James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 15, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 15 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 16 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm, 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 16, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* is planned to conduct water chemistry and toxicology sampling. These operations depend upon approval to apply dispersants either aerial or with boat spray systems onboard the M/V *International Peace*.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 27,700 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above

Date 6-16-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 16 June 2010 with Oil Targets from Spotter Operations on 15 June

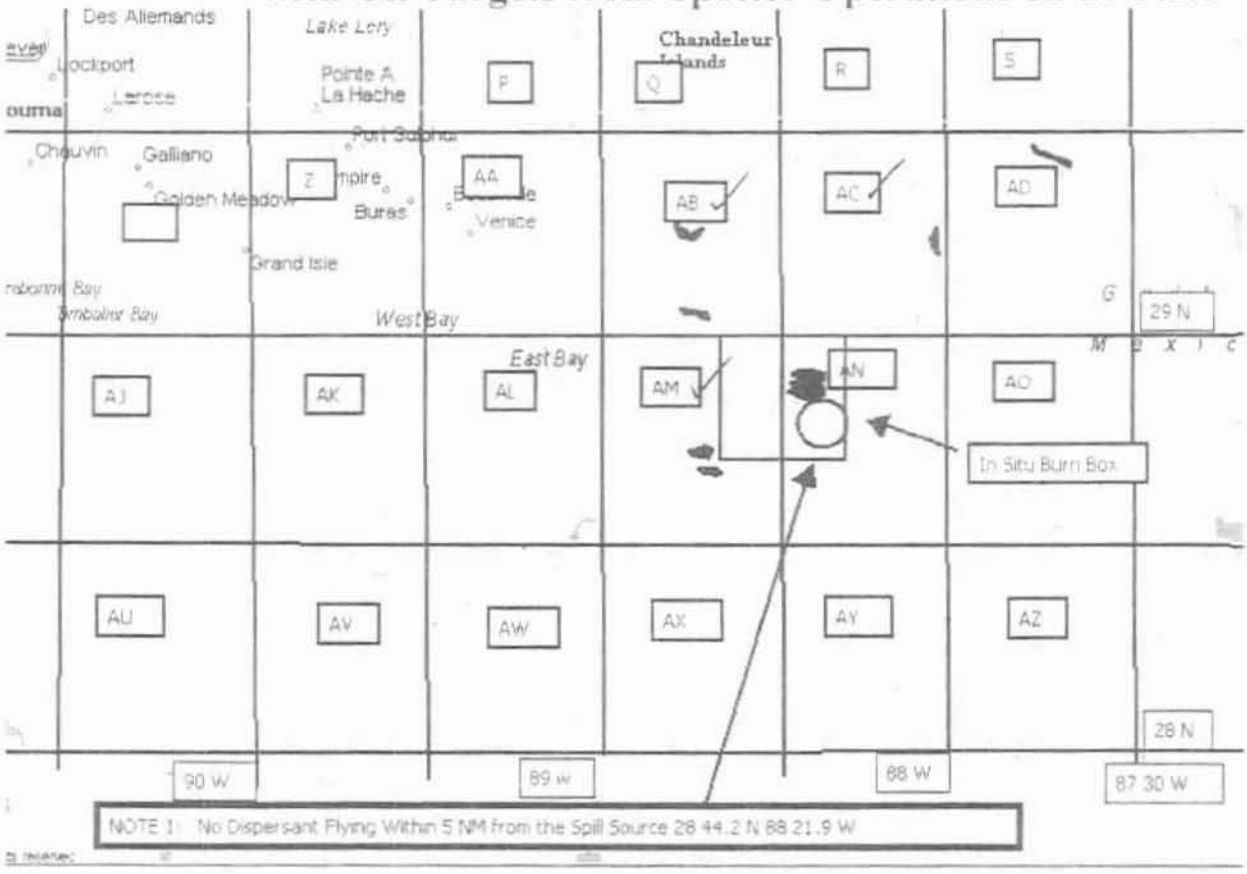


TABLE 1
Dispersible Oil Report June 15, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AB	2	3200	2-15	1,152
AD	1	1152	90	5,184
AM	2	2739	60-70	9,498
AC	1	1280	30	1,920
AN	TBD	TBD	Due to Enterprise shutdown expect significant surface oil slicks near the source	10,000
TOTAL				27,754

19K.

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

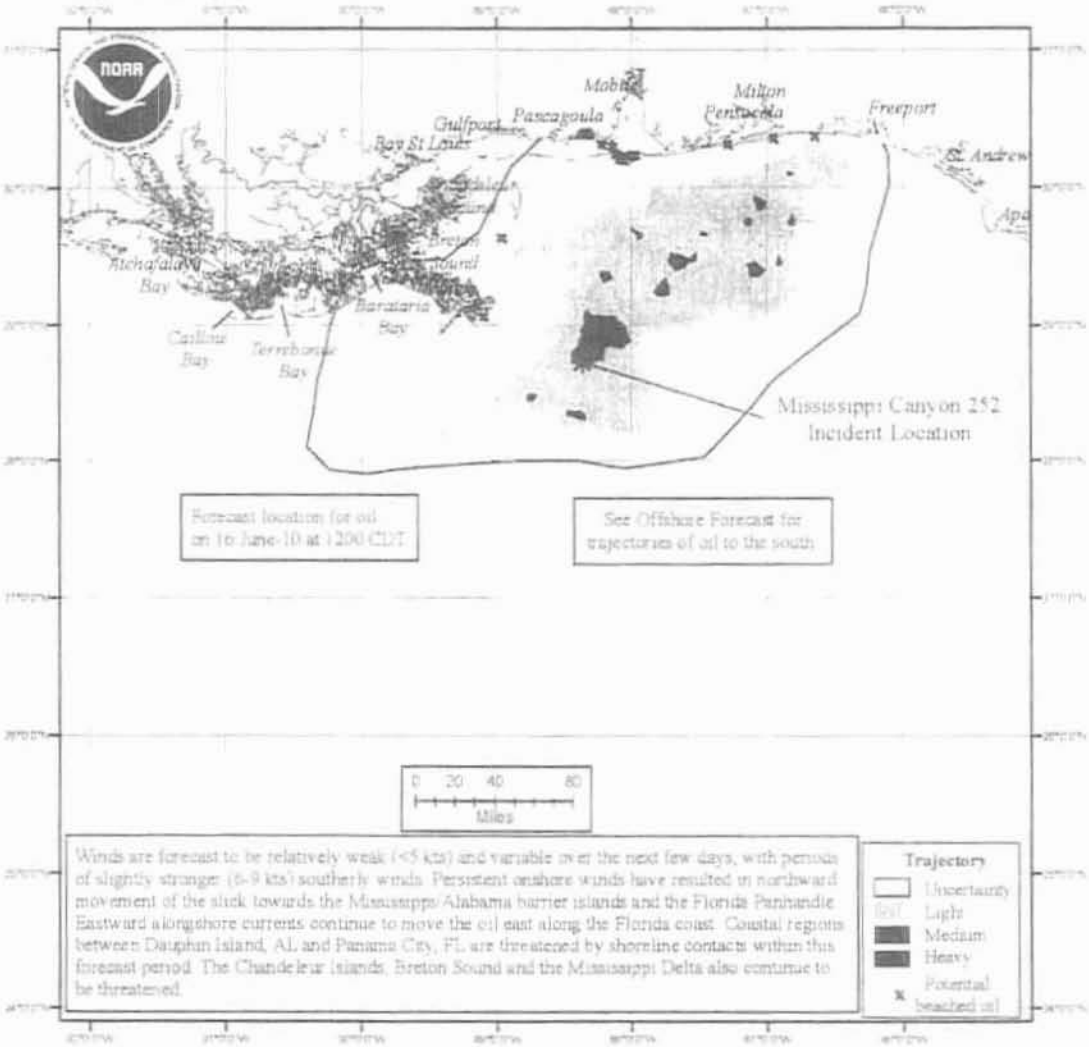
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Wednesday, 6/16/10
Date Prepared: 2100 CDT, Monday, 6/14/10

This forecast is based on the NWS spot forecast from Monday, June 14 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Sunday-Monday satellite imagery analysis (NOAA/NESDIS). The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast:
June 15th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

In Transit
Out of Service
Lightering

	SOURCE				Date/Time 15 June 1400	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
SW	RV1/Weir	Seacor Washington (Dutch arm)	NRC	Equipment	Fourchon	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	Venice	
12						
13						
IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Mechanical	Venice	
14						
15						
16						
402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	
Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	
		Boom Boats				
Designator		Vessel	Assignment		Location	ETA
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
HE	WB1	Hercules	Source	Boom tow	Enroute	
BR	WB1	Brutus	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	
		Crew/Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	
		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

NON SOURCE				
Vessel	Assignmen	Status	Location	ETA
[redacted]				
Gulf Influence	FED	On-scene	Western Loop	
[redacted]				
Orleans	FED	repairs	Fourchon	
[redacted]				
Sir Lancelot (USCG VOSS)	FED	repairs	Fourchon	
Miss Megan (USCG VOSS)	FED	Enroute		
[redacted]				
Resolve Pioneer		Unable to contact		

June 16, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Weekly Source Control Surface Dispersant Plan (June 17 through 23, 2010)

Dear Admiral Watson,

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") submitted a weekly Source Control Surface Dispersant Plan for the week June 10 to June 16, which you approved on June 9. The plan allowed for a maximum daily application volume (calendar day) of 6,000 gallons, unless more was required to control VOCs. From June 10 through June 15, the average daily volume applied has been less than 1,000 gallons. The maximum daily application was 3,360 gallons on June 12.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

BP respectfully requests approval of to the Weekly Source Control Dispersant Plan for June 17 though June 23, as follows:

Date	Expected Maximum Volume per calendar day (gals)
June 17	6000
June 18	6000
June 19	6000
June 20	6000
June 21	6000
June 22	6000
June 23	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Doug Suttles

Douglas J. Suttles

Approval granted subject to the above

Date: 6-16-10

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating (Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

Recommended actions for VOC management:

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 16, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has seven (7) spotter visual reports from 16 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 17 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm, 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 17, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service. A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the *MV International Peace* plans to conduct boat spray testing on fresh oil with water chemistry and toxicology sampling. The SMART Tier 1 observations indicate that dispersants are effective as shown in the QA/QC review document attached. Details and photographs of the Tier 1 observations are available at epaosc.org web site.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~25,800~~ 18,700 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above.

Date 6-17-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 17 June 2010 with Oil Targets from Spotter Operations on 16 June

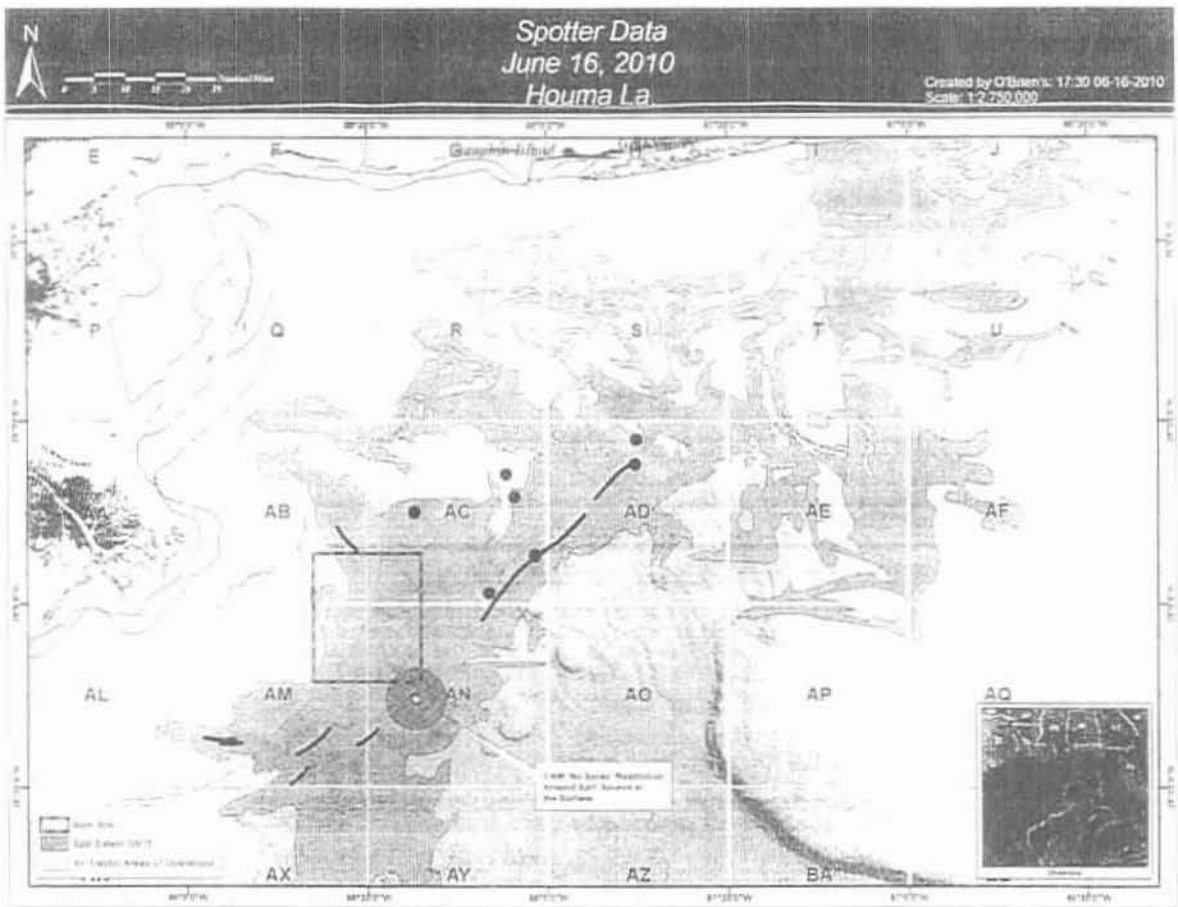


TABLE 1
Dispersible Oil Report June 16, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AB	1	96	90	432
AC	4	10,240	20	10,240
AD	2	684	50-90	1,801
AM	4	4838	20-80	13,312
AN	TBD	TBD	Zone near source, unable to recon due to ISB	0
TOTAL				25,785

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

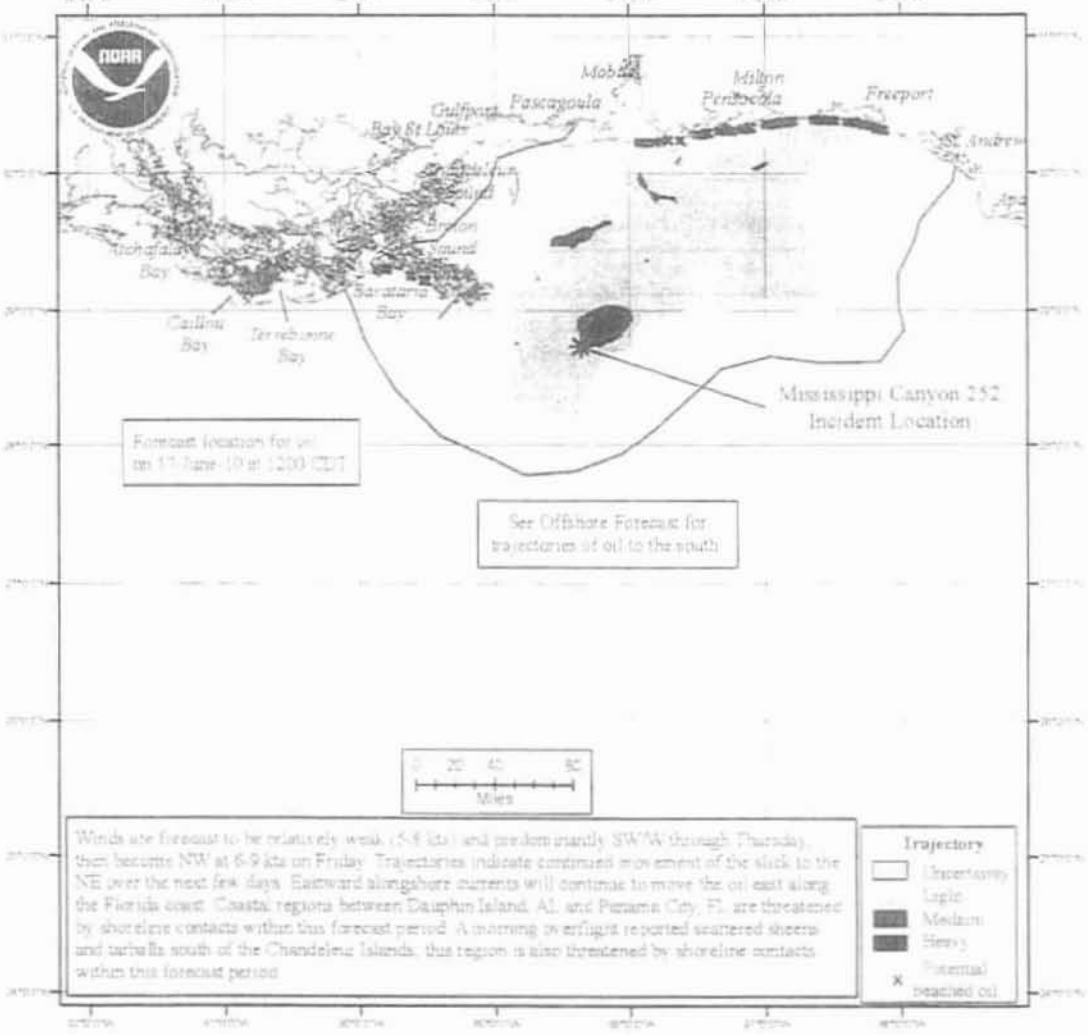
Nearshore Surface Oil Forecast Deepwater Horizon MC252

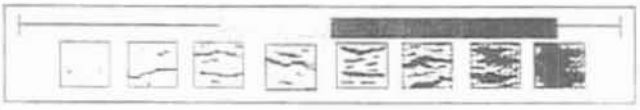
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Thursday, 6/17/10
Date Prepared: 2100 CDT, Tuesday, 6/15/10

This forecast is based on the NWS spot forecast from Tuesday, June 15 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast
June 16th PM

this scale bar shows the meaning of the distribution terms at the current time

		Boom Boats				
Designator		Vessel	Assignment		Location	ETA
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
HE	WB1	Hercules	Source	Boom tow	Enroute	
BR	WB1	Brutus	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	

		Crew /Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	

		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

Attachment 3

Offshore Skimming Resources

SOURCE				Date/Time 16 June 0900		
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MSR	RV1/Weir	Mississippi Responder	MSRC	Pit stop	Ft Jackson	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
SW	RV1/Weir	Seacor Washington (Dutch arm)	NRC	Equipment	Fourchon	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Mechanical	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	MC-252	
RP	RV1/Belt	Rene's Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Pauline II (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
HM	RV1/Weir	HDS Mystique (Dutch arm)	[illegible]	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)	[illegible]	Reassign Non-Source	Non-Source	
IRC	RV1/Weir	Ocean Raider 17 (MC 8001)	Grip	Reassigned Mobile	Mobile	
ADM	RV1/Belt	NRC Adm/FSI	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse VII (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PI	RV1/Weir	Pauline II (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	
Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	

Attachment 4

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Preliminary Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date: 6/15/2010

Operational Period: 0000 15 June 2010 to 2359 15 June 2010

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 9)

☑ Photo Log

Assessment (Check appropriate box(s))

☑ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log

☐ Results inconclusive with respect to dispersant effectiveness

☐ Other. Briefly describe

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name: [redacted] Signature: [redacted] Date: 6-16-10

Reviewed by NOAA SSC (Print name, sign, and date)

Name: [redacted] Signature: [redacted] Date: 6-16-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 17, 2010

Dear Admiral Watson

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 17 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 18 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm; 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (5,400 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 18 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means. The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service. A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* plans to conduct boat spray testing on fresh oil with water chemistry and toxicology sampling. The QA/QC report on the SMART Tier 1 observations will be provided tomorrow with the updated morning spotter reports.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~21,000~~ 19,200 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above

Date: 6/18/2010

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 18 June 2010 with Oil Targets from Spotter Operations on 17 June

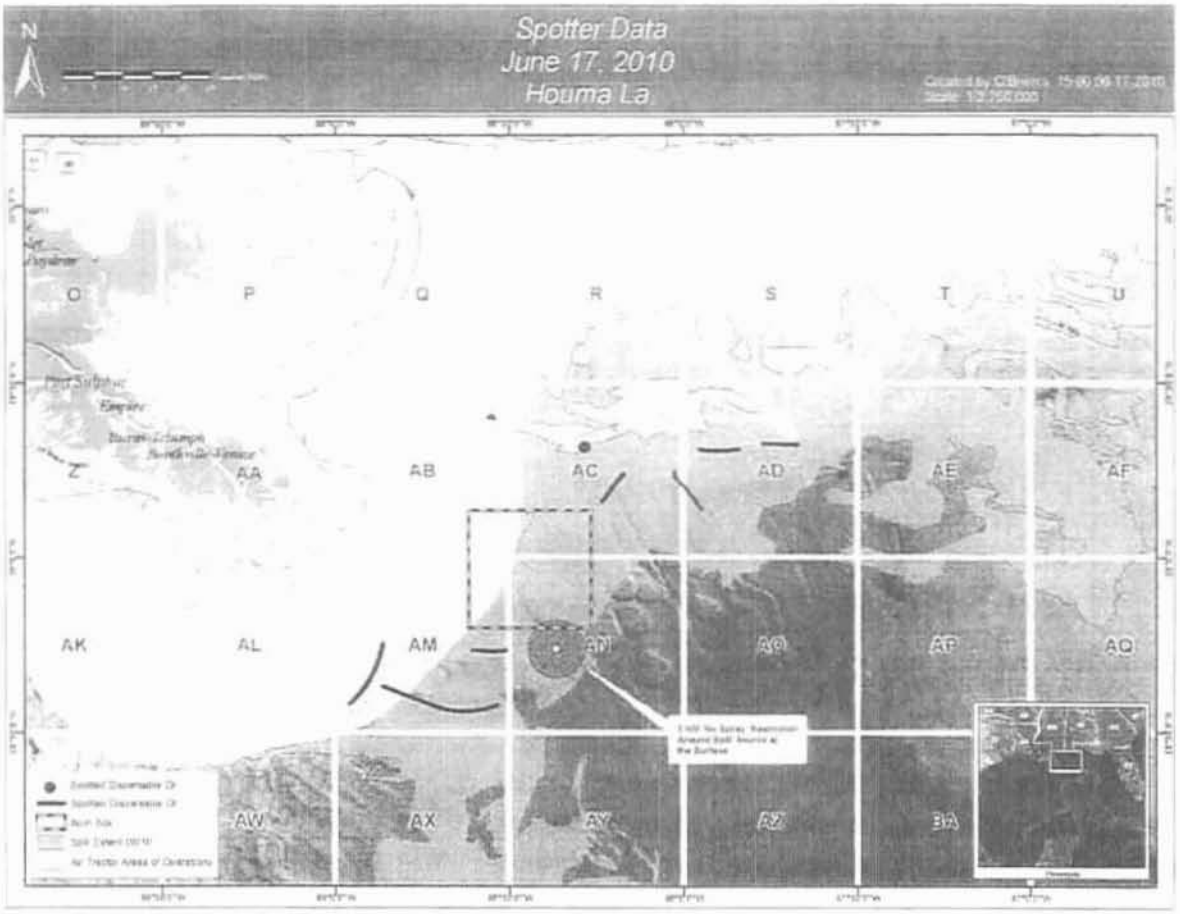


TABLE 1
Dispersible Oil Report June 17, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AB	2	640	20	640
AC	3	1,120	70-80	4,160
AD	3	693	80-85	9,397
AM	4	6,903	15-85	6,829
AN	TBD	TBD	Zone near source, unable to recon due to ISB	0
TOTAL				21,026

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

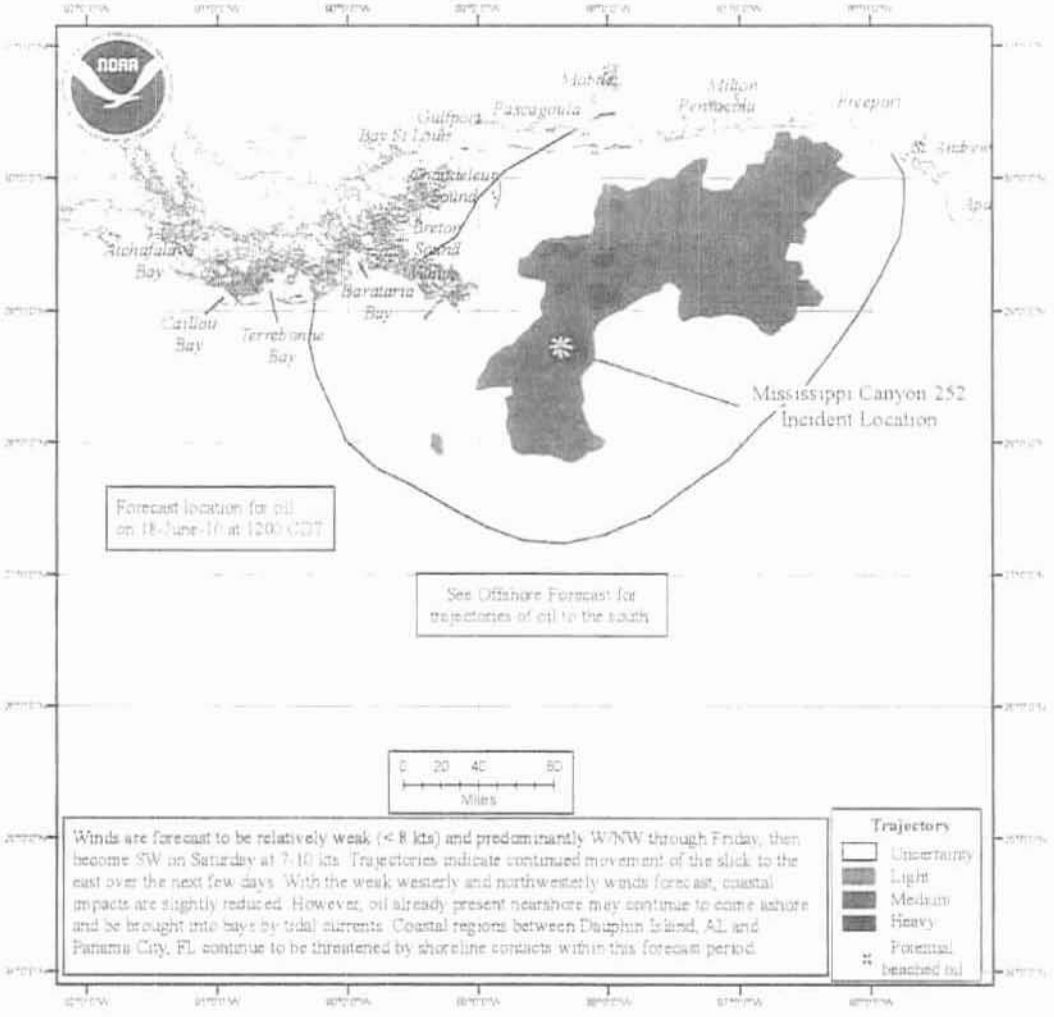
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R | **Nearshore**

Estimate for 1200 CDT, Friday, 6/18/10
Date Prepared 2100 CDT, Wednesday, 6/16/10

This forecast is based on the NWS spot forecast from Wednesday, June 16 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Winds are forecast to be relatively weak (< 8 kts) and predominantly W/NW through Friday, then become SW on Saturday at 7-10 kts. Trajectories indicate continued movement of the slick to the east over the next few days. With the weak westerly and northwesterly winds forecast, coastal impacts are slightly reduced. However, oil already present nearshore may continue to come ashore and be brought into bays by tidal currents. Coastal regions between Dauphin Island, AL and Panama City, FL continue to be threatened by shoreline contacts within this forecast period.

Next Forecast
June 17th PM

this scale bar shows the meaning of the distribution terms at the current time

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 18, 2010

Dear Admiral Watson

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 18 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 19 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 0.5-1 feet, ceilings unlimited and visibility 10 nm. 25 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 19 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means. The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service. A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* plans to conduct boat spray testing on fresh oil with water chemistry and toxicology sampling. The QA/QC report on the SMART Tier 1 observations for the 17th is attached.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 16,400 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date 6-19-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 19 June 2010 with Oil Targets from Spotter Operations on 18 June

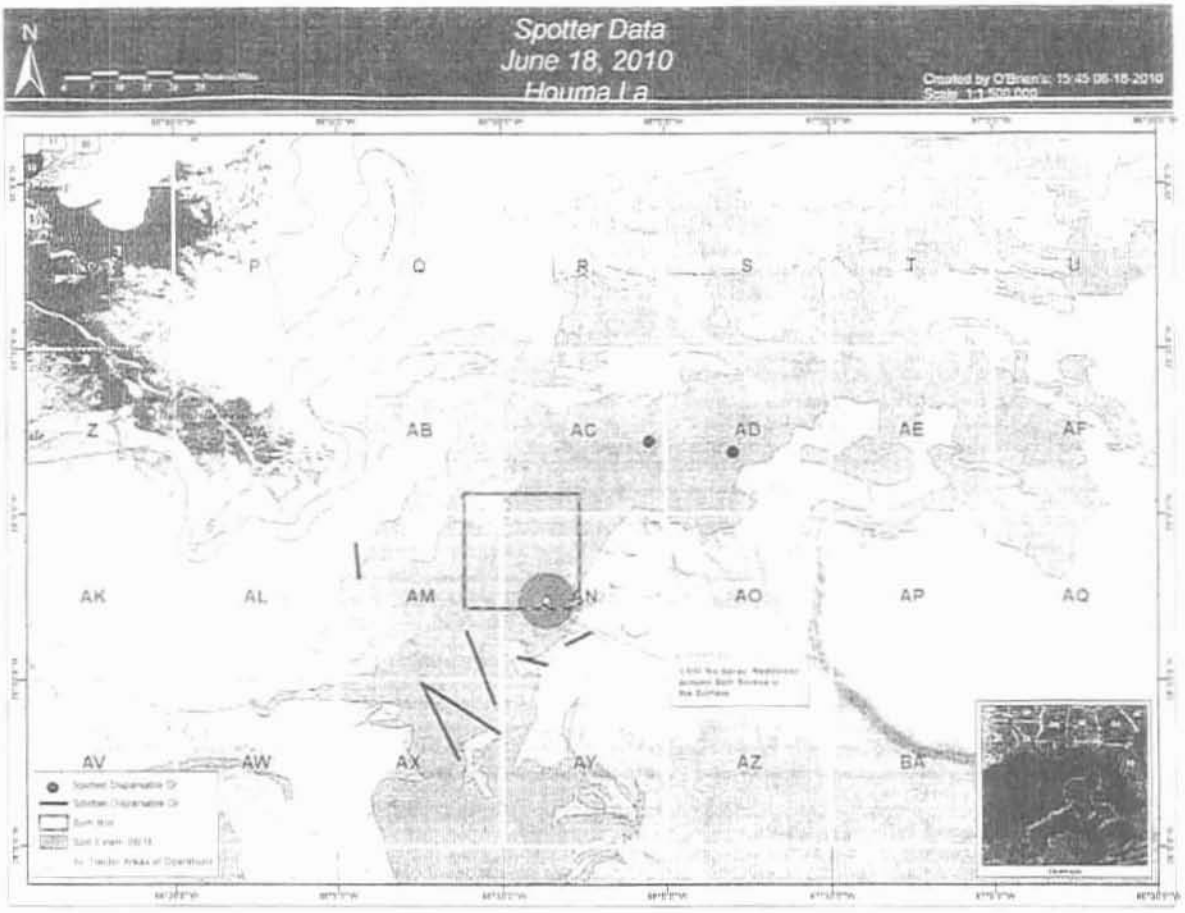


TABLE 1
Dispersible Oil Report June 18, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	1	2560	30	3,840
AD	1	192	90	864
AM	2	1280	80	5,120
AN	2	3360	30-90	5,520
AX	2	736	20	1,024
TOTAL				16,368

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

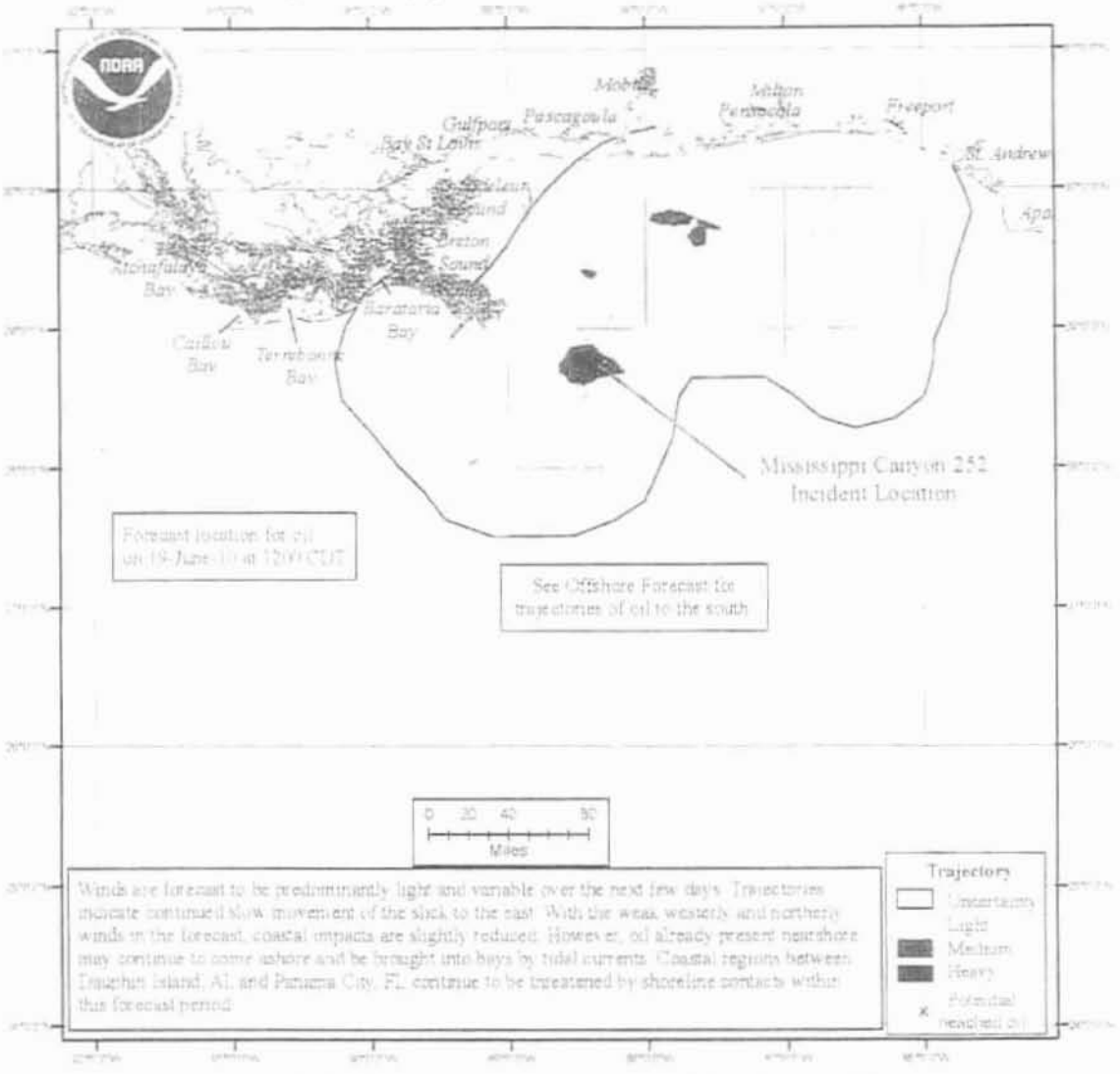
NOAA/NOS/OR&R

Nearshore

Estimate for 1200 CDT, Saturday, 6/19/10

Date Prepared 2100 CDT, Thursday, 6/17/10

This forecast is based on the NWS wind forecast from Thursday, June 17 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday-Thursday satellite imagery analysis (NOAA/NESDIS) and Thursday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast
June 18th PM

this scale bar shows the meaning of the discoloration areas at the current time

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 18 June 1500	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
MSR	RV1/Weir	Mississippi Responder	MSRC	Pit stop	Ft Jackson	
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	Skimming	[illegible]	
FR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
[illegible]	[illegible]	[illegible]	NRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	NRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	NRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	NRC	Skimming	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA Fed	Mechanical Equipment	MC-252 MC-252	
RE	RV1/Belt	Rene (Navy Marco)				
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch Arm)		Reassign Non-Source	MC-252	
HM	RV1/Weir	HOS Mayhque (Dutch Arm)		Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Reassign Non-Source	Non-Source	
OMC	RV1/Weir	Ocean Raider (?/OMC3009)	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse V1 (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	

Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	
		Boom Boats				
Designator		Vessel	Assignment		Location	ETA
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
HE	WB1	Hercules	Source	Boom tow	Enroute	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MR	WB1	Mr Randolf	Source	Boom tow	Enroute	
SH	WB2	Sea hawk	Source	Standby	Venice	

		Crew / Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	

		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

Deepwater Horizon Incident - Houma Incident Command Center

SMART Tier 1 Preliminary Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team # 2 Date 6/17/2010

Operational Period 0000 17 June 2010 to 2359 17 June 2010

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 12)

☑ Photo Log

Assessment (Check appropriate box(s))

☑ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log

☐ Results inconclusive with respect to dispersant effectiveness

☐ Other. Briefly describe

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name [redacted] Signature [redacted] Date 6/18/10

Reviewed by NOAA SSC (Print name, sign

Name [redacted] Signature [redacted] Date 6/18/10

June 19, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Guidance on Subsea Dispersant Application

Dear Admiral Watson,

On June 8, you approved GoM Drilling, Completions, and Interventions – MC 252 Guidance on Subsea Dispersant Application Ops Note #3. You approved this plan through June 30, 2010. The plan defines a maximum application of dispersant subsea of 15,000 gallons per calendar day, consistent with the Dispersant Monitoring and Assessment Directive – Addendum 3 (the "Directive"). The Directive requires a formal application for an exemption should application rates greater than 15,000 gallons per calendar day be necessary.

Between 21:00 and 24:00 yesterday (June 18) very high VOCs were measured around the containment vessels Discoverer Enterprise (>300 ppm) and Q4000 (over 200 ppm). Subsea dispersant application was increased to 15 gallons per minute and has successfully reduced VOC level. If sustained application at 15 gallons per minute is required to maintain safe operating conditions, the 15,000 gallon per calendar day maximum will be breached.

BP respectfully requests an exemption to the Directive's maximum daily application of subsea dispersant in the event that such application is required to maintain safe operating conditions. This exemption shall be for Saturday June 19, 2010.

Sincerely,

Douglas J. Suttles

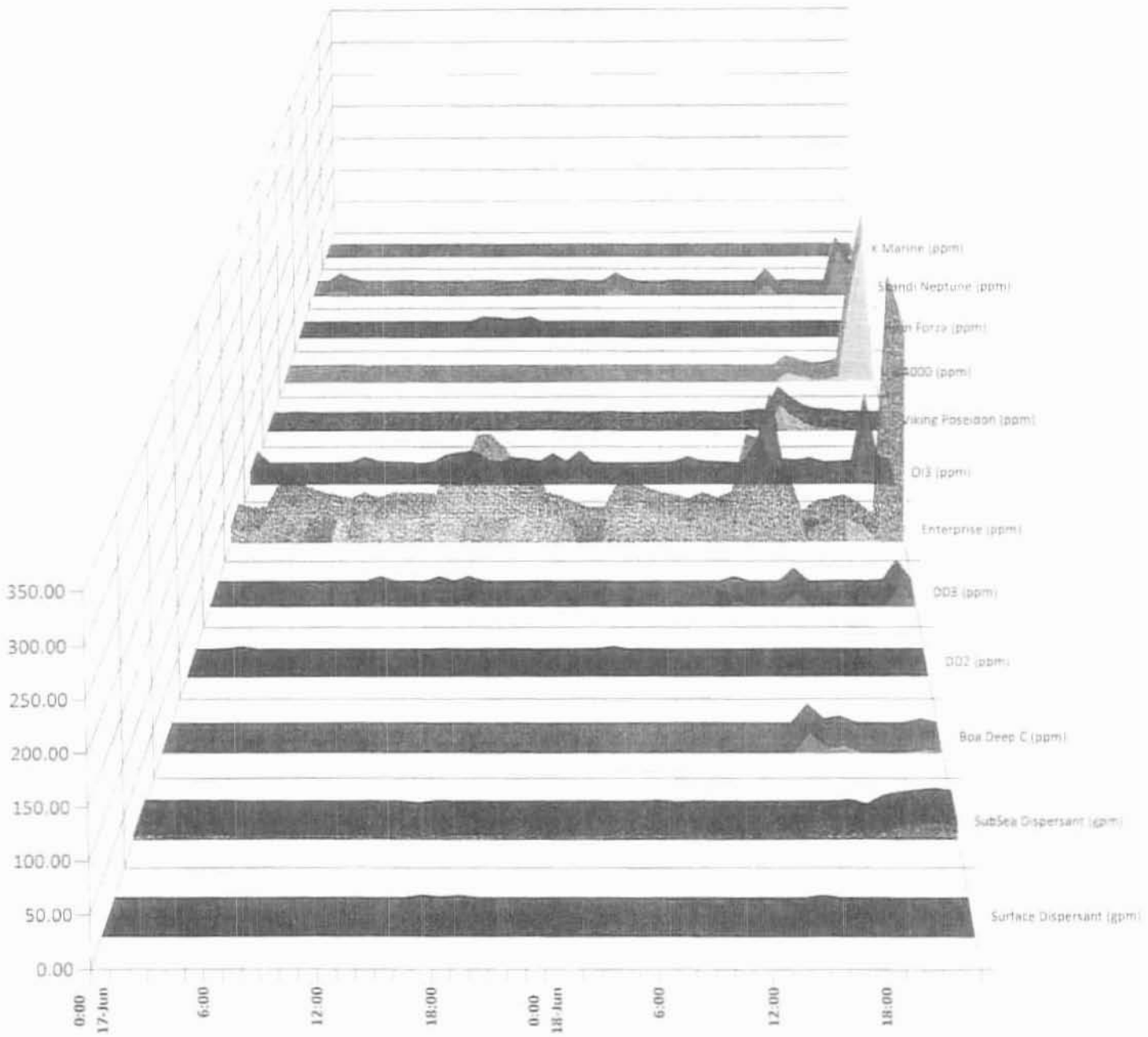
Approval granted subject to the above.

Date: 6-19-10

Jim Watson
Rear Admiral, USCG

Federal On-Scene Coordinator

48 Hour Dispersant Application and VOC Chart



James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 19, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has eleven (11) spotter visual reports from 19 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 20June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 4-8 knots, wave height 0.5-1 feet, ceilings unlimited and visibility 10 nm; 40 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 20 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be returning to port for the transfer of samples and re-provisioning. The QA/QC report on the SMART Tier 1 observations for the 18th will be provided to EPA tomorrow morning.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 15,500 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

J A Watson

Date: 6-19-20

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 20 June 2010 with Oil Targets from Spotter Operations on 19 June

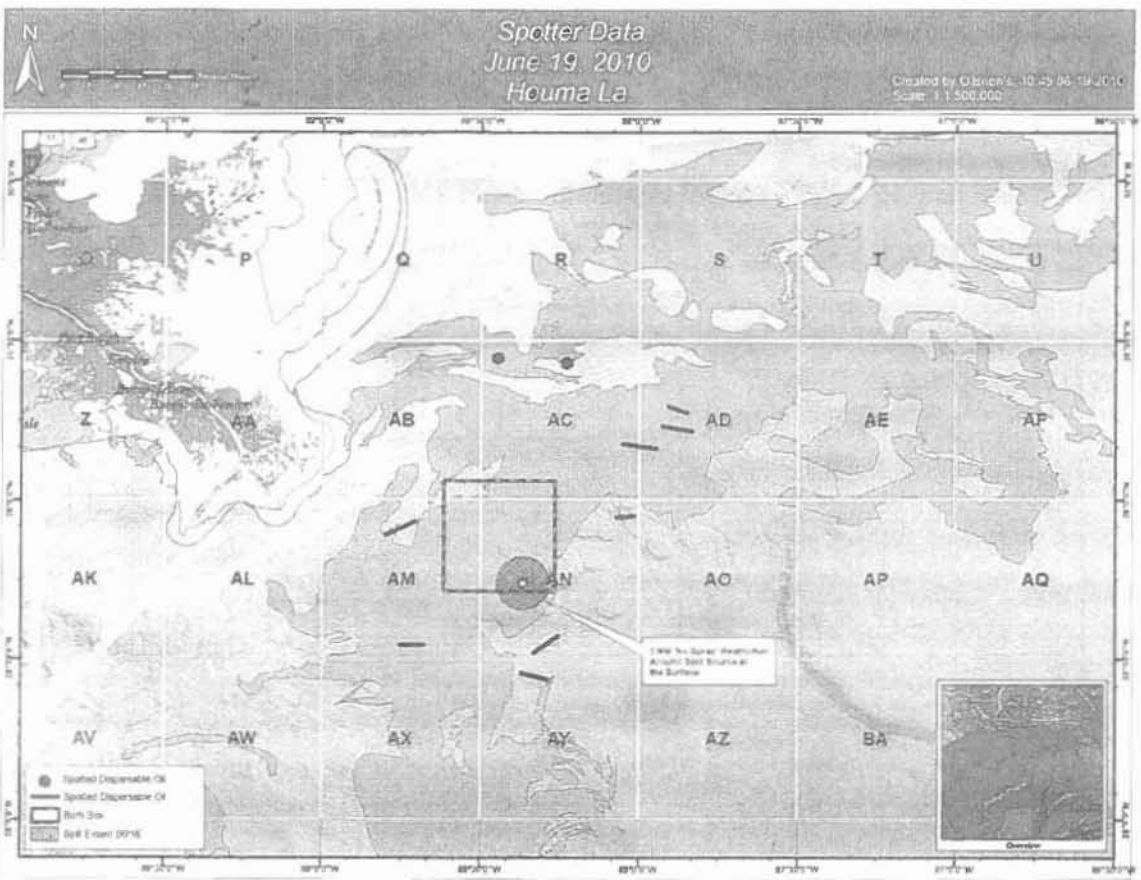


TABLE 1
Dispersible Oil Report June 19, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	3	280	20-50	600
AD	3	1,172	30-50	2,611
AM	3	12,198	15-60	9,638
AN	3	2,880	15-20	2,480
AY	1	127	20	130
TOTAL				15,459

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

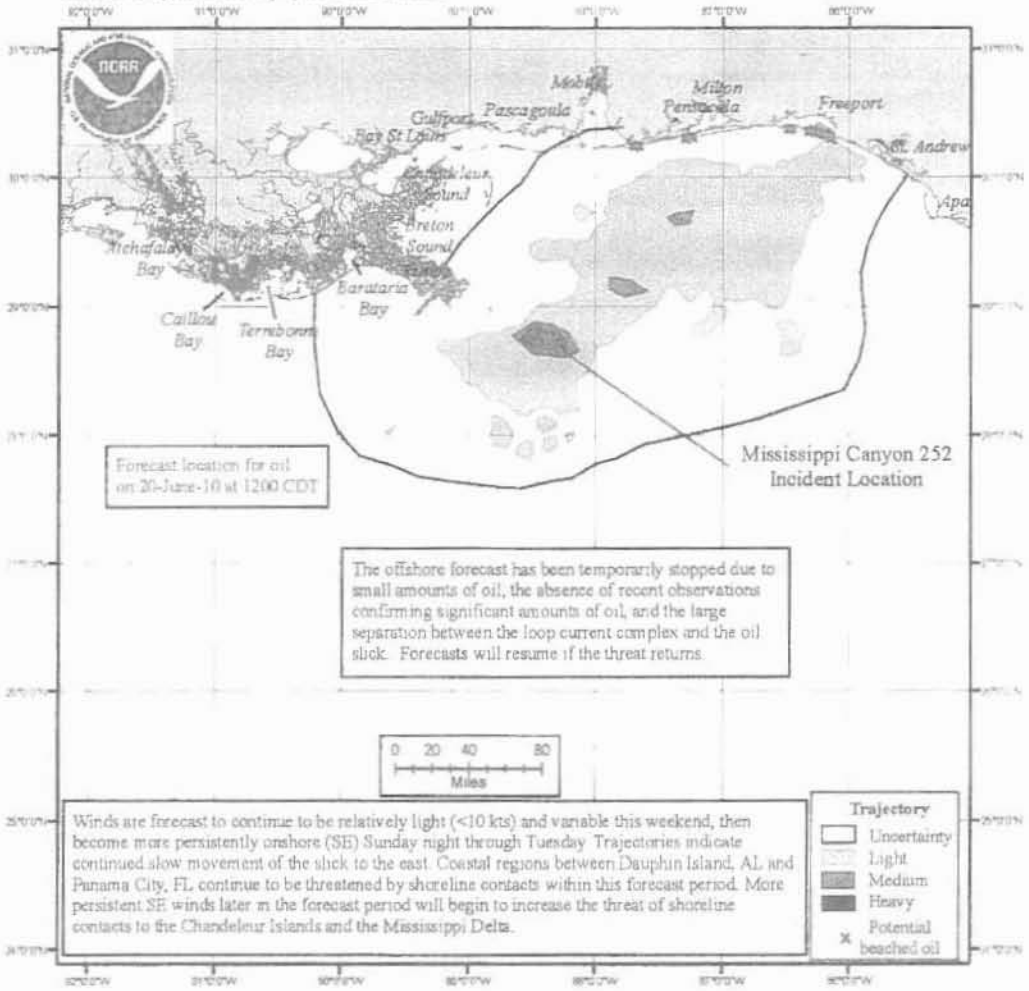
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Sunday, 6/20/10
Date Prepared: 2100 CDT, Friday, 6/18/10

This forecast is based on the NWS spot forecast from Friday, June 18 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Thursday-Friday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 19th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 19 June 1500	
Designator	**Kind/Type**	**Vessel**	**Assignment**	**Status**	**Location**	**ETA**
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252	
MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
SDR	RV1/Weir	Southern Responder	MSRC	Skimming	MC-252	
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC-252	
VAR	RV1/Weir	Virginia Responder	MSRC	Pit stop	Ft Jackson	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
HOSS	RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
SV	RV1/Weir	Seacor Vanguard (Current Buster 2 ea)	Buster	Skimming	MC-252	
JC	RV1/Weir	John Coghill (Current Buster)	Buster	Skimming	MC-252	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	MC-252	
LF	RV1/Belt	Lyane Frink (NRC Marco)	NRC	Skimming	MC-252	
LIB	RV1/Disk	NRC Liberty (Disc)	NRC	Skimming	MC-252	
NG	RV1/Weir	Noonie G (w/CGA FRU)	CGA	Skimming	MC-252	
IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Skimming	MC-252	
CAP	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Skimming	MC-252	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Mechanical	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	MC-252	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Reassign Non-Source	MC-252	
HM	RV1/Weir	HOS Mystique (Dutch arm)		Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Reassign Non-Source	Non-Source	
IMC	RV1/Wier	Ocean Raider 17/IMC3009	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL 155 (Rebel)	TF Storage	On-scene	MC-252	

Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	
		Boom Boats				
Designator		**Vessel**	**Assignment**		**Location**	**ETA**
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
BG	WB2	Betty G	Source	Boom tow	MC 252	
MSA	WB2	Ms. Alisha	Source	Boom tow	Venice	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
SL	WB1	St. Ignatius Loyola	Source	Boom tow	MC 252	
HE	WB1	Hercules	Source	Boom tow	Enroute	
BR	WB1	Brutus	Source	Boom tow	MC 252	
MM	WB1	Mia Maky	Source	Boom tow	MC 252	
MR	WB1	Mr Randolf	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	

		Crew/Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	

		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

SAFETY ASPECTS OF AERIAL DISPERSANT OPERATION IN SUMMERTIME

Safety issue:

The unintended consequences of delayed dispersant approval are:

- Less time to deal with severe weather.
- Introduces uncertainty that increase risks.

Operational Considerations:

Normal summer time weather patterns in the Gulf of Mexico are fairly predictable. Scattered air mass thunderstorms form offshore in the early morning and build in intensity during the morning. By midday they have strengthen and are drawn ashore. Once overland they continue to build in strength causing heavy thunderstorms and winds. These thunderstorms lose their energy and begin to dissipate during the late afternoon (after 4:00 PM).

Visualization is most difficult in low angle light and under cloudy conditions.

Current Situation:

Aerial Dispersants are submitting an approval request late in the day before, requesting approval to spray designated areas with defined amounts of dispersant.

The spotter aircraft depart in the early morning and look for "sprayable" oil. These reports are consolidated into a request report and sent for approval. These flights, submitting the reports and the approval cause the first flight to be approved as the thunderstorms start to build and limit the effectiveness of the flight.

Proposed Solutions:

A pre-approved amount of dispersant that can be applied in the early morning, prior to the heavier weather affecting the flights.

A secondary approval based on spotter reports developed during the morning. The secondary approval would be dispersed as weather allows, perhaps later in the day as the weather improves.

Risk Assessment:

By having a pre-approved amount for early morning flights, crewing can be scheduled to minimize the fatigue induced by waiting at the airport for approval then scrambling to fuel, load dispersant, file flight plans and prepare the aircraft for departure. While these are normal duties and problems for flight crews it is still fatiguing and can cause safety issue by "rushing" to accomplish the mission.

The pre-approval would cause less stress process thus mitigating the risk involved mentioned above.

By allowing a secondary request for approval the follow on crews will also be exposed to a much more orderly approach to the mission, especially in the selection of flight time that imposes the least risk from the weather .

As the project draws on the risk level increase and mitigation factors need to be investigated.

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 19, 2010

Dear Admiral Watson

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has eleven (11) spotter visual reports from 19 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 20June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 4-8 knots, wave height 0.5-1 feet, ceilings unlimited and visibility 10 nm; 40 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sqmil) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 20 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means. The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service. A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be returning to port for the transfer of samples and re-provisioning. The QA/QC report on the SMART Tier 1 observations for the 18th will be provided to EPA tomorrow morning.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 15,500 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above.

Date 6-20-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 20 June 2010 with Oil Targets from Spotter Operations on 19 June

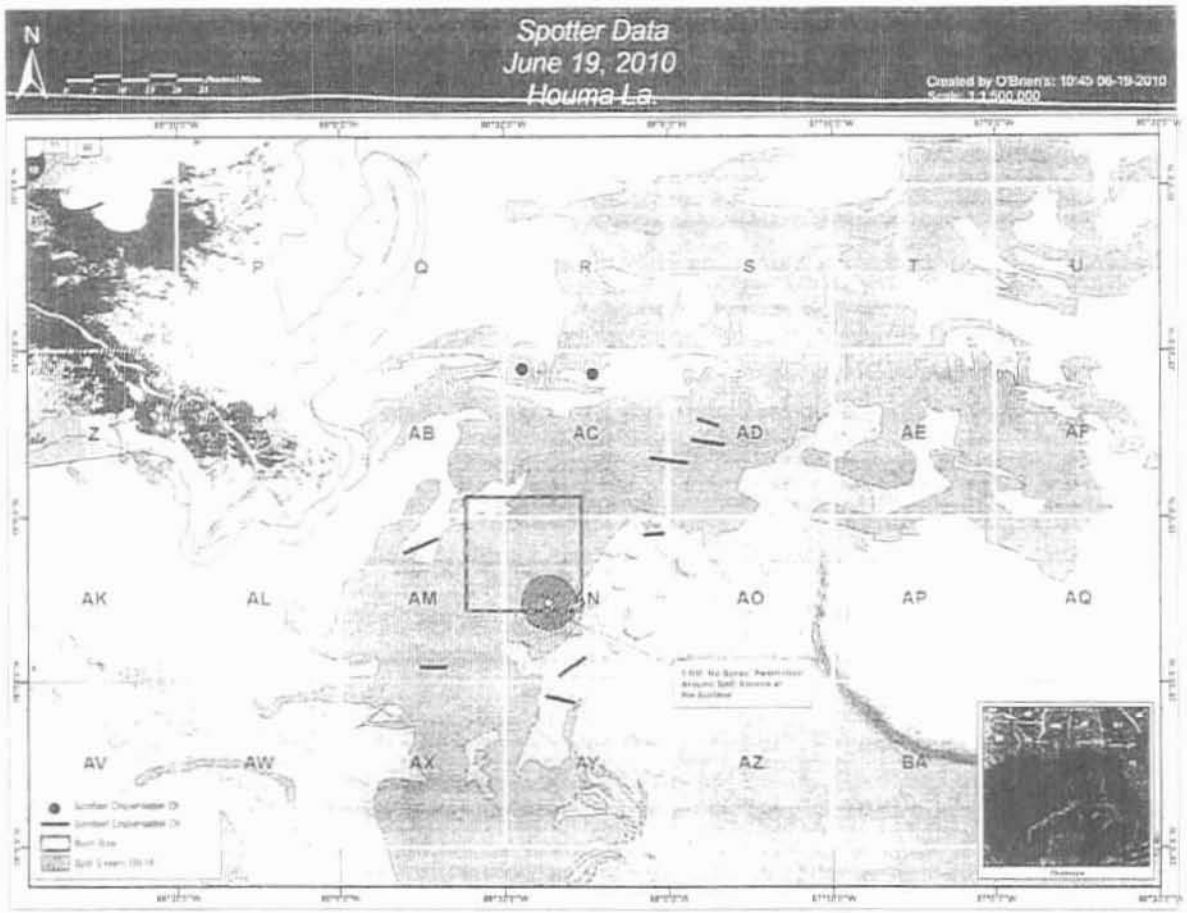


TABLE 1
Dispersible Oil Report June 19, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	3	280	20-50	600
AD	3	1,172	30-50	2,611
AM	3	12,198	15-60	9,638
AN	3	2,880	15-20	2,480
AY	1	127	20	130
TOTAL				15,459

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

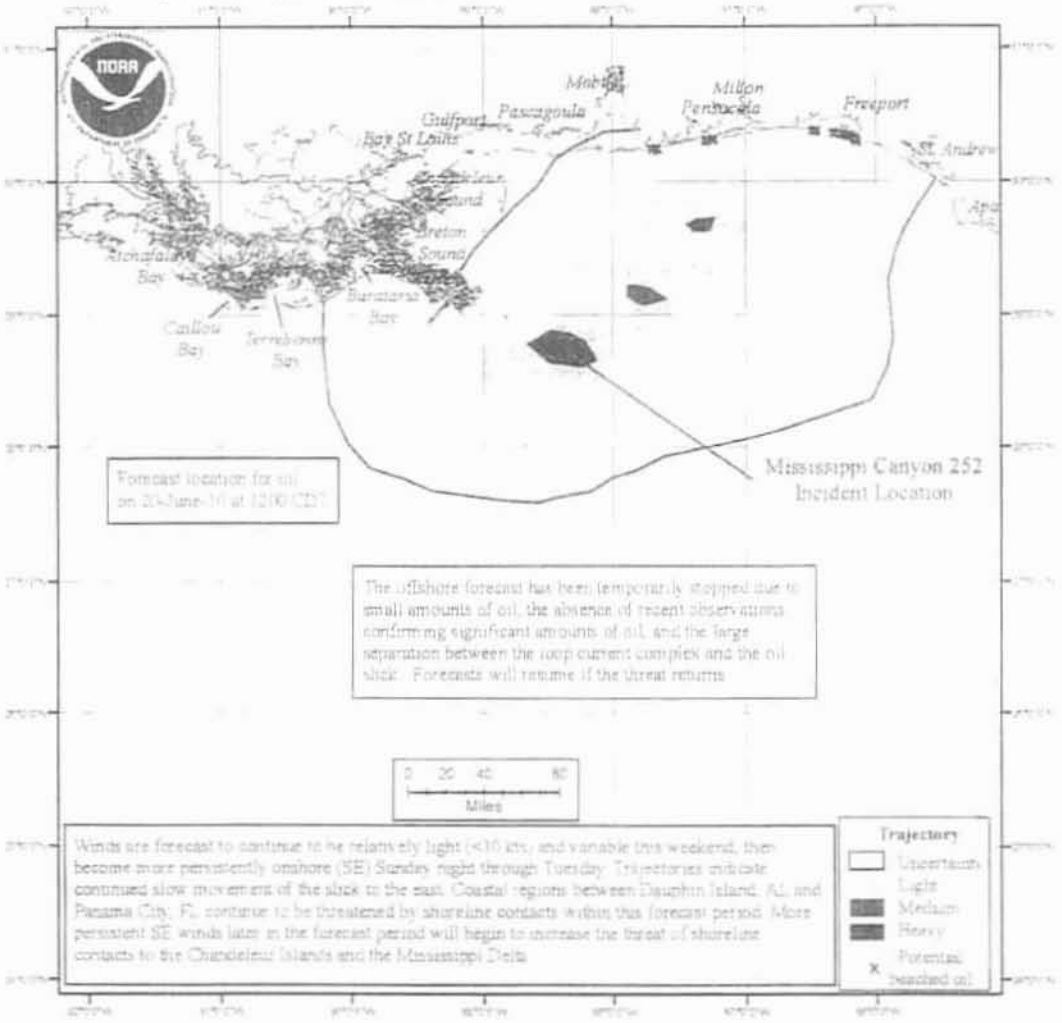
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Sunday, 6/20/10
Date Prepared: 2100 CDT, Friday, 6/18/10

This forecast is based on the NWS spot forecast from Friday, June 18 PM. Currents were obtained from several models (West Florida Shelf/USF, TOTO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Thursday-Friday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain surfaces that are not readily observable from the imagery (hence not included in the model initialization). Oil near tiny inlets could be brought into that bay by local tidal currents.



Next Forecast
June 19th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 19 June 1500	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	MSRC	[illegible]	[illegible]	
VAR	RV1/Weir	Virginia Responder	MSRC	Pit stop	Ft Jackson	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NSR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	MC-252	
[illegible]	[illegible]	[illegible]	NRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	NRC	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	CGA	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	CGA	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	CGA	[illegible]	[illegible]	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Mechanical	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	MC-252	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T. (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Reassign Non-Source	MC-252	
RM	RV1/Weir	HOS Mystique (Dutch arm)		Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Reassign Non-Source	Non-Source	
OR	RV1/Weir	Ocean Raider 17/JME3009	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PJ	RV1/Weir	Pauline II (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	

Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	
		Boom Boats				
Designator		Vessel	Assignment		Location	ETA
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
[illegible]	WB2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HE	WB1	Hercules	Source	Boom tow	Enroute	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MR	WB1	Mr Randolf	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	

		Crew / Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	

		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 20, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has eight (8) spotter visual reports from 20 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 21 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates flying weather with winds of 4-8 knots, wave height 0.5-1 feet, ceilings unlimited and visibility 10 nm; 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sq.mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 21, 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V ***International Peace*** will be returning to sea for sampling operations this evening. QA/QC SMART report for June, 19, 2010, is provided at Attachment 4.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 22,600 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

J A Watson

Date: 6-20-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 21 June 2010 with Oil Targets from Spotter Operations on 20 June

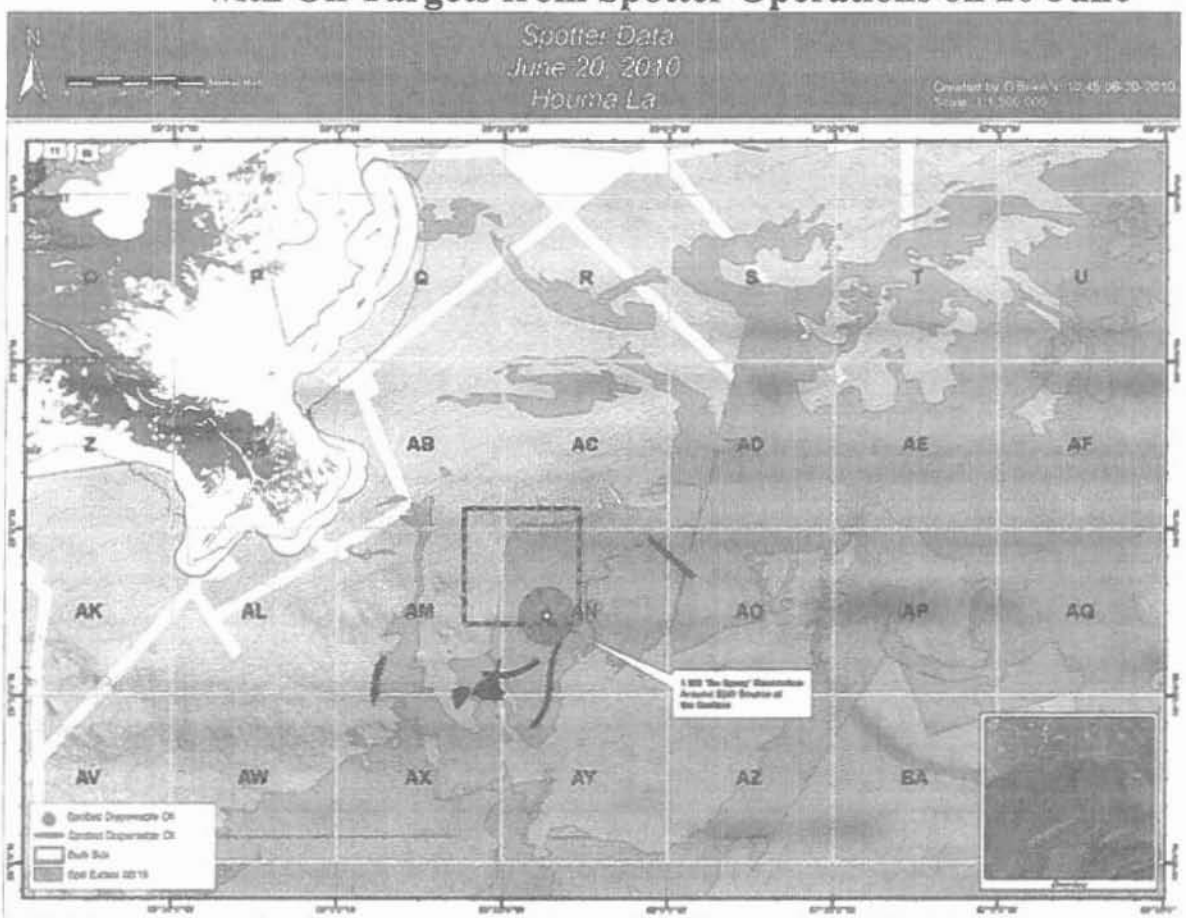


TABLE 1
Dispersible Oil Report June 20, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil (range is for multiple slicks)	Dispersant Needed (1/20 DOR)
AN	3	3,839	30-80	7,195
AM-AX	3	44,294	5-50	11,780
AY	1	2,240	30	3,360
AO	1	157	35	275
TOTAL				**22,610**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

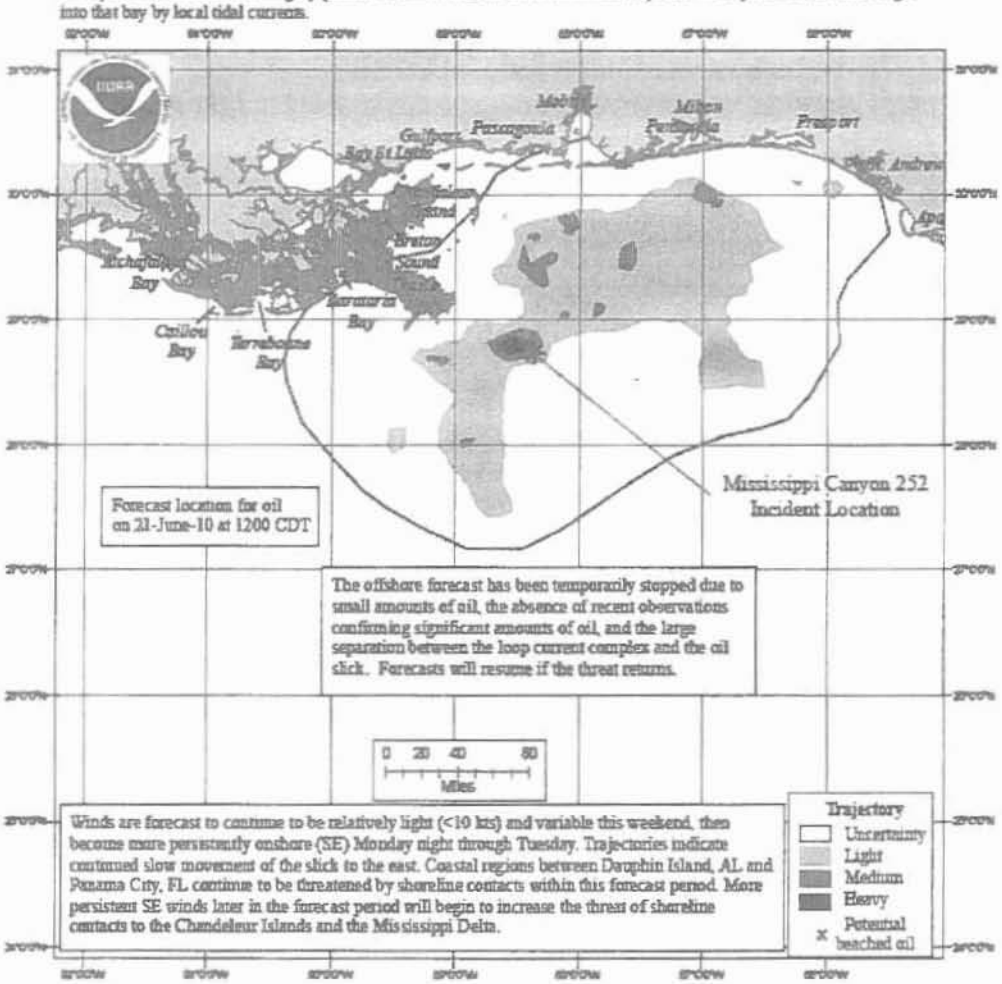
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Monday, 6/21/10

Date Prepared: 2100 CDT, Saturday, 6/19/10

This forecast is based on the NWS spot forecast from Saturday, June 19 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Saturday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 20th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 20 June 1600	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252	
AMER	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
SCR	RV1/Weir	Southern Responder	MSRC	Skimming	MC-252	
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC-252	
VAR	RV1/Weir	Virginia Responder	MSRC	Pit stop	Ft Jackson	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	RV1/Belt	CGA VOSS (Brian Crosby Sun)	Pauline T	Equipment	MC-252	
[illegible]	RV1/Weir	Shearer Wings (Mississippi Marine 2 vol)	Airmar	Skimming	MC-252	
[illegible]	RV1/Weir	Sam Sagrillo (Current Equipment)	Surplus	Skimming	MC-252	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	MC-252	
[illegible]	RV1/Belt	Lynne Finke (NRC Marco)	NRC	Skimming	MC-252	
[illegible]	RV1/Weir	NRC Lake Ivy (Belt)	NRC	Skimming	MC-252	
[illegible]	RV1/Weir	Mr. Jim S (CGA FRU)	CGA	Skimming	MC-252	
[illegible]	RV1/Weir	Mr. Richard Rose (w/CGA FRU)	CGA	Skimming	MC-252	
[illegible]	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Skimming	MC-252	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Mechanical	MC-252	
[illegible]	RV1/Belt	Robert Irwin (NRC Marco)	NRC	Skimming	MC-252	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Reassign Non-Source	MC-252	
HM	RV1/Weir	UOS Mystique (Dutch arm)		Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Reassign Non-Source	Non-Source	
MC	RV1/Weir	Ocean Raider (?/NRC?)	Gulf	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Belt	Seaforge VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	

Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	
		Boom Boats				
Designator		**Vessel**	**Assignment**		**Location**	**ETA**
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
BG	WB2	Gulf [illegible]	Source	Boom tow	MC-252	
MSR	WB2	Ms. Alicia	Source	Boom tow	Venice	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
SI	WB2	St. Ignatius [illegible]	Source	Boom tow	MC-252	
HC	WB2	Hercules	Source	Boom tow	Enroute	
BR	WB2	Bryan	Source	Boom tow	MC-252	
MS	WB2	Miss Marie	Source	Boom tow	MC-252	
MR	WB2	Mr. Randolph	Source	Boom tow	MC-252	
BG	WB2	Black Gold	Source	Boom tow	MC-252	
DF	WB2	Dixie Fish	Source	Boom tow	MC-252	
SH	WB2	Sea Hawk	Source	Standby	Venice	
		Crew/Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	
		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

Task Force	Vsl Name	Proposed Box to Operate	Future Plans	Notes / Current location
SUP	M/V Transporter, Date O/S: 25 May 0600R	General OP area	Support	14 nm NW of SW pass
SUP	Tug Angelica & T/B Valient Date O/S: 25 May 2000$	General OP area	Arrive o/s; Lightenng	14 nm NW of SW pass
SUP	Tug Clinton Cenac & T/B 2602 Date O/S: 28 May 1900R	N/A	Arrive o/s; Lightering	Moored Port Fourchon / Pump Issues
TFL	M/V Bumble Bee, Date O/S: 24 May 2000R	N/A	C/C On Scene	IVO LOOP
TF1	M/V Odyssey, Date O/S: 7 June 10	E of SW Pass	Skimming	14 nm NW of SW pass
TF1	M/V Queen Bee	E of SW Pass	Skimming	
TF2	M/V Odyssey Quest, Date O/S: 26 May 0600R	E of SW Pass	Skimming	14 nm NW of SW Pass
TF2	M/V Odyssey Mariner Date O/S: 26 May 1600R	E of SW Pass	Skimming	14 nm NW of SW Pass
TF3	M/V Miss Megan	E of SW Pass	Skimming	
TF3	M/V Sir Lancelot	E of SW Pass	Skimming	
TF4	M/V Laurent Lacoste, Date O/S	E of SW Pass	Skimming	14 nm NW of SW Pass
TF4	M/V Gulf Scout, Date O/S: May	E of SW Pass	Skimming	14 nm NW of SW Pass
TF5	M/V NRC Admiral	E of SW Pass	Skimming	
TF5	M/V C Aggressor, Date O/S: May	E of SW Pass	Skimming	14 nm NW of SW Pass
TF6	M/V Pope Benedict, Date O/S: 9 June 10	E of SW Pass	Skimming	14 nm NW of SW pass
TF6	M/V Reb Bordelon		Moored	Fourchon, LA
TF6	M/V Sandy Clipper	E of SW Pass	Skimming	
SUP	M/V Slap Shot	E of SW Pass	Support	
TF6	M/V NRC Perseverance	E of SW Pass	Enroute	
SUP	M/V Miss Lilly		Moored	Fourchon, LA
TF7	M/V HOS North	E of SW Pass	Skimming	
TF7	M/V Gulf Influence	LOOP	Skimming	LOOP
TF8	M/V NRC Seahorse 6	E of SW Pass	Skimming	
TF8	M/V NRC Seacor Pride	E of SW Pass	Skimming	
TF8	M/V NRC Resolve Engineer	E of SW Pass	Skimming	

Attachment 4

QA/QC SMART REPORT

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 1 Date: 6/19/2010

Operational Period: 20100619 0900 to 20100619 1530

Data Review (Check documents that were reviewed)

- [x] Unit Log - ICS 214-CG
- [x] Photographs (How many reviewed? 10)
- [x] Photo Log
- [x] Dispersant Observation Reporting Form 30

Assessment (Check appropriate box(s))

- [x] Concur with SMART observer findings (reasonableness of findings)
- [ ] Issues of note from data review. Briefly describe.

Sea state marginal

- [x] Dispersant is effective based on review of Activity Log, photographs, and photo log.
- [ ] Results inconclusive with respect to dispersant effectiveness.
- [ ] Other. Briefly describe.

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name [redacted] Signature [redacted] Date: 6/17/10

Reviewed by NOAA SSC (Print name, sig

Name [redacted] Signature [redacted] Date: 6-17-10

bp

Doug Suttles
Chief Operating Officer

Exploration & Production
BP America Inc
501 WestLake Park Boulevard
Houston, TX 77079

June 22, 2010

Rear Admiral James A. Watson
Federal On-Scene Commander
1250 Poydras Street
New Orleans, LA 70113

Direct 281 366 3969
Fax 281 366 7239
Doug.Suttles@bp.com

Weekly Source Control Surface Dispersant Plan (June 24 through 30, 2010)

Dear Admiral Watson,

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") submitted a weekly Source Control Surface Dispersant Plan for the week June 17 to June 23, which you approved on June 16. The plan allowed for a maximum daily application volume (calendar day) of 6,000 gallons, unless more was required to control VOCs. From June 17 through June 21, the average daily volume applied was ~2,200 gallons. The maximum daily application was 5,776 gallons on June 19.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

BP respectfully requests approval of the Weekly Source Control Dispersant Plan for June 24 though June 30, as follows:

Date	Expected Maximum Volume per calendar day (gals)
June 24	6000
June 25	6000
June 26	6000
June 27	6000
June 28	6000
June 29	6000
June 30	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Douglas J. Suttles

Approval granted subject to the above.

Date: 6/23/10

James A. Watson IV
Rear Admiral, USCG
Federal On-Scene Commander

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

Recommended actions for VOC management:

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 22, 2010

Dear Admiral Watson

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has five (5) spotter visual reports from 22 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 23 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating scattered showers and thunderstorms with winds 10-15 knots SSE, waves 2 feet, ceiling 3,500', visibility 5-10 nm with a 50% chance of rain.

Houma Unified Command anticipates that, due to the weather, location, distribution (1,800 sq mi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 23, 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means. The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming

vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service. A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the *M/V International Peace* will be conducting sampling operations. QA/QC SMART report for 21 June, 2010.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks determined after tomorrow mornings reconnaissance flights. The reason for this request is that weather during most of the day prevented over flights to locate the oil slicks and conduct spraying. It is expected that since both skimming and ISB operations were limited or not operational today and ISB will not be operational tomorrow that there will be significantly more oil slicks in the operational area. We have identified oil slicks that require over 10,000 gallons of dispersant, and request approval to commerce early operations with 5,000 gallons of dispersant to initial slicks identified in the first morning over flights.

Sincerely,

Houma Unified Command

Exemption approved subject to the above

Roy A Nash Date: 6/23/2010

James A. Watson
Rear Admiral, USCG
FOR Federal On-Scene Coordinator

NOTE: TOP HAT was removed under an "emergency drive off" based on alarms received at 0943. HAT is off at time of signing. RA Nash

Attachment 1

Dispersant Zone Map for 23 June 2010 with Oil Targets from Spotter Operations on 22 June

TABLE 1
Dispersible Oil Report June 22, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AX	4	8,160	45	887
AM	1	19,200	10	9,600
TOTAL	5	27,360		10,487

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

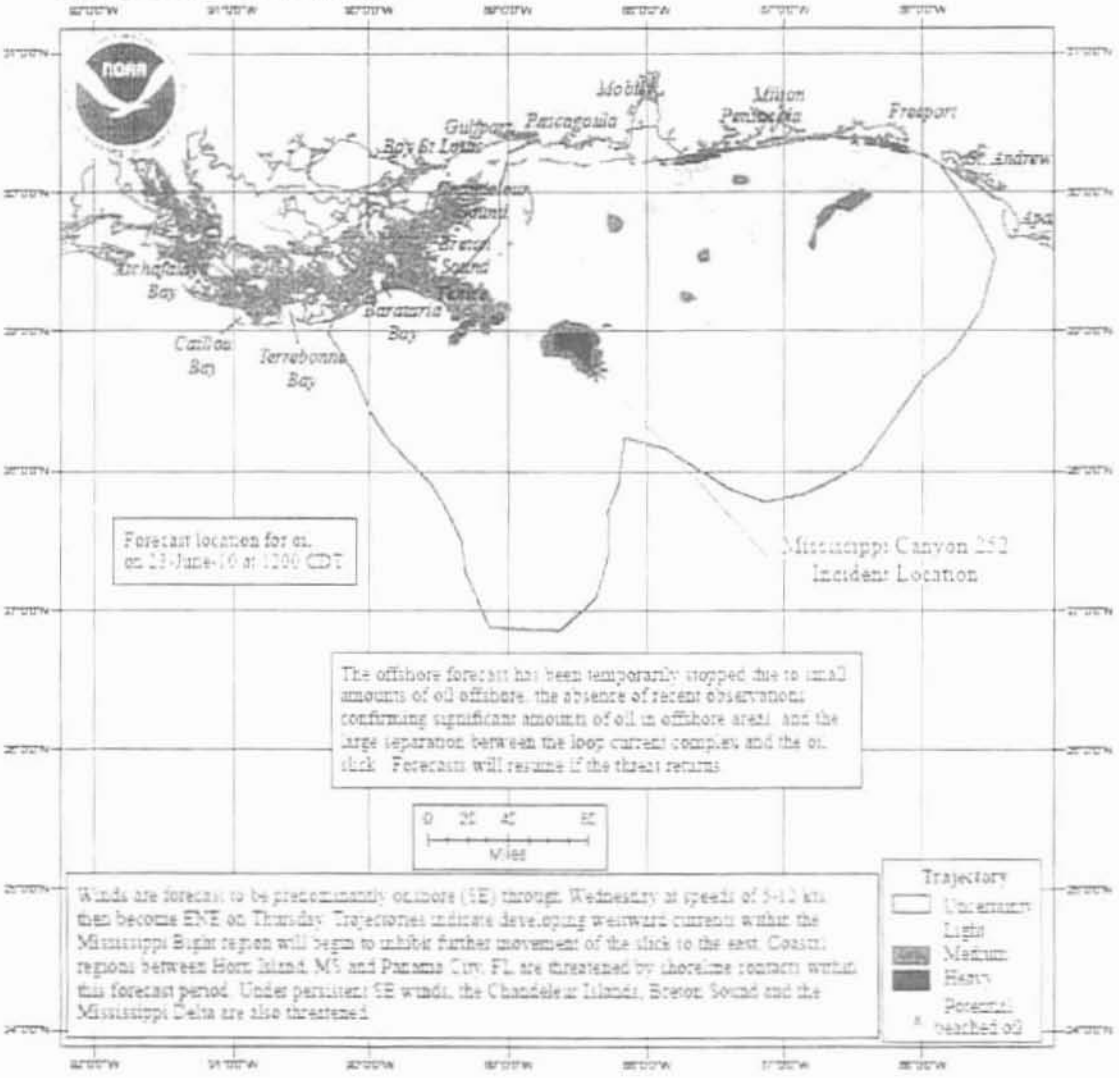
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Wednesday, 6/23/10

Date Prepared: 2100 CDT, Monday, 6/21/10

This forecast is based on the NWS spot forecast from Monday, June 21 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Sunday satellite imagery analysis (NOAA/NESDIS) and Monday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast
June 22nd PM

Attachment 3

Vessel Status Board

		SOURCE			Date/Time 22 June 0700	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252	
MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC-252	
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC-252	
VAR	RV1/Weir	Virginia Responder	MSRC	Pit stop	F1Jackson	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
HOSS	RV1 Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
SV	RV1/Weir	Seacor Vanguard (Current Buster 2 ea)	Buster	Skimming	MC-252	
JC	RV1/Weir	John Coghill (Current Buster)	Buster	Skimming	MC-252	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
PER	RV1/Belt	NRC Perseverance	NRC	Mechanical	MC-252	
LF	RV1 Belt	Lynne Finley (NRC Marco)	NRC	Skimming	MC-252	
LIB	RV1/Disk	NRC Liberty (Disk)	NRC	Skimming	MC-252	
NG	RV1/Weir	Naomis G (w/CGA FRU)	CGA	Skimming	MC-252	
IT	RV1/Weir	International Trapper (w/CGA FRU)	CGA	Skimming	MC-252	
CAR	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Equipment	Venice	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Skimming	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	Gulfport	
RP	RV1/Belt	Resolute Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Skimming	MC-252	
HM	RV1/Weir	HOS Mystique (Dutch arm)		Skimming	MC-252	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Skimming	MC-252	
JMC	RV1/Weir	Ocean Builder (?/JMC3009)	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
		Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Equipment	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

Attachment 4

QA/QC SMART REPORT

Deepwater Horizon Incident – Incident Command Center

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (ICS 214 CG), and pre- and post-application photographs and associated photo log of dispersant aerial operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team # 4 Date 6/21/2010

Operational Period 2010-06-21 0400 to 2010-06-21 [illegible]

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214 CG

☐ Photographs (How many reviewed? ___) [illegible]

☐ Photo Log

☑ Dispersant Observation Reporting Form 10

Assessment (Check appropriate boxes)

☐ Consist with SMART Observer findings (reasonableness of findings)

☐ Issues or flags in data review. Briefly describe

[illegible]

☐ Dispersant ineffective based on review of Activity Log, photographs and photo log

☐ Results inconclusive with respect to dispersant effectiveness

☒ Other. Briefly describe

[illegible]

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name [redacted] Signature [redacted] Date [illegible]

Reviewed by NOAA SSC (Print name, sign)

Name [redacted] Signature [redacted] Date [illegible]

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 23, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 23 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 24 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating isolated showers and thunderstorms with winds 10-15 knots SE, waves 2 feet, ceiling good except 1,000 around thunderstorms, visibility 5-10 nm and chance of rain is 20%.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sq mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 24, 2010.

Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the

dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service. A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be conducting sampling operations. QA/QC SMART report for June 22, 2010 are not available.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks determined after tomorrow mornings reconnaissance flights. The reason for this request is we expect to see substantially more oil slicks due to the removal of the top cap, no ISB operations and reduced skimming operations. We request to commerce early operations with 5,000 gallons of dispersant to initial slicks identified and then request a subsequent amount to spray based on the full spotter reports.

Sincerely,

Houma Unified Command

Exemption approved subject to the above.

Roy A. Nash

ROY A. NASH

Date: 6/24/2010

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Deputy

Attachment 1

Dispersant Zone Map for 24 June 2010 with Oil Targets from Spotter Operations on 23 June

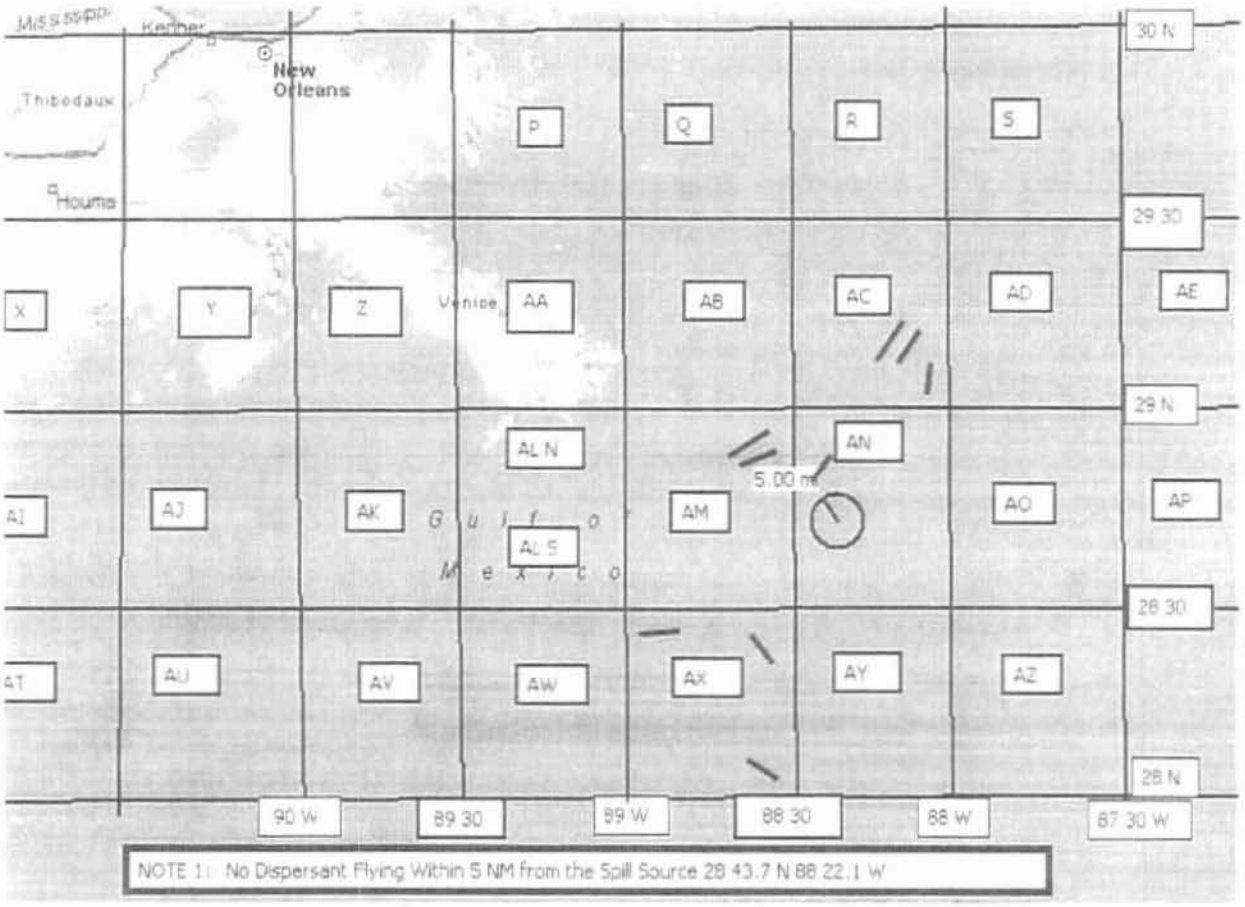


TABLE 1
Dispersible Oil Report June 24, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	3	12,800	20%	10,800
AM	2	72	40%	140
AN	1	31	30%	960

AX	3	810	30%	1,850
TOTAL	9	12,903		**13,750**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

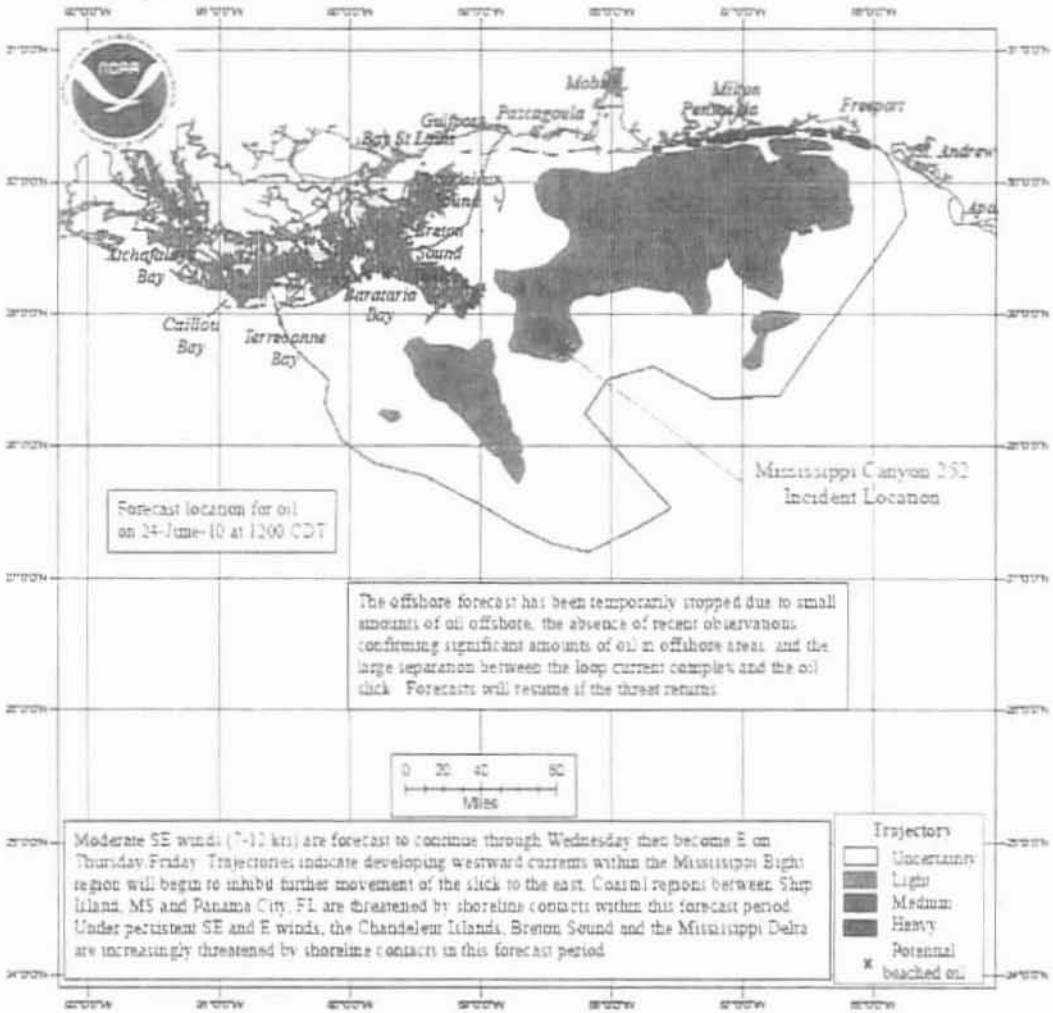
NOAA/NOS/OR&R

Nearshore

Estimate for 1200 CDT, Thursday, 6/24/10

Date Prepared 2100 CDT, Tuesday, 6/22/10

This forecast is based on the NWS spot forecast from Tuesday, June 22 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast
June 23rd PM

Attachment 3

Vessel Status Board

		SOURCE			Date/Time 23 June 1400	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
LAR	RV1/Wer	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Wer	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Wer	Texas Responder	MSRC	Scheduled Pit Stop	Ft Jackson - 6/23 - 6/25	
MER	RV1/Wer	Maine Responder	MSRC	Skimming	MC-252	
MSR	RV1/Wer	Mississippi Responder	MSRC	Skimming	MC-252	
SOR	RV1/Wer	Southern Responder	MSRC	Skimming	MC 252	
DER	RV1/Wer	Delaware Responder	MSRC	Skimming	MC 252	
VAR	RV1/Wer	Virginia Responder	MSRC	Skimming	MC 252	
FLR	RV1/Wer	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Wer	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
HOSS	RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
SV	RV1/Wer	Seacor Vanguard (Current Buster 2 ea)	Buster	Equipment	Fourchon - 6/22	
JC	RV1/Wer	Seacor John Coghill (Current Buster)	Buster	Skimming	MC-252	
LR	RV1/Wer	Lana Rose (NRC VOSS)	NRC	Skimming	MC-252	
PER	RV1/Belt	NRC Perseverance	NRC	Reassign Non-Source	Non-Source	
LF	RV1/Belt	Lynne Frink (NRC Marco)	NRC	Equipment	Venice - 6/22	
LIB	RV1/Disk	NRC Liberty (Disc)	NRC	Equipment	Venice - 6/22	
NG	RV1/Wer	Noonie G (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
IT	RV1/Wer	International Trooper (w/CGA FRU) - Ampol	CGA	Skimming	MC-252	
KB	RV1/Wer	Kim B (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
MA	RV1/Wer	Mr. Alex (w/CGA FRU) - Ampol	CGA	Skimming	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	Gulfport - 6/22	
RP	RV1/Belt	Revolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Wer	Pauline T (NRC VOSS)	NRC	Skimming	MC 252	
SW	RV1/Wer	Seacor Washington (Dutch arm)		Skimming	MC-252	
HM	RV1/Wer	HOS Mystique (Dutch arm)		Skimming	MC 252	
SW	RV1/Wer	HOS Sweetwater (Dutch Arm)		Skimming	MC-252	
JMC	RV1/Wer	Ocean Raider 17/JMC3009	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	Gulp	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Wer	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Wer	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Wer	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Offloading	Pilottown	
155	TV1	K-Sea CBL-155 (Rebel)	TF Storage	On-scene	MC-252	
Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	Non Operational	Fourchon	

POB Status Report MC 252 Source Control site
23nd June

			Personnel			Heli		Return		
Drilling Vessels	**Evade Sequence**	**Operational Activity** (or comment)	**Non Essential**	**Essential**	**Total**	**Deck**	**T-Time** (hrs)	**Return Sequence**	**Restart time** (once in field) (hrs)	**Restart Operation**
Development Driller 2	Per T-Time	Relief well	37	126	163	Yes	96	Asap	72	relief well
Development Driller 3	Per T-Time	Relief well	78	118	196	Yes	114	Asap	90	relief well
Containment Vessels	**Evade Sequence**	*Drilling sub totals*	*115*	*244*	*359*			**Return Sequence**		
Discoverer Enterprise	1	Containment & flare	44	142	186	Yes	114	2	38	Top hat #4
Helix Q4000	2	Flare	0	134	134	Yes	69	[illegible]	72	Containment
Helix Producer 1	Not in Field	Containment	33	43	76	Yes	1	-		-
Clear Leader	Not in Field	Containment	25	119	144	Yes	24		-	-
Toisa Pisces	Not in Field	Containment			0	Yes		-	-	-
Construction Vessels	**Priority to Remain**	*Containment sub totals*	*102*	*438*	*540*			**Priority to Return**		
Skandi Neptune	P1	Dispersant	49	27	76	Yes	6	P1	12	Dispersant
Ocean Intervention 3	P1	Multipurpose construction	6	53	59	Yes	1	P1	Typically 6 hours	Construction
HOS Achiever	P2	CDP construction						P1		CDP construction
Boa Deep C	P2	Multipurpose construction	38	37	75	Yes	1	P2		Construction
Olympic Challenger	P2	Construction	47	21	68	Yes	0	P2		Construction
Helix Express	P3	CDP construction	13	94	107	Yes	12	P3		CDP construction
Chouest Holiday	P3	CDP construction						P3		CDP construction
West Sirius	P3	CDP construction			0	Yes	64	P3		CDP construction
Support Vessels	**Evade Sequence**	*Construction sub totals*	*153*	*232*	*385*			**Priority to Return**		
Off-take hose string		Off-take hose string	-	-	-	-				
➖ Seacor Venture	1	Hose Support Vsl	-			No	28	2	6	
➖ Mary Moran		Hose Support Vsl	-			No				
Massachusetts & Paul T	-	Off-take ATB	-		0	Yes	4	3	6	
➖ Catherine C. Moran		Support Tug	-							
Overseas Cascade	1	Off-take Tanker	-		0	No	4	3	6	
➖ Forte		Support Tug		10	10	No				
Loch Rannoch	Not in Field	Storage Tanker	-	-	-	Yes	Typically 2	3	Typically 4	
Navion Fennia	Not in Field	Storage Tanker	-		-			3		
Evi Knutson	Not in Field	Storage Tanker	-	-	-	-		3		
Normand Commander	3	Large vsl - fire support	-	20	20	Yes	1	[illegible]	1	Fire support
Rem Forza	3	Large vsl - fire support	-	27	27	Yes	1	[illegible]	1	Fire support
Tyler Stephen	1	Fire support	-	20	20	No	1	[illegible]	1	Fire support
Monica Ann	1	Fire support	-	20	20	No	1	[illegible]	1	Fire support
Adriatic	2	Dispersant	-		0	No	0	[illegible]	0	Dispersant
HOS Super H	2	Dispersant	5	7	12	No	1	[illegible]	1	Dispersant
		Support sub totals	*5*	*104*	*109*					
		Total Personnel	**222**	**786**	**1008**					

* MODU's and Off-take hose have additional 24 hours evade time

To be added or removed from this distribution list email MC252_simops@bp.com

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 24, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has ten (10) spotter visual reports from 24 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 25 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating isolated showers and thunderstorms in PM with winds 8 -13 knots East, waves 1-2 feet, ceiling good except 1,000 around thunderstorms, visibility 5-10 nm and chance of rain is 20% in the afternoon.

Houma Unified Command anticipates that, due to the weather, location, distribution (5,400 sq.mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 25, 2010.
Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided:

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means. The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming

vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. M/V *International Peace* is returning to port and conducting crew changes. M/V *International Peace* operations for 25 June will depend upon departure time from port. QA/QC SMART reports being developed for June 22 and 23, 2010.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks determined after tomorrow mornings reconnaissance flights.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~28,200~~ 14,400 gallons for a period not to exceed 12 hours. We request to commerce early operations with 5,000 gallons of dispersant to initial slicks identified and then request a subsequent amount to spray based on the full spotter reports.

Sincerely,

Houma Unified Command

Exemption approved subject to the above.

Date 6/25/10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 25 June 2010 with Oil Targets from Spotter Operations on 24 June

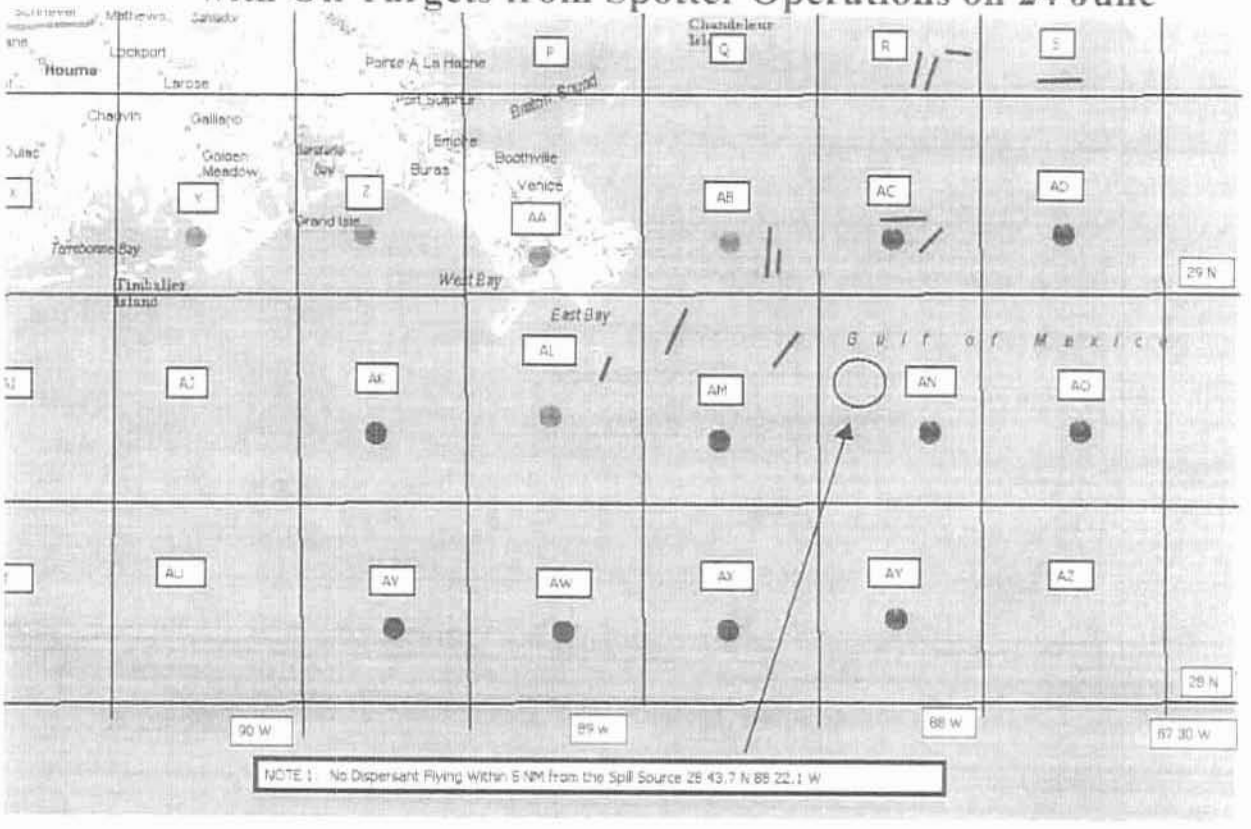


TABLE 1
Dispersible Oil Report June 25, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
R	3	614	20%	565
S	1	160	30%	240
AC	2	880	30%	1,320
AB	2	11840	45%	15,040

AM	2	20,480	10%	10,240
AL	1	1600	10%	800
TOTAL	11	35,574		**28,205**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC 252

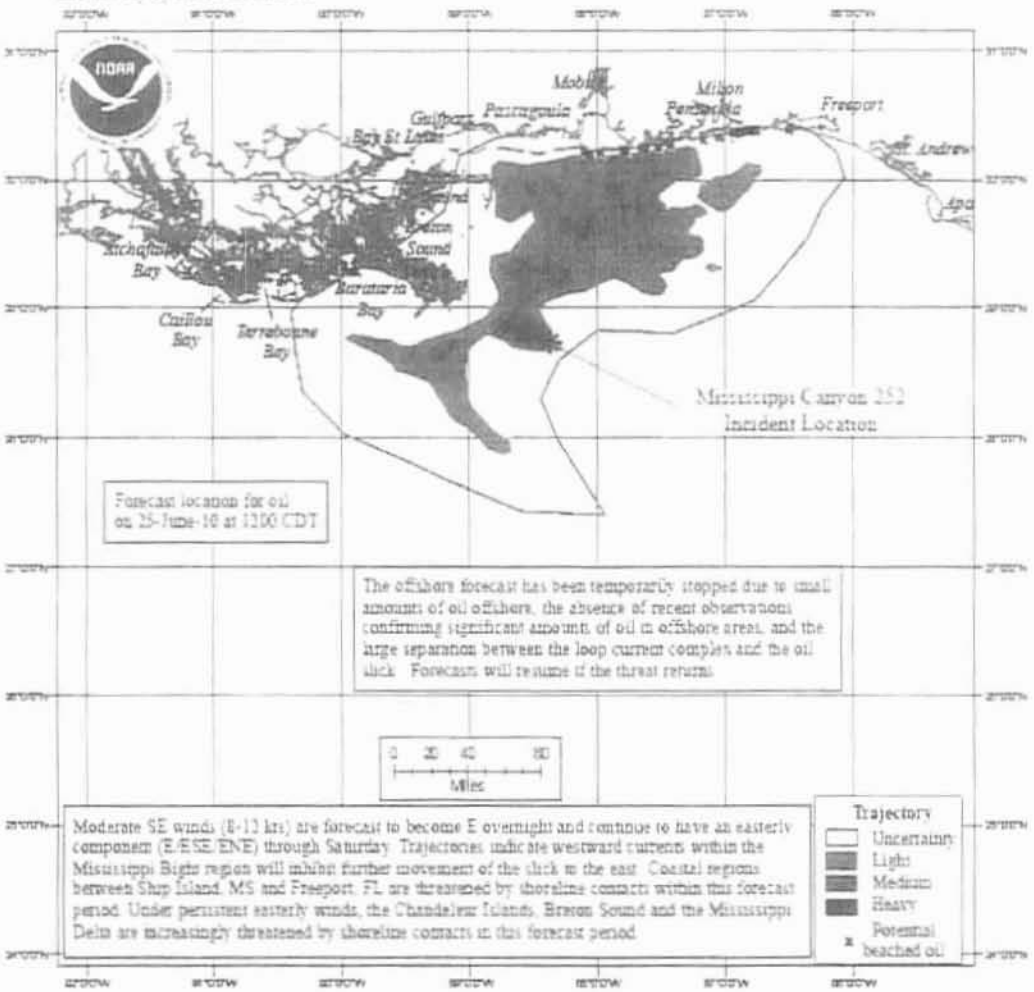
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Friday, 6/25/10

Date Prepared: 2100 CDT, Wednesday, 6/23/10

This forecast is based on the NWS spot forecast from Wednesday, June 23 PM. Currents were obtained from several models (West Florida Shelf USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast
June 24th PM

Attachment 3

Vessel Status Board

DEEPWATER HORIZON
SOURCE GROUP

Date/Time 24 June 2010 1600

	TOTAL	SKIMMING	OFFLOADING	Unscheduled Maintenance	Scheduled Maintenance
SKIMMERS	26	18	2	5	1
TANK BARGES	5	N/A	1	1	
INLAND BARGES	5	N/A	0	0	
WORKBOATS	22	N/A	N/A	0	

	ON SCENE WEATHER	COMMENTS:
WIND	E 10	
WAVE	1'	
SWELL	SE 2 4'	

Kind/Type	Vessel	Assignment	Status	Location	ETA
RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
RV1/Weir	Texas Responder	MSRC	Scheduled Maint.	Ft. Jackson - 6/23 - 6/25	
RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
RV1/Weir	Southern Responder	MSRC	Skimming	MC 252	
RV1/Weir	Delaware Responder	MSRC	Skimming	MC 252	
RV1/Weir	Virginia Responder	MSRC	Skimming	MC 252	
RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
RV1/Weir	Seacor Vanguard (Current Buster 2 ea)	Buster	Unscheduled Maint.	Fourchon - 6/22	
RV1/Weir	Seacor John Coghill (Current Buster)	Buster	Skimming	MC-252	
RV1/Weir	Lana Rose (NRC VOSS)	NRC	Offloading	Venice - 6/24	
RV1/Belt	Lynne Frink (NRC Marco)	NRC	Unscheduled Maint.	Venice - 6/22	
RV1/Disk	NRC Liberty (Disc)	NRC	Skimming	MC 252	
RV1/Weir	Noonie G (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
RV1/Weir	International Trooper (w/CGA FRU) - Ampol	CGA	Skimming	MC-252	
RV1/Weir	Kim B (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
RV1/Weir	Mr. Alex (w/CGA FRU)- Ampol	CGA	Skimming	MC-252	
RV1/Belt	Rene (Navy Marco)	Fed	Unscheduled Maint.	Gulfport - 6/22	
RV1/Weir	Pauline T (NRC VOSS)	NRC	Offloading	Venice - 6/24	
RV1/Weir	Seacor Washington (Dutch arm)		Skimming	MC-252	
RV1/Weir	HOS Mystique (Dutch arm)		Unscheduled Maint.	Fourchon	
RV1/Weir	HOS Sweetwater (Dutch Arm)		Skimming	MC-252	
RV1/Belt	Resolve Pioneer (NRC Marco)		Skimming	MC-253	
RV1/Belt	NRC Admiral (Marco)		Skimming	MC-254	
RV1/Weir	JMC-300/RHEA (Gulp 2)		Unscheduled Maint.	MC-255	

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

July 8, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Command had thirteen (13) spotter/recon flights on 8 July from aircraft out of both Stennis and Houma Base. No spray missions were conducted so no dispersants were applied from our 10,000 gallon pre-approval. Morning observations indicated dispersible oil but evaluation by the Aerial Dispersants Group judged it to be more appropriate for skimming and the Offshore Group were given the coordinates to conduct skimming operations. Late in the afternoon, visible dispersible oil began to appear and two spray missions were evaluated for about 8,000 gallons, however being late in the day and our inability to move non-skimming skimmers fast enough from the area, we cancelled the spray missions.

Oil slicks were observed in the morning but mostly sheen but some dispersible oil was located. Afternoon recon flights began locating dispersible oil near the source that was not evident during the morning. We theorize that oil that has been in the adverse weather environment for the previous few days is now becoming visible as the weather/sea state improves.

As the weather continues to moderate, skimming and ISB operations will be available tomorrow for a full day of operation. Weather conditions are excellent for aerial dispersant operations.

The Friday forecast calls for 5%-10% precipitation, winds of 4-7 knots with easterly and variable winds, wind waves of 1 foot, significant wave height of approximately 2 feet, with maximum wave heights around 3 feet. Ceilings are forecasted to be unlimited with visibility 15 nm.

The NOAA Surface Oil Forecast for July 9th shows extensive areas of heavy and medium oil (Attachment 2) that are or may adversely impact the shoreline, including sensitive wetlands.

Houma Unified Command continues to anticipate that the most viable means of response will be the use of dispersants to reduce the risk of shoreline impact. The heavy weather and significant sea state over the past week enhanced the natural dispersion of the oil and also made it very difficult for spotter aircraft to see surface oil. Aerial Dispersants believes that as the sea state moderates, surface oil may become more visible than it has been for the past week.

Prior to spray operations tomorrow morning, the recon/spotter aircraft will identify the high value targeted slicks and we will prepare a report of the location and dispersant volumes needed for application as soon as practicable.

Pursuant to a request this date from Unified Command, the following information is provided.

A-Estimated size of identified dispersible oil slick targets proposed in designated zones: See Attachment 1.
B-Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The weather forecast should be suitable for skimming, ISB and dispersant operations. We anticipate that skimming and ISB resources will not be sufficient to handle the oil that will be observed as the weather improves and will require to be supplemented with aerial dispersants.

- **Skimming units:** Recommencement of skimming operations
- **ISB Assets:** Recommencement of burn operations
- **A Whale:** Operating offshore for testing of system.

C-Today, offshore recovery assets, skimmers, etc. were in port due to adverse weather and it is anticipated that these vessels will recommence skimming operations sometime during tomorrows daylight hours. ISB operations did not take place today and they are anticipated to recommence burn operations tomorrow.

D-It is planned to conduct Tier 1 helicopter SMART over flights to observe dispersant operations tomorrow should they be conducted. SMART Team Tier 1 QA/QC checklists are not yet available from the July 6th mission.

E-M/V *International Peace* is currently in port. No SMART Tier 2 or Tier 3 monitoring will be conducted.

F-The A Whale is subject to the 2 NM no spray criteria.

G-Forecast sea state through Friday showing skimming and ISB limitations is provided as Attachment 5.

In accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A. As aerial dispersant is the primary response tool for tomorrow, we have mobilized the reconnaissance and deployment resources and ***request an initial 10,000 gallons*** for early opportunistic targets. This will be coupled with further reconnaissance and target identification tomorrow morning. A subsequent request will be forwarded later in the day based on the full set of spotter reports.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

James A. Watson

Date: 7-9-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator (FOSC)

Attachment 1

Dispersant Zone Map for 9 July 2010 with Oil Targets from Spotter Operations on 8 July

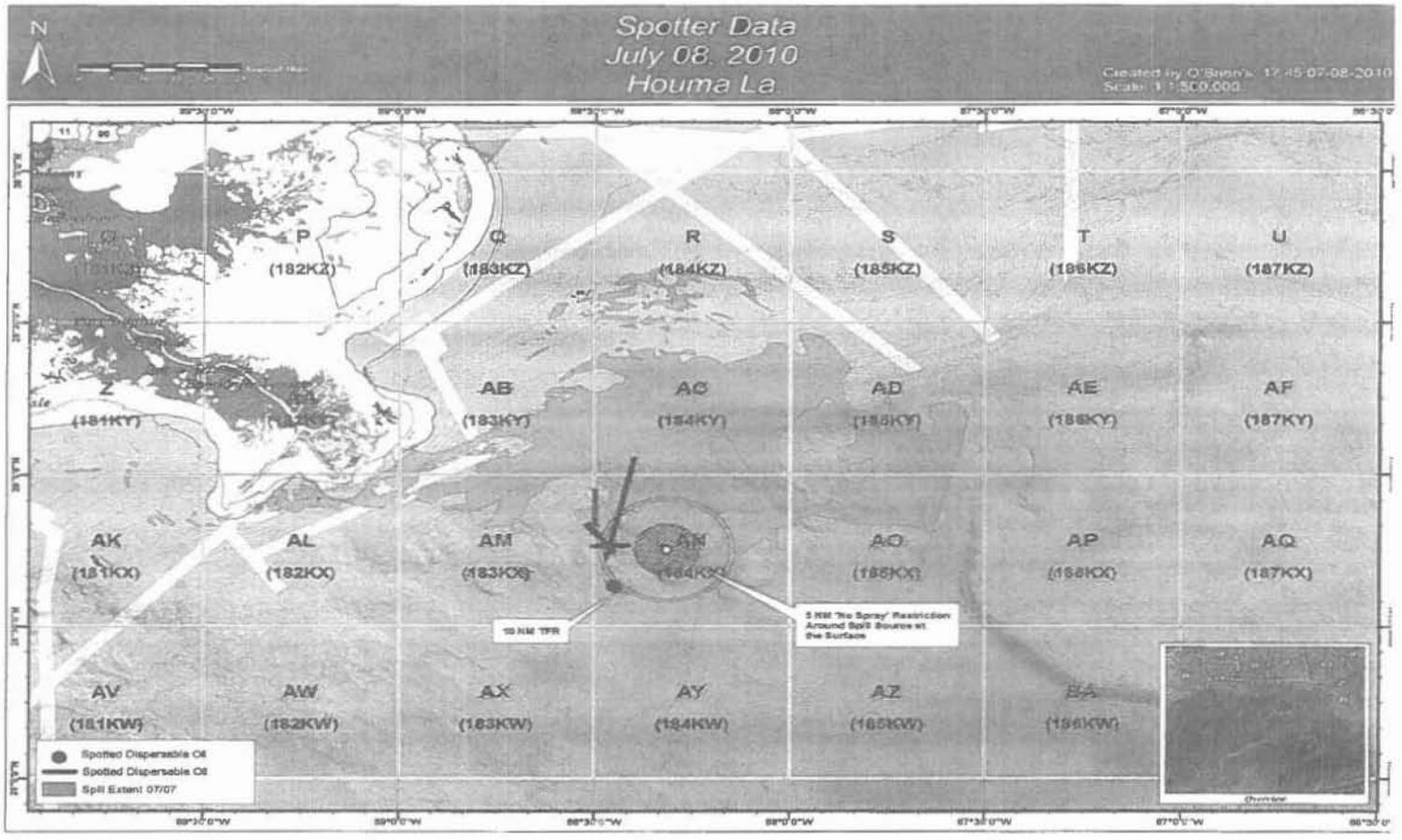


TABLE 1* Dispersible Oil Report July 8, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed** (1/20 DOR)
AC/AN	2	6560	35%	11,400
AN	1	3680	30%	6000
AM	1	85	25%	107
Dispersants were Sprayed Today- 0 - The requested amount for 7/9/10 will be based on tomorrow mornings reconnaissance An **initial request for 10,000 gals**. is being made due to the anticipation of finding dispersible oil requiring that amount of dispersants. Estimated Dispersant Needed 7/9/2010 based upon full morning spotter reports				**17,507**

***Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.**

****Note: <u>Dispersant needed is based upon area in acres x % dispersible oil x 5 gallons per acre</u>**

Attachment 2

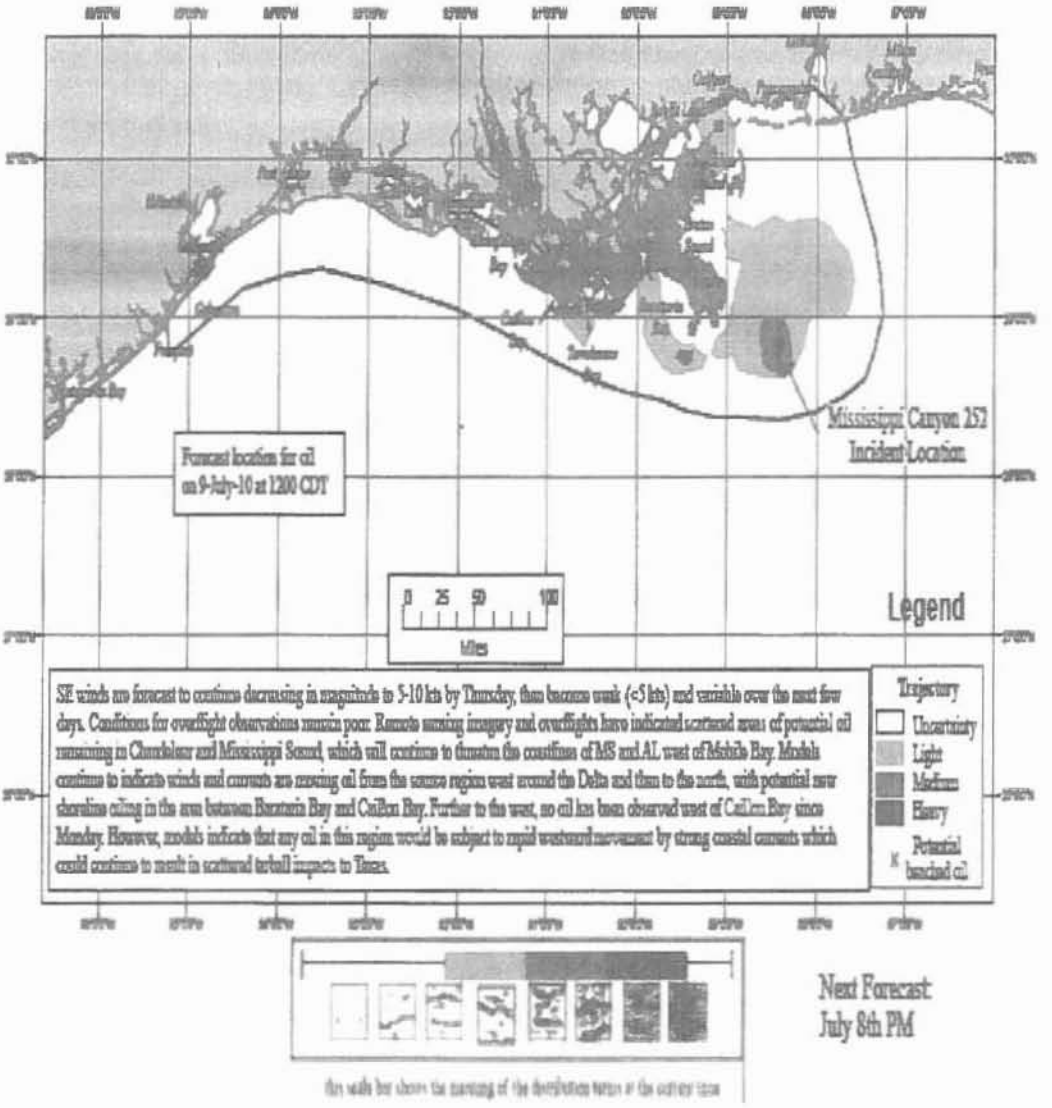
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Friday, 7/09/10

Date Prepared: 2100 CDT, Wednesday, 7/07/10

This forecast is based on the NWS spot forecast from Wednesday, July 7 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TCOA/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday satellite imagery analysis (NOAA/NESDIS) and overflights. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



SE winds are forecast to continue decreasing in magnitude to 5-10 kts by Thursday, then become weak (<5 kts) and variable over the next few days. Conditions for overflight observations remain poor. Remote sensing imagery and overflights have indicated scattered areas of potential oil remaining in Chandeleur and Mississippi Sound, which will continue to threaten the coastlines of MS and AL west of Mobile Bay. Models continue to indicate winds and currents are moving oil from the source region west around the Delta and then to the north, with potential new shoreline oiling in the area between Barataria Bay and Caillou Bay. Further to the west, no oil has been observed west of Caillou Bay since Monday. However, models indicate that any oil in this region would be subject to rapid westward movement by strong coastal currents which could continue to result in scattered tarball impacts to Texas.

Next Forecast:
July 8th PM

The walls for show the warning of the destination region of the current time

Attachment 3

Vessel Status Board

EEPWATER HORIZON Date/Time July 8, 2010 07JUL BBLS Skimmed: 0
FFSHORE NON-SOURCE SKIMMING GROUP 1

		TOTAL	SKIMMING	OFFLOADING	Unscheduled Maintenance	Scheduled Maintenance	Enroute	Ordered
SKIMMERS		12	0		1	1	1	
TANK VESSELS		4	N/A				2	
'ESSELS OTHER		1	N/A					
WORKBOATS		6	N/A	N/A				

		ON SCENE WEATHER	COMMENTS: Skimming vessels are on standby/anchorage until weather conditions permit for safe skimming operations.
WIND		SE 10-15KT	
WAVE		4 - 6'	
SWELL			

Kind/Type	Skimmer Type	Skimming Vessel	Assignment	Status	Location	ETA	Notes:
CG VOSS	RV1/Weir	Orleans	GulfMark	Standby	IVO Baptiste Collette, MS River		Moored at anchorage area
CG VOSS		Charles M. Callais		Standby	IVO Baptiste Collette, MS River		Moored at anchorage area
CG VOSS	RV1/Weir	Odysea Quest	NRC	Standby	IVO Baptiste Collette, MS River		Moored at anchorage area
CG VOSS	RV1/Weir	Odysea Mariner	NRC	Standby	IVO Baptiste Collette, MS River		Moored at anchorage area
CG VOSS	RV1/Weir	Miss Megan	NRC	Standby	Moored Venice		
CG VOSS	RV1/Weir	Sir Lancelot	NRC	Standby	Head of Passes Anchorage, MS		Moored
CG VOSS	RV1/Weir	Lauren Lacoste	NRC	Standby	Enroute Port Fourchon		Moored
CG VOSS	RV1/Weir	Gulf Scout (Being Demobed/	NRC	Enroute	Replacement vessel enroute	Coming Offline	Replacement: Callais Navigator
CG VOSS	RV1/Weir	C Aggressor	NRC	Standby	Moored Venice		
Supsalv ESSM	RV1/Weir	Pope Benedict XVI	NRC	Unscheduled Maint.	Moored Port Fourchon	ETA 06JUL10	Reconfiguration
CG VOSS	RV1/Weir	HOS Express	BP America	Scheduled Maint.	Enroute Port Fourchon		HOS Express replaced HOS North
CG VOSS	RV1/Weir	Gulf Influence	NRC	Standby	Head of Passes Anchorage, MS		
		Offshore Barges				Remaining Storage bbls	
TV2							
TV2		TV 2602/ TB Clinton Cenac	NRC	Standby	Moored West Delta Area	13000	
TV2		TV GCS 236/ TB Mary Gellatly	BP	Standby	Moored Venice	37000	
TV2		TV Connecticut/ Tug Joan Moran	BP	Standby	Moored West Delta Area	37000	Completing USCG Inspection

		Crew/Re-supply					
WB2		Transporter	Re-Supply	Standby	IVO Baptiste Collette, MS River		
WB2		Wateree	Shuttle	Supply Run	Moored Fourchon		
WB2		Miss Lauren	Shuttle	Supply Run	Moored Fourchon		
WB2							
WB2		Jambon Supplier	2602 Support	Standby	Moored Venice		
WB2		Reb Bordelon	CT Support	Scheduled Maint.	Moored Fourchon		Outfitting to support CT Barge
		Jason K McCall		Standby	Moored Fourchon		
Kind/Type		Command and Control	Assignment	Status	Location		
WB2		Bumble Bee	NRC	Command	Enroute Venice, LA		VHF radio OOC

DEEPWATER HORIZON Date/Time 7/8/10 8:51
Offshore Skimming Group 2

Kind	Total	Skimming	Offloading	Unscheduled Maintenance	Scheduled Maintenance	Enroute	Ordered	Standby
OSRV	25	0	1	1	1	18	0	6
TANK VESSELS	5	N/A	1	0	0	0	0	4
VESSELS OTHER	2	N/A	N/A	0	0	2	0	0
WORKBOATS	18	N/A	N/A	0	0	4	0	14
TUGBOAT	8	N/A	N/A	0	0	0	0	8

	ON SCENE WEATHER	Comments:
WIND	14-16 kts ESE	
WAVE	6'	
SWELL	Unavailable	

	Other Vessels						Telephone
	Vessel	Assignment	Status	Location	ETA		
VSO	Seacor Lee	Command	Enroute	MC-252		Source Group Command Vessel	713-568-9635
VSO	Seacor Pride (offloading vessel)	Offload Support	Enroute	MC 252			713-395-7842

Kind/Type	Vessel	Assignment	Status	Location	ETA	Notes:	Telephone
OSRV/RV1	Louisiana Responder	MSRC	Scheduled Maint	Ft. Jackson			
OSRV/RV1	Gulf Coast Responder	MSRC	Enroute	MC 252		WX Standby	
OSRV/RV1	Texas Responder	MSRC	Enroute	MC 252		WX Standby	
OSRV/RV1	Maine Responder	MSRC	Enroute	MC 252		WX Standby	
OSRV/RV1	Mississippi Responder	MSRC	Enroute	MC 252		WX Standby	
OSRV/RV1	Southern Responder	MSRC	Standby	Venice		WX Standby	
OSRV/RV1	Delaware Responder	MSRC	Enroute	MC 252		WX Standby	
OSRV/RV1	Virginia Responder	MSRC	Enroute	MC 252		WX Standby	
OSRV/RV1	CGA HOSS Barge (Crosby Sun)	TF HOSS	Offloading	Pilot Town		WX Standby	713-395-7472
OSRV/RV1	Seacor Vanguard (Current Buster 2 ea)		Standby	Venice		WX Standby	985-518-9842
OSRV/RV1	Seacor Vantage (Current Buster)	Buster	Enroute	Gulfport		Swapping out with John Coghill	985-746-4692
OSRV/RV1	Bryce Glen (w/CGA FRU) - Ampol	CGA	Enroute	Venice			
OSRV/RV1	International Trooper (w/CGA FRU) - Ampol	CGA	Enroute	Venice		WX Standby	001-88165-149-8485
OSRV/RV1	Kim B (w/CGA FRU) - Ampol	CGA	Enroute	Venice		WX Standby	
OSRV/RV1	Mr. Alex (w/CGA FRU)- Ampol	CGA	Enroute	Venice		WX Standby	
OSRV/RV1	Rene (Navy Marco)	Fed	Standby	Venice		U/W @ 1300 for USCG Inspection	504-208-4601
OSRV/RV1	Seacor Washington (Dutch arm)	Command	Enroute	Fourchon		OSG2 Command Vessel	504-620-5963
OSRV/RV1	HOS Msytique (Dutch arm)		Enroute	Fourchon		WX Standby	832-260-0755
OSRV/RV1	HOS Sweetwater (Dutch Arm)		Enroute	Fourchon		WX Standby	504-620-7502
OSRV/RV1	Candie Clipper (Ocean Buster)		Standby	Fourchon		WX Standby	
OSRV/RV1	JMC-300/RHEA (Gulp 2)		Standby	Anchor		WX Standby	
OSRV/RV1	Kylie Williams (Ocean Buster/vane)		Enroute	Fourchon		WX Standby	337-504-0274
OSRV/RV1	Southern Cross (Ocean Buster)		Unscheduled Maint.	Fourchon		Ocean buster repair	985-360-0201
OSRV/RV1	Amy Chouest (Ocean Buster)		Enroute	Fourchon		WX Standby	
OSRV/RV1	A Whale (fixed weir)		Standby	MC-252		Initial test	011-870-7649-51421

	Offshore Barges				Remaining Storage bbls		
TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	Standby	Pilottown	40,300		
TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Fort Jackson	45000		
TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	Fort Jackson	57000		
TV1	K-Sea DBL-155 (Rebel)	TF Storage	Offloading	Pilottown	125000		646-303-9860
TV1	Energy 8001(Superior Service) Costner	TF Storage	Standby	Fourchon	80000		646-671-0008

	Boom Boats						
	Vessel	Assignment		Location	ETA		
WB2	Sea Fox	Source	Standby	Venice			251-979-3453
WB2	Betty G	Source	Enroute	MC 252			251-404-2691
WB2	Ms. Alissa	Source	Standby	Venice			662-288-3070
WB2	Ms. Addison	Source	Standby	Venice			985-677-1049
WB2	Judienne Marie	Source	Standby	Venice			985-709-7119
WB1	St. Ignatius Loyola	Source	Standby	Venice			850-596-4180
WB1	Hercules	Source	Enroute	MC 252			713-751-6022
WB1	Brutus	Source	Enroute	MC 252			713-751-6023
WB1	Mia Maloy	Source	Standby	Venice			409-939-6873
WB1	Mr Randolf	Source	Standby	MC 252			985-413-9450
WB1	Black Tip	Source	Standby	Venice		Crew change the U/W Noon	228-326-4552
WB1	Dog Fish	Source	Enroute	MC 252			321-961-9304

	Crew/Re-supply						
WB2	Mr. Leroy	Shuttle/Re-supply	Standby	Venice Based			
WB2	Fox	Ampol Re-supply	Standby	Venice Based			713-576-7779
WB2	Jean Perry	Shuttle/Re-supply	Standby	Venice Based			
WB2	Sea Hawk	Shuttle/Re-supply	Standby	Venice Based			
WB2	Chantise G	Shuttle/Re-supply	Standby	Venice Based			
WB2	Ben Charamie	Shuttle/Re-supply	Standby	Venice Based			

Kind/Type	Tugboats	Assignment	Status	Location	ETA	Notes:	
TB	Crosby Sun		Standby			Towing CGA-200	
TB	Kimberly Colle		Standby				
TB	Tara Crosby		Standby				
TB	Crosby Clipper		Standby				
TB	Rebel		Standby				
TB	Superior Service		Standby				
TB	Crosby Eagle		Standby				
TB	Susan Marie		Standby				

DEEPWATER HORIZON
OFFSHORE SKIMMING GROUP III

Date/Time 07/08/10 0800 HRS

Kind	Total	Skimming	Offloading	Unscheduled Maintenance	Scheduled Maintenance	Enroute	Ordered	Standby
SKIMMERS	9	0	0	3	0	6	0	0
TANK VESSELS	2	N/A	0	0	0	0	0	2
VESSELS OTHER	1	N/A	N/A	0	0	1	0	0
WORKBOATS	3	N/A	N/A	0	0	0	0	3
TUGBOAT	3	N/A	N/A	0	0	0	0	3

	ON SCENE WEATHER
WIND	SSE 10 - 15 kts
WAVE	7 - 9 ft
SWELL	

Comments: M/V NRC Perserverence waiting ABS inspection. M/V NRC Admiral doing forepeak vent repaired, estimated completion 1030 hours. M/V Pauline T changing crane today.

	Other Vessels					
	Vessel	Assignment	Status	Location	ETA	
VSO	Queen Bee	Command	Enroute	Fourchon		Source Grp Comnd Vessel

Kind/Type	Vessel	Assignment	Status	Location	ETA	Notes:
RV1/Belt	NRC Admiral (Marco)	NRC	Unscheduled Maint.	Fourchon		Departing dock @ 1100 hrs
RV1/Weir-disc	NRC Energy (Crucial)	NRC	Enroute	Fourchon		Departing dock
RV1/Belt	NRC Guardian (Marco)	NRC	Enroute	Fourchon		Departing dock
RV1/Belt	NRC Perseverence (Marco)	NRC	Unscheduled Maint.	Fourchon		Waiting for ABS inspection
RV1/Disc	NRC Liberty (Crucial)	NRC	Enroute	Fourchon		Departing dock
RV1/Disc	Seahorse VI (Crucial)	NRC	Enroute	Fourchon		Departing dock
RV1/Weir	Lana Rose (Weir)	NRC	Enroute	Fourchon		Departing dock
RV1/Belt	Pauline T(Marco)	NRC	Unscheduled Maint.	Venice		Replacing Crane
RV1/Belt	Resolve Pioneer(Marco)	NRC	Enroute	Fourchon		Departing dock

	Offshore Barges				Remaining Storage bbls	
TV2	NRC Defender	TF Storage	Standby	Venice		Preparing to depart
TV2	NRC Valiant	TF Storage	Standby	Venice		Preparing to depart

	Boom Boats					
	Vessel	Assignment		Location	ETA	

	Crew/Re-supply					
WB2	Eveready	Re-supply	Standby	Venice		Preparing to depart
WB2	Miss Wynter	Re-supply	Standby	Venice		Preparing to depart
WB2	Lady Nina	Re-supply	Standby	Venice		Preparing to depart

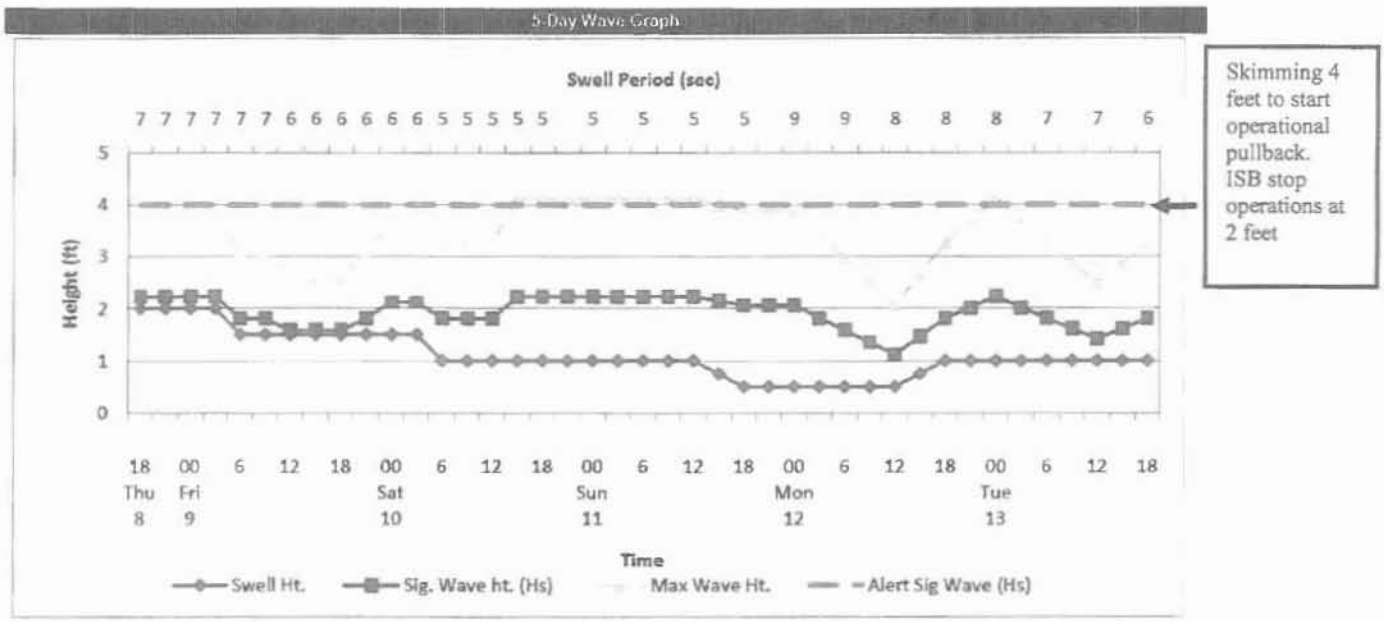
Kind/Type	Tugboats	Assignment	Status	Location	ETA	Notes:
TB	Helena Maria	NRC	Standby	Venice		Preparing to depart
TB	Tools I	NRC	Standby	Venice		Preparing to depart
TB	Angelica E	NRC	Standby	Venice		Preparing to depart

Attachment 4

QA / QC Reports

No QA/QC Checklists for the July 6th spray mission are not yet available.

Attachment 5



Maximum Wave Height is defined as the average of the highest .1% of all waves

bp

Douglas J. Suttles
Chief Operating Officer

BP Exploration & Production Inc.
501 WestLake Park Boulevard
Houston, TX 77079
Direct [redacted]
Fax 281 366 7239
[redacted]

July 11, 2010

Rear Admiral James A. Watson
Federal On-Scene Coordinator
United States Coast Guard

Exemption to Dispersant Monitoring and Assessment Directive – Addendum 3

Dear Admiral Watson,

BP respectfully requests an exemption to the Directive's maximum daily application of subsea dispersant for Sunday, July 11, 2010. Consistent with the Capping Stack Installation Plan sent to Admiral Allen on July 9, 2010, we are currently injecting 12 gallons per minute of subsea dispersant into the exiting oil stream. This is to ensure safe working conditions for the +1400 people on vessels working near the source. While we will continue to adjust the dispersant injection rate based upon winds, observed VOCs and oil capture volume, if we maintain 12 gpm, we will exceed 15,000 gallons for July 11.

An increase in subsea dispersant use is consistent with the Guidance on Subsea Dispersant Application you signed on June 23, which states, "For the purpose of VOC control, increases in the application rate of subsurface dispersants will be limited to conditions where winds are weak (< 10 knots) or VOC readings indicate potential health concerns. While this authority is granted to the OSC in the National Contingency Plan, all attempts will be made to maintain the 15,000 gallon per day subsurface cap outlined in Addendum 3 of the Dispersant Monitoring and Assessment Directive." The increase in subsea dispersant is also consistent with the Source Control Subsea Dispersant Forward Plan signed by Doug Suttles on July 6 and awaiting your signature. Assuming a flow rate of 53,000 bbls/day, a capture rate of 8,000 bbls/day, and a dispersant to oil ratio of 75 as stipulated by the USCG and EPA, the target daily dispersant volume would be 25,200 gallons or 17.5 gallons/minute.

The amount of subsea dispersant needed for VOC control has many controlling factors, including oil containment volume, wind conditions, and ocean currents. As you are aware, the amount of oil being captured decreased by ~18,000 barrels yesterday when the previous cap was removed. While we continue to bring the Helix Producer on line as quickly as is safely and operationally prudent, until it is operational, the amount of oil coming to the surface is greater than it has been recently. Additionally, winds are less than 10 knots today and the NOAA forecast is for winds to continue to be light. Finally, while ocean currents are currently bringing the oil to the surface to the southeast of the central operational area, if this current shifts or dissipates, the oil could revert to coming up directly under the main operational area, increasing the risk of VOCs.

Consistent with all of the above, we are requesting an exemption from the 15,000 gallon limit for July 11, 2010. Unless we see an increase in VOCs, we intend to hold our subsea dispersant rate at approximately 12 gpm, which would result in a total volume for today of less than 20,000 gallons. Further, the Helix Producer should begin capturing oil today, and thus we expect we will only need a one day exemption to proactively prevent dangerous VOC conditions during this time of crucial operations near the source.

Sincerely,

Douglas J Suttles RTF

Douglas J. Suttles

Approval granted subject to the above:

J A Watson

Date: 7-11-10

Rear Admiral James A. Watson
Federal On-Scene Coordinator
United States Coast Guard

May 20, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Samuel Coleman, P.E.
Director, Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Re: May 19, 2010 Addendum 2 to Dispersant Monitoring and Assessment Directive ("Addendum 2")

Dear Admiral Landry and Mr. Coleman:

This letter is the response to the directive in Addendum 2 for BP Exploration & Production Inc. ("BP") to identify within 24 hours of issuance of Addendum 2 one or more approved dispersant products from the National Contingency Plan Product Schedule that are "available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopis, as indicated on the NCP Product Schedule".

BP's response below considers the criteria set forth in the directive in the following order (1) dispersants with a toxicity value greater than or equal to 32.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopis, as indicated on the NCP Product Schedule, (2) the availability based on existing stockpiles, the estimated time to begin aerial and subsurface application, and time for manufacturing, shipping and warehousing, and (3) as effective as Corexit EC9500A at dispersing the oil plume. As discussed below, given the above criteria, BP continues to believe that Corexit EC9500A is the best alternative.

(1) Toxicity Value.

Only five products on the NCP Product Schedule meet the criteria in the May 19th directive. These are: Sea Brat #4, Nokomis 3-F4 and Nokomis 3-AA, Mare Clean 200, and Neos AB3000.

EPA has used acute toxicity criteria to evaluate dispersants that will be applied to oil floating on the water surface. When evaluating the same materials for subsea use, additional criteria may be relevant. We have attached a summary of the criteria that BP is using to evaluate dispersant options, and comparison tables that evaluate each dispersant by such criteria, based on information currently available to us.

One relevant criterion, given the amount of dispersant that is required at this site and the proposed application near the ocean floor, is the potential long term effect and persistence of the chemicals in each dispersant.

In this regard, Sea Brat #4 contains a small amount of a chemical that may degrade to a nonylphenol (NP). The class of NP chemicals have been identified by various government agencies as potential endocrine disruptors, and as chemicals that may persist in the environment for a period of years. The manufacturer has not had the opportunity to evaluate this product for those potential effects, and BP has not had the opportunity to conduct independent tests to evaluate this issue either. BP learned of this issue after it applied for permission to use Sea Brat #4 at the incident site.

With this additional information in hand, we believe it would be prudent to evaluate the potential NP issue more carefully before EPA or the FOSC require Sea Brat to be used at the incident site, and in particular, before it is applied underwater near the ocean floor.

It would also be prudent to obtain the chemical formulas for the other dispersants that meet the acute toxicity criteria in the May 19th directive, and evaluate them for their potential to degrade to NP, or any other chemical that has been identified as a potential endocrine disruptor. BP has not been able to obtain this information in the 24 hour time frame provided in the directive.

COREXIT does not contain chemicals that degrade to NP. The manufacturer indicates that COREXIT reaches its maximum biodegradability within 28 days of application, and that it does not persist in the environment. These qualities make COREXIT a better choice for subsea application, based on the information currently available. COREXIT appears to have fewer long term effects than the other dispersants evaluated.

(2) Availability.

BP has an inventory of 246,380 gallons of COREXIT that are available for immediate use, and the manufacturer is able to produce an additional 68,000 gallons/day, which is sufficient to meet all anticipated dispersant needs at this site.

BP also has an inventory of 100,000 gallons of Sea Brat #4 available for immediate use. The manufacturer is able to produce an additional 50,000 gallons/day, which would be sufficient to meet all anticipated surface application needs, but may not be sufficient to meet both surface and subsurface application needs combined.

BP does not have a stockpile of the other dispersants that meet the criteria in the May 19th Directive, and the manufacturers tell us that they cannot produce the requested volume for 10 to 14 days or more.

Attached to this letter is a table that describes the availability and production capability for each dispersant option (See "Dispersant Supply Profile.')

(3) Effectiveness.

COREXIT was 55% to 63% effective in dispersing samples of South Louisiana Crude Oil. Sea Brat #4 was 61% effective in dispersing samples of the same material. The products are expected to have similar levels of effectiveness in the field.

Attached to this letter is a table that shows the expected effectiveness ratings for the four other dispersants that meet the acute toxicity criteria in Addendum 2. The Nokomis products are slightly more effective (64-65%), while Mare Clean and Neos AB3000 are reported to be substantially more effective at dispersing oil (84% and 90%).

(4) Conclusion.

In the midst of an oil spill response, one of the most important criteria is whether the dispersant in question can be obtained in sufficient volumes to meet immediate needs. Dispersants must be applied to the spill shortly after release to be effective. As oil weathers in the environment, it becomes increasingly difficult to disperse with any of the listed products.

COREXIT was the only dispersant that was available immediately, in sufficiently large quantities, to be useful at the time of the spill. Subsequent efforts have identified Sea Brat #4 as a possible alternative that is equally effective at dispersing oil, but has fewer acute toxicity effects. In the short

time provided to us, BP and the manufacturer of Sea Brat #4 have not had the opportunity to evaluate other potentially significant criteria, including the risk that a small fraction of Sea Brat #4 may degrade to NP, and/or may persist in the environment.

None of the other dispersants that meet the acute toxicity and effectiveness criteria in Addendum 2 are available in sufficient quantities at this time. In addition, before supporting a decision to switch to those dispersants, it would be important to review the formula for each alternative, and evaluate it for additional risks, such as persistence in the environment. BP has not been able to do this in the time provided.

Based on the information that is available today, BP continues to believe that COREXIT was the best and most appropriate choice at the time when the incident occurred, and that COREXIT remains the best option for subsea application.

Before the Coast Guard and EPA issue further directives requiring a change in dispersant products or monitoring, we would appreciate the opportunity to meet with you to discuss the options and their efficacy and potential impacts, in view of the circumstances at the spill site, and the proposed methods of usage.

After you have the opportunity to review the attached information, please let me know the earliest time when you might be available to meet with our team to discuss these issues.

Sincerely,

Douglas J. Suttles

bp

Doug Suttles

Exploration & Production
BP America Inc.
501 Westlake Park Boulevard
Houston, TX 77079

May 21, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Samuel Coleman, P.E.
Director, Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Email: [illegible]
Fax: [illegible]
[illegible]

Request for Temporary Waiver of Dispersant Monitoring

Dear Admiral Landry and Mr. Coleman:

In compliance with the May 9, 2010 Dispersant Monitoring and Assessment Directive (the "Directive"), BP Exploration & Production Inc. ("BP") has been monitoring the application of subsurface dispersant with the RV Brooks McCall. As discussed in detail below, BP requests a waiver of the requirement of dispersant monitoring for the period of time required for RV Brooks McCall to return to port, for BP to install required equipment, and return to its station and resume monitoring.

Under Addendum 1 to the Directive, to continue application of subsurface dispersant after midnight of May 21, 2010, BP must install additional equipment on the RV Brooks McCall that requires it to return to port. In addition, to assure the RV Brooks McCall will be available to apply subsurface dispersant during the entire anticipated time period for the "Top Kill" operation, it will need to return to port for resupply.

BP plans to bring the RV Brooks McCall to port, departing 1830 Friday, May 21 and arriving Port Fourchon at 0600 Saturday, May 22, and it anticipates that the RV Brooks McCall will be able to return on station and resume monitoring by approximately 0900 hrs on Sunday, May 23. BP requests a waiver of the requirement of dispersant monitoring for the period of time required for RV Brooks McCall to return to port, for BP to install required equipment, and return to its station and resume monitoring.

Sincerely,

Douglas J. Suttles

U.S. Department of Homeland Security
United States Coast Guard

Commander
Eighth Coast Guard District

Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130
Staff Symbol (dl)
Phone: [redacted]

16480
May 21, 2010

Doug Suttles
Chief Operating Officer
Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, Texas 77079

Re: Request for Temporary Waiver of Dispersant Monitoring

I received your letter request dated May 21, 2010, in which you requested a waiver of the requirement of dispersant monitoring for the period of time required for RV Brooks McCall to return to port, for BP to install required equipment, and return to its station and resume monitoring.

Your request is approved, subject to the estimated schedule outlined in your request, and subject to the following terms: You shall continue to use an integrated management approach to control the oil, including prioritization of offshore response efforts that focuses on mechanical recovery, skimming, and burning on the surface, as well as subsurface dispersant application. If mechanical recovery and other surface efforts are not feasible, you will employ surface application of dispersant. You must minimize, to the maximum extent feasible, application of surface and subsurface dispersants. In coordination with the Coast Guard, you shall immediately comply with the monitoring provisions of the May 9, 2010 Directive, Section II "Special Monitoring of Applied Response Technologies ("SMART") Protocol for Surface Application of Dispersants" to determine efficiency and short term impacts of dispersant application.

Separately, EPA and the Coast Guard will pursue the use of less toxic dispersants with you if feasible.

Mary E Landry

MARY E. LANDRY
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

July 1, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command had two (2) spotter visual reports on 1 July from aircraft out of Stennis Base and these spotters were able to identify oil slicks that were estimated to require over 20,000 gallons of dispersant. Because of weather conditions, Houma Base was able to launch only one reconnaissance flight which returned to base shortly due to deteriorating weather.

Weather will again be an issue tomorrow, but significantly improved from the past few days. The Friday forecast calls for flying conditions that will have showers, winds of 6-12 knots from the SE-ESE, maximum significant wave height 4 feet, ceilings of 17,000 feet or less, visibility of 6 nm with a 20%-30% chance of rain.

The NOAA Surface Oil Forecast for July 2nd shows extensive areas of heavy and medium oil (Attachment 2) that are or may adversely impact the shoreline, including sensitive wetlands.

Houma Unified Command anticipates that due to the weather, if oil slicks are identified, the most viable means of response will be the use of dispersants to reduce the risk of oil land fall especially with the continuation of southerly and easterly winds.

Prior to spray operations tomorrow morning, the spotter aircraft will identify the high value targeted slicks and we will prepare a report of the location and dispersant volumes needed for application as soon as practicable tomorrow. It is anticipated that the thunderstorm pattern that has existed in the previous couple of days will moderate, although the continued presence of rain showers may continue to make it difficult to execute reconnaissance or dispersant spray missions.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: Today there were limited air surveillance operations and the only two reconnaissance flights observed dispersible oil slicks in Zone AC as shown in See Table 1.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The weather is moderating and the forecast wind wave heights for tomorrow averaging 2 feet, with significant wave height averaging 4 feet and maximum wave height averaging 6.8 feet.

Source Skimming Assets:	All vessels in port
Non-Source Skimming Assets:	All vessels in port
ISB Assets:	All vessels in port

- Consequently, source and non-source skimming vessels as well as ISB will not be in action tomorrow.
- Today, all offshore recovery assets (skimmers, etc.) are ***in port or at anchor due to inclement weather*** and ISB operations did not take place.
- It is planned to conduct Tier 1 helicopter SMART over flights to observe dispersant operations tomorrow should they be conducted.
- M/V *International Peace* is currently in port waiting on better seas and weather. It is not anticipated that she will get underway and on station until later in the day Friday at the earliest, weather permitting.
- QA/QC SMART Team 2 June 27th report (Attachment 4).
- No burn box is shown at this time, since the ISB fleet will be in port tomorrow.
- Forecast sea state through Sunday showing skimming and ISB limitations is provided as Attachment 5.
- ***ALL RESPONSE OPERATIONS MAY BE CANCELED DUE TO WEATHER TOMORROW***

It should be noted, that due to the adverse weather, there has been no skimming, ISB or dispersant activities for the past three (3) days. Skimming and ISB operations are not scheduled for tomorrow. With the anticipation of the weather moderating over the next couple of days, it is anticipated that significant quantities of dispersible oil will be observed and there will be flying weather conducive for air operations.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A on dispersible oil slicks based on the morning reconnaissance flights. As aerial dispersant presents the primary mechanism for spill response, we have mobilized the reconnaissance and deployment resources and request an initial ~~15,000~~ 20,000 gallons for early opportunistic targets. This will be coupled with further reconnaissance and target identification. If further targets are identified, a subsequent request will be issued later in the day.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 7-2-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 2 July 2010 with Oil Targets from Spotter Operations on 1 July

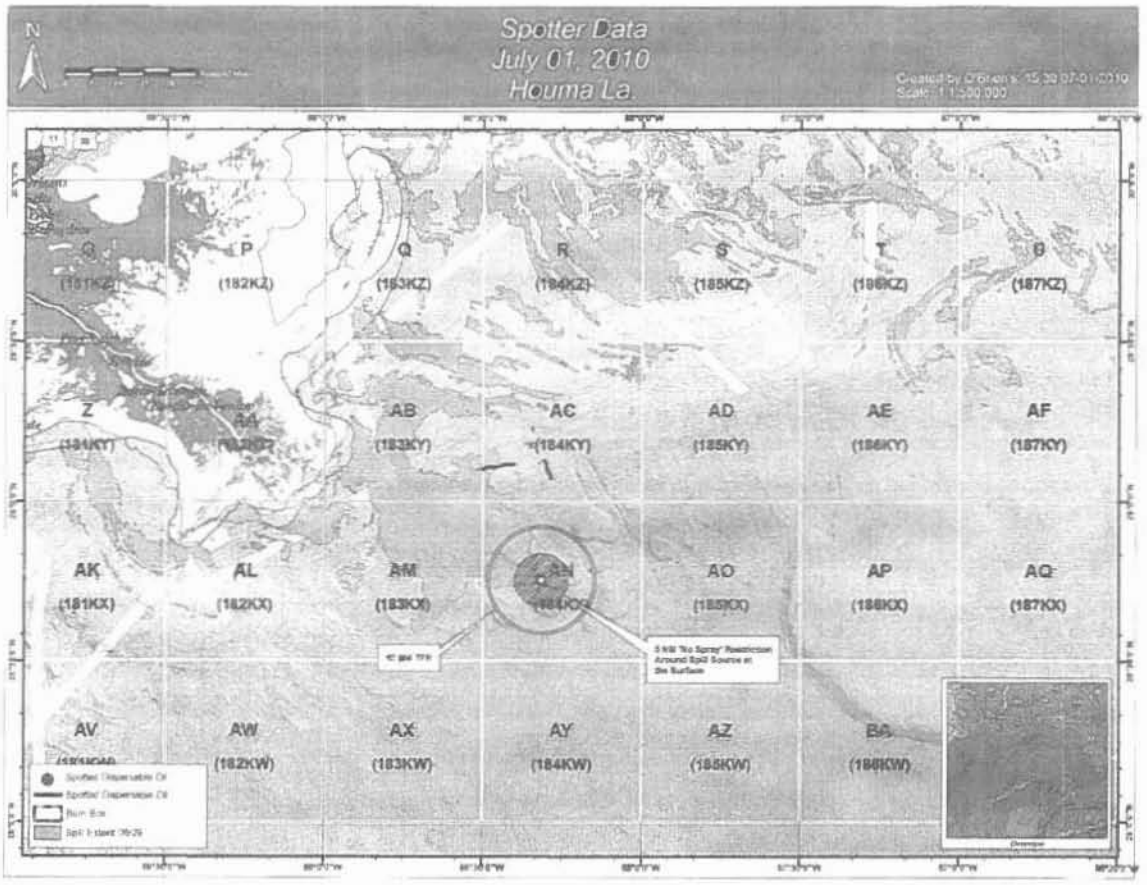


TABLE 1 Dispersible Oil Report July 1, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	2	4,224	95%	20,064
Dispersant Approved: 20,000 gallons - Sprayed Today The requested amount for 7/2/10 will be based on tomorrow mornings reconnaissance with an initial request for 15,000 g as it is expected with 4 days of no response operations there will be considerable surface oil.				17,852

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

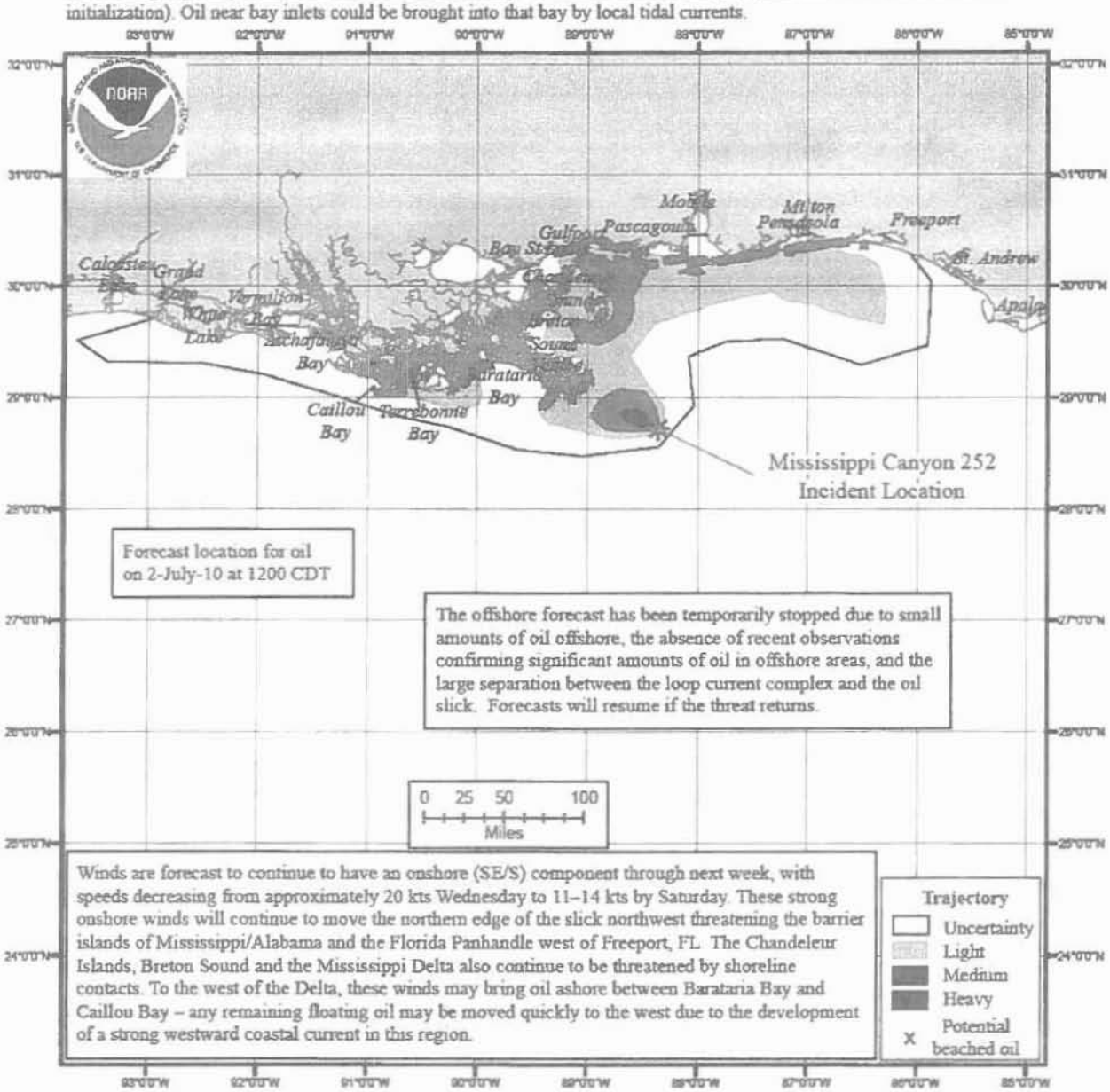
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Friday, 7/02/10
Date Prepared: 2100 CDT, Wednesday, 6/30/10

This forecast is based on the NWS spot forecast from Wednesday, June 30 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday-Wednesday satellite imagery analysis (NOAA/NESDIS) and Wednesday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



this scale bar shows the meaning of the distribution terms at the current time

Next Forecast:
July 1st PM

Attachment 3

Vessel Status Board

All Vessels Are Currently In Port Due To Inclement Weather And The Anticipation Is That Skimming Capacity Will Remain In Port Tomorrow

Attachment 4

QA / QC Report for 6/27/10

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date: 6/27/2010

Operational Period: 20100627 0700 to 20100627 1506

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 9)

☑ Photo Log

☐ Dispersant Observation Reporting Form 30 – not included in package

Assessment (Check appropriate box(s))

☑ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

dispersion along edges of the oil patch, with 'cafe-au-lait' color change

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log.

☐ Results inconclusive with respect to dispersant effectiveness.

☐ Other. Briefly describe.

noticeable changes to oil patch

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

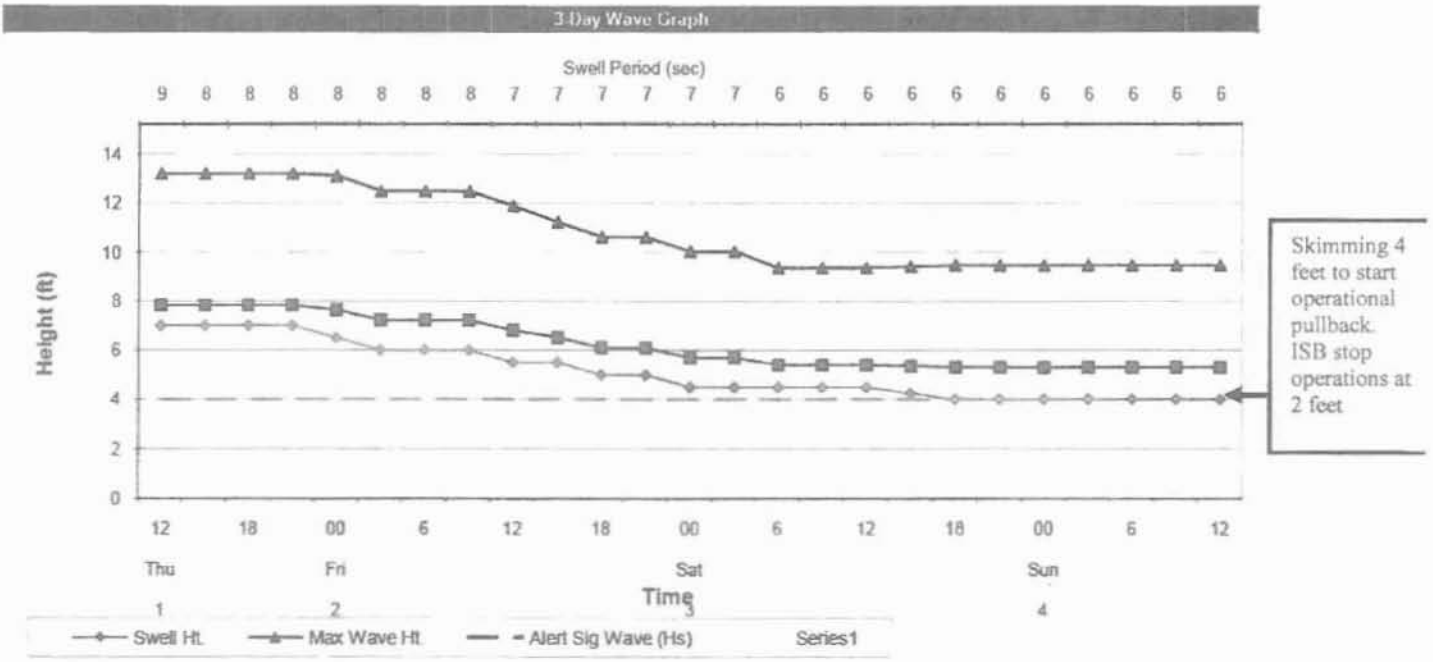
Nam[redacted]nature[redacted] Date: 6/30/10

Reviewed by NOAA SSC (Print name, sig[redacted]

Nam[redacted]nature[redacted] Date: 6/30/10

Template Updated 20100619

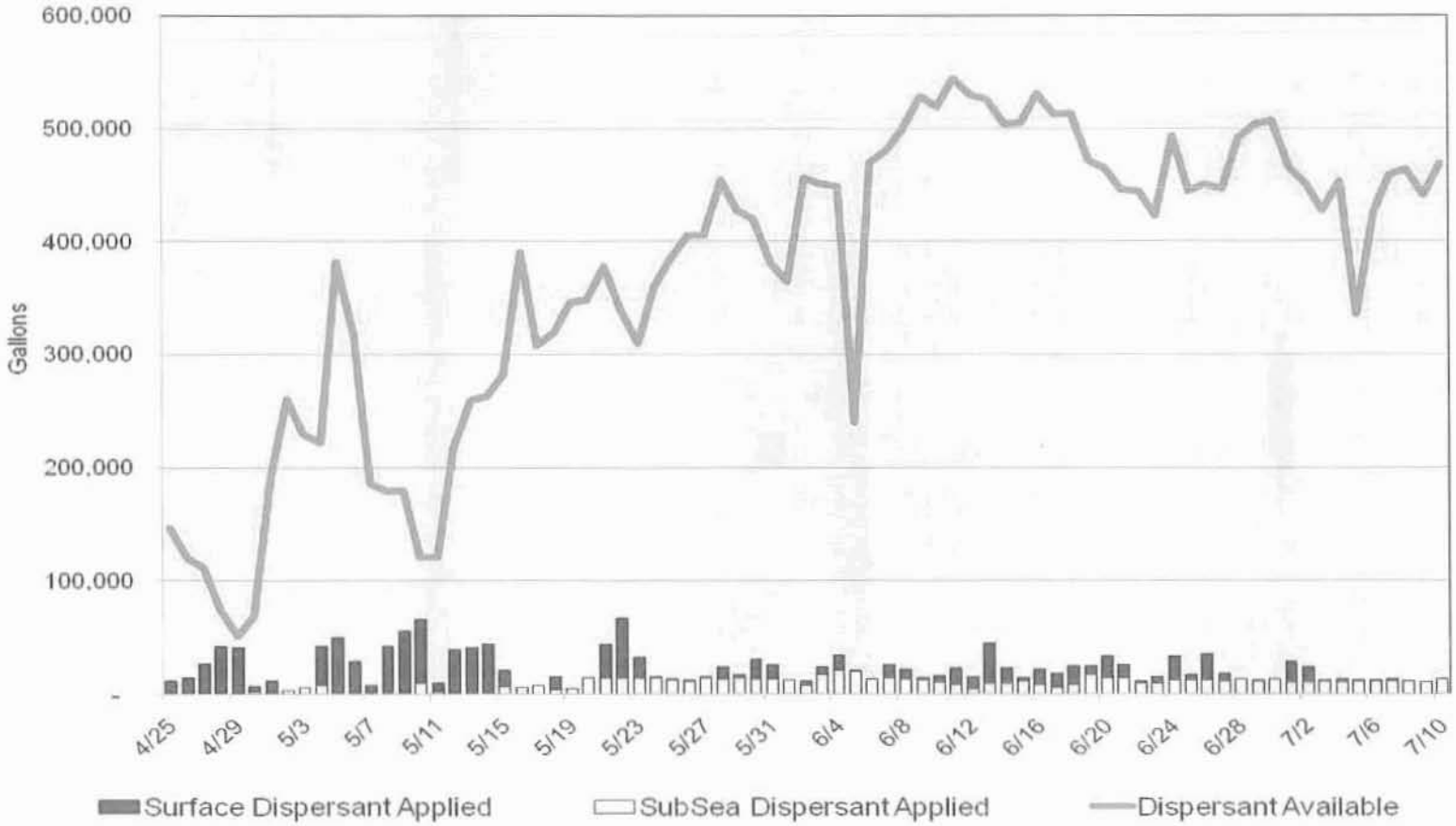
Attachment 5



Dispersant Application and Supply

Deepwater Horizon Response

Updated
July 10 2200 hours



- Current dispersant available is 468,569
- 30 Day average application is 20,319
- Implies approximately 23 days of supply is available

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 14, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 13 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 14 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 6-8 knots, wave height 1 foot, ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 15, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* is planned to conduct water chemistry and toxicology sampling. These operations depend upon approval to apply dispersants either aerial or with boat spray systems onboard the M/V *International Peace*.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 23,000 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Roy A. Nash Date: 6/15/2010

FOR James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 15 June 2010 with Oil Targets from Spotter Operations on 14 June

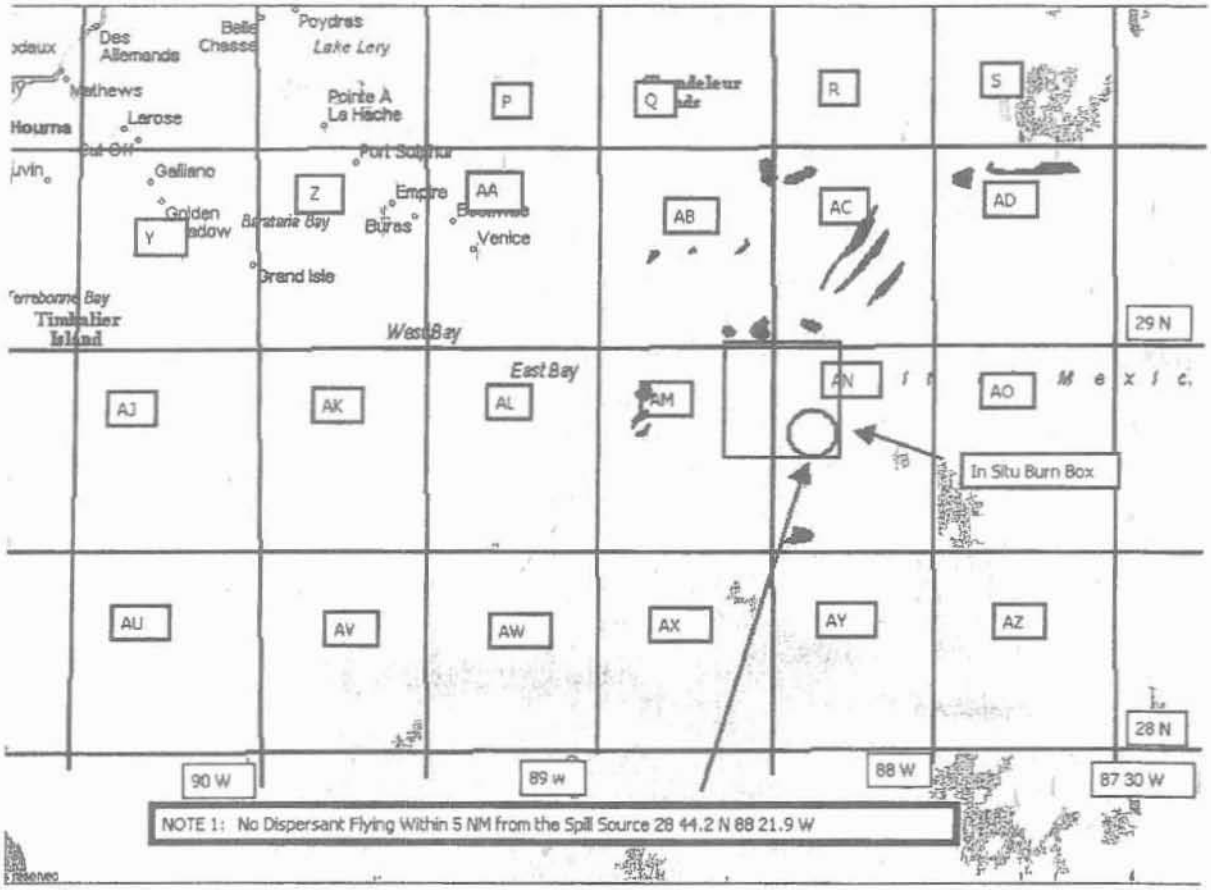


TABLE 1
Dispersible Oil Report June 14, 2010

	Zone	Estimated Area (sq.mi)	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
Priority 1	AD	900	.2	5,600
Priority 2	AC	900	1.0	13,440
Priority 3	AB	900	.01	1,120
Priortiy 4	AM	900	.02	1,440
Priority 5	AN	900	.01	1,120
Total		4,500		22,720

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

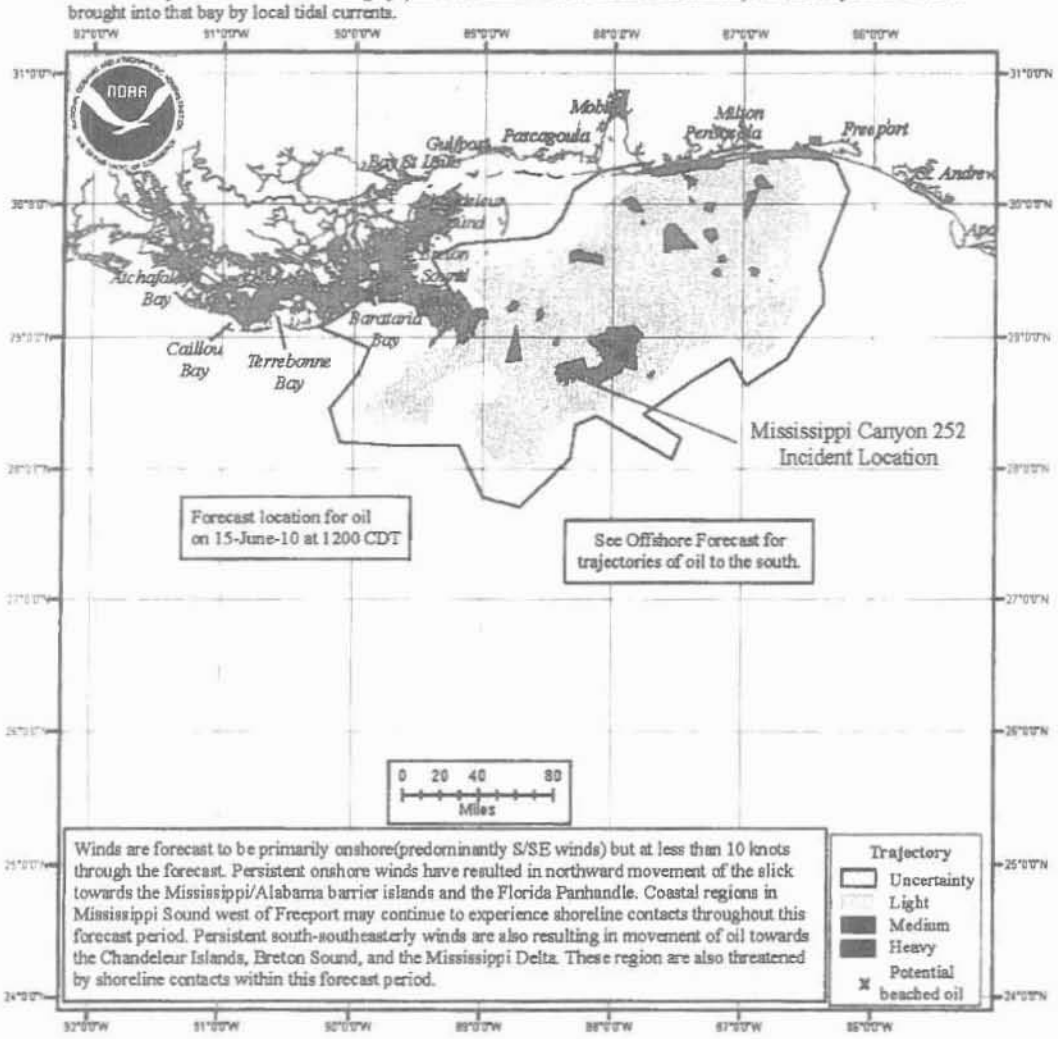
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Tuesday, 6/15/10
Date Prepared: 2100 CDT, Sunday, 6/13/10

This forecast is based on the NWS spot forecast from Sunday, June 13 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Sunday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Winds are forecast to be primarily onshore(predominantly S/SE winds) but at less than 10 knots through the forecast. Persistent onshore winds have resulted in northward movement of the slick towards the Mississippi/Alabama barrier islands and the Florida Panhandle. Coastal regions in Mississippi Sound west of Freeport may continue to experience shoreline contacts throughout this forecast period. Persistent south-southeasterly winds are also resulting in movement of oil towards the Chandeleur Islands, Breton Sound, and the Mississippi Delta. These region are also threatened by shoreline contacts within this forecast period.

Next Forecast: June 14th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 14 June 1200
Designator	Kind / Type	Vessel	Assignmen	Status	Location
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252
TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252
MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252
SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC-252
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC-252
VAR	RV1/Weir	Virginia Responder	MSRC	Skimming	MC-252
HOSS	RV1/Weir	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252
SV	RV1/Weir	Seacor Vana and Quinant Buster	Buster	Skimming	MC-252
JC	RV1/Weir	John Cogill	Buster	Skimming	MC-252
LR	RV1/Weir	Lane Rose (NRC HOSS)	NRC	Skimming	MC-252
RT	RV1/Weir	Rollins T (NRC HOSS)	NRC	Skimming	MC-252
RP	RV1/Weir	Resolve Pioneer (NRC Manta)	NRC	Skimming	MC-252
SW	RV1/Weir	Seager Washington (Dutch Arm)	NRC	Skimming	MC-252
PSF	RV1/Weir	NRC Perseverance	NRC	Skimming	MC-252
LIB	RV1/Weir	NRC Liberty (Dutch)	NRC	Skimming	MC-252
SH	RV1/Weir	Seahorse VI (NRC HOSS)	NRC	Skimming	MC-252
NG	RV1/Weir	Nuange II (w/CGA FRU)	CGA	Skimming	MC-252
IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Skimming	Mechanical
CAR	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Skimming	MC-252
MA	RV1/Weir	Ms. Alex (w/CGA FRU)	CGA	Skimming	MC-252
RS	RV1/Weir	Reine (Navy Barge)	Reine	Mechanical	MC-252
NM	RV1/Weir	Nina Marique (Dutch Arm)		Skimming	MC-252
	RV1/Weir	Sweetwater (Dutch Arm)		Skimming	MC-252
402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	Pilot Town
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252
Costner	TV1	Energy 8001 (Superior Service) Co	TF Storage	On-scene	MC-252
		Boom Boats			
Designator		Vessel	Assignment		Location	ETA
CC		Chanese G	Central	Standby	Venice	
SF		Sea Fox	Central	Standby	Venice	
BG		Betty G	Central	Boom tow	MC-252	
MSA		Ms. Alexa	Central	Boom tow	Venice	
MSE		Ms. Addison	Central	Mechanical	Venice	
JN		Julienne Marie	Central	Standby	Venice	
SI		St. Ignatius Loyola	Central	Boom tow	MC-252	
SH		Sea Hawk	Central	Standby	Venice	

Page 1

		Crew/Re-supply				
ML		Mr. Leroy	Shuttle/Re-	Supply Run	Venice Based	
FO		Fox	Shuttle/Re-	Supply Run	Venice Based	
JP		Jean Perry	Shuttle/Re-	Supply Run	Venice Based	
CS		Corissa Shane	Shuttle/Re-	Supply Run	Venice Based	
KL		Katie Lynn	Shuttle/Re-	Supply Run	Venice Based	
BC		Ben Charamie	Shuttle/Re-	Supply Run	Venice Based	

		Inland Barges				
331		Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323		Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324		Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048		Higman 3048 Barge	TF Storage	Full	Enroute	Houstor
HM-3049		Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

NON SOURCE

Designator		Vessel	Assignmer	Status	Location
BC	VSB1	Harry Claiborne	FED	On-scene	Off Grand Isle
FS	RV1	C-Aggressor	FED	Skimming	Fourchon
GS	RV1	Gulf Scout	FED	Skimming	Off Grand Isle
OQ	RV1	Odyssea Quest	FED	Skimming	Off Grand Isle
LL	RV1	Lauren LaCoste	FED	Skimming	Off Grand Isle
OM	RV1	Odyssea Marriet	FED	Skimming	Fourchon
GI	RV1	Gulf Influence	FED	Enroute	
SED2	RV1	Cenac 2802 w/Dunton Cenac	FED	Stand-by	Off Grand Isle
VA	TV	Valiant w/Agelight	FED	On-scene	E of LOOP
Q	RV1	Queens	FED	Skimming	E of SW Pass
PB	RV1	Pope Benedict	FED	Skimming	E of SW Pass
GW	RV1	Great White	FED	Skimming	E of SW Pass
QB	RV1, WEIR	Queen Bee (USCG VOSS)	FED	Skimming	MC-252
SL	RV1,WEIR	Sir Lancelot (USCG VOSS)	FED	Skimming	MC-252
MM	RV1, WEIR	Miss Megan (USCG VOSS)	FED	Skimming	MC-252
AD	RV1/BELT	USC Admiral (Marco)	FED	Skimming	MC-252
HN	RV1	HOS North	FED	Outfitting	Fourchon

Page 2

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 15, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 15 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 16 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm; 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 16, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* is planned to conduct water chemistry and toxicology sampling. These operations depend upon approval to apply dispersants either aerial or with boat spray systems onboard the M/V *International Peace*.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 27,700 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-16-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 16 June 2010 with Oil Targets from Spotter Operations on 15 June

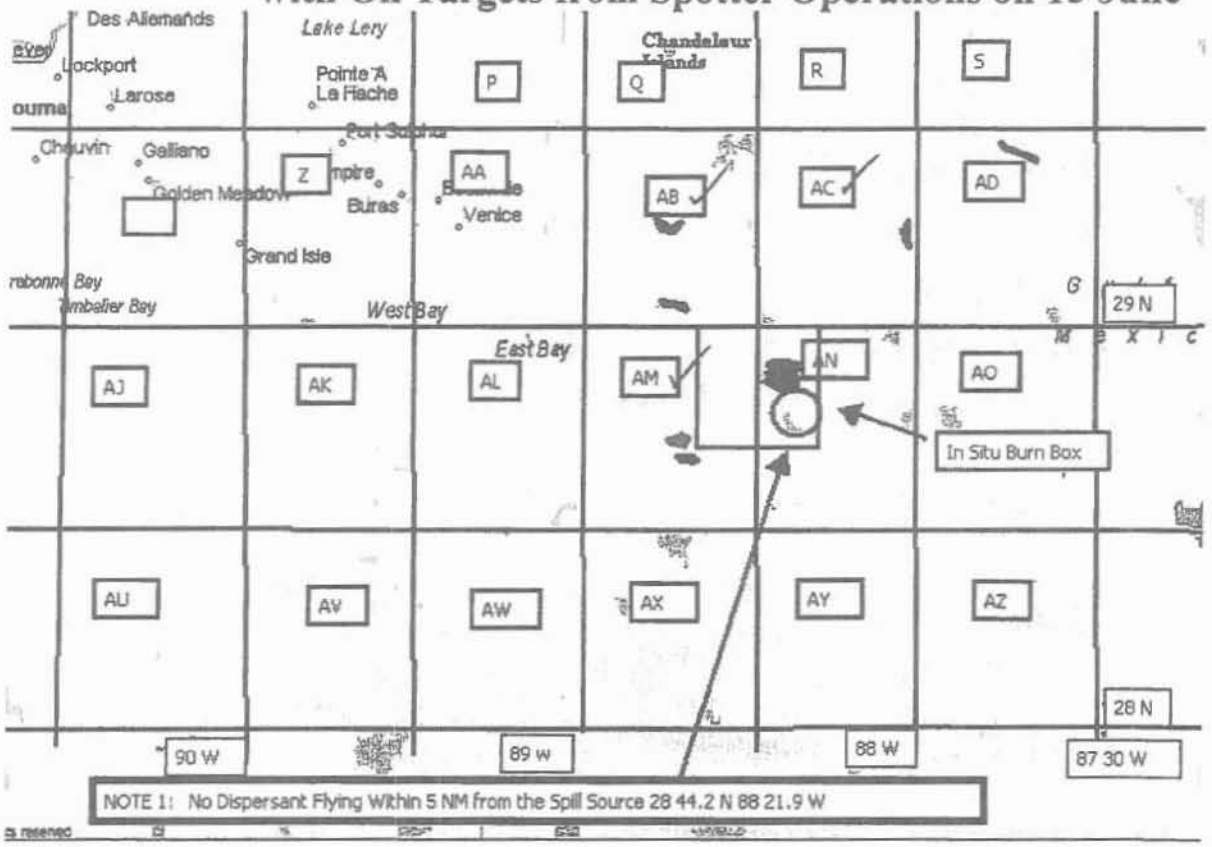


TABLE 1
Dispersible Oil Report June 15, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AB	2	3200	2-15	1,152
AD	1	1152	90	5,184
AM	2	2739	60-70	9,498
AC	1	1280	30	1,920
AN	TBD	TBD	Due to Enterprise shutdown expect significant surface oil slicks near the source	10,000
TOTAL				27,754

19K.

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

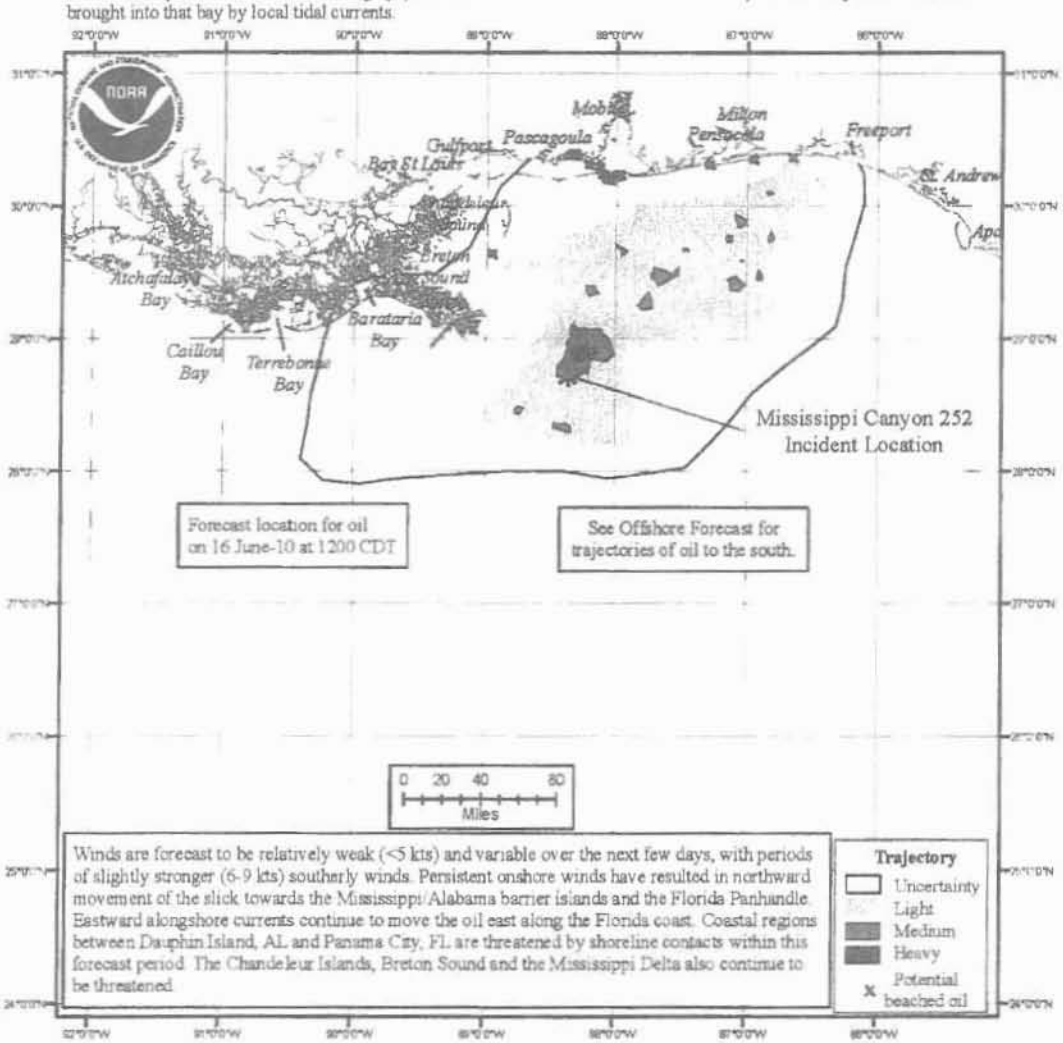
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Wednesday, 6/16/10
Date Prepared: 2100 CDT, Monday, 6/14/10

This forecast is based on the NWS spot forecast from Monday, June 14 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Sunday-Monday satellite imagery analysis (NOAA/NESDIS). The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Winds are forecast to be relatively weak (<5 kts) and variable over the next few days, with periods of slightly stronger (6-9 kts) southerly winds. Persistent onshore winds have resulted in northward movement of the slick towards the Mississippi/Alabama barrier islands and the Florida Panhandle. Eastward alongshore currents continue to move the oil east along the Florida coast. Coastal regions between Dauphin Island, AL and Panama City, FL are threatened by shoreline contacts within this forecast period. The Chandeleur Islands, Breton Sound and the Mississippi Delta also continue to be threatened.

Trajectory
- Uncertainty
- Light
- Medium
- Heavy
- Potential beached oil

Next Forecast: June 15th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

On-scene/Ready
In Transit
Out of Service
Lightering

	SOURCE				Date/Time 15 June 1400		
	Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	LR	RV1/Weir	Lone Rose (NRC VOSS)	NRC	Equipment	MC-252	
	SW	RV1/Weir	Seacor Washington (Dutch arm)	NRC	Equipment	Fourchon	
	PER	RV1/Self	NRC Perseverance	NRC	Mechanical	Venice	
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	II	RV1/Weir	International Trooper (ex-CGA 180)	CGA	Mechanical	Venice	
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
	452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
	570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
	155	TV1	K-Sea DBL 155 (Rebel)	TF Storage	On scene	MC-252	
	Costner	TV1	Energy 5001(Superior Service) Costner	TF Storage	On-scene	MC-252	

	Boom Boats					
Designator		Vessel	Assignment		Location	ETA
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
HE	WB1	Hercules	Source	Boom tow	Enroute	
BR	WB1	Brutus	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	

	Crew/Re-supply					
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	

	Inland Barges					
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HH-3048	TV3	Hannah 3048 Barge	TF Storage	Full	Enroute	Houston
HH-3049	TV3	Hannah 3049 Barge	TF Storage	8,000 bbl open	Venice Bee Park	

NON SOURCE				
Vessel	**Assignmen**	**Status**	**Location**	**ETA**
Harry Claiborne	FED	On-scene	SW Spring Site	
El Agressor	FED	Skimming	E of SW Pass	
Gulf Seeker	FED	Skimming	E of SW Pass	
Odyssey Quest	FED	Skimming	E of SW Pass	
Laurin McGrath	FED	Skimming	E of SW Pass	
Chesapeake Mariner	FED	Skimming	E of SW Pass	
Gulf Influence	FED	On-scene	Western Loop	
Cenac 2002 w/Clifton Cenac	FED	Stand-by	Off Grand Isle	
Valiant w/Bellica	FED	On-scene	N of LOOP	
Orleans	FED	repairs	Fourchon	
Pete Bergeron	FED	Skimming	E of SW Pass	
Great White	FED	Skimming	E of SW Pass	
Gulan Rae (USCG VOSS)	FED	Skimming	E of SW Pass	
Sir Lancelot (USCG VOSS)	FED	repairs	Fourchon	
Miss Megan (USCG VOSS)	FED	Enroute		
USC Admiral (USCG)	FED	Skimming	E of SW Pass	
HOS March	FED	Skimming	E of SW Pass	
Rob Bordelon	FED	Skimming	E of SW Pass	
OSV Blue Stars	FED	Skimming	E of SW Pass	
Miss Lulu	FED	Skimming	E of SW Pass	
Gordy Clinger	FED	Skimming	E of SW Pass	
Seaborne	FED	Skimming	E of SW Pass	
Pauline	FED	Skimming	E of SW Pass	
Resolve Pioneer		Unable to contact		

June 16, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Weekly Source Control Surface Dispersant Plan (June 17 through 23, 2010)

Dear Admiral Watson,

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") submitted a weekly Source Control Surface Dispersant Plan for the week June 10 to June 16, which you approved on June 9. The plan allowed for a maximum daily application volume (calendar day) of 6,000 gallons, unless more was required to control VOCs. From June 10 through June 15, the average daily volume applied has been less than 1,000 gallons. The maximum daily application was 3,360 gallons on June 12.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

BP respectfully requests approval of to the Weekly Source Control Dispersant Plan for June 17 though June 23, as follows

Date	Expected Maximum Volume per calendar day (gals)
June 17	6000
June 18	6000
June 19	6000
June 20	6000
June 21	6000
June 22	6000
June 23	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Doug Suttles

Douglas J. Suttles

Approval granted subject to the above:

Date: 6-16-10

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating (Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

Recommended actions for VOC management:

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 16, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has seven (7) spotter visual reports from 16 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 17 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm; 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 17, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* plans to conduct boat spray testing on fresh oil with water chemistry and toxicology sampling. The SMART Tier 1 observations indicate that dispersants are effective as shown in the QA/QC review document attached. Details and photographs of the Tier 1 observations are available at epaosc.org web site.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~25,800~~ 18,700 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-17-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 17 June 2010 with Oil Targets from Spotter Operations on 16 June

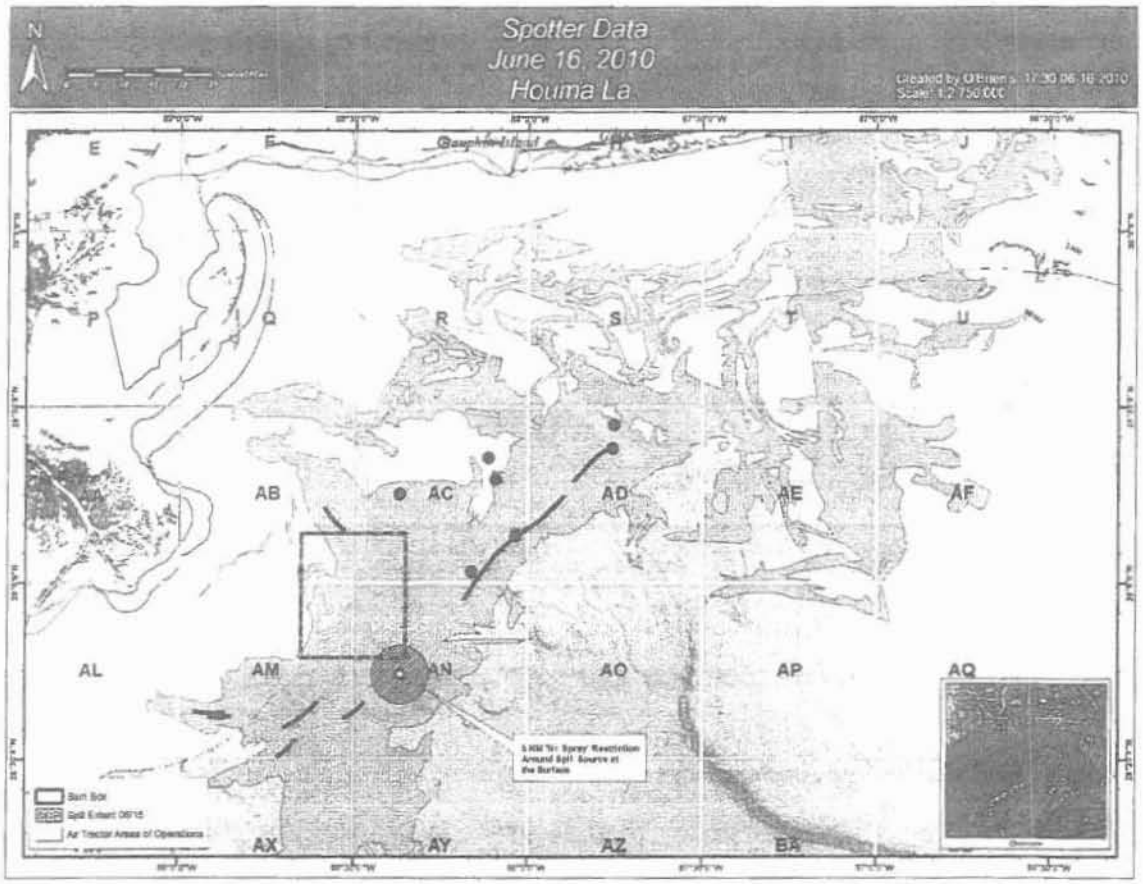


TABLE 1
Dispersible Oil Report June 16, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AB	1	96	90	432
AC	4	10,240	20	10,240
AD	2	684	50-90	1,801
AM	4	4838	20-80	13,312
AN	TBD	TBD	Zone near source, unable to recon due to ISB	0
TOTAL				25,785

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

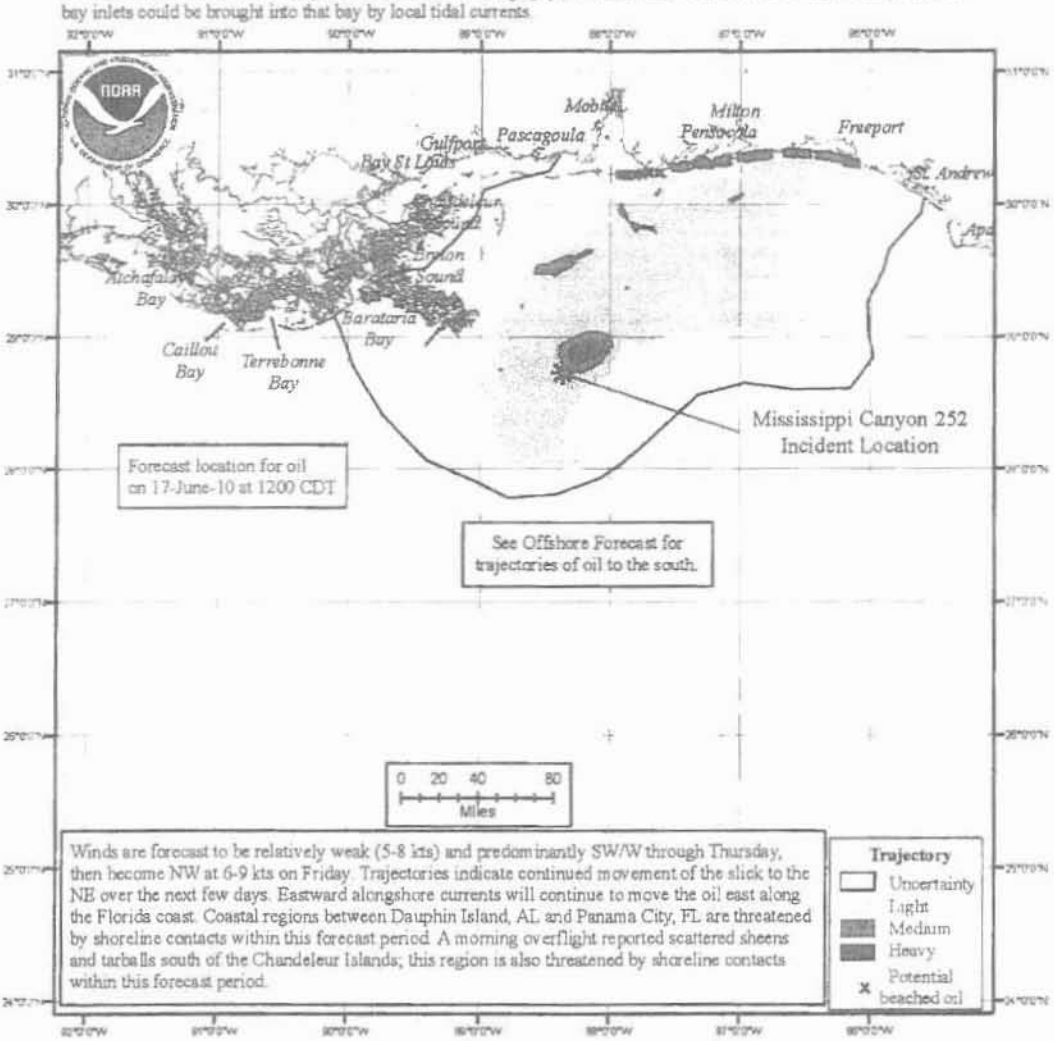
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Thursday, 6/17/10
Date Prepared: 2100 CDT, Tuesday, 6/15/10

This forecast is based on the NWS spot forecast from Tuesday, June 15 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast:
June 16th PM

this scale bar shows the meaning of the distribution terms at the current time

		Boom Boats				
Designator		**Vessel**	**Assignment**		**Location**	**ETA**
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
HE	WB1	Hercules	Source	Boom tow	Enroute	
BR	WB1	Brutus	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	

		Crew/Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	

		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 16 June 0900	
Designator	**Kind/Type**	**Vessel**	**Assignment**	**Status**	**Location**	**ETA**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MSR	RV1/Weir	Mississippi Responder	MSRC	Pit stop	Ft Jackson	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	RV1/Belt	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
SW	RV1/Weir	Seacor Washington (Dutch arm)	NRC	Equipment	Fourchon	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Mechanical	Venice	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	MC-252	
[illegible]	RV1/Belt	Beaver Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	HOS Mystique (Dutch arm)		Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Seawater (Dutch Arm)		Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Ocean Raider 17/18C 30dg	Subp	Reassigned Mobile	Mobile	
[illegible]	RV1/Belt	NRC Arthur	NRC	Reassign Non-Source	Non-Source	
[illegible]	RV1/Disk	Seahorse VI (TSRS VOSS)	NRC	Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
[illegible]	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tall	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	
Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	

Attachment 4

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Preliminary Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date: 6/15/2010

Operational Period: 0000 15 June 2010 to 2359 15 June 2010

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 9)

☑ Photo Log

Assessment (Check appropriate box(s))

☑ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log.

☐ Results inconclusive with respect to dispersant effectiveness.

☐ Other. Briefly describe.

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name: [redacted] ture: [redacted] e: 6-16-10

Reviewed by NOAA SSC (Print name, sigr

Name: [redacted] Signature: [redacted] e: 6·16·10

Template Updated 20100613

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 17, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 17 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 18 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm; 20 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (5,400 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 18 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* plans to conduct boat spray testing on fresh oil with water chemistry and toxicology sampling. The QA/QC report on the SMART Tier 1 observations will be provided tomorrow with the updated morning spotter reports.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~21,000~~ 19,200 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6/18/2010

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 18 June 2010 with Oil Targets from Spotter Operations on 17 June

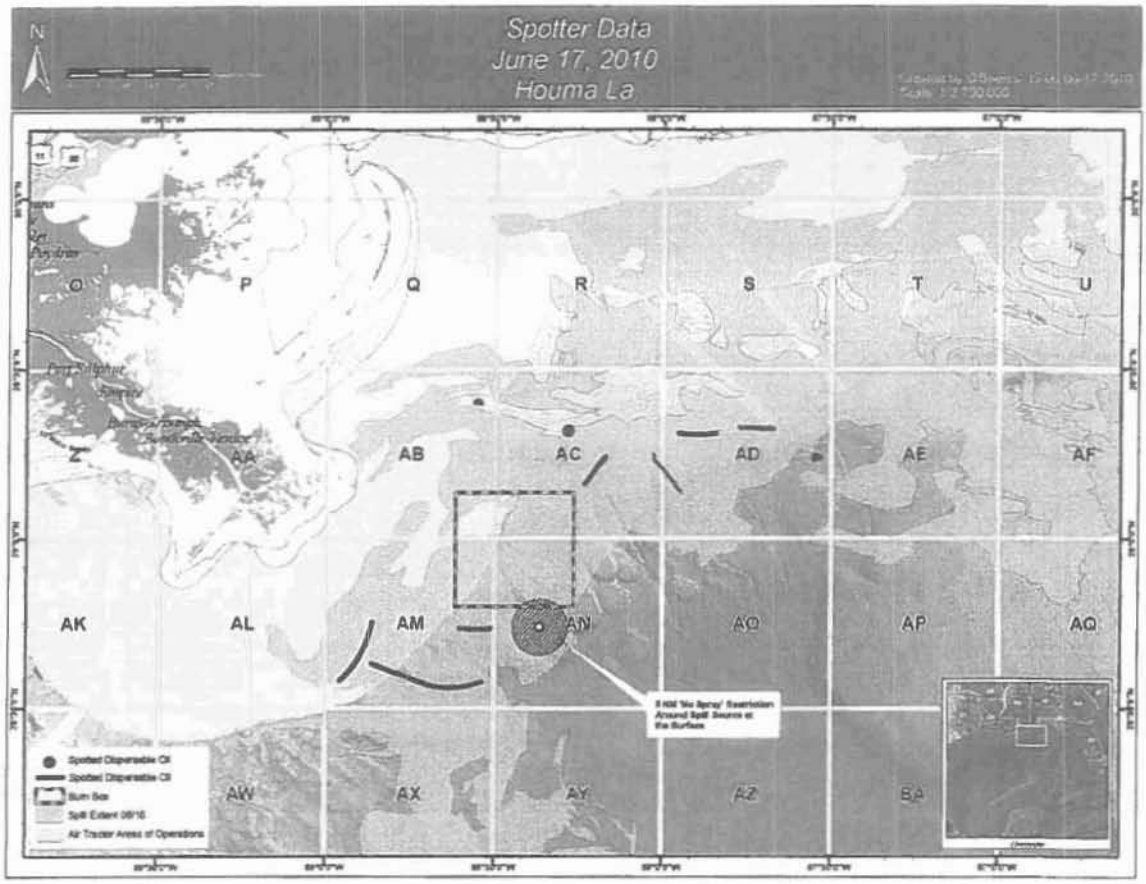


TABLE 1
Dispersible Oil Report June 17, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AB	2	640	20	640
AC	3	1,120	70-80	4,160
AD	3	693	80-85	9,397
AM	4	6,903	15-85	6,829
AN	TBD	TBD	Zone near source, unable to recon due to ISB	0
TOTAL				21,026

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

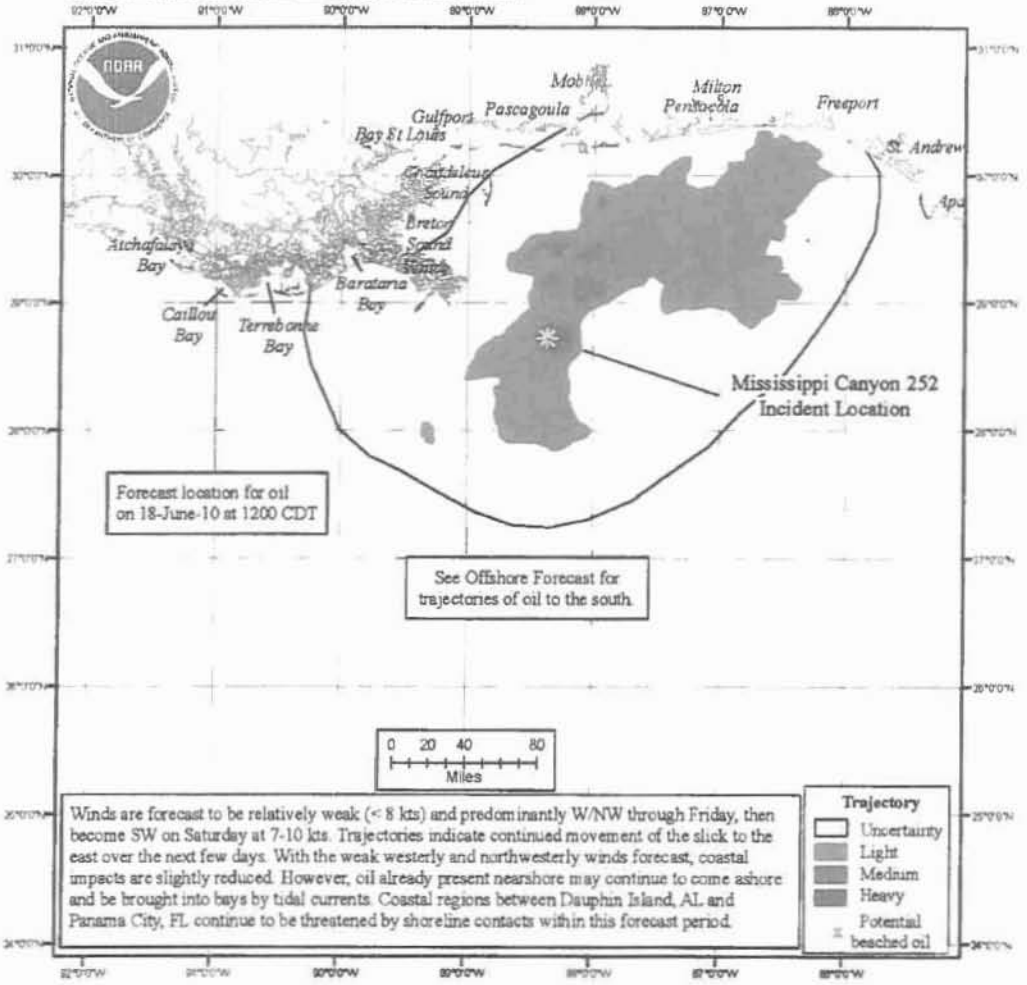
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

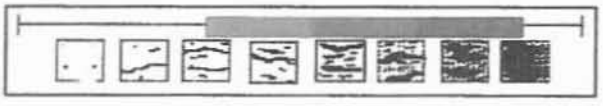
Estimate for: 1200 CDT, Friday, 6/18/10

Date Prepared: 2100 CDT, Wednesday, 6/16/10

This forecast is based on the NWS spot forecast from Wednesday, June 16 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Winds are forecast to be relatively weak (< 8 kts) and predominantly W/NW through Friday, then become SW on Saturday at 7-10 kts. Trajectories indicate continued movement of the slick to the east over the next few days. With the weak westerly and northwesterly winds forecast, coastal impacts are slightly reduced. However, oil already present nearshore may continue to come ashore and be brought into bays by tidal currents. Coastal regions between Dauphin Island, AL and Panama City, FL continue to be threatened by shoreline contacts within this forecast period.



Next Forecast:
June 17th PM

this scale bar shows the meaning of the distribution terms at the current time

Perry, Raymond CAPT

From: Crossland.Ronnie@epamail.epa.gov
Sent: Friday, June 18, 2010 9:13 AM
To: Watson, James RADM
Cc: Watson, James RADM; Perry, Raymond CAPT; Coleman.Sam@epamail.epa.gov; steve Lehmann; Austin, Meredith CAPT; Mason.Steve@epamail.epa.gov; Carroll.Craig@epamail.epa.gov; R6_DWH_REOC_RIC@epamail.epa.gov; Moore.Gary@epamail.epa.gov; Crossland.Ronnie@epa.gov; Nash, Roy RDML
Subject: Re: FW: Houma Unified Command - Aerial Dispersant Request - June 18, 2010
Attachments: June_18_request_for_aerial_spray_operations_FINAL.doc

Admiral Watson,

I have reviewed the request and have consulted with EPA Region 6. We continue to look for an increase in mechanical recovery and oil containment at the wellhead and still await the schedule for increasing these capabilities. When using dispersants, EPA evaluates the entire picture taking into consideration the use of subsurface, surface at the source and aerial dispersant application. With this in mind, EPA agrees with a total limit of 25,000 gals of dispersant for use on June 18, 2010. This limit should take into account all methods of dispersant application.

~~6~~ 10 FOR AERIAL

With regard to your request to increase the subsurface injection rate to 10 gpm, this would fall within the allowable volume of 15,000 gallons per day described in Directive 1 Addendum 3. Recognize that this would impact the dispersant volume available for aerial surface application because of the total dispersant limit of 25,000 gals for June 18, 2010..

We look forward to further discussions on reducing surface application, eliminating subsurface application, and achieving 90% source recovery.

Thanks,
Ronnie

5,760 - 19,240

From: "Watson, James RADM" <James.A.Watson@uscg.mil>
To: "Perry, Raymond CAPT" <Raymond.J.Perry@uscg.mil>, "steve Lehmann" <steve.Lehmann@noaa.gov>, Ronnie Crossland/R6/USEPA/US@EPA
Cc: Sam Coleman/R6/USEPA/US@EPA
Date: 06/17/2010 09:08 PM
Subject: FW: Houma Unified Command - Aerial Dispersant Request - June 18, 2010

Please review tomorrow's dispersant request.
Thanks

-----Original Message-----
From: mike.utsler@uk.bp.com [mailto:mike.utsler@uk.bp.com <mailto:mike.utsler@uk.bp.com>]
Sent: Thursday, June 17, 2010 8:06 PM

To: Watson, James RADM
Cc: Cavanagh, Ian; Rainey, David I; Austin, Meredith CAPT; Laferriere, Roger CAPT; Charlie Huber; Littlefield, S. Burt; coleman.sam@epa.gov; moore.gary@epa.gov
Subject: Houma Unified Command - Aerial Dispersant Request - June 18, 2010

Admiral,

The Houma Unified Command (excluding the standing abstention on this issue by the SOSC) is providing the Attached is the dispersant spray request for 18 June 2010. In line with our normal routine, we will be sending up 4 spotter aircraft at 0615 to re-assess the area and re-locate targets.

<<June_18_request_for_aerial_spray_operations_FINAL.doc>>
Due to other pending activities the QA/QC for the SMART Tier 1 observations for 16 June were not available. Arrangements have been made to complete the review tomorrow morning. The QA/QC will be provided together with the morning spotter reports of dispersible oil.

Therefore, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 21,000 gallons for a period not to exceed 12 hours.

Respectfully,

Mike Utsler Captain Roger Laferriere

Houma Unified Command

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 18, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 18 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 19 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 0.5-1 feet, ceilings unlimited and visibility 10 nm; 25 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 19 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* plans to conduct boat spray testing on fresh oil with water chemistry and toxicology sampling. The QA/QC report on the SMART Tier 1 observations for the 17th is attached.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 16,400 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-19-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 19 June 2010 with Oil Targets from Spotter Operations on 18 June

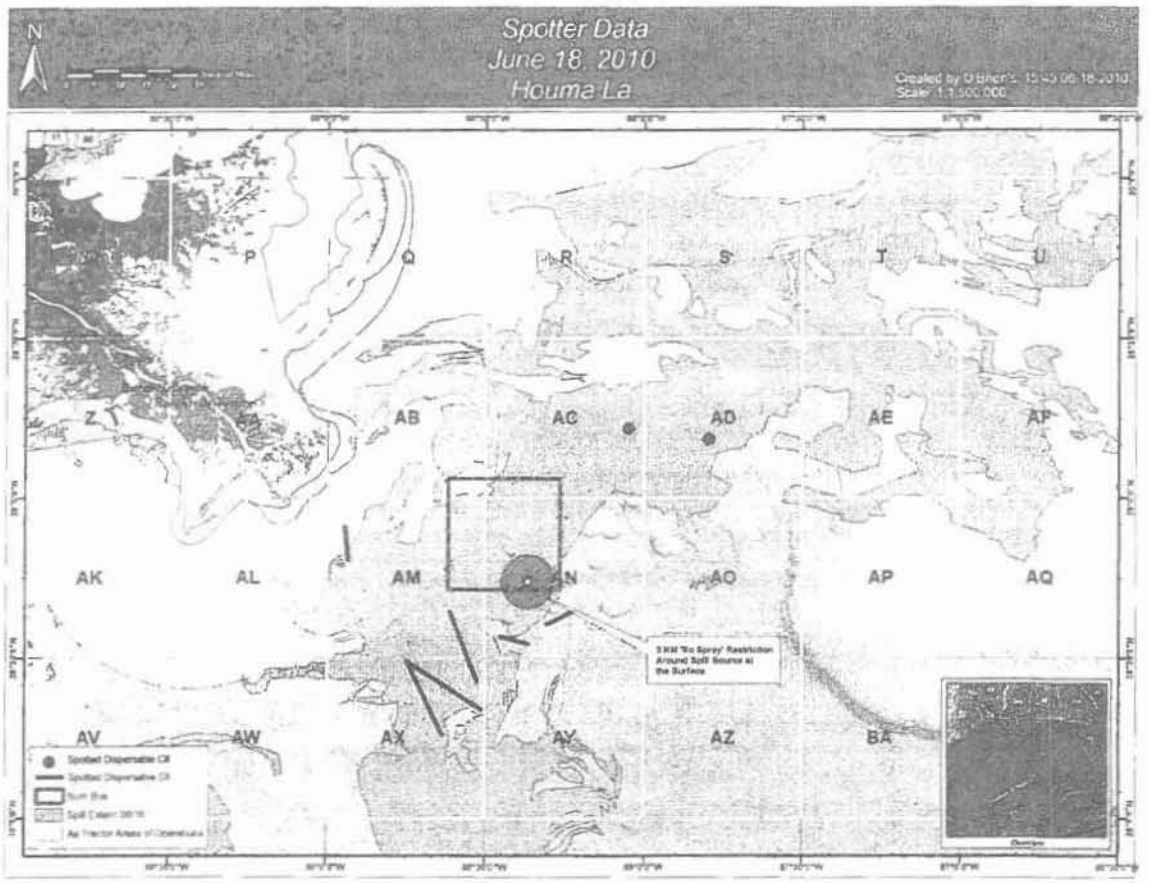


TABLE 1
Dispersible Oil Report June 18, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	1	2560	30	3,840
AD	1	192	90	864
AM	2	1280	80	5,120
AN	2	3360	30-90	5,520
AX	2	736	20	1,024
TOTAL				16,368

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

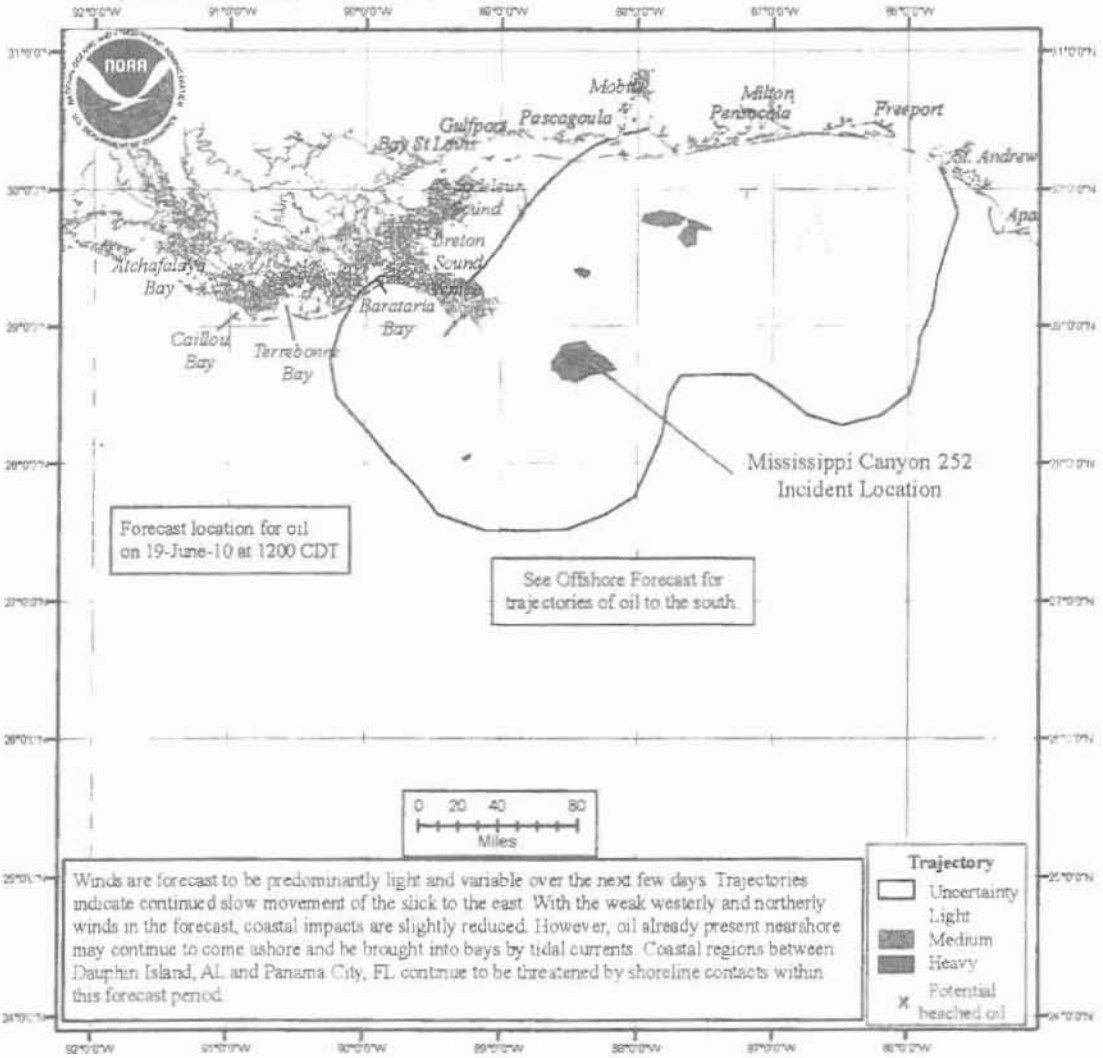
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Saturday, 6/19/10
Date Prepared: 2100 CDT, Thursday, 6/17/10

This forecast is based on the NWS spot forecast from Thursday, June 17 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday-Thursday satellite imagery analysis (NOAA/NESDIS) and Thursday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 18th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

SOURCE					Date/Time 18 June 1500	
Designator	**Kind/Type**	**Vessel**	**Assignment**	**Status**	**Location**	**ETA**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MSR	RV1/Weir	Mississippi Responder	MSRC	Pit stop	Ft Jackson	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
FR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Mechanical	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	MC-252	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seaside Washington (Dutch arm)		Reassign Non-Source	MC-252	
HM	RV1/Weir	HOS Newcastle (Dutch arm)		Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Reassign Non-Source	Non-Source	
TMC	RV1/Weir	Ocean Raider [illegible]	Gulp	Reassigned Mobile	Mobile	
AP	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Dick	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Belt	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	

Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On scene	MC-252	
		Boom Boats				
Designator		**Vessel**	**Assignment**		**Location**	**ETA**
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
BG	WB2	Betty G	Source	Boom tow	MC-252	
SFA	WB1	Sea Alice	Source	Boom tow	Venice	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
SL	WB1	St. Michael Lewis	Source	Boom tow	MC-252	
HE	WB1	Hercules	Source	Boom tow	Enroute	
[illegible]	WB1	[illegible]	Source	Boom tow	MC-252	
[illegible]	WB1	[illegible]	Source	Boom tow	MC-252	
MR	WB1	Mr Randolf	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	

		Crew/Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamle	Shuttle/Re-su	Supply Run	Venice Based	

		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Preliminary Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date: 6/17/2010

Operational Period: 0000 17 June 2010 to 2359 17 June 2010

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 12)

☑ Photo Log

Assessment (Check appropriate box(s))

☑ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log.

☐ Results inconclusive with respect to dispersant effectiveness.

☐ Other. Briefly describe.

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name [redacted] gnature [redacted] Date: 6/18/10

Reviewed by NOAA SSC (Print name, sig

Name: [redacted] Signature [redacted] Date: 6/18/10

June 19, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Guidance on Subsea Dispersant Application

Dear Admiral Watson,

On June 8, you approved GoM Drilling, Completions, and Interventions – MC 252: Guidance on Subsea Dispersant Application Ops Note #3. You approved this plan through June 30, 2010. The plan defines a maximum application of dispersant subsea of 15,000 gallons per calendar day, consistent with the Dispersant Monitoring and Assessment Directive – Addendum 3 (the "Directive"). The Directive requires a formal application for an exemption should application rates greater than 15,000 gallons per calendar day be necessary.

Between 21:00 and 24:00 yesterday (June 18) very high VOCs were measured around the containment vessels Discoverer Enterprise (>300 ppm) and Q4000 (over 200 ppm). Subsea dispersant application was increased to 15 gallons per minute and has successfully reduced VOC level. If sustained application at 15 gallons per minute is required to maintain safe operating conditions, the 15,000 gallon per calendar day maximum will be breached.

BP respectfully requests an exemption to the Directive's maximum daily application of subsea dispersant in the event that such application is required to maintain safe operating conditions. This exemption shall be for Saturday June 19, 2010.

Sincerely,

Douglas J. Suttles

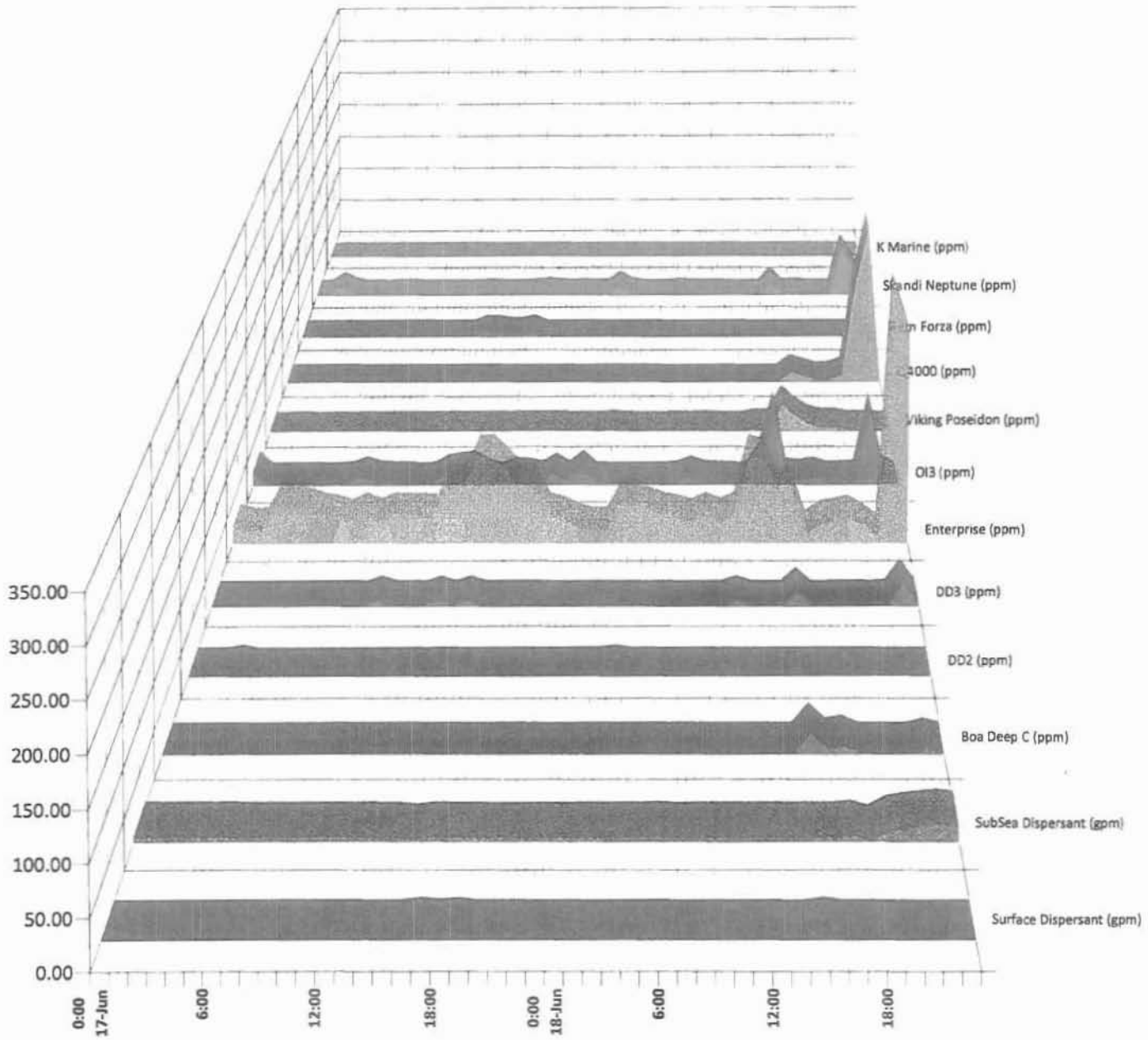
Approval granted subject to the above:

Date: 6-19-10

Jim Watson
Rear Admiral, USCG

Federal On-Scene Coordinator

48 Hour Dispersant Application and VOC Chart



James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 19, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has eleven (11) spotter visual reports from 19 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 20June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 4-8 knots, wave height 0.5-1 feet, ceilings unlimited and visibility 10 nm; 40 per cent chance of thunderstorms in the area.

Houma Unified Command anticipates that, due to the weather, location, distribution (4,500 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 20 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be returning to port for the transfer of samples and re-provisioning. The QA/QC report on the SMART Tier 1 observations for the 18th will be provided to EPA tomorrow morning.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 15,500 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-20-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 20 June 2010 with Oil Targets from Spotter Operations on 19 June

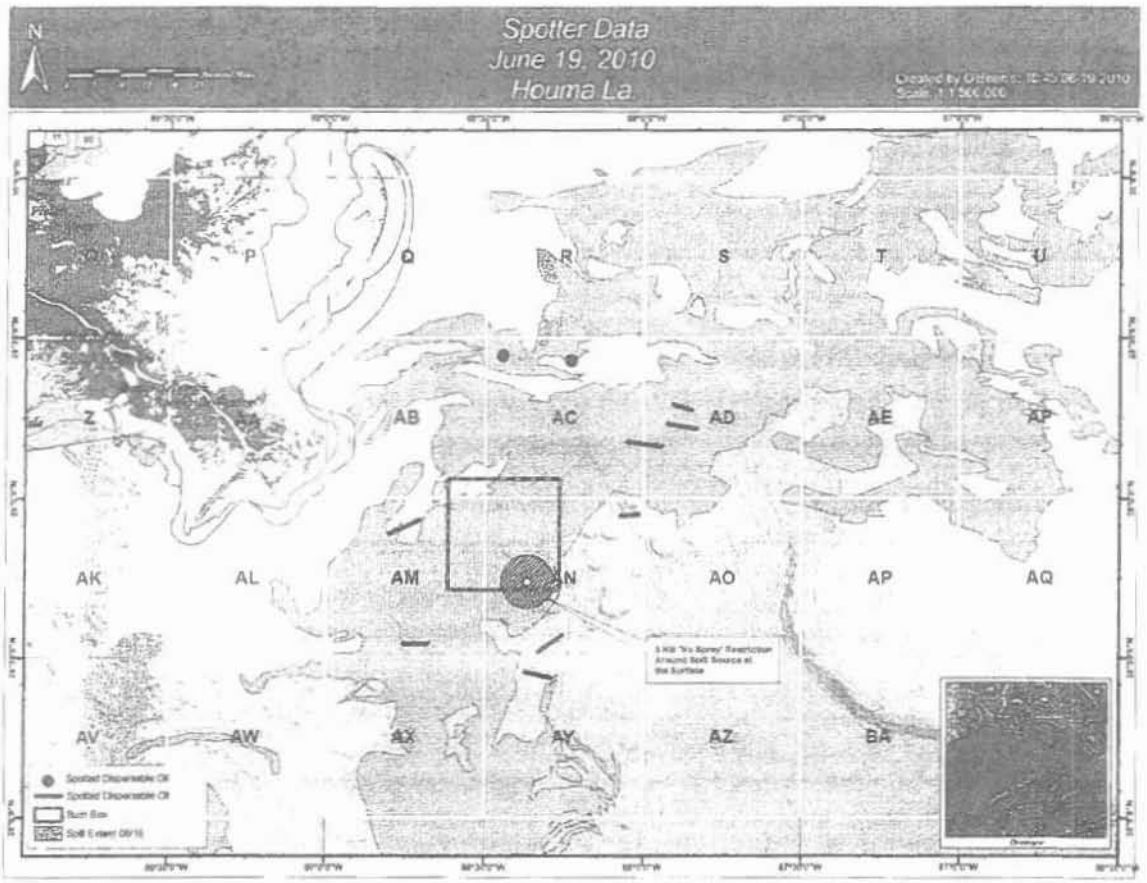


TABLE 1
Dispersible Oil Report June 19, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	3	280	20-50	600
AD	3	1,172	30-50	2,611
AM	3	12,198	15-60	9,638
AN	3	2,880	15-20	2,480
AY	1	127	20	130
TOTAL				15,459

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

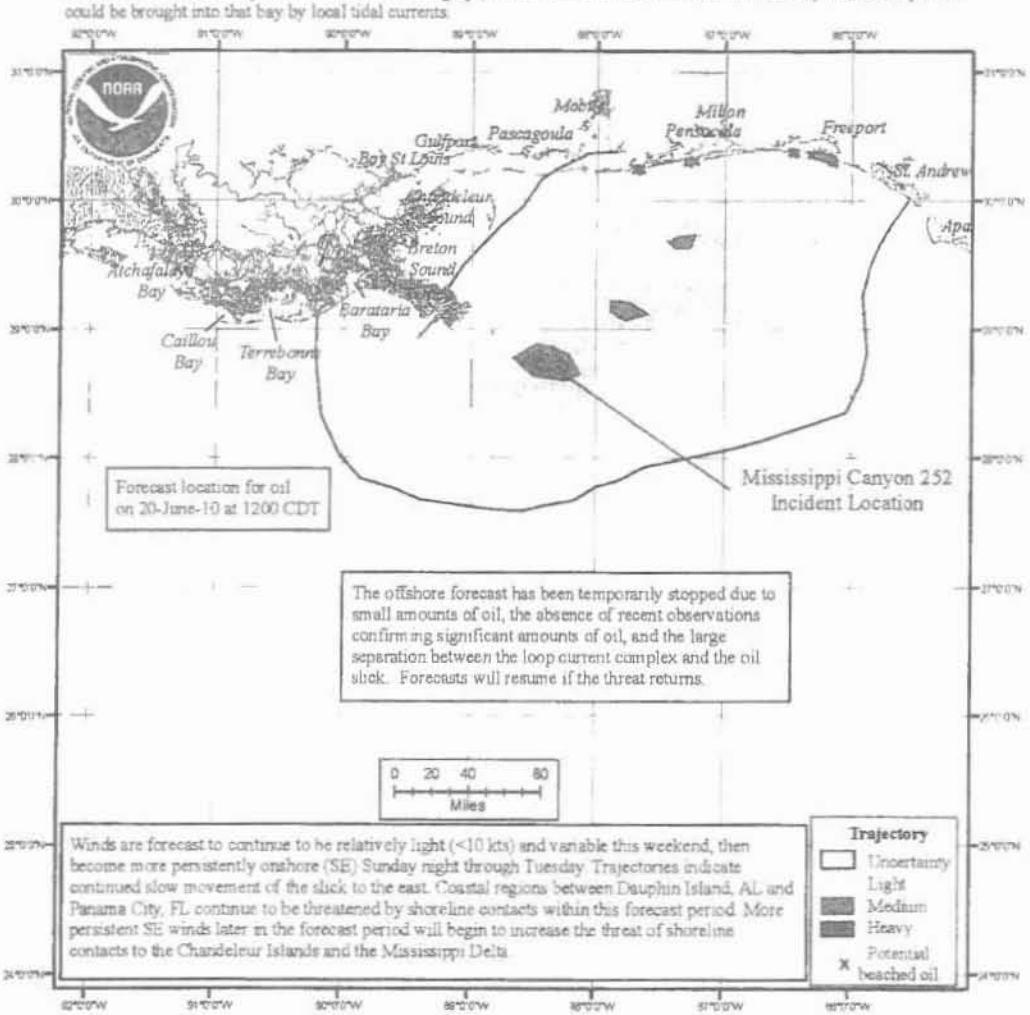
Nearshore Surface Oil Forecast Deepwater Horizon MC252

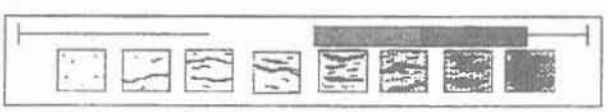
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Sunday, 6/20/10
Date Prepared: 2100 CDT, Friday, 6/18/10

This forecast is based on the NWS spot forecast from Friday, June 18 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Thursday-Friday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast: June 19th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

SOURCE				Date/Time 19 June 1500		
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
VAR	RV1/Weir	Virginia Responder	MSRC	Pit stop	Ft Jackson	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
PER	RV1/Belt	NRC Perseverence	NRC	Mechanical	MC-252	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Mechanical	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	MC-252	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Reassign Non-Source	MC-252	
HM	RV1/Weir	HOS Mystique (Dutch arm)		Reassign Non-Source	Non-Source	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Reassign Non-Source	Non-Source	
[illegible]	RV1/Weir	Ocean Raider 17 (MC3089	ship	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	White Tail	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	

Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	On-scene	MC-252	
		Boom Boats				
Designator		**Vessel**	**Assignment**		**Location**	**ETA**
CC	WB2	Chanese G	Source	Standby	Venice	
SF	WB2	Sea Fox	Source	Standby	Venice	
BG	WB2	Bella G	Source	Boom tow	MC-252	
[illegible]	WB2	[illegible]	Source	Boom tow	MC-252	
MSE	WB2	Ms. Addison	Source	Mechanical	Venice	
JN	WB2	Julienne Marie	Source	Standby	Venice	
[illegible]	WB1	[illegible]	Source	Boom tow	MC-252	
HE	WB1	Hercules	Source	Boom tow	Enroute	
[illegible]	WB2	[illegible]	Source	Boom tow	MC-252	
[illegible]	WB1	[illegible]	Source	Boom tow	MC-252	
MR	WB1	Mr Randolf	Source	Boom tow	Enroute	
SH	WB2	Sea Hawk	Source	Standby	Venice	
		Crew/Re-supply				
ML	WB2	Mr. Leroy	Shuttle/Re-su	Supply Run	Venice Based	
FO	WB2	Fox	Ampol Re-sup	Supply Run	Venice Based	
JP	WB2	Jean Perry (Drop Box)	Shuttle/Re-su	Supply Run	Venice Based	
CS	WB4	Corissa Shane	Shuttle/Re-su	Supply Run	Venice Based	
KL	WB2	Katie Lynn	Shuttle/Re-su	Supply Run	Venice Based	
EV	WB2	Eveready	NRC Re-suppl	Supply Run	Venice Based	
MW	WB2	Miss Wynter	NRC Re-suppl	Supply Run	Venice Based	
BC	WB2	Ben Charamie	Shuttle/Re-su	Supply Run	Venice Based	
		Inland Barges				
331	TV3	Cenac 331 Barge	TF Storage	5,000 bbl open	Ft Jackson	
323	TV3	Cenac 323 Barge	TF Storage	21,000 bbl open	Venice	
324	TV3	Cenac 324 Barge	TF Storage	21,000 bbl open	Venice	
HM-3048	TV3	Higman 3048 Barge	TF Storage	Full	Enroute	Houston
HM-3049	TV3	Higman 3049 Barge	TF Storage	8,000 bbl open	Venice New Park	

Re: FW: Houma Unified Command - Sunday, June 20, 2010 - Aerial Dispersant Utilization Request

Ronnie Crossland to: Watson, James RADM 06/20/2010 09:45 AM

Cc: "Loebl, Gordon CAPT", James.A.Watson, "Perry, Raymond CAPT", "Nash, Roy RDML", Sam Coleman, "steve Lehmann", Steve Mason, Gary Moore, R6 DWH REOC RIC, Craig Carroll, "Austin, Meredith

Admiral Watson,

I have reviewed the request and have consulted with EPA Region 6. We continue to look for an increase in mechanical recovery and oil containment at the wellhead and still await the schedule for increasing these capabilities. EPA concurred with an initial 5,000 gallons last night for aerial application on June 20, 2010. EPA is now concurring with the remainder of the request of 10,500 gallons which brings the total to 15,500 gallons for aerial dispersant application for June 20, 2010.

As mentioned in previous concurrences, EPA evaluates the entire picture when considering the use of dispersants. On June 19, 2010, approximately 23,000 gallons of dispersant (Subsurface and Source Area Surface application) were used to control VOC levels in the source area. EPA looks forward to reviewing the VOC trend data as part of our ongoing evaluation of the use of dispersants as a VOC control method.

As always, we look forward to continuing discussions on reducing surface application, eliminating subsurface application, and achieving 90% source recovery.

Thanks,
Ronnie

"Watson, James RADM" Please review dispersant request for tomo 06/19/2010 08:24:25 PM

From: "Watson, James RADM" <James.A.Watson@uscg.mil>
To: "Perry, Raymond CAPT" <Raymond.J.Perry@uscg.mil>, Sam Coleman/R6/USEPA/US@EPA, Ronnie Crossland/R6/USEPA/US@EPA, "steve Lehmann" <steve.Lehmann@noaa.gov>
Cc: "Utsler, Mike J" <mike.utsler@uk.bp.com>, "Loebl, Gordon CAPT" <Gordon.A.Loebl@uscg.mil>, "Nash, Roy RDML" <Roy.A.Nash@uscg.mil>
Date: 06/19/2010 08:24 PM
Subject: FW: Houma Unified Command - Sunday, June 20, 2010 - Aerial Dispersant Utilization Request

Please review dispersant request for tomorrow. Note special request for 5K gals tonight based on track record of reliable amounts of oil that will still be there from tonight's flight and wx problems when the missions are delayed.

JW

-----Original Message-----
From: mike.utsler@uk.bp.com [mailto:mike.utsler@uk.bp.com]
Sent: Saturday, June 19, 2010 6:44 PM
To: Watson, James RADM
Cc: Mutschler, Jackie C; Cavanagh, Ian; Keller, Luke; Charlie Huber; Laferriere, Roger CAPT; Austin, Meredith CAPT; coleman.sam@epa.gov; moore.gary@epa.gov; Rainey, David I
Subject: Houma Unified Command - Sunday, June 20, 2010 - Aerial Dispersant Utilization Request

Admiral,

Attached is the dispersant spray request for 20 June 2010. In line with our

normal routine, we will be sending up spotter aircraft at 0615 to re-assess the area and re-locate targets.

<<June_20_request_for_aerial_spray_operations_FINAL.doc>>
As you have probably noticed we are in a period of offshore thunderstorms which prevent us from adequately mapping the response area in the morning and reduces our ability to apply dispersants in the afternoon. This weather pattern and the delayed approval process also increases risk within our air operations as described in the attached review prepared by our aviation consultant. With the typical afternoon storms for this area we have only been able to spray a portion of the daily volumes authorized. For June 19th we were authorized to spray 16,400 g, but were only able to spray 2,604 gallons.

To improve safe air operations for this time of year, we propose that (based upon our request) the FOSC approve the night before a single flight from each base which would total no more than 5,000 gallons. This would allow the spotters to acquire and direct spray aircraft during the morning when we are experiencing fewer storms. While these aircraft are operating other spotters would more thoroughly map the response area and provide the complete report of slicks for the day. This updated report would be provided at about 0930 to the FOSC as we are currently doing. At that time the FOSC could set the final volume for the day.

<<SAFETY ASPECTS OF AERIAL DISPERSANT OPERATION IN SUMMERTIME.doc>>

Respectfully,

Mike Utsler Captain Roger Laferriere

Houma Unified Command

June_20_request_for_aerial_spray_operations_FINAL.doc

SAFETY ASPECTS OF AERIAL DISPERSANT OPERATION IN SUMMERTIME.doc

Re: FW: Houma Unified Command - Sunday, June 20, 2010 - Aerial Dispersant Utilization Request

Ronnie Crossland to: Watson, James RADM 06/19/2010 11:21 PM

Cc: "Loebl, Gordon CAPT", James.A.Watson, "Perry, Raymond CAPT", "Nash, Roy RDML", Sam Coleman, "steve Lehmann", Steve Mason, Gary Moore, Crossland.Ronnie, "Austin, Meredith CAPT"

Admiral Watson,

I have reviewed the request and have consulted with EPA Region 6. EPA concurs with the special request for 5,000 gallons of dispersant to be available for use on June 20, 2010. We will evaluate the remaining balance of the request tomorrow morning. In addition, we will evaluate a path forward to ensure safe air operations.

Thanks,
Ronnie

"Watson, James RADM" Please review dispersant request for tomo 06/19/2010 08:24:25 PM

From: "Watson, James RADM" <James.A.Watson@uscg.mil>
To: "Perry, Raymond CAPT" <Raymond.J.Perry@uscg.mil>, Sam Coleman/R6/USEPA/US@EPA, Ronnie Crossland/R6/USEPA/US@EPA, "steve Lehmann" <steve.Lehmann@noaa.gov>
Cc: "Utsler, Mike J" <mike.utsler@uk.bp.com>, "Loebl, Gordon CAPT" <Gordon.A.Loebl@uscg.mil>, "Nash, Roy RDML" <Roy.A.Nash@uscg.mil>
Date: 06/19/2010 08:24 PM
Subject: FW: Houma Unified Command - Sunday, June 20, 2010 - Aerial Dispersant Utilization Request

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JW

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Sent: Saturday, June 19, 2010 6:44 PM
To: Watson, James RADM
Cc: Mutschler, Jackie C; Cavanagh, Ian; Keller, Luke; Charlie Huber; Laferriere, Roger CAPT; Austin, Meredith CAPT; coleman.sam@epa.gov; moore.gary@epa.gov; Rainey, David I
Subject: Houma Unified Command - Sunday, June 20, 2010 - Aerial Dispersant Utilization Request

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<<SAFETY ASPECTS OF AERIAL DISPERSANT OPERATION IN SUMMERTIME.doc>>

Respectfully,

Mike Utsler Captain Roger Laferriere

Houma Unified Command

June_20_request_for_aerial_spray_operations_FINAL.doc

SAFETY ASPECTS OF AERIAL DISPERSANT OPERATION IN SUMMERTIME.doc

bp

Doug Suttles
Chief Operating Officer

Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, TX 77079

June 22, 2010

Rear Admiral James A. Watson
Federal On-Scene Commander
1250 Poydras Street
New Orleans, LA 70113

Direct 281 366 3969
Fax 281 366 7239
Doug.Suttles@bp.com

Weekly Source Control Surface Dispersant Plan (June 24 through 30, 2010)

Dear Admiral Watson,

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") submitted a weekly Source Control Surface Dispersant Plan for the week June 17 to June 23, which you approved on June 16. The plan allowed for a maximum daily application volume (calendar day) of 6,000 gallons, unless more was required to control VOCs. From June 17 through June 21, the average daily volume applied was ~2,200 gallons. The maximum daily application was 5,776 gallons on June 19.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

BP respectfully requests approval of the Weekly Source Control Dispersant Plan for June 24 though June 30, as follows

Date	Expected Maximum Volume per calendar day (gals)
June 24	6000
June 25	6000
June 26	6000
June 27	6000
June 28	6000
June 29	6000
June 30	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Douglas J. Suttles

Approval granted subject to the above:

Date: 6/23/10

James A. Watson IV
Rear Admiral, USCG
Federal On-Scene Commander

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating (Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

<u>Recommended actions for VOC management:</u>

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

June 22, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Weekly Source Control Surface Dispersant Plan (June 24 through 30, 2010)

Dear Admiral Watson,

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") submitted a weekly Source Control Surface Dispersant Plan for the week June 17 to June 23, which you approved on June 16. The plan allowed for a maximum daily application volume (calendar day) of 6,000 gallons, unless more was required to control VOCs. From June 17 through June 21, the average daily volume applied was ~2,200 gallons. The maximum daily application was 5,776 gallons on June 19.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

BP respectfully requests approval of the Weekly Source Control Dispersant Plan for June 24 though June 30, as follows

Date	Expected Maximum Volume per calendar day (gals)
June 24	6000
June 25	6000
June 26	6000
June 27	6000
June 28	6000
June 29	6000
June 30	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Douglas J. Suttles

Approval granted subject to the above:

_____ Date: _____

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating (Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

Recommended actions for VOC management:

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 22, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has five (5) spotter visual reports from 22 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 23 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating scattered showers and thunderstorms with winds 10-15 knots SSE, waves 2 feet, ceiling 3,500', visibility 5-10 nm with a 50% chance of rain.

Houma Unified Command anticipates that, due to the weather, location, distribution (1,800 sq.mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 23, 2010. Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming

vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be conducting sampling operations. QA/QC SMART report for 21 June, 2010.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks determined after tomorrow mornings reconnaissance flights. The reason for this request is that weather during most of the day prevented over flights to locate the oil slicks and conduct spraying. It is expected that since both skimming and ISB operations were limited or not operational today and ISB will not be operational tomorrow that there will be significantly more oil slicks in the operational area. We have identified oil slicks that require over 10,000 gallons of dispersant, and request approval to commerce early operations with 5,000 gallons of dispersant to initial slicks identified in the first morning over flights.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Roy A Nash Date: 6/23/2010

James A. Watson
Rear Admiral, USCG
FOR Federal On-Scene Coordinator

NOTE: TOP HAT was removed under an "emergency drive off" based on alarms received at 0943. HAT is off at time of signing. RA Nash

Attachment 1

Dispersant Zone Map for 23 June 2010 with Oil Targets from Spotter Operations on 22 June

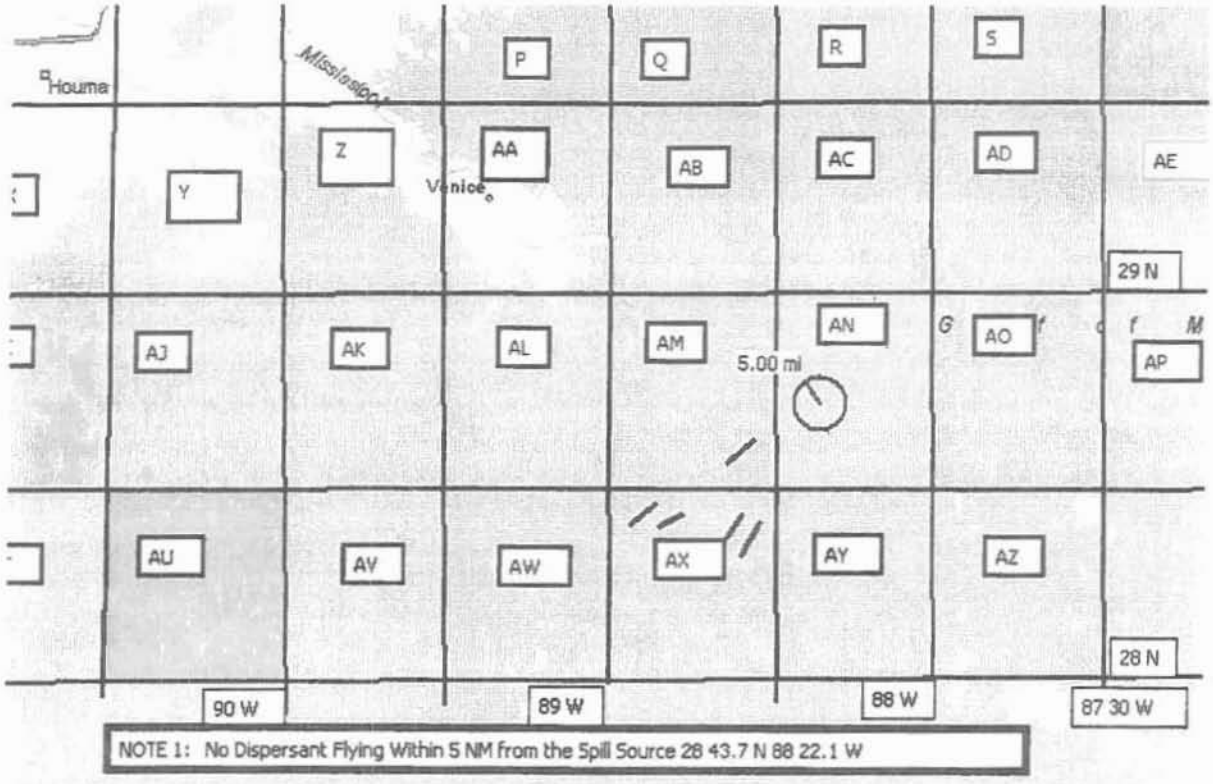


TABLE 1
Dispersible Oil Report June 22, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AX	4	8,160	45	887
AM	1	19,200	10	9,600
TOTAL	5	27,360		10,487

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

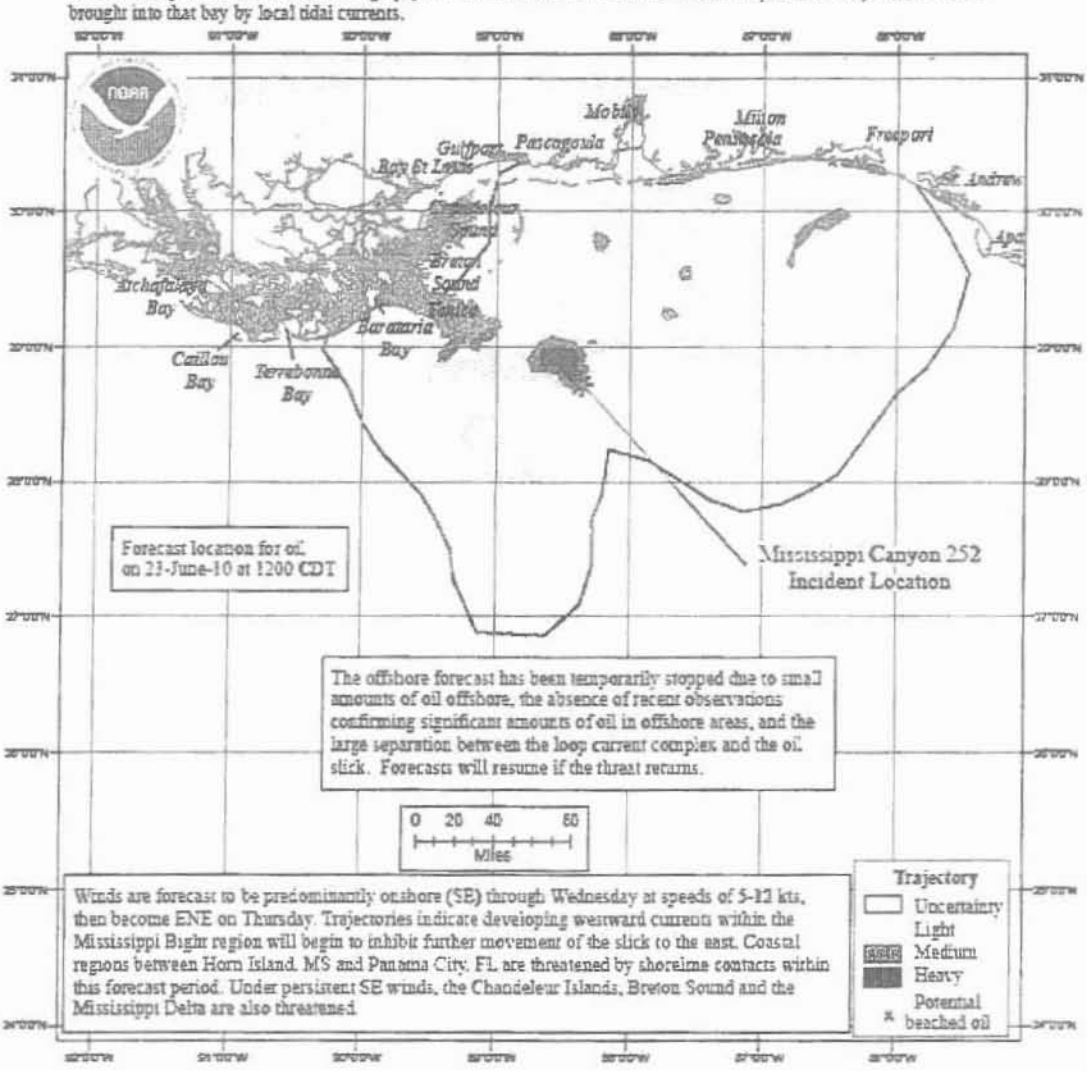
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Wednesday, 6/23/10

Date Prepared: 2100 CDT, Monday, 6/21/10

This forecast is based on the NWS spot forecast from Monday, June 21 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Sunday satellite imagery analysis (NOAA/NESDIS) and Monday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 22nd PM

Attachment 3

Vessel Status Board

		SOURCE			Date/Time 22 June 0700	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252	
MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC 252	
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC 252	
VAR	RV1/Weir	Virginia Responder	MSRC	Pit stop	Ft Jackson	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
HOSS	RV1/Belt	CGA HOSS Barge (Crosby Surf)	TF HOSS	Skimming	MC-252	
SV	RV1/Weir	Seacor Vanguard (Current Buster 2 ea)	Buster	Skimming	MC-252	
JC	RV1/Weir	John Coghill (Current Buster)	Buster	Skimming	MC-252	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Equipment	MC-252	
PER	RV1/Belt	NRC Perseverance	NRC	Mechanical	MC-252	
LF	RV1/Belt	Lynne Frink (NRC Marco)	NRC	Skimming	MC-252	
LIB	RV1/Disk	NRC Liberty (Disc)	NRC	Skimming	MC-252	
NG	RV1/Weir	Noonie G (w/CGA FRU)	CGA	Skimming	MC 252	
IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Skimming	MC-252	
CAR	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Equipment	Venice	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Skimming	MC-252	
RE	RV1/Belt	Renee (Navy Marco)	Fed	Equipment	Gulfport	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Skimming	MC-252	
HM	RV1/Weir	HOS Mystique (Dutch arm)		Skimming	MC 252	
SW	RV1/Weir	Sweetwater (Dutch Arm)		Skimming	MC-252	
JMC	RV1/Weir	Ocean Raider 17/JMC3009	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	NRC	Reassign Non-Source	Non-Source	
SI	RV1/Belt	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Equipment	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

Attachment 4

QA/QC SMART REPORT

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214 CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date 6/21/2010

Operational Period: 2010 06 21 0700 to 2010 06 21 1030

Data Review (Check documents that were reviewed)

☑ Unit Log – CS 214 CG

☐ Photographs (How many reviewed? ___) no photos or photo log available

☐ Photo Log

☑ Dispersant Observation Reporting Form 30

Assessment (Check appropriate box(s))

☐ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

Brief narrative discrepancy observations

☐ Dispersant is effective based on review of Activity Log, photographs, and photo log.

☐ Results inconclusive with respect to dispersant effectiveness.

☒ Other. Briefly describe.

No noticeable dispersion – need more energy

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name: [redacted] Signature [redacted] Date: 6/22/10

Reviewed by NOAA SSC (Print name, sign, and date)

Name: [redacted] Signature [redacted] Date: 6/22/10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 23, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 23 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 24 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating isolated showers and thunderstorms with winds 10-15 knots SE, waves 2 feet, ceiling good except 1,000 around thunderstorms, visibility 5-10 nm and chance of rain is 20%..

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sq.mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 24, 2010.

Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the

dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be conducting sampling operations. QA/QC SMART report for June 22, 2010 are not available.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks determined after tomorrow mornings reconnaissance flights. The reason for this request is we expect to see substantially more oil slicks due to the removal of the top cap, no ISB operations and reduced skimming operations. We request to commerce early operations with 5,000 gallons of dispersant to initial slicks identified and then request a subsequent amount to spray based on the full spotter reports

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 1-24-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Dispersant Monitoring and Assessment Directive

I. Plume Monitoring and Assessment Plan for Subsurface Dispersant Application

BP shall implement the approved Dispersed Plume Characterization Plan for Subsurface Dispersant Application. Part 1 of the plan is a "Proof of Concept" to determine if subsurface dispersant operation is chemically dispersing the oil plume. Once the "Proof of Concept" test is complete, the results will be reviewed by the RRT for a decision to proceed or not proceed with Part 2 of the plan. Part 2 of the plan involves robust sampling to detect and delineate the dispersed plume Part 3, entitled "Subsurface Injection of Dispersant", outlines the operational procedures. Additional guidance will be provided by the RRT coordination group on specific implementation of this directive and that guidance will be considered an addendum to this directive.

At least 24 hours prior to the testing, use and/or application of any subsurface dispersants, BP shall provide a *Dispersant Application Plan* that identifies the dispersants to be used, describes the methods and equipment used to inject the dispersant, plume model to assure representative sampling, proposed method of visual observation, process for determining the effectiveness of subsurface injection, the specific injection rate (i.e., gallons/minute), the total amount to be used for the duration of the test, the total length of time that dispersant is injected, and the plan for sampling and monitoring, as approved by the Unified Command Environmental Unit. Dispersants must be on the approved product schedule and suitable for this use.

All data shall be provided to the United States Coast Guard (USCG) Federal On-Scene Coordinator, and the Environmental Protection Agency (EPA) Regional Response Team (RRT) representative within 24 hours of the information being received. This data includes real time monitoring, laboratory analysis, documented observations, photographs, video, and any other information related to subsurface dispersant application.

BP shall conduct Part 1 monitoring and collect the data outlined below to determine dispersed plume concentration and transport. BP shall conduct Part 2 monitoring and collect the data outlined below, which will be sustained and more comprehensive, to address plume fate and effects on aquatic life from the dispersed plume and chemical dispersants based on the results of Part 1 and iterative hydrodynamic modeling output. * ROTIFER ONLY

Timing: BP shall commence Part 1 monitoring when subsurface application of dispersant is initiated. BP shall ensure that the R/V Brooks McCall or equivalent on location is outfitted, and manned before subsurface application commences.

RDC for SC

Part 1

BP shall design and implement a Part 1 monitoring plan to determine the factors needed to calculate dispersion effectiveness, namely, % oil, % water, % dispersant. This phase of

ORIGINAL

DROPLET AJJ MEL RDC for SC

sampling should determine the factors to predict buoyancy; namely ~~bubble~~ sizes, density (or specific gravity) along the thermal gradient of the water column, and kinematic viscosity.

Part 2

IF PART 1 IS SUCCESSFUL AND CONTINUOUS SUBSEA INJECTION PROCEEDS

BP shall design and implement a Part 2 monitoring plan to collect and report, on a daily basis, the data and information described below. BP shall submit this plan to the FOSC and EPA RRT Co Chair for approval and shall begin implementation upon notice from the Coast Guard and EPA. BP shall continue implementation of this plan until further notification from the Coast Guard and EPA. [1]

AJJ MEL RDC for SC

BP's monitoring plan shall include a more thorough oil analysis, to enable EPA to determine whether the dispersed plume is toxic to aquatic life. This plan shall be designed and implemented to determine whether the dispersed oil will hang in the water column and eventually come in contact with the benthos as it approaches land. BP has the option of conducting this particular monitoring and analysis as part of Part 1 if so desired.

PART 1 – Proof of Concept – Data Collection Requirement

- Towed Fluorometer at 1 meter
- LISST Particle Analysis at various intervals from surface to 550 meters
- Dissolved Oxygen at various intervals from surface to 550 meters
- CTD – Conductivity, Temperature, and Depth at various intervals from surface to 550 meters
- Water sampling from surface to 550 meters for PAH analysis
- Aerial Visual Observation - WEATHER PERMITTING AJJ MEL RDC for SC

PART 2 – Characterization Plan – Data Collection Requirement

- Cast Fluorometer – surface to sea floor
- LISST Particle Analysis at various intervals from surface to sea floor
- Dissolved Oxygen at various intervals from surface to sea floor
- CTD – Conductivity, Temperature, and Depth at various intervals from surface to sea floor
- Water sampling from surface to 550 meters for PAH analysis
- Aerial Visual Observation
- Rototox toxicity testing
- UV-Fluorescence testing to meet objectives in Appendix A

PART 3 – Subsurface Injection of Dispersant – Parameter Requirements

- Type of dispersant to be used

[1] See Appendix A for further background

- Rate of dispersant injection
- Process for monitoring pumping rate
- Procedures for FOSC to start and stop injection

Evaluation Criteria to Determine Operational Shut-Down of Subsurface Sea Dispersant Application:

The Federal On-Scene Coordinator will immediately convene the Regional Response Team (RRT) when either of the following conditions is reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must first perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response. Then, a more refined dilution procedure must be done to get the final LC50 answer. This result will be compared to a NOAA plume model that would predict when or where exertion of that toxic response would take place. EPA and NOAA will interpret the results of the toxicity tests to inform determination of a shutdown decision.

ONLY APPLIES TO PART 2
MEL
RDC for SC

The RRT will evaluate the conditions above, in addition to all relevant factors including shoreline, surface water, and other human health and ecological impacts, to determine whether subsurface dispersant application should be shut down.

Limitations to Address

BP shall include in its monitoring plan provisions to address and minimize the impact of the following challenges:

1. Timely transport of samples to labs where necessary, which may be subject to weather and/or operational delays.
2. Sampling in the deep sea environment may pose challenges due to equipment limitations and malfunctions.

Quality Assurance and Sampling Plan Requirements

BP's plan shall include sample collection methodology, handling, chain of custody and decontamination procedures to ensure the highest quality data will be collected. Discrete samples shall be tested at an approved lab(s). ~~Triplicate~~ samples shall be tested. All samples (or as practicably possible) shall be archived for potential future analysis. Where technically possible, all samples shall be at least 100 ml.

TRIPLICATES NOT POSSIBLE
DUPLICATES ONLY
MEL
RDC for SC

BP shall include the following components and criteria in its Sampling Plan:

1. An Introduction, to include project objective and project staff
2. A brief site description and background
3. A description of the Sampling Approach and Procedures, to encompass:
    a. A brief overview of sampling activities, data quality objectives, and health and safety implementation strategies (frequently, this references another specific document, but must be included).
    b. The actual sampling and/or monitoring approach, to ensure repeatability and consistent procedures. Describe sampling, monitoring, sampling and field QC procedures, spoil or waste disposal procedures resulting from this effort, as well as specimen/data handling issues.
    c. Sample management – how the sample will be procured, handled, and delivered
    d. Sample instructions- preservation, containers, and hold times

4. The analytical approach – what lab tests will be run, any special instructions, how the data will be verified, and how data will be reported.
5. Quality Assurance- custody procedures, field records including logs, chain of custody, qualitative data handling including photographs.

II. Special Monitoring of Applied Response Technologies ("SMART") Protocol for Surface Application of Dispersants

BP shall immediately implement the Special Monitoring of Applied Response Technologies ("SMART") Protocol (attached as Appendix B) at the Tier III level for surface application of dispersants. Results from Tier III monitoring must be shared with the Area Command Environmental Unit. If Tier III is not deemed to be sufficient, further direction will be provided.

Mary E Landry Date: 5/9/10

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Sam Coleman Date: 5/9/10

Samuel Coleman, P.E.
Director
Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

BP shall include the following components and criteria in its Sampling Plan:

1. An Introduction, to include project objective and project staff
2. A brief site description and background
3. A description of the Sampling Approach and Procedures, to encompass:
    a. A brief overview of sampling activities, data quality objectives, and health and safety implementation strategies (frequently, this references another specific document, but must be included).
    b. The actual sampling and/or monitoring approach, to ensure repeatability and consistent procedures. Describe sampling, monitoring, sampling and field QC procedures, spoil or waste disposal procedures resulting from this effort, as well as specimen/data handling issues.
    c. Sample management – how the sample will be procured, handled, and delivered
    d. Sample instructions- preservation, containers, and hold times

4. The analytical approach – what lab tests will be run, any special instructions, how the data will be verified, and how data will be reported.
5. Quality Assurance- custody procedures, field records including logs, chain of custody, qualitative data handling including photographs.

II. Special Monitoring of Applied Response Technologies ("SMART") Protocol for Surface Application of Dispersants

BP shall immediately implement the Special Monitoring of Applied Response Technologies ("SMART") Protocol (attached as Appendix B) at the Tier III level for surface application of dispersants. Results from Tier III monitoring must be shared with the Area Command Environmental Unit. If Tier III is not deemed to be sufficient, further direction will be provided.

NOT APPLICABLE TO SUBSEA DISPERSION MEL RDC for SC

Mary E Landry Date: 5/10/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Date: _____

Samuel Coleman, P.E.
Director
Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

5-10-10

Appendix A –Background for Part 2 Methodology for Informational Purposes

The fact that many organic compounds fluoresce at specific excitation and emission wavelengths is the basis for identifying many of the components of crude oil in seawater. When subject to excitation at 245-280 nm, polycyclic aromatic hydrocarbons (PAH) fluoresce over wavelengths of 310 to > 400 nm, depending on the number of aromatic rings in the structure. Only one group has examined the 2D UV Fluorescence Spectroscopy (UVFS) spectra of oil treated with chemical dispersants, the Ken Lee group at Fisheries and Oceans Canada (DFO). They found that a fixed excitation wavelength of 280 nm works best for fluorescence of PAHs in crude oil, and two different emission wavelengths, one at 340 nm for 1-and 2-ring PAHs and the other at 445 nm for 3-ring and higher PAHS, provide an excellent fingerprint for differentiating chemically dispersed oil from non-dispersed oil. As oil gets dispersed due to the action of a chemical dispersant, the peak height at 445 nm becomes highly pronounced relative to the peak height at 340 nm. Thus, computing the ratio of peak height at 340 to the peak height at 445 gives a direct measurement of the degree of dispersion that has taken place as a result of applying a dispersant to an oil.

The effect of oil dispersion on UVFS spectra can be expressed in terms of an emission ratio, so that dispersion can be tracked without having to measure oil concentration. The spectral changes associated with the application of dispersant can also be calibrated to quantify increasing oil or oil plus dispersant. The fact that UVFS and UVA data are comparable at an emission intensity of 445 nm or over the whole spectrum of intensities (from 300 - 500 nm) indicates that the fate of higher molecular weight (> 3-ring) PAH fractions - the more "dispersible" fraction of an oil slick - will provide a good idea of the fate of the oil as a whole during the dispersion process. Given that higher molecular weight PAHs may be associated with many of the persistent (or chronic) toxic effects of crude oils on marine organisms, the ability of UVFS to track "dispersible" fractions would make it a particularly useful tool in studies of the long-term toxic effects of dispersed oil.

Dispersant Monitoring and Assessment Directive – Addendum 1

This is an addendum (Addendum 1) to the Dispersant Monitoring and Assessment Directive issued on May 10, 2010, by the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA) to BP. The requirements in this Addendum 1 apply to Part 2 of the May 10, 2010 Directive and are in addition to the requirements of that Directive. BP shall commence Part 2 requirements before subsurface application of dispersant is initiated and continue the Part 2 requirements and this Addendum 1 until cancelled or modified by the USCG and EPA. WAIVED FOR 10 HRS COMMENCE 0130 15 MAY 2010 MEL

Additional Requirements:

1. Sampling of dispersant/oil and oil-only waters must be continued per the Directive, and in addition, baseline data of waters without direct application of dispersant or oil shall also be collected by BP.
2. BP shall allow EPA/NOAA scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice). For example, EPA may request to recast the station if the CDOM fluorometer indicates a large increase in signal after data review. EPA/NOAA staff must be allowed to be in constant communication with staff on shore.
3. BP shall use Turner Designs C3 fluorometer (e.g., SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
4. BP shall use a CTD rosette package equipped with CDOM fluorometer and a 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in the water column using the live feed data stream. The requirement must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
5. BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
6. Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
7. BP shall provide 48 hour advanced notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-chair. WAIVED MEL 0130 15 MAY 2010
8. Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-chair.

Mary E Landry Date: 5/14/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Sam Coleman Date: 5/14/2010

Samuel Coleman, P.E.
Director
Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Dispersant Monitoring and Assessment Directive – Addendum

This is an addendum (Addendum 2) to the Dispersant Monitoring and Assessment Directive issued on May 10, 2010, and Addendum 1 issued on May 14, 2010 by the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA) to BP. The requirements in this Addendum 2 apply to Parts 1 and 2 of the May 10, 2010 Directive and are in addition to the requirements of that Directive. BP shall commence Parts 1 and 2 requirements before subsurface application of dispersant is initiated and continues the Parts 1 and 2 requirements, Addendum 1, and this Addendum 2 until cancelled or modified by the USCG and EPA.

Alternative Dispersant additional Requirements:

1. Sampling of dispersant/oil and oil-only waters must be continued per the Directive, and in addition, baseline data of waters without direct application of dispersant or oil shall also be collected by BP. Monitoring of subsurface dispersant application by BP shall be performed from a vessel capable of performing all requirements of the May 10, 2010, Dispersant Monitoring and Assessment Directive and Addendum 1 on each day that dispersant is applied. As used in this Addendum 2, a "day" shall mean a calendar day.
2. Within 24 hours of the issuance of this Addendum 2, BP shall identify to the FOSC and the EPA RRT Co-chair for EPA's and the FOSC's approval, one or more approved dispersant products from the National Contingency Plan Product Schedule that are available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopsis, as indicated on the NCP Product Schedule (http://www.epa.gov/oem/content/ncp/tox_tables.htm). The less toxic dispersant product(s) shall be used by BP for surface application and subsurface application as directed by the FOSC. Within 72 hours after submitting the list of alternatives, and after receiving EPA approval, BP shall immediately use only the approved alternative dispersant. Should BP not be able to identify alternative dispersant products, BP shall provide the FOSC and EPA RRT CO-Chair a detailed description of the products investigated, the reason the products did not meet the standards described above. Availability shall be based on new existing stockpiles of dispersants, the estimated time to begin and aerial and subsurface application, time for manufacturing, shipping, and warehousing.
3. The effectiveness of the dispersant in subsurface application shall be determined as specified in Directive 1 Part 1, and Part 2. Dispersant application can be applied subsurface if, and only if, daily monitoring is performed.
4. BP shall provide 48 hours advanced notice of departure and trip duration timelines of the monitoring vessel to the FOSC and the EPA RRT Co-chair.
5. Monitoring data on the use of the less toxic dispersant product(s) shall be reported by BP to the FOSC and the EPA RRT Co-chair on a daily basis. This reporting shall include a sample tracking table. Daily data reports shall thereafter be provided by BP to the FOSC and the EPA RRT Co-chair as soon as practicable on the day following use of the less toxic dispersant product(s) by BP, but in no event later than 24 hours after use.

Mary E Landry, RADM FOSC

Date: 5/19/2010 2135

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Sam Coleman

Date: 5/19/2010 9:35pm

Samuel Coleman, P.E.
Director, Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Appendix

Simple parametric diffusion model of oil dispersed from injection of dispersants at the well head.

Conceptual Model:

The oil-and-gas plume is released from the well head and rises in a coherent fashion while entraining water. At the point where the density of the plume approaches the density of the water it starts to lose its coherence and individual droplets start moving independently. Dispersed oil droplets move with the plume during the coherent stage of plume rise, but start moving independently in the transition zone between these two stages of plume rise. The vertical distance over which this transition occurs defines the vertical distribution of the dispersed oil droplets. We are not aware of experiments or reliable models that can inform us regarding the extent of the transition zone; however, we would look to sharp gradients in water density in deep water as a probably location of the zone.

We have not yet included any mechanism for deposition of oil droplets as the plume moves down-current. Any sink term would reduce the resulting concentrations.

Model assumptions:

- Dispersed oil travels with the currents with negligible vertical velocity due to buoyancy
- Horizontal current is 5 cm/sec at the depth of the dispersed plume
- Horizontal (cross current) diffusion is 0.1 m^2/s
- Vertical diffusion is negligible (conservative approximation)
- Along current diffusion is neglected (conservative approximation)
- Diffusion process is governed by Fickian diffusion with constant diffusion constant
- Droplets are uniformly distributed vertically within a finite slab of water
- Droplets start from a single vertical line source
- The entire release rate from the well (5000 bbl/day) contributes to the dispersed oil plume
- The release duration is indefinitely long

Model results:

The model was run for 2 scenarios: all the oil is within a 100 meter slab of water; and all the oil is within a 50 meter slab of water. The plume length is sensitive to the assumptions made about the vertical distribution of the dispersed oil droplets. Plume length is also sensitive to release rate.

For 100 meter slab:

- Centerline concentration drops to 1 ppm (by mass) in 44 kilometers.
- 2 billion cubic meters of water have concentrations above 1ppm
- Centerline concentration drops to 200 ppb (by mass) in 432 kilometers (the travel distance of the plume in 100 days)

For a 50 meter slab

- Centerline concentration drops to 1 ppm (by mass) in 172 kilometers.
- 8 billion cubic meters of water have concentrations above 1ppm

U.S. Department of Homeland Security
United States Coast Guard

Commander
Eighth Coast Guard District

Hale Boggs Federal Building.
500 Poydras Street
New Orleans, LA 70130
Staff Symbol (dl)
Phone: [redacted]

5080
May 9, 2010

To: Providers of Surfactant Supplies to the Nalco Company

Ladies and Gentlemen:

We write to you in a time of great national need. On April 20, 2010, an incident on the mobile offshore drilling unit Deepwater Horizon resulted in an oil spill in the Gulf of Mexico which has since been designated a "spill of national significance." The Coast Guard supports the efforts of BP Exploration & Production Inc. (BP EPI) to contain and eliminate this oil spill and minimize and prevent its effects, both at sea and onshore.

Given the circumstances of the oil spill, including its size and proximity to the shoreline of the United States, chemical dispersants are essential to the oil spill response and clean-up effort. At this time, the supply of dispersant available to BP EPI is extremely limited. The Nalco Company, a dispersant manufacturer, is manufacturing additional dispersant for BP EPI to use in the Deepwater Horizon response but cannot produce at full capacity due to a shortage of surfactant supplies and will soon deplete what remaining surfactant supply it has. If BP EPI cannot source additional dispersant very soon, its current supply of dispersant will be exhausted. The consequences of such a dispersant exhaustion will be widespread, and we write to you today to ask for your assistance in helping all of us avoid those consequences.

Specifically, we are asking companies that provide the Nalco Company with surfactant supplies to assist by making available, to the greatest extent possible, their surfactant material to this response and clean-up effort. We understand that this material may be in short supply or otherwise already designated for contracts with other companies. We appreciate the commercial realities involved and respectfully ask that you make what efforts you can to allot surfactant supply to the Nalco Company's production so that it can manufacture dispersant for BP EPI's oil spill response, knowing that whatever efforts you are undertaking in this regard are of invaluable benefit to this country.

We ask that you contact Nalco directly to arrange reasonable terms for your surfactant supply.

Please do not hesitate to contact us should you have any questions. We thank you for your time and consideration of this request.

Sincerely,

Mary E Landry

MARY E. LANDRY
Rear Admiral, U.S. Coast Guard
Commander, Eighth Coast Guard District

bp

David I. Rainey
Vice President
Gulf of Mexico Exploration

BP Exploration & Production Inc
501 WestLake Park Boulevard
Houston, TX 77079

VIA HAND DELIVERY AND REGULAR MAIL

May 23, 2010

Administrator Lisa P. Jackson
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue N. W.
Washington D.C. 20460

Direct [redacted]
Fax 281 366 7239

Dear Administrator Jackson:

Thank you for providing me the opportunity to meet with you this evening and for openly and candidly sharing with me your concerns about the use of dispersants as part of the MC 252 spill response. I hope I was able to clarify BP's response to the Environmental Protection Agency's ("EPA") directive to identify alternative dispersants. BP understands your concerns and we will do all that we can to address them.

- BP will continue its search for an alternative dispersant that is available, effective and less toxic.
- BP will review the scientific literature for case studies on the actual use of dispersants, their efficacy and the impact their use had on the environment.
- BP is committed to minimizing as much as possible the use of dispersants while meeting the objectives of the Unified Area Command response.

Please let me know if there is anything more BP can do to address your concerns with regard to the use of dispersants.

Sincerely,

David Rainey
Vice President of Gulf of Mexico Exploration

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 26 2010

THE ADMINISTRATOR

Mr. David Rainey
Vice President of Gulf of Mexico Exploration
BP Exploration and Production
501 Westlake Park Boulevard
Houston, Texas 77079

Dear Mr. Rainey:

In your response dated May 23, 2010, you stated that you will continue to search for an alternative dispersant and that you fully understand and intend to comply with the directive from the U.S. Environmental Protection Agency and the U.S. Coast Guard to minimize the use of dispersants. I want to reinforce the importance of this approach to the BP oil spill response.

In the directive we sent last week, the EPA instructed you to analyze potential alternative dispersants for toxicity and effectiveness and report back within 24 hours. The goal of that directive was to determine whether a less toxic, more alternative dispersant existed in the quantities necessary to address this crisis.

Before I discuss the steps the EPA will take, I want to reiterate what Admiral Landry and I stated on a press conference call yesterday: The EPA and the Coast Guard believe your response to the directive was insufficient. We believe the response lacked sufficient analysis and focused more on defending your initial decisions than on analyzing possible better options.

Because we believe your analysis of potential alternative dispersants was insufficient, the EPA is performing its own scientific verification of the data BP presented. In addition, the EPA will perform testing to determine whether there is indeed a less toxic, more effective dispersant available in the volumes necessary for a crisis of this magnitude. The EPA will be performing at least two types of assessments to evaluate COREXIT 9500 and 9527 and other dispersants. Laboratory comparisons will be made with Gulf of Mexico species, including a silverside and Mysid shrimp. The EPA will use the quality assurance and testing methods set forth in the EPA test manuals (http://www.epa.gov/waterscience/methods/wet/disk2/index.html).

Internet Address (URL) • http://www.epa.gov
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The EPA also will identify a test for endocrine disrupters and will use the test results to help make a determination in selecting less toxic dispersants.

Furthermore, as we discussed, the federal government, led by the Coast Guard, is reiterating its instructions to BP to take immediate steps to significantly scale back the overall use of dispersants. Data demonstrates that subsea dispersant application is having an effect on the oil at the source of the leak and thus far has had no observed significant ecological effects. Because so much is still unknown about the potential impact of dispersants, BP should use no more dispersant than is necessary. By decreasing the amount of dispersant used, particularly on the surface where we expect less undispersed oil because of the subsea application, BP can reduce the amount of dispersant applied by as much as 75 percent and possibly more.

Finally, I reiterate that BP must operate openly and transparently. Your response to EPA's directive contained redacted information because BP and dispersant manufacturers claim some sections of the response contain confidential business information. Once again, we demand that you immediately release to the public all of the information BP has claimed as CBI and urge you to do all you can to ensure Americans are fully informed about the potential environmental impact of these alternative dispersants.

I have attached a directive from the EPA and the Coast Guard requiring you to significantly reduce dispersant use. I fully expect your immediate and complete compliance with the requirements of the directive.

Sincerely,

- Lisa P. Jackson

U.S. Department of
Homeland Security

United States
Coast Guard

31 May 2010

Doug Suttles
Chief Operating Officer
Exploration & Production
BP America, Inc.
501 WestLake Park Boulevard
Houston, Texas 77079

Re: Dispersant Management Plan

Dear Mr. Suttles,

In the wake of the recent failure of the Top Kill procedure, we must move forward with additional plans to secure the Deepwater Horizon oil leak. We understand that BP has developed a Lower Marine Riser Package Cap (Top Cap) procedure which includes cutting portions of the riser. Before such an operation may commence, however, I need from you a hydrocarbon and dispersant management plan. Such a plan must include detailed information regarding your intended use of dispersants during the transition from Top Kill to Top Cap, during the Top Cap procedure itself, and immediately following its completion. The plan must also take into account the need to minimize surface and subsurface application of dispersants pursuant to Addendum 3 of the Dispersant Monitoring and Assessment Directive.

Separate and apart from this requirement, I seek your assurance that you are continuing an aggressive pursuit of alternate dispersants which will lower the risk of harm to human life and our environment.

Sincerely,

JAMES A. WATSON
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

bp

Doug Suttles
Chief Operating Officer

Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, TX 77079

Direct [redacted]
Fax 281 366 7239

May 31, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Riser Cut and LMRP Cap Oil and Dispersant Management Plan

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has maintained subsea injection of dispersant following the Top Kill procedure. In response to your letter dated May 31, 2010, this letter outlines our dispersant management plan to continue subsea injection of dispersant during and potentially after the riser cut and LMRP cap operation in compliance with the Directive.

For surface applications, BP will continue to evaluate daily reconnaissance data and ascertain if there are aerial dispersant targets that are not recoverable via other techniques. BP will also provide surface dispersant capability for minimizing emissions at the source well locations to ensure staff safety. In both cases, BP will request advance authorization from the FOSC on a calendar daily basis as required by the Directive. BP will continue to manage to a goal of surface dispersant 75% lower than the maximum daily amount.

BP continues to diligently evaluate alternatives to the existing COREXIT 9500 product. This includes a chemical component analysis of the products on the EPA approved list and rigorous laboratory testing. This activity is being actively reviewed by the EPA and should a less toxic product available in appropriate quantities be found, BP will seek authorization to utilize the new product.

The objective of the riser cut and LMRP cap procedure is to contain production from the MC252 well and process the fluids using the Transocean Enterprise and the Q4000 using oil and gas processing facilities. For a period of time following the riser cut and installation of the cap, the well will be open to flow into the environment. Following successful installation of the cap, it is expected that the majority of the flow will be processed by the above vessels and not enter the sea environment. The objective of this letter is to reply to your requirement for a plan detailing the volumes and criteria for the subsea use of COREXIT 9500 dispersant during and after the procedure.

Prior to riser cut: The existing protocol will apply as per Dispersant Monitoring and Assessment Directive - Addendum 3 with a maximum volume of 15,000 gallons per calendar day.

After riser cut and prior to installation of LMRP: The existing protocol will apply as per Dispersant Monitoring and Assessment Directive - Addendum 3 with a maximum volume of 15,000 gallons per calendar day.

Following installation of LMRP cap: Following observation of the resulting flow of oil into the sea (total volume less fluid transported to surface vessels for processing) and measured volumes observed from the processing facilities, subsea dispersant will be ramped down proportionally from the existing volumes of 14-15,000 gallons per day based on the ratio of remaining estimated flow to the sea relative to the estimated flow of non-contained production prior to the riser cut. This will be done in an effort to maintain the same effective dosage of dispersant to oil production as prior to the procedure. As the precise flow volumes from MC252 are not certain, judgment will be applied to arrive at utilized estimates. In no case will subsea dispersant exceed 15,000 gallons per day without specific approval from the Federal On-Scene Coordinator.

Accordingly, in accordance with the Directive, BP respectfully requests approval of this plan.

Sincerely,

Douglas J. Suttles

Approval granted subject to the above:

Date: 31 May 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 5, 2010

Doug Suttles, COO, BP
Robert Command Post
23260 Shell Lane
Robert, LA 70455

Dear Mr. Suttles,

The purpose of this letter is to outline improvements to the Rototox testing being conducted on two BP vessels. BP commissioned the Brooks-McCall and Ocean Veritas to collect data described in a May 10, 2010, Directive from the United States Coast Guard (USCG) and Environmental Protection Agency (EPA) regarding the subsurface application of dispersant. These data include a CTD array (temperature, dissolved oxygen, and conductivity), sampling and analysis of total petroleum hydrocarbons (TPH), volatile organic analysis (VOA), toxicity of rotifers (Rototox kit assay), and oil dispersion as indicated by Laser In-Situ Scattering and Transmissometery (LISST) and CTD fluorometry. Many of these measurements are taken from multiple depths. After careful review of the Rototox toxicity data, EPA engaged in a technical discussion with BP [redacted] and their consultant [redacted] in order to determine a path forward to improve toxicity test reliability and data interpretability. Below is an outline of the agreed upon improvements to the rotifer toxicity (Rototox) testing:

1. Control survival: As per the test protocol, EPA and BP agreed that control survival for test acceptability will be set at greater than or equal to 90%. This is also consistent with ASTM Method E 1440-91. If control survival is below 90%, then the test is considered to be invalid. However, BP will nonetheless report the data.

2. BP agreed to implement two hatches of rotifers each day. This is to ensure both the availability and improved viability of organisms for daily testing, and to minimize the use of organisms that would potentially be too old for test initiation. These hatches should be approximately eight hours apart.

3. Reference toxicity testing will be included in the test procedures by replacing the lowest dilution concentration per sample (i.e., 6.25%), with an appropriate reference toxicant. This will ensure that there is a regular procedure for quality control/quality assurance purposes.

4. The level of replication in the Rototox test is six replicates of each treatment. Treatments include a per-sample control, each dilution level of a sample, and reference toxicant). To provide clarity in the reporting of data, all results will be provided to EPA and USCG as raw data (i.e., each replicate will be reported).

The implementation of the technical details outlined above will help to ensure higher quality Rototox data. If you have any questions, please do not hesitate to contact one of us.

Sincerely,

J. A. Watson
Rear Admiral, U. S. Coast Guard
Federal On-Scene Coordinator

Ronald D. Cronland
for Samuel Coleman, P.E.
Director
Superfund Division
U.S. EPA Region 6

U.S. Department of Homeland Security
United States Coast Guard

Commander
Eighth Coast Guard District

500 Poydras Street
New Orleans, LA 70130-3310
Staff Symbol: (drm)
Phone: [redacted]
Fax: (504) 671-2005

MEMORANDUM

16600
07 June 10

From: J. E. Hanzalik CAPT
CGD EIGHT (drm)

Reply to Attn of: [redacted] USCG

To: RRT VI CONSENSUS NETWORK PARTICIPANTS

Subj: RRT CALL TO DISCUSS PROCEEDING WITH A DAY OF TRAGETED AERIAL DISPERSANT ACTIVITY DUE TO INABILITY TO SKIM OR IN-SITU BURN

1. A request for a 15th overall Incident Specific convening of the RRT VI consensus trustees was made on behalf of RADM James A. Watson, the USCG FOSC for the on-going oil spill associated with the TRANS-OCEAN DEEP WATER HORIZON) incident that began on 20 APR 2010, where a Mobile Off-Shore Drilling Unit (MODU) located approximately 45-miles SE of Venice, Louisiana in the Gulf of Mexico suffered an uncontrolled blow-out, explosion, loss of life, and subsequent sinking of the MODU. The purpose of this Incident Specific Convening of the RRT VI trustee agencies was to gain consensus to perform a one-day targeted application of aerial dispersants in the ICP Houma AOR, since weather conditions had precluded surface oil removal my either mechanical skimming, or in-situ burning. A one-day waiver to the cessation of aerial dispersants was requested to gain back some lost ground that the gap in both skimming and in-situ burning has created with the goal to prevent shore-line impact created by the larger quantity of surface oil now presenting based on 06 JUN over-flight observations. The following trustees, RRT VI member agency representatives, consensus network participants, were present on the Incident Specific Telephone Conference that began at 1030am L Central Time, Monday 07 June 2010, but not limited to the following list:

CAPT James Hanzalik, USCG (Region VI Co-Chair)
CAPT Raymond Perry, USCG (Deputy AUC, Robert, LA)
Mr. Craig Carroll, EPA – Region VI Alternate Co-Chair
Mr. Ronnie Crossland – EPA Region VI Scientific Support Staff
Mr. Steve Mason, EPA – RRT VI Coordinator
Mr. Steve Lehmann, NOAA – RRT VI Rep for DOC
Mr. Jordan Stout, NOAA SSC at ICP Houma
Dr. Stephen Spencer; DOI Region VI (Designated Primary Trustee Rep)
Dr. Karolien Debuscherre, LA State for LOSCO (SOSC-Oil issues)
Mr. Rusty Wright; DOI, Minerals Management Service (MMS)
Mr. Doug Mutter, DOI rep at ICP Houma
Mr. Dwight Bradshaw, LADEQ (Alternate LA State SOSC Oil Issues)
CDR [redacted] USCG Legal Adviser to UAC, Robert, LA
LT [redacted] USCG, Legal Support Staff to UAC, Robert, LA
[redacted] USCG, RRT VI Coordinator

2. [redacted] performed a role call and introduced the purpose of the incident specific convening of the RRT VI Trustee network and applicable stakeholders. A memo for Admiral Watson (FOSC) to sign approving a one-day waiver to the currently discontinued surface aerial dispersant use was submitted to RRT VI consensus trustees for concurrence (Encl. 1).
As stated above, aerial over-flights on 06 June indicated a presence of dark high concentration oil that had accumulated due to the (adverse weather caused gap) in conducting either surface skimming ops or in-situ burning. This requested one-day targeted aerial application is meant to gain back the ground lost by inability to convene surface ops, and to prevent a greater shore-line impact that would result if surface application of dispersants to mitigate multiple reported slicks of fresh oil is not temporarily resumed for a requested one day period. The amount of surface application requested would not exceed 32,000 gallons for a period not to exceed 12 hours.

3. LADEQ acknowledged that the greater accumulation of surface oil was caused by adverse weather creating a gap that precluded both surface skimming operations and in-situ burning. EPA stated concerns regarding if the weather would preclude the required SMART monitoring, if aerial dispersant use was resumed. TIER I visual monitoring, at a minimum would be available, but if consensus was achieved to conduct the one-day targeted application, Tier III would be requested and mandated as co-requisite. Additionally, in accordance with previous sampling and monitoring directive, TIER III is required for surface dispersant application periods (Encl. 2). Note also (Encl. 3) Addendum III, that later directed the cessation of surface dispersant use, unless on rare occasions it was deemed by FOSC as being required.

4. A motion was made by USCG Co-Chair to solicit consensus for the one-day targeted aerial dispersant application to reduce the larger surface oil footprint caused by the weather induced gap in surface mechanical recovery and in-situ burning.

- USCG Concurred with the use of aerial for one day, with required TIER III monitoring implemented as co-requisite.
- DOI concurred provided that monitoring was co-requisite.
- DOC concurred provided that monitoring was co-requisite.
- State (LOSCO and DEQ) abstained
- EPA would further vet the issue with their chain of command and return reply to CAPT Hanzalik (USCG RRT VI Co-Chair via off-line phone call).

5. EPA immediately following the RRT call submitted the following e-mail statement from EPA Co-Chair to USCG Co-Chair: The justification identified as (Encl 1) for this RRT call #15 …"was received in accordance with the Dispersant Monitoring and Assessment Directive - Addendum 3. The Directive refers to "rare cases where there may have to be an exemption." BP is now requesting the exemption on a somewhat regular basis. Furthermore the written requests being presented are becoming less and less specific, and do not include the specific

requirements in the Addendum. As you know, there is a strong preference to mechanical removal technology. From the documents we are seeing, EPA cannot tell the extent to which these methods are considered, why they are not being used, and when you anticipate they will be available. In short, the approval process appears to be somewhat pro forma, and not as rigorous as EPA desires. The Agency believes BP must provide much more robust explanations, and must be put on notice that the request for exemptions cannot be presumed to be approved at the point they are submitted.

Per our phone call just now, dispersant application can proceed per the directive. EPA request documentation that more clearly demonstrates the need for this exemption. While there is good information in the current request, additional information is relevant to support compliance with the directive. Specifically, the request should also cover:

* Operational conditions that merit - e.g. weather, VOC levels in and around rig and supporting data
* Capacity issues that require it - e.g. lack of spotters, lack of skimming vessels
* Subsurface dispersant injection issues that contribute - e.g. stopped due to capping of BOP therefore increased oil was released to surface.
* Tactical issues that require it - e.g. slick cannot be reached in time by skim/burn vessels before it weathers too much
* Rational for why particular slicks were prioritized for dispersion rather than mechanical recovery.
* Monitoring - e.g. Type of monitoring that will be conducted; date/time SMART data which demonstrates effectiveness of application will be provided."

6. The above statement from EPA received via e-mail at 1303L Central 07 JUNE from Craig Carroll to CAPT James Hanzalik provides the conditional items marked by asterisk that their agency requires prior to consensus to proceed with the targeted aerial dispersant application. Other than State of Louisiana abstaining to an official decision, all other applicable resource trustee agencies concurred with the conditional dispersant application via the requested exemption based on weather precluding both skimming operations and in-situ burning. Again, EPA requested that comprehensive details be provided to them for the asterisked items above prior to a decision of consensus or not by EPA to the requested exemption.

7. The USCG Co-Chair has noted concerns regarding the process by which expedited exemptions can be made in a time critical manner at the RRT level for an ongoing emergency response. This will allow for mitigation of larger quantities of fresh dispensable surface oil when weather precludes other mechanical or surface oil mitigation techniques. It should also be noted that there is pre-approval/preauthorization for the use of dispersants in this region and that subsequent calls are not needed or required. Although the use of dispersants for this event and the amount of oil spilled is unprecedented, unprecedented means to affect the outcome of this response is needed to meet the unprecedented emergency spill response we are endeavoring to

mitigate. The Co-Chair recommends that the FOSC "take whatever additional response actions are deemed appropriate to mitigate the substantial threat the public and the environment."

#

Encl (1) MEMO to FOSC by BP requesting Surface Dispersant Exception 07 JUNE 2010
Encl (2) Dispersant Monitoring and Assessment Directive 09 MAY 2010
Encl (3) Dispersant Monitoring and Assessment Directive Addendum 3 (MAY 26, 2010)

Gulf of Mexico SPU

bp

GoM Drilling, Completions and Interventions - MC252

Guidance on Subsea Dispersant Application
Ops Note #3

BPR APPROVAL: JEFF HOHLE — Print Name above — Sign Above — Date 6/8/10 Time: 1655

Reviewed: John Fitzgerald — Sign Above — 6/8/10 1654

GOR TEAM APPROVAL: James Watson — Print Name above — Sign Above — Date 6/8/10 Time: 2125

0	06/06/2010	Approved - Issued for GoM Use	Jon Rogers	
Rev	Date	Document Status	Custodian/Owner	Authority

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AMENDMENT RECORD

Amendment Date	Revision Number	Amender Initials	Amendment
06/06/2010	0		

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1 Background and Assumptions:

Subsea dispersant (EC9500A) injection is critical in managing the safety of containment operations. Over time a correlation has been observed between the usage of oil dispersant and the rise in volatile organic compounds (VOC) and hydrocarbon vapor amounts at the surface in the area of the source. Hydrocarbon vapor amounts have not exceeded the lower explosive limit (LEL) to date but have been as high as 8-10%. Within 3-6 hours of discontinuation of subsea dispersant, the VOC concentrations at the surface have increased to >200 ppm and hydrocarbon vapors also increase. VOC and LEL issues have been resolved within a few hours when dispersant has been re-established in these instances allowing safe operations to continue in the area of the source.

Federal government authorities estimated the MC252 oil leak rate to be 12,000 - 19,000 bbls/day. For the purposes of dispersant injection, we will assume 19,000 bbls/day. This oil volume is assumed as the basis for dispersant rates and the table below can be used to calculate the EC9500A injection rates required to effectively disperse the residual oil volumes.

Table 1: Dispersant Application Range

Estimated Volume of Crude Processed at Surface	Target EC 9500A Subsea Dispersant Injection Rate
16,0000 bpd+	**4 GPM**
12,000 - 16,000 bpd	**7 GPM**
< 12,000 bpd	**10 GPM**
1. High VOCs at reported at surface OR 2. Following suspension of subsea dispersant for > 1 hr	15 GPM*

***If sustained injection above 10GPM is required to maintain VOC emissions at operable levels, BP will, if required, formally request an exemption from the Federal On-Scene Commander to increase application of EC9500A from the 15,000 gallons per day agreed in the Directive, to the estimated volume required.**

2. Recommended Forward Plan

Proactive steps will be taken to optimize the dispersant volumes and minimize where possible. The following forward plan is recommended:

1. The Skandi Neptune is currently on location about 1200' West of the source applying EC9500A dispersant subsea at the BOP at a target 10 gpm via ROV
2. Maintain dispersant injection rate as required until the time the Skandi is required to relocate to a new position to allow installation of the CDP suction pile
3. Replace current flow meter with new, calibrated 1" turbine flow meter with totalizer.
4. Move Skandi from current location to new location at ~1200' to the NW of source at which time dispersant will be disrupted for approximately 4-5 hrs
5. When Skandi is in the new position, restart dispersant at 10 gpm or higher if required, to control any rising VOCs and re-establish baseline
6. Once surface VOC emissions are sustained at operable levels and Enterprise flow rates are stable, slowly decrease dispersant injection in accordance with the table on page 1 and continue to monitor VOCs and LEL at surface.
7. Once Q4000 is brought online, assess oil rates at Enterprise and Q4000 and make determination on whether further reduction in dispersant can be made based on estimated reduced oil volumes to sea.
8. The estimated volume of crude processed at the surface must be both stable and sustained above 16,000BPD before any optimization in dispersant below 5GPM is attempted.

Document Authorization Form

This form to be used for authorizing new, revised and obsolete documents, please indicate clearly which category applies

Special Instructions	**MC252 Incident**

Document Details

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Reason for Issue (check as applicable)	New Document	Revised Document	Obsolete Document
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Custodian/Owner			
Reviewer(s) (if applicable)	[redacted]		6/8/10
Authorizer (Houston)			
Authorizer (Houston)			
Authorizer (Houston)			
Document Control Use			

2020-T2-DM-FM-000002	0	Document Authorization Form
Document Number	Rev	Title

U.S. Department of Homeland Security

United States Coast Guard

Federal On-Scene Coordinator
Unified Area Command

Unified Area Command
Shell Oil Training Center
23260 Shell Lane
Robert, LA 70455

16480
June 8, 2010

Doug Suttles
Chief Operating Officer
Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, Texas 77079

I am in receipt of the document entitled GoM Drilling, Completions, and Interventions – MC252: Guidance on Subsea Dispersant Application OPS Note #3 which addresses your plan for use of subsea dispersants. As you know, under the third addendum to the Dispersant Monitoring and Assessment Directive, use of subsea dispersant in volumes greater than 15,000 gallons per day requires my or the current Federal On-Scene Coordinator's approval. It is my understanding that your plan seeks to maximize the efficacy of subsea dispersant and allow for reductions in their use as the oil flow is reduced. With this in mind, your plan is approved effective immediately, subject to the following conditions unless otherwise directed:

1. Continue to conduct required monitoring and provide daily updates as to the results of the operation.

2. This approval shall continue through June 30, 2010.

3. Submit a new plan for subsea dispersant use not later than three days prior to the expiration of this approval.

My Incident Commanders have suggested that the current dispersant use limitations present significant and growing operational challenges to the management of this emergency response. Please provide me, within 48 hours, with any additional information that you have regarding this concern including your assessment of dispersant toxicity, availability of mechanical recovery equipment (e.g., offshore and near shore skimmers) to keep pace with the current and potential release, and total insitu-burn capacity. Once I receive this information, I intend to consult with the Regional Response Team and my Incident Commanders to develop an effective operational plan for use of surface and sub-surface dispersant while minimizing any environmental impact.

If you have any questions concerning the content of this letter please contact CAPT Ray Perry or my Scientific Support Coordinator (SSC), Mr. Steve Lehmann located at the UAC in Robert, LA.

Sincerely,

JAMES A. WATSON
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

U.S. Department of Homeland Security
United States Coast Guard

Federal On-Scene Coordinator
Unified Area Command

Unified Area Command
1250 Poydras Street
New Orleans, LA 70113

June 22, 2010

Regional Response Team
Federal Region VI

Respected Members,

I received the attached letter from CAPT LaFerriere, the Houma Incident Commander, and Jerome Zeringue, the Louisiana On-Scene Coordinator. I wholeheartedly endorse their letter, and request that you draft and propose a new Addendum (to supersede Addendum 3) to address the dispersant approval process.

The new Addendum should incorporate a number of important principles. First, it should be consistent with the National Contingency Plan, in which dispersant use is a response option that the FOSC controls guided by the pre-approval of Regional Response Teams in consultation with the National Response Team. Second, it should reflect the continued goal of minimizing dispersant use when operationally feasible—I will not tolerate excessive use of dispersants which provides no real advantage in fighting this spill. Third, it should in no way weaken the current monitoring and water sampling program currently in place. Fourth, it should empower incident commanders to make real-time decisions to use appropriate amounts of dispersants—we cannot afford the delay inherent in seeking approval from above when the window of opportunity is frequently short. Fifth, it should allow the use of dispersants to appropriately control volatile organic compounds—we must protect the health and safety of the workers at or near the source. Finally, the new Directive should in no way condition the use of dispersants on receipt of precise data regarding the capability of mechanical recovery methods. While recovery by mechanical methods does reduce the overall need to use dispersants, the success of those methods is subject to an enormous number of constantly shifting variables—variables that will only increase as hurricane season adds new challenges.

While the use of dispersants in any amount involves a number of unknowns and risk tradeoffs, we must keep in mind what we do know: that non-dispersed oil continues to damage the environment onshore and offshore in the Gulf of Mexico. We must employ all the tools at our disposal to fight it on all fronts.

Sincerely,

JAMES A. WATSON
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

June 20, 2010

RADM James Watson
Federal On-Scene Coordinator
Unified Area Command
1250 Poydras Street
New Orleans, LA 70113

Admiral Watson:

We believe the time is right to reconsider the approval process for the use of surface dispersants.

As you know, on May 26, the EPA and the FOSC concurrently issued Addendum 3 to the Dispersant Monitoring and Assessment Directive. That Addendum instituted strict limits on the application of dispersants—limits which could be exceeded only by explicit FOSC approval after consideration of a number of specific factors.

At the time Addendum 3 was signed, estimates suggested that the oil flow into the Gulf was approximately 5,000 barrels per day. Current estimates from the Flow Rate Technical Group, however, suggest the number is in the range of 35,000-60,000 barrels per day—roughly 7 to 12 times the rate previously thought. In light of the challenges presented by this marked increase in flow rate estimates, we are convinced that the dispersant approval process must be reexamined. In particular, we believe the current process hinders our ability to adequately respond to varying operational conditions. While we expect that you will continue to set broad policy guidelines, incident commands must be able to exercise discretion to make real-time decisions as to dispersant application.

Therefore, we believe the RRT should draft and propose to you a new Addendum (to supersede Addendum 3) to address the dispersant approval process.

ROGER LAFERRIERE
Captain, U.S. Coast Guard
Federal On-Scene Coordinator's Representative
By Direction

JEROME ZERINGUE
Louisiana Coastal Protection &
Restoration Authority
State On-Scene Coordinator

bp

Doug Suttles
Chief Operating Officer

Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, TX 77079

June 23, 2010

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Guidance on Subsea Dispersant Application

Direct [redacted]
Fax 281 366 7239

Dear Admiral Watson,

On June 8, you approved GoM Drilling, Completions, and Interventions – MC 252: Guidance on Subsea Dispersant Application Ops Note #3. You approved this plan through June 30, 2010. The plan was predicated on the then current Federal Flow Rate Technical Group (FRTG) estimates of the MC 252 oil leak which ranged from 12,000 to 19,000 bbls per day. The rate of application was determined as follows

- Assume flow rate of 19,000 bbls/day
- Calculate oil escaping by subtracting oil captured by containment system from 19,000 bbls/day
- Apply dispersant at dispersant to oil ratio of 1:20

On June 15 the FRTG announced an improved estimate of the flow rate from MC 252 leak. The new estimate ranges from 35,000 day to 60,000 bbls per day. Accordingly, we have recalculated the application rates for subsea dispersant based on an assumed flow rate of 35,000 bbls/per day. Depending upon the volume of oil captured each day, the target EC9500A subsea dispersant application rate ranges from 5 to 20 gallons per minute.

Application of dispersant subsea has been demonstrated to be an effective tool in managing the safety of containment operations. Over time a correlation has been observed between the application of dispersant and the rise in volatile organic compounds (VOCs) and hydrocarbon vapor concentrations at the surface in the area of the source. The data for the 15th and 16th of June show a step up in VOC readings at the Discoverer Enterprise shortly after the reduction of dispersant application rate from 7 gpm to 4 gpm is clear.

The May 26, 2010, Dispersant Monitoring and Assessment Directive – Addendum 3 (the "Directive") defines a limit for subsea dispersant application of 15,000 gallons per day. This is equivalent to a sustained application rate of 10.4 gallons per minute.

For the purpose of VOC control, increases in the application rate of subsurface dispersants will be limited to conditions where winds are weak (<10 knots) or VOC readings indicate potential health concerns. While this authority is granted to the OSC in the National Contingency Plan, all attempts will be made to maintain the 15,000 gallon per day subsurface cap outlined in Addendum 3 of the Dispersant Monitoring and Assessment Directice.

When the next containment system is fully operational, we will revisit this plan.

Sincerely,

Douglas J. Suttles

Approval granted subject to the above:

Date: 6/23/10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

EPA REGION 6
1445 Ross Avenue
Dallas, Texas 75202

Admiral Watson,

In order to continually improve operational efficiency, EPA concurs with the IC Houma ability to approve up to 5,000 gallons of aerial dispersant per day provided there is documentation of appropriate targets, and that the appropriate monitoring takes place. Based on consultation with the IC Houma, this will allow effective dispersant operations to commence as needed, while at the same time maintaining a process to ensure dispersant use is minimized. This concurrence is in effect as of 06/25/2010 and will remain in effect until further notice by EPA.

For aerial application of volumes over the 5,000 gallons per day the existing concurrence process remains in effect.

Also I think we need to start thinking about a less than daily process for applications of volumes over 5,000 gallons per day. Effectively, EPA would propose that in coordination with the increased recovery capacity, a schedule to phase out the use of dispersants be developed. This plan in the form of milestones and averages, can guide the IC Houma in the decision making. EPA involvement can be less frequent, and additional operational efficiencies can develop. We recognize that there may be occasional exceedances of the plan due to uncontrollable events (i.e., weather or equipment failure). However, setting milestones and goals can only make the process better.

for Samuel Coleman, P.E.
Director
Superfund Division Region 6

[redacted]

EPA REGION 6
1445 Ross Avenue
Dallas, Texas 75202

Admiral Watson,

This letter is to rescind and modify the letter I sent yesterday. On reflection, a much better process is as follows:

- IC Houma identifies potential high priority targets by 1800 as discussed in the attached flow diagram. These are forwarded to the FOSC before 2000 each day along with the requested amounts of dispersant to be applied.
- The FOSC reviews the proposal and if he/she agrees forward the request to the EPA Representative for review and concurrence.
- The EPA representative will review and provide comments and/or concurrence for the FOSC by 0700 the following day
- The FOSC will approve the appropriate targets and notify IC Houma for operational implementation.

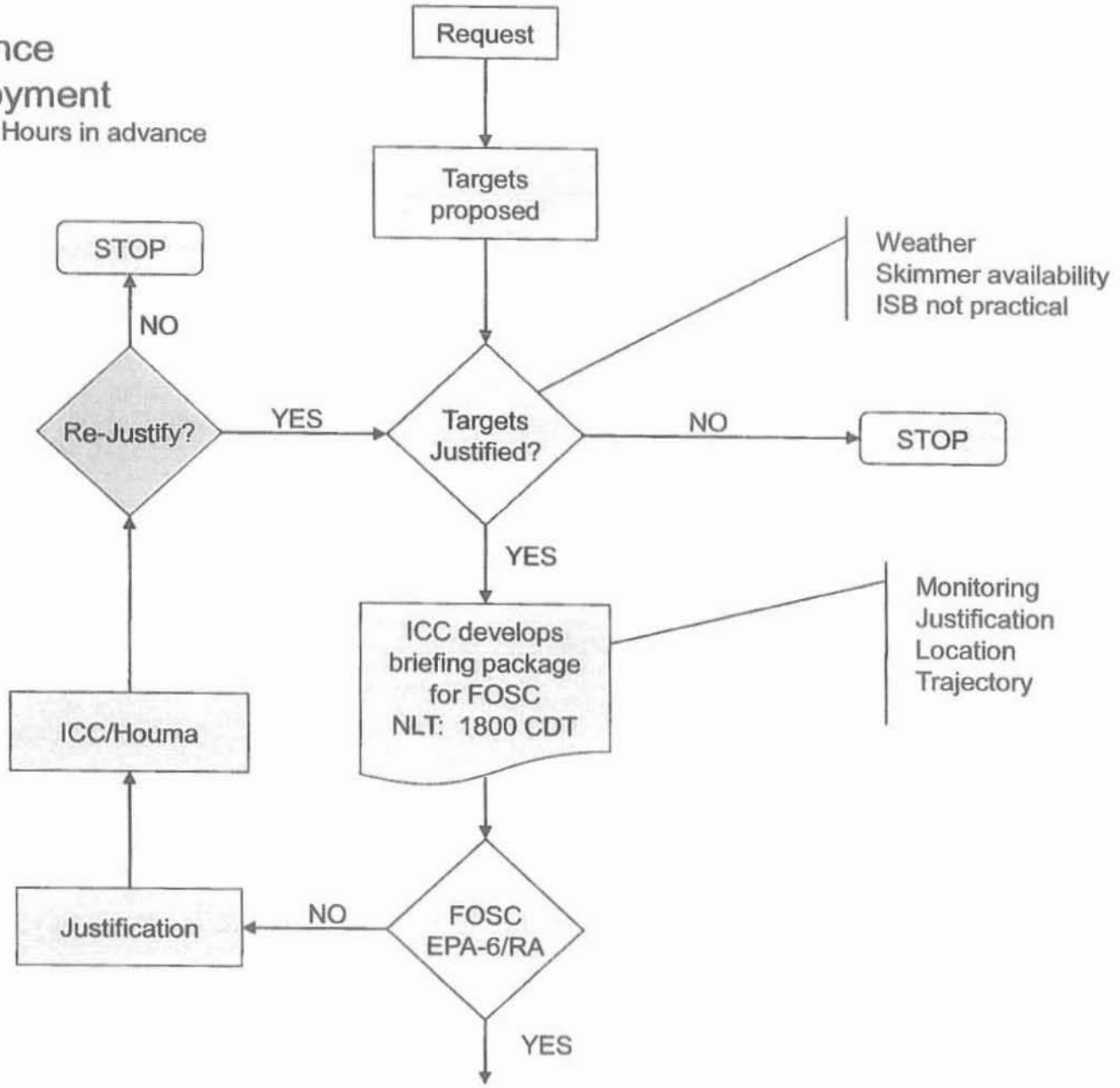
We believe this process provides for the clear decision making and provides the proper management controls for meeting the incident objectives and for adequately justifying the use of dispersant each day. This process also is consistent with other operational decision making. You may implement this revised process as soon as you like. EPA's concurrence with having IC Houma approve the use of any dispersant on a pre-approved 5000 gallon per day basis is rescinded. All dispersant used should be properly justified, and documented. Our current procedures (see attached flow diagram) will meet that requirement. Should you have any questions, please do not hesitate to contact me.

for Samuel Coleman, P.E.
Director
Superfund Division Region 6

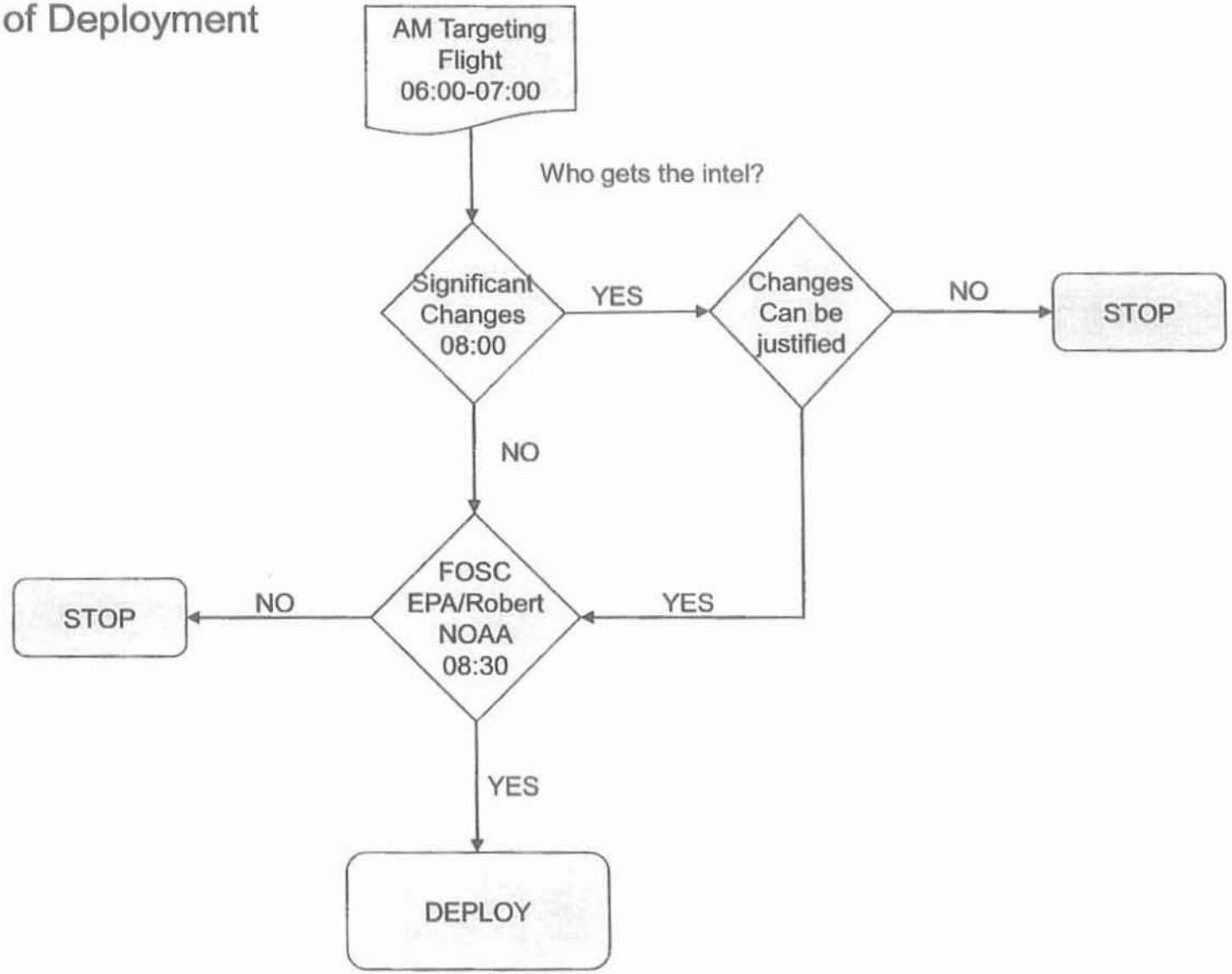
[redacted]

Advance Deployment

NMT 48 Hours in advance



Morning of Deployment



May 30, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has now eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

On May 27, 2010, BP conducted a surface dispersant test in the amount of 229 gallons; however, no subsequent deployment of dispersant was made following that successful test. On May 28, 2010, BP deployed surface dispersant in the amount of 6,400 gallons as required for health and safety purposes due to confirmed VOC emissions at the source control site.

Since these two limited excursions, BP has fully complied with the Directive which we agree requires advance approval by the Federal On-Scene Coordinator for surface application of dispersants. Since the above referenced deployments, BP has taken affirmative steps to ensure full future compliance with the Directive, including the issuance of clear procedures to relevant operations staff. In light of the otherwise supportive nature of the applicable circumstances, we request your retroactive authorization for the referenced deployments.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Mary E. Landry

Date: 5/30/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

VIA EMAIL AND CERTIFIED MAIL

May 28, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has located a large (2x0.5 miles) dispersible oil slick approximately 90 miles Southeast of Houma, Louisiana with suitable weather for dispersant operations, i.e. visibility > 4 sm, ceiling > 1500 ft and winds less than 35 knots. BP anticipates that, due to the location and size of the oil slick the use of mechanical recovery and ISB will provide insufficient means due to the travel distance to the site and the operational time needed to remove this spill volume, on May 28, 2010. Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 15,000 gallons for a period not to exceed 12 hours.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Mary E Landry Date: 5/28/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

[redacted]

From: James.E.Hanzalik@uscg.mil on behalf of Hanzalik, James CAPT [James.E.Hanzalik@uscg.mil]
Sent: 28 May 2010 14:06
To: Easley, Max
Subject: FW: Aerial dispersant target

Sent with Good (www.good.com)

-----Original Message-----
From: Hanzalik, James CAPT
Sent: Friday, May 28, 2010 03:02 PM Eastern Standard Time
To: Landry, Mary RADM
Cc: Watson, James RADM
Subject: Aerial dispersant target

Ma'am,

FYI I gave BP the go ahead to hit an oil target offshore with dispersants IAW the directive.

V/R.

James

Sent with Good (www.good.com)

Dispersant Monitoring and Assessment Directive – Addendum 3

Reduction in Use of Dispersants. BP shall implement measures to limit the total amount of surface and subsurface dispersant applied each day to the minimum amount possible. BP shall establish an overall goal of reducing dispersant application by 75% from the maximum daily amount used as follows:

a. Surface Application. BP shall eliminate the surface application of dispersants. In rare cases when there may have to be an exemption, BP must make a request in writing to the FOSC providing justification which will include the volume, weather conditions, mechanical or means for removal that were considered and the reason they were not used, and other relevant information to justify the use of surface application. The FOSC must approve the request and volume of dispersant prior to initiating surface application.

b. Subsurface Application. BP shall be limited to a maximum subsurface application of dispersant of not more than 15,000 gallons in a single calendar day.

Application of dispersant in amounts greater than specified in this Addendum 3 shall be in such amounts, on such day(s) and for such application (surface or subsurface) only as specifically approved in writing by the USCG Federal On-Scene Coordinator (FOSC).

Mary E Landry

Date: 5/26/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Sam Coleman

Date: 5/26/2010

Samuel Coleman, P.E.
Director
Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

VIA EMAIL AND CERTIFIED MAIL

May 29, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP requests to deploy surface dispersant as required for health and safety purposes to minimize VOC emissions at the source control site. It is expected that the volume will be less than 6,000 gallons per calendar day. Should VOC monitoring dictate further deployment of dispersant, bp requests authorization to exceed 6,000 gallons per day as required to manage safety of staff at Source Control site.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Mary E Landry Date: 5/29/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

[redacted]

From: James.E.Hanzalik@uscg.mil on behalf of Hanzalik, James CAPT [James.E.Hanzalik@uscg.mil]
Sent: 29 May 2010 10:21
To: Easley, Max
Cc: Landry, Mary RADM; Watson, James RADM
Subject: Surface dispersant application Approval

Max,

Your request to conduct aerial dispersant operations for dispersable oil 30 miles off shore is approved. In addition, your request to apply vessel disperant ops for the health and safety reasons at the source is also approved. These operations have been verbally approved by RADM Landry.

CAPT James Hanzalik
Robert, UAC

Sent with Good (www.good.com)

VIA EMAIL AND CERTIFIED MAIL

May 29, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has visual reports from 28 May of dispersible oil approximately 20-30 miles west of the source site and the NOAA Surface Oil Forecast for 29 May shows combined areas of heavy and medium oil covering a 30 x 5 nm area as shown on the attached chart. Weather forecasts indicate winds of 8 knots, visibility of greater than 5 nm, ceiling unlimited and waves of 1.5 feet suitable for dispersant operations.

BP anticipates that, due to the location and size of the oil slick the use of mechanical recovery and ISB will not provide sufficient means to recover or remove the oil in the target area due to the extent of the slick (150 sq mi area) and the speed of advance of 1-2 knots for skimming and ISB vessels to remove the spill volume on May 29, 2010. Prior to spray operations spotter aircraft will identify target streamers and slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 19,000 gallons for a period not to exceed 12 hours.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Mary E Landry Date: 5/29/2010

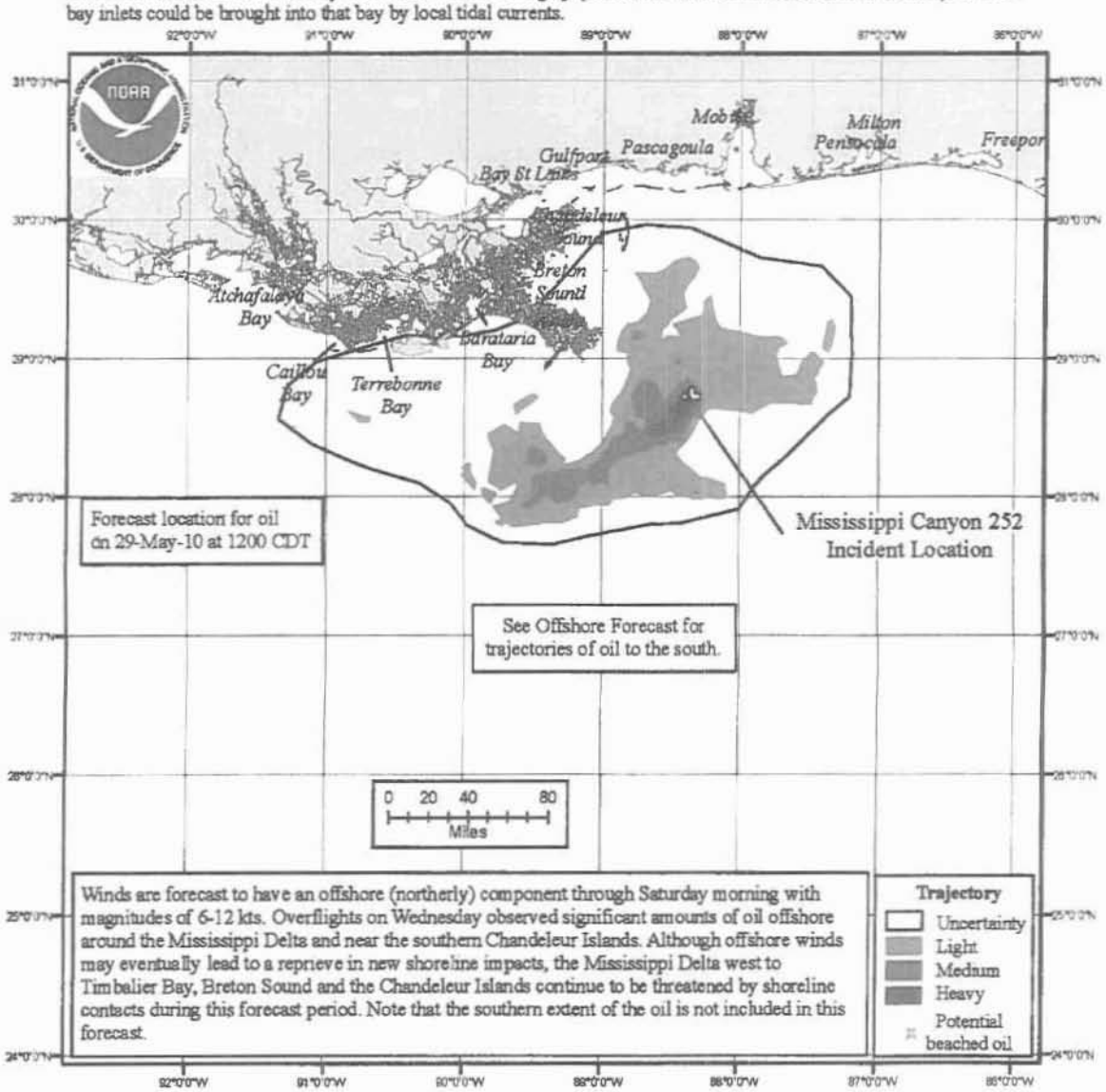
Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

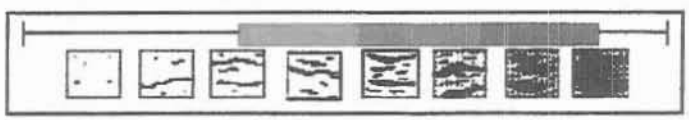
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Saturday, 5/29/10
Date Prepared: 2100 CDT, Thursday, 5/27/10

This forecast is based on the NWS spot forecast from Thursday, May 27 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TAMU/TGLO, NAVO/NRL) and HFR measurements. The model was initialized from Thursday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





this scale bar shows the meaning of the distribution terms at the current time

Next Forecast: May 28th PM

Dispersant Monitoring and Assessment Directive – Addendum 3

Reduction in Use of Dispersants. BP shall implement measures to limit the total amount of surface and subsurface dispersant applied each day to the minimum amount possible. BP shall establish an overall goal of reducing dispersant application by 75% from the maximum daily amount used as follows:

a. Surface Application. BP shall eliminate the surface application of dispersants. In rare cases when there may have to be an exemption, BP must make a request in writing to the FOSC providing justification which will include the volume, weather conditions, mechanical or means for removal that were considered and the reason they were not used, and other relevant information to justify the use of surface application. The FOSC must approve the request and volume of dispersant prior to initiating surface application.

b. Subsurface Application. BP shall be limited to a maximum subsurface application of dispersant of not more than 15,000 gallons in a single calendar day.

Application of dispersant in amounts greater than specified in this Addendum 3 shall be in such amounts, on such day(s) and for such application (surface or subsurface) only as specifically approved in writing by the USCG Federal On-Scene Coordinator (FOSC).

Mary E Landry

Date: 5/26/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Sam Coleman

Date: 5/26/2010

Samuel Coleman, P.E.
Director
Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

VIA EMAIL AND CERTIFIED MAIL

May 29, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has visual reports from 28 May of dispersible oil approximately 20-30 miles west of the source site and the NOAA Surface Oil Forecast for 29 May shows combined areas of heavy and medium oil covering a 30 x 5 nm area as shown on the attached chart. Weather forecasts indicate winds of 8 knots, visibility of greater than 5 nm, ceiling unlimited and waves of 1.5 feet suitable for dispersant operations.

BP anticipates that, due to the location and size of the oil slick the use of mechanical recovery and ISB will not provide sufficient means to recover or remove the oil in the target area due to the extent of the slick (150 sq mi area) and the speed of advance of 1-2 knots for skimming and ISB vessels to remove the spill volume on May 29, 2010. Prior to spray operations spotter aircraft will identify target streamers and slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 19,000 gallons for a period not to exceed 12 hours.

Sincerely,

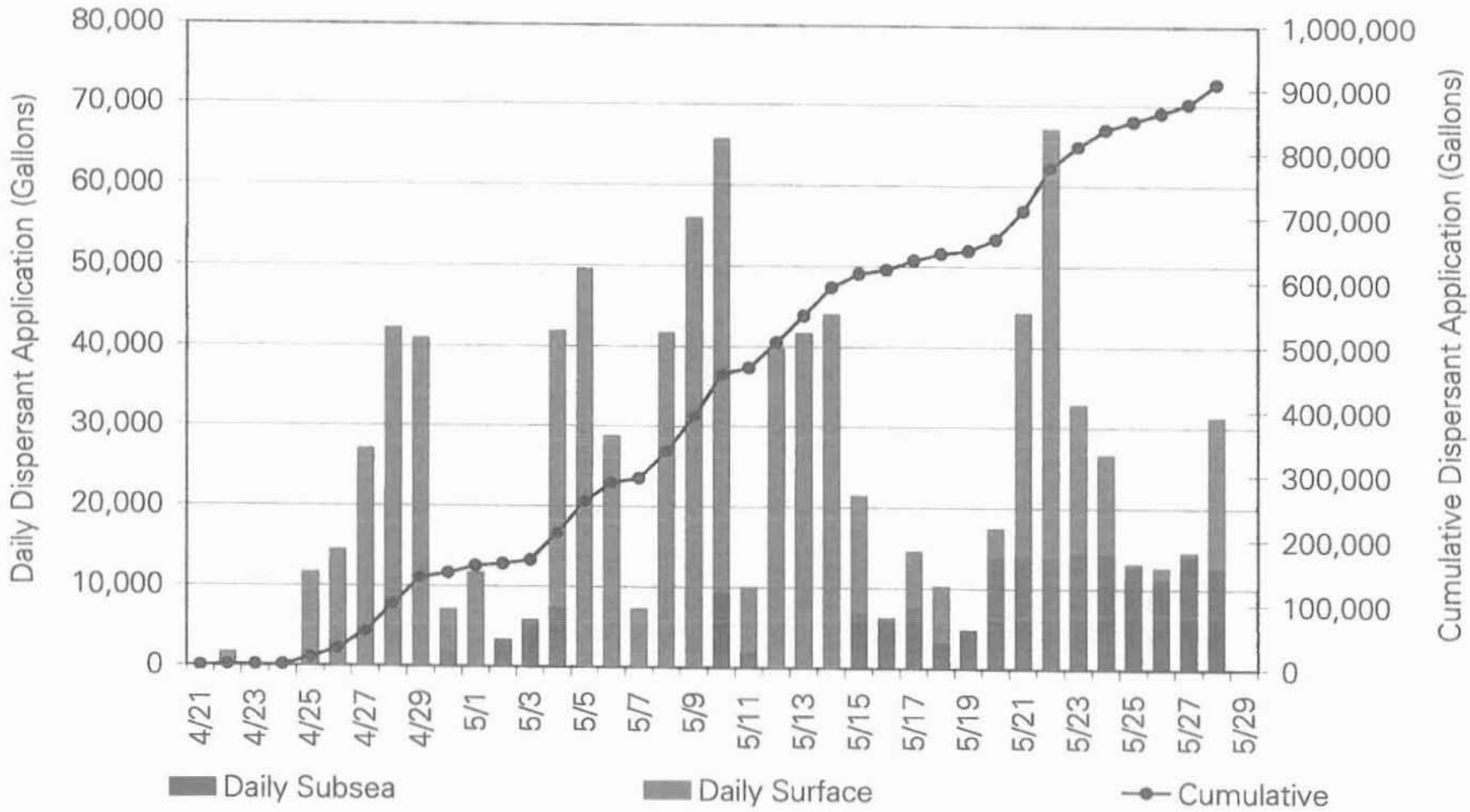
Douglas J. Suttles

Exemption approved subject to the above:

Mary E Landry Date: 5/29/2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Total Dispersant Summary



* Data as of 5/28 22:00 hrs.

VIA EMAIL AND CERTIFIED MAIL

May 30, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP requests to deploy surface dispersant as required for health and safety purposes to minimize VOC emissions at the source control site. It is expected that the volume will be less than 6,000 gallons. Should VOC monitoring dictate further deployment of dispersant, BP requests authorization to exceed 6,000 gallons as required to manage safety of staff at Source Control site.

Sincerely,

Doug J. Suttles RTF

Douglas J. Suttles

Exemption approved subject to the above:

Date: 5-30-2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

May 30, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has visual reports from 29 May of multiple slicks of dispersible oil and the NOAA Surface Oil Forecast for 30 May shows combined areas of heavy and medium oil approximately 25 miles either side of the diagonal line shown in Attachment 2. Weather forecasts indicate winds of 9 knots, visibility greater than 5 nm, ceilings of 1,500 feet or greater, and waves of 2.0 feet suitable for dispersant operations.

BP anticipates that, due to the location and size of the multiple oil slicks identified, the use of mechanical recovery and ISB will not provide sufficient means to recover or remove the oil in the target area due to the extent of the slicks (>150 sqmi area) and the speed of advance of 1-2 knots for skimming and ISB vessels to remove the spill volume on May 30, 2010. Prior to spray operations spotter aircraft will identify high target streamers and slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 19,000 gallons for a period not to exceed 12 hours.

Sincerely,

Doug J. Suttles RTF

Douglas J. Suttles

Exemption approved subject to the above:

Date: 5-30-2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

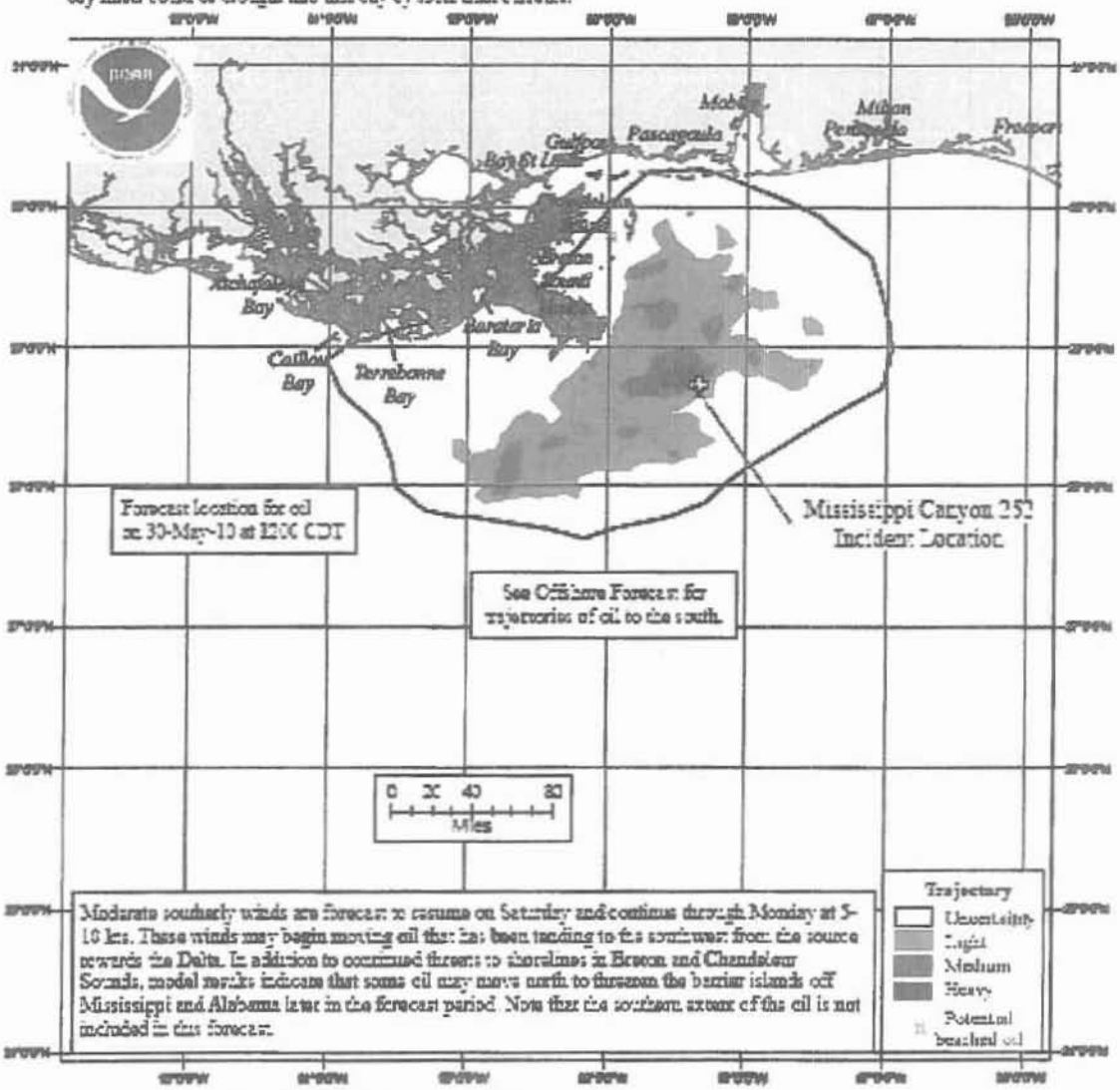
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Sunday, 5/30/10
Date Prepared: 2100 CDT, Friday, 5/28/10

This forecast is based on the NWS spot forecast from Friday, May 28 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf USF, TAMU TGLO, NAVO NRL) and HFR measurements. The model was initialized from Friday satellite imagery analysis (NOAA NESDIS) and overflight observations. The leading edge may contain outcrops that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Moderate southerly winds are forecast to resume on Saturday and continue through Monday at 5-10 kts. These winds may begin moving oil that has been tending to the southwest from the source towards the Delta. In addition to continued threats to shorelines in Breton and Chandeleur Sounds, model results indicate that some oil may move north to threaten the barrier islands off Mississippi and Alabama later in the forecast period. Note that the southern extent of the oil is not included in this forecast.

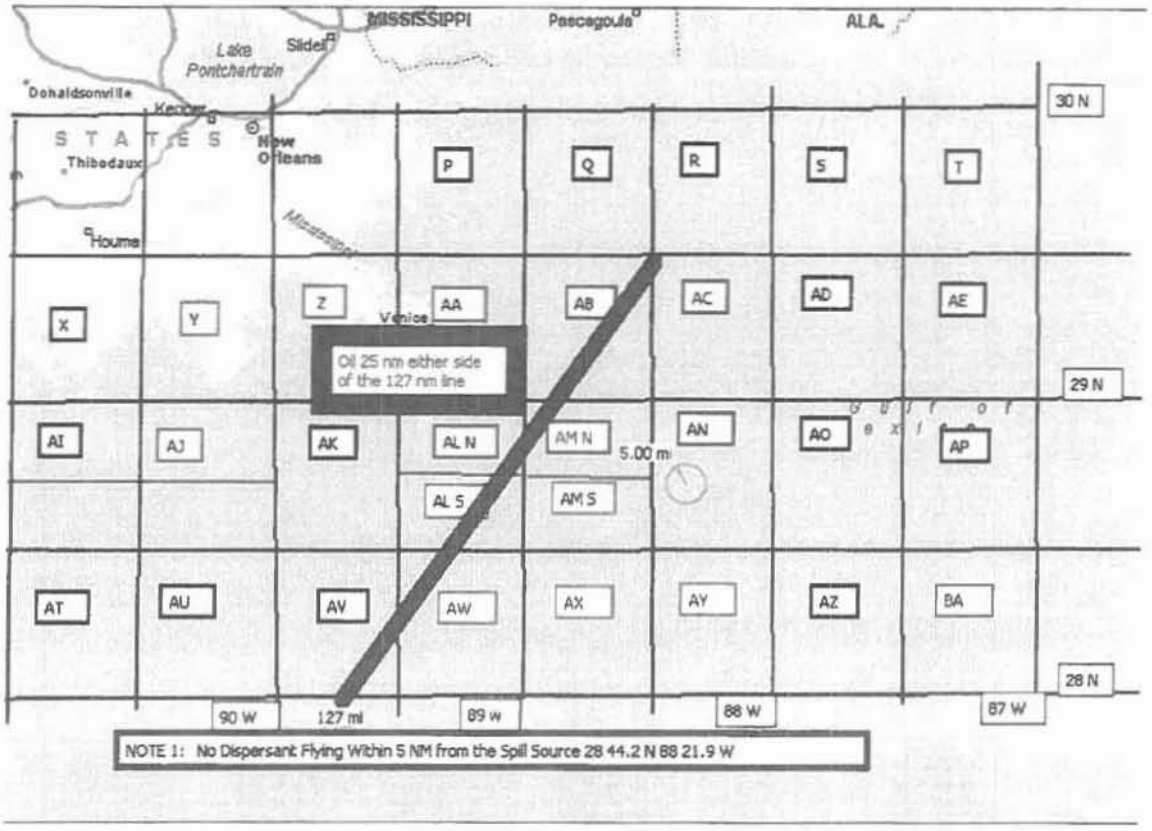
Next Forecast: May 29th PM

Attachment 2

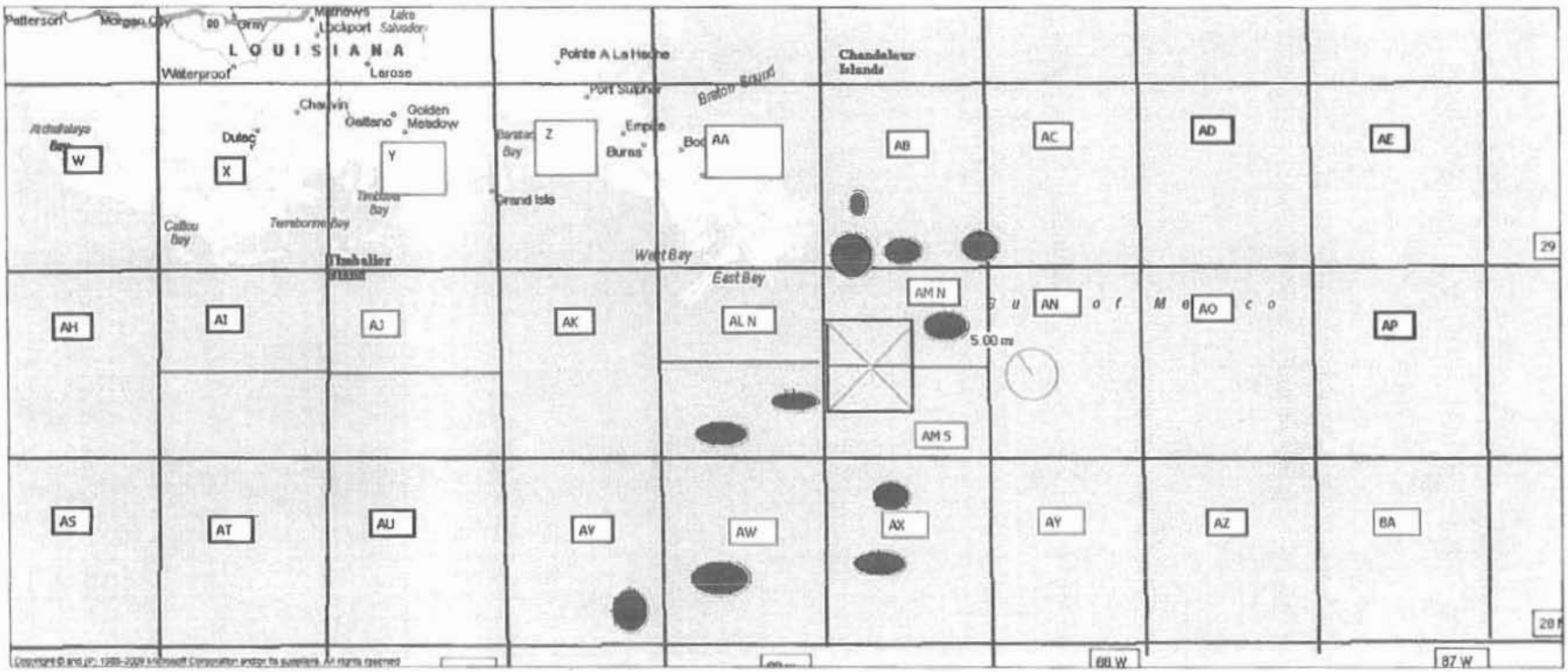
Dispersant Zone Map
For 30 May 2010

Dispersible oil slicks are located along the line

from	**29° 30′ N**	**88° 30′ W**
to	**28° 00′ N**	**89° 40′ W**



30 May 2010
Dispersant Group Targeting



May 31, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP requests to deploy surface dispersant as required for health and safety purposes to minimize VOC emissions at the source control site. It is expected that the volume will be less than 6,000 gallons. Should VOC monitoring dictate further deployment of dispersant, BP requests authorization to exceed 6,000 gallons as required to manage safety of staff at Source Control site.

Sincerely,

Doug T. Suttles RTF

Douglas J. Suttles

Exemption approved subject to the above:

Date: 5-31-2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

May 31, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Dear Admiral Landry:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has visual reports from 30 May of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 31 May shows combined areas of heavy and medium oil approximately spreading more than 30 miles west of the spill source (Attachment 2). Weather forecast indicate weather suitable for dispersant operations: winds of 9 knots, visibility greater than 5 nm, ceilings unlimited, and waves of 1.5 feet.

BP anticipates that, due to the location and size of the multiple oil slicks identified, the use of mechanical recovery and ISB will not provide sufficient means to recover or remove the oil in the target area due to the extent of the slicks (>150 sq mi area) and the speed of advance of 1-2 knots for skimming and ISB vessels to remove the spill volume on May 31, 2010. Prior to spray operations spotter aircraft will identify high target streamers and slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 19,000 gallons for a period not to exceed 12 hours.

Sincerely,

Doug J Suttles RTP

Douglas J. Suttles

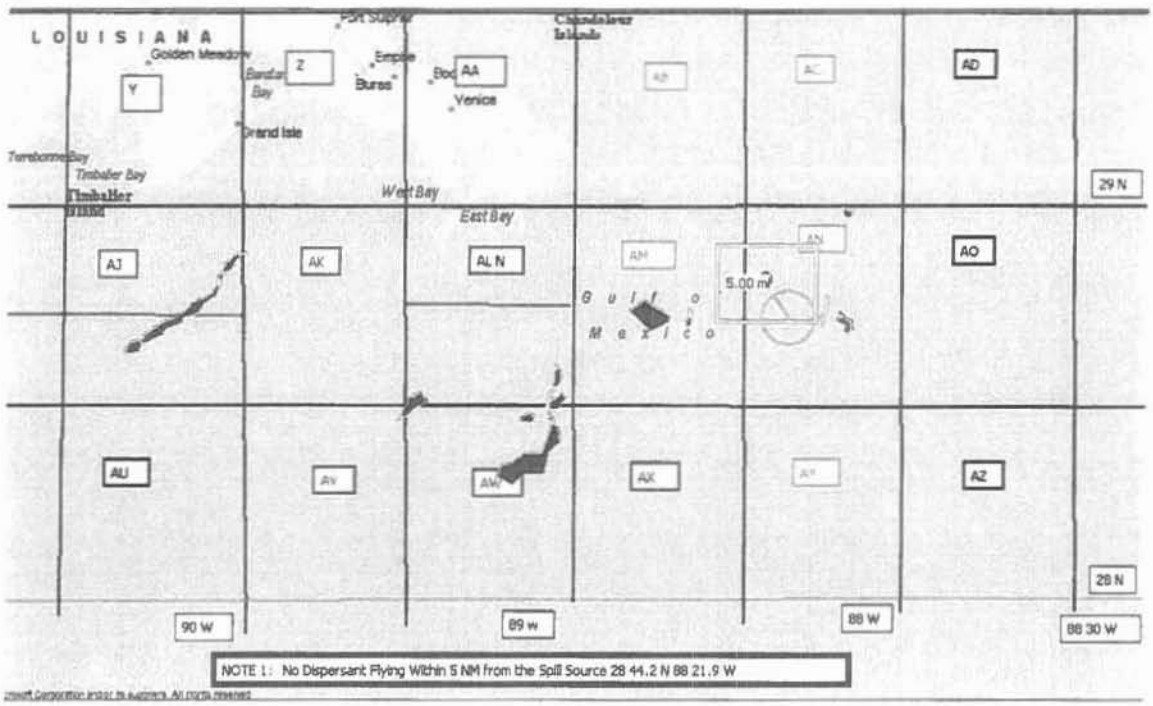
Exemption approved subject to the above:

Date: 5-31-2010

Mary E. Landry
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 31 May 2010



Attachment 2

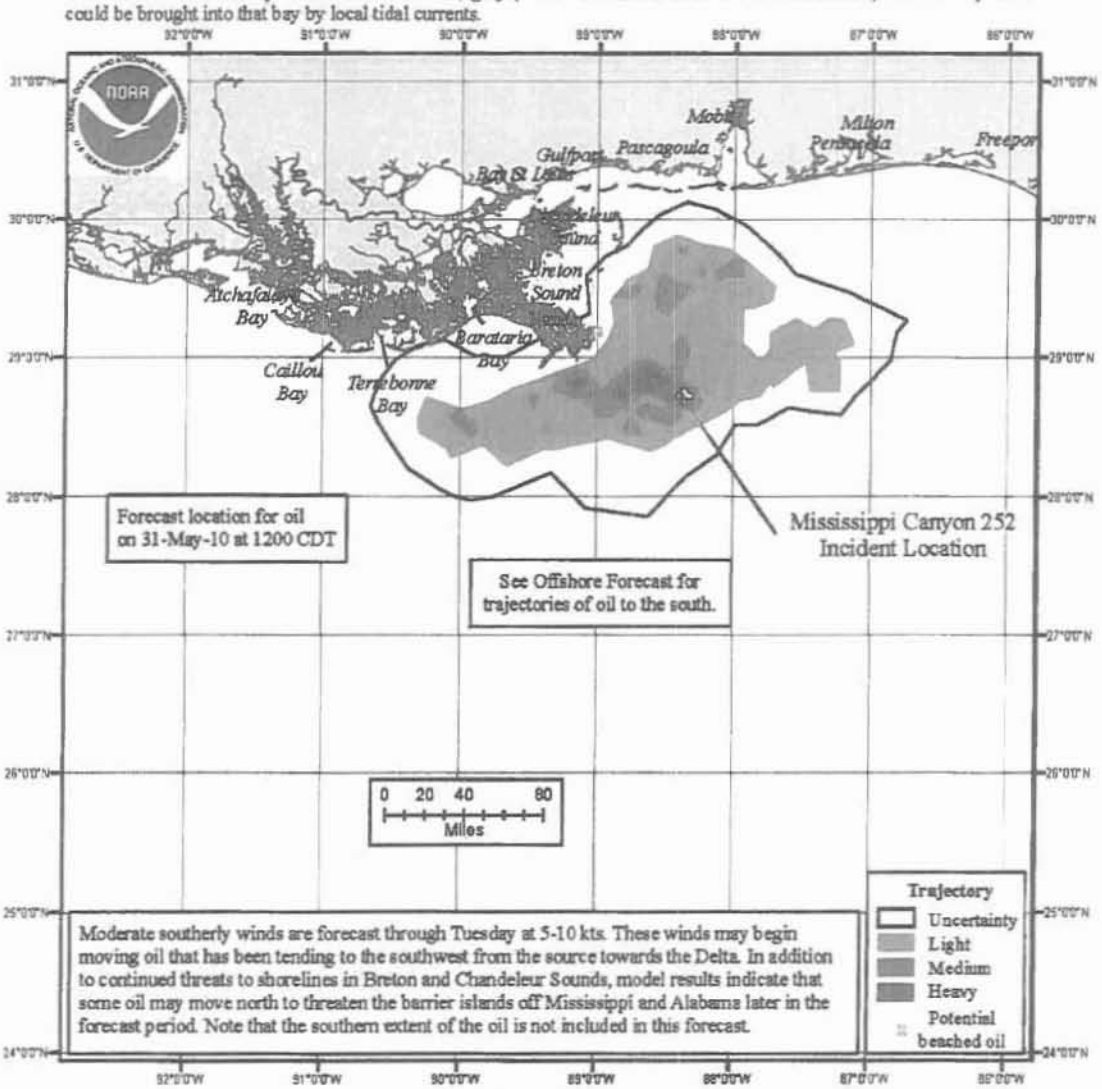
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

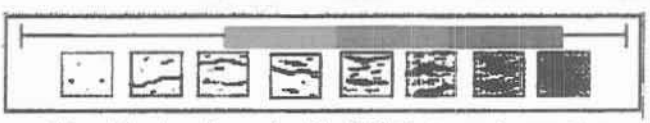
Nearshore

Estimate for: 1200 CDT, Monday, 5/31/10
Date Prepared: 2100 CDT, Friday, 5/29/10

This forecast is based on the NWS spot forecast from Saturday, May 29 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Friday and Saturday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Moderate southerly winds are forecast through Tuesday at 5-10 kts. These winds may begin moving oil that has been tending to the southwest from the source towards the Delta. In addition to continued threats to shorelines in Breton and Chandeleur Sounds, model results indicate that some oil may move north to threaten the barrier islands off Mississippi and Alabama later in the forecast period. Note that the southern extent of the oil is not included in this forecast.



this scale bar shows the meaning of the distribution terms at the current time

Next Forecast: May 30th PM

June 1, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Dear Admiral Watson:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP requests to deploy surface dispersant as required for health and safety purposes to minimize VOC emissions at the source control site. It is expected that the volume will be less than 6,000 gallons. Should VOC monitoring dictate further deployment of dispersant, BP requests authorization to exceed 6,000 gallons as required to manage safety of staff at Source Control site.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Date: 1 Jun 10

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 2, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Dear Admiral Watson:

In compliance with the May 26, 2010 Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP requests to deploy surface dispersant as required for health and safety purposes to minimize VOC emissions at the source control site. It is expected that the volume will be less than 6,000 gallons. Should VOC monitoring dictate further deployment of dispersant, BP requests authorization to exceed 6,000 gallons as required to manage safety of staff at Source Control site.

On June 1st, there were two VOC excursions above 70 ppm, but vessel movement negated the need for dispersant and no surface dispersant was deployed for the calendar day.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Date: 2 JUN 10

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 2, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Weekly Source Control Surface Dispersant Plan (June 3-9, 2010)

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has made daily requests for surface dispersant to control VOC (volatile organic compounds) emissions that present health and safety risks to the personnel working on vessels in the source well location. These requests have indicated a maximum expected volume of 6000 gallons per day as the realized VOC emissions were impossible to reliably predict. Actual deployment has averaged 2362 gallons per calendar day since enactment of the Directive. The objective of this plan is to set out a weekly authorization for deployment of surface dispersant to manage VOC emissions.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

Given the above controls and the inherent variability of VOC emissions on a calendar daily basis, BP respectfully requests authorization to deploy surface dispersant (if necessary) on the following days:

Date	Expected Maximum Volume per calendar day (gals)
June 3	6000
June 4	6000
June 5	6000
June 6	6000
June 7	6000
June 8	6000
June 9	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Pp

Douglas J. Suttles

Approval granted subject to the above:

Date: 3 Jun 10

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating (Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

Recommended actions for VOC management:

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 3, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has six (6) spotter visual reports from 2 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 3 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates weather will be suitable for dispersant operations: winds of 8-19 knots, with waves of 1.5-4.0 feet, ceilings and visibility above minimums outside of isolated thunderstorms.

BP anticipates that, due to the location, distribution and size of the multiple oil slicks identified, the use of mechanical recovery and ISB will not provide sufficient means to recover or remove the oil in the target area due to the extent of the slicks and distribution of the slicks (>180 sq mi area) and the speed of advance of 1-2 knots for skimming and ISB vessels to remove the spill volume on June 3, 2010. Prior to spray operations spotter aircraft will identify high target slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 2,000 gallons for a period not to exceed 12 hours.

Sincerely,

pp N Eoff

Douglas J. Suttles

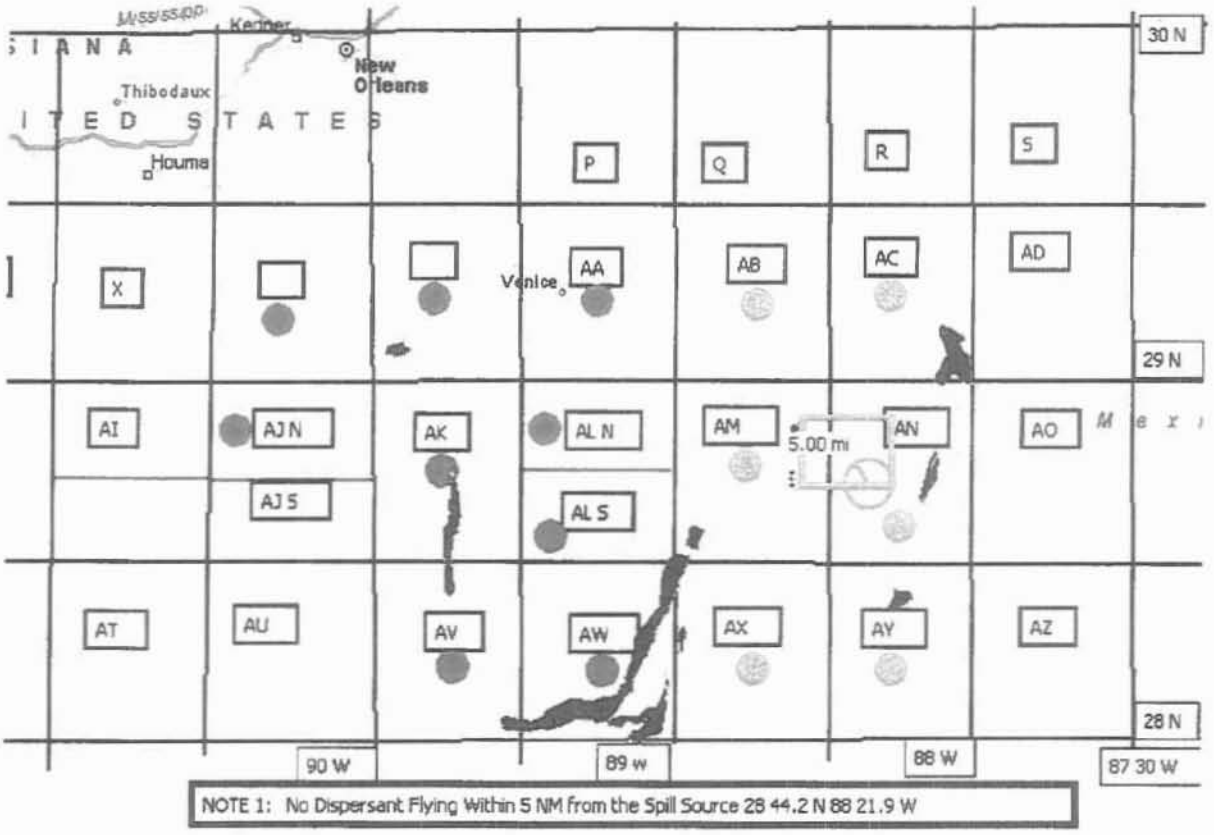
Exemption approved subject to the above:

Date: 3 Jun 10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 3 June 2010 with oil targets.



Legend:

Red Dots	**Primary zones for Stennis aircraft**
Blue Dots	**Primary zones for ASI aircraft at Houma airport**
Green Dots	**Primary AT-802 aircraft at Houma airport**

Attachment 2

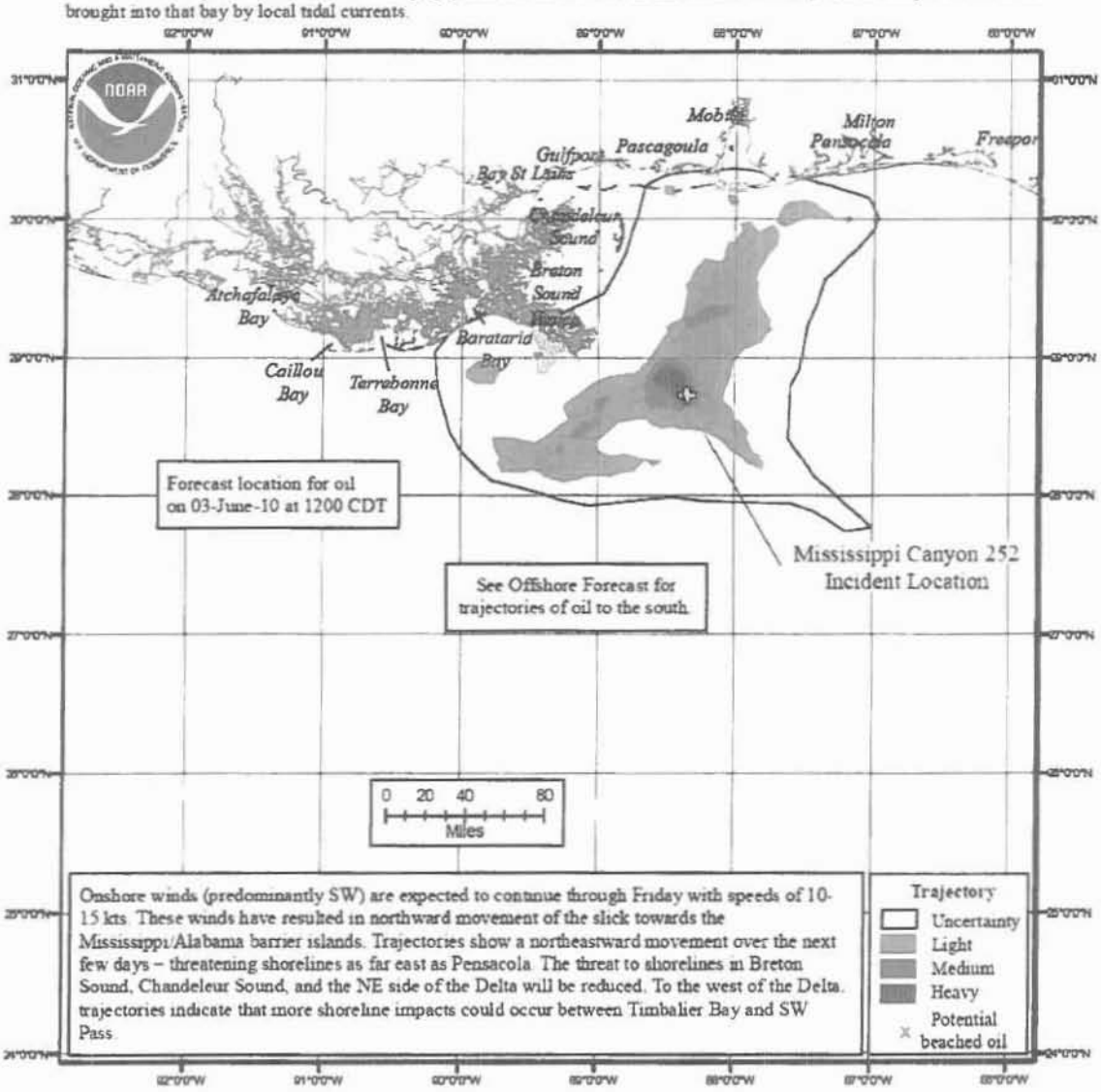
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Thursday, 6/03/10
Date Prepared: 2100 CDT, Tuesday, 6/01/10

This forecast is based on the NWS spot forecast from Tuesday, June 1 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 2nd PM

this scale bar shows the meaning of the distribution terms at the current time

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 4, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has eleven (11) spotter visual reports from 3 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 4 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates weather will be suitable for dispersant operations: winds of 16-19 knots, with waves of 2.5-4.0 feet, ceilings and visibility above minimums outside of isolated thunderstorms.

BP anticipates that, due to the weather and the location, distribution and size of the multiple oil slicks identified, the use of mechanical recovery and ISB will not provide sufficient means to recover or remove the oil in the target area due to the extent of the slicks and distribution of the slicks (>180 sq mi area) to remove the spill volume on June 4, 2010. Prior to spray operations the spotter aircraft will identify high volume target slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 2,000 gallons for a period not to exceed 12 hours.

BP also requests an exemption for a small aerial deployment of 200 gallons in support of a National Institute for Occupational Health (NIOSH) led study to ascertain whether health risks are present in aerial dispersant operations.

Sincerely,

Douglas J. Suttles

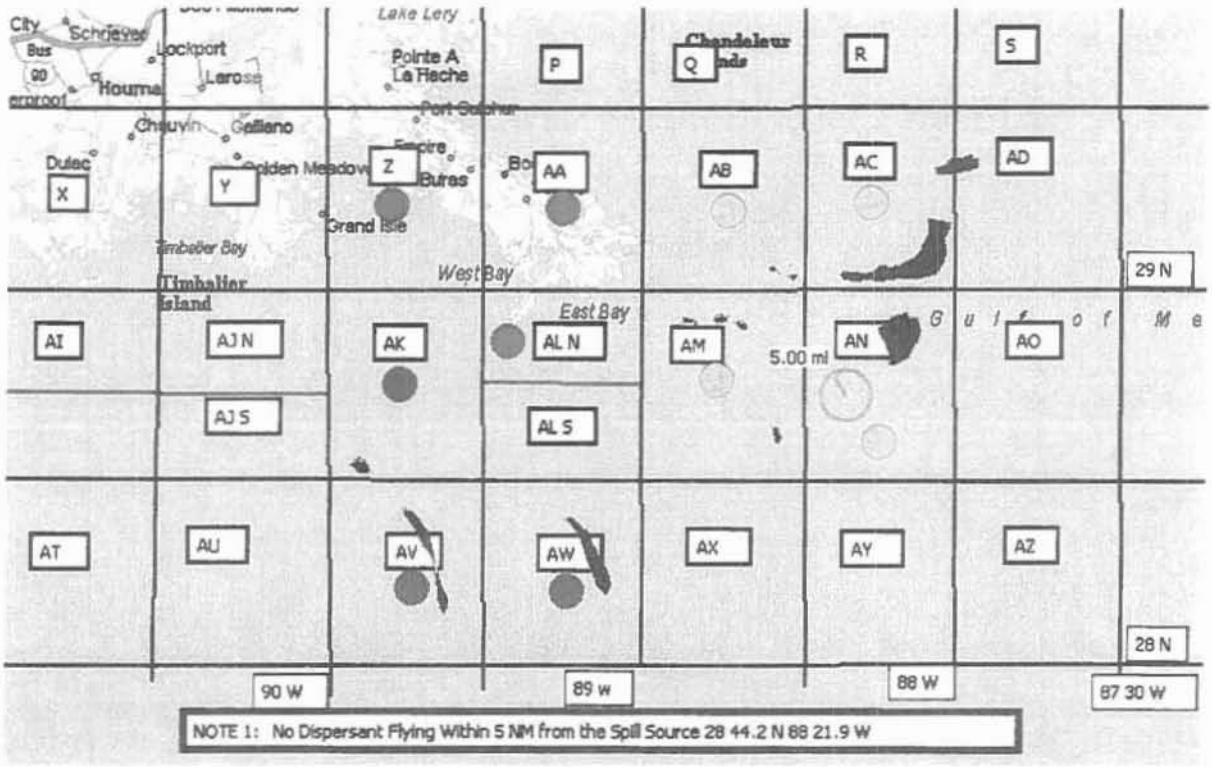
Exemption approved subject to the above:

Date: 4 Jun 10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 4 June 2010 with oil targets.



Legend:
Red Dots Primary zones for aircraft at Stennis, MS airport
Blue DotsPrimary zones for ASI aircraft at Houma, LA airport
Green Dots Primary zones for AT-802 aircraft at Houma, LA airport

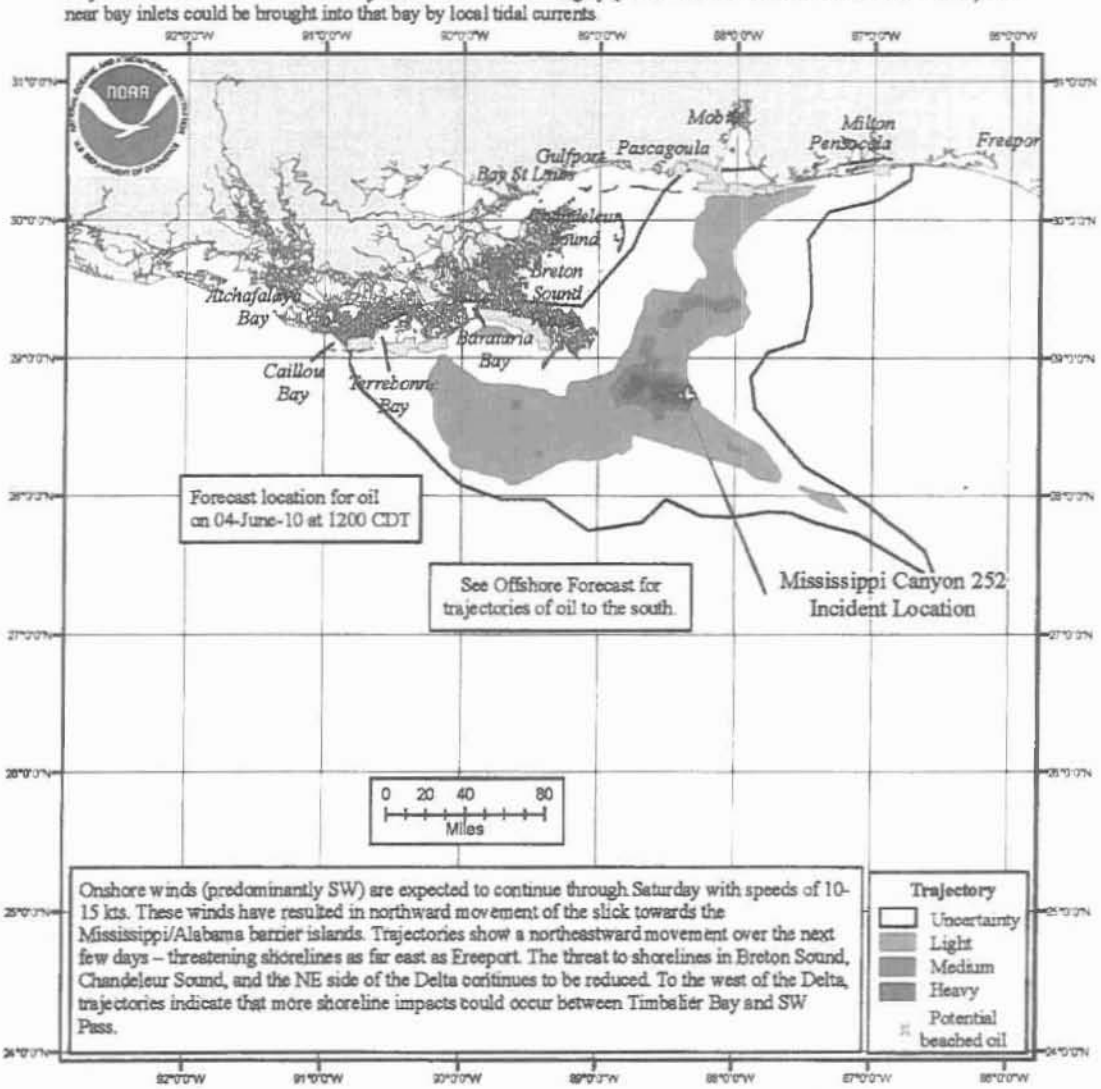
Attachment 2

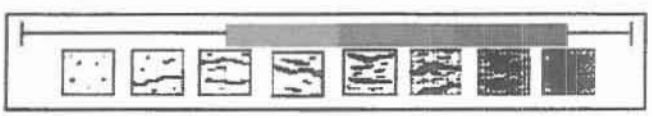
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Friday, 6/04/10
Date Prepared: 2100 CDT, Wednesday, 6/02/10

This forecast is based on the NWS spot forecast from Wednesday, June 2 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday evening satellite imagery analysis (NOAA/NESDIS) and Wednesday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast: June 3rd PM

this scale bar shows the meaning of the distribution terms at the current time

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 4, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator. In addition, the subsurface application has been capped to 15,000 gallons per calendar day.

Placement of the LMRP cap resulted in interruptions to subsea dispersant (only 10,241 gallons) and non-optimal placement of deployment wand. As a result VOC emissions are posing operational risk to maintaining the Enterprise vessel on station.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to increase application of EC9500A in volumes from 15,000 per calendar day to 23,000 gallons for the calendar day June 4th should it be needed to maintain VOC emissions at operable levels.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Date: 4 Jun 10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 5, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has eleven (11) spotter visual reports from 4 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 5 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates weather will be suitable for dispersant operations: winds of 18-20 knots, with waves of 5 feet, ceilings and visibility above minimums outside of isolated thunderstorms.

BP anticipates that, due to the weather and the location, distribution and size of the multiple oil slicks identified, the use of mechanical recovery and ISB will not be operating or sufficient to recover or remove the oil in the target area due to the extent (slick area 7,000 acres) and distribution of the slicks (>900 sq mi area) to remove the spill volume on June 5, 2010. Prior to spray operations the spotter aircraft will identify high volume target slicks and will direct aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes not to exceed 2,000 gallons for a period not to exceed 12 hours.

BP also requests an exemption for a small aerial deployment of 200 gallons in support of a National Institute for Occupational Health (NIOSH) led study to ascertain whether health risks are present in aerial dispersant operations.

Sincerely,

Douglas J. Suttles

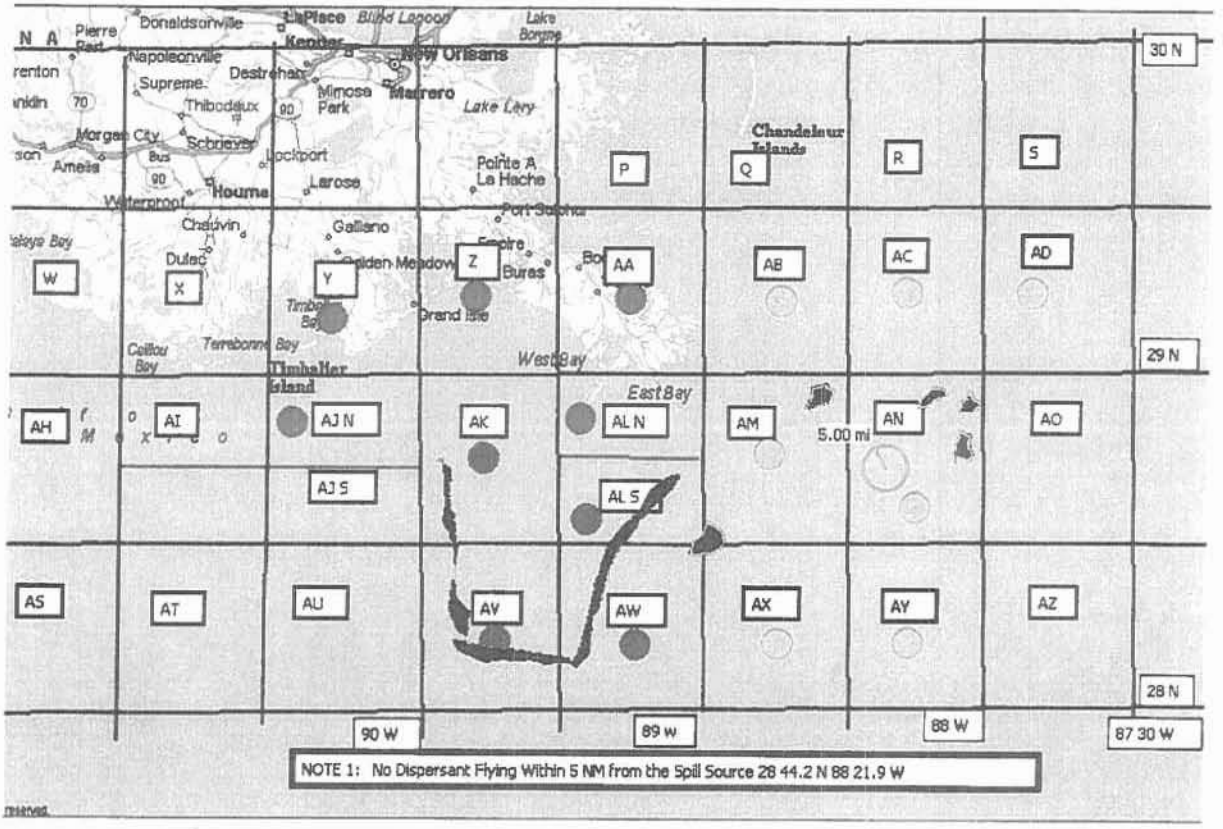
Exemption approved subject to the above:

Date: 6-5-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 5 June 2010 with oil targets.



Legend:

Red Dots:	**Primary zones for aircraft at Stennis, MS airport**
Blue Dots:	**Primary zones for ASI aircraft at Houma, LA airport**
Green Dots:	**Primary zones for AT-802 aircraft at Houma, LA airport**

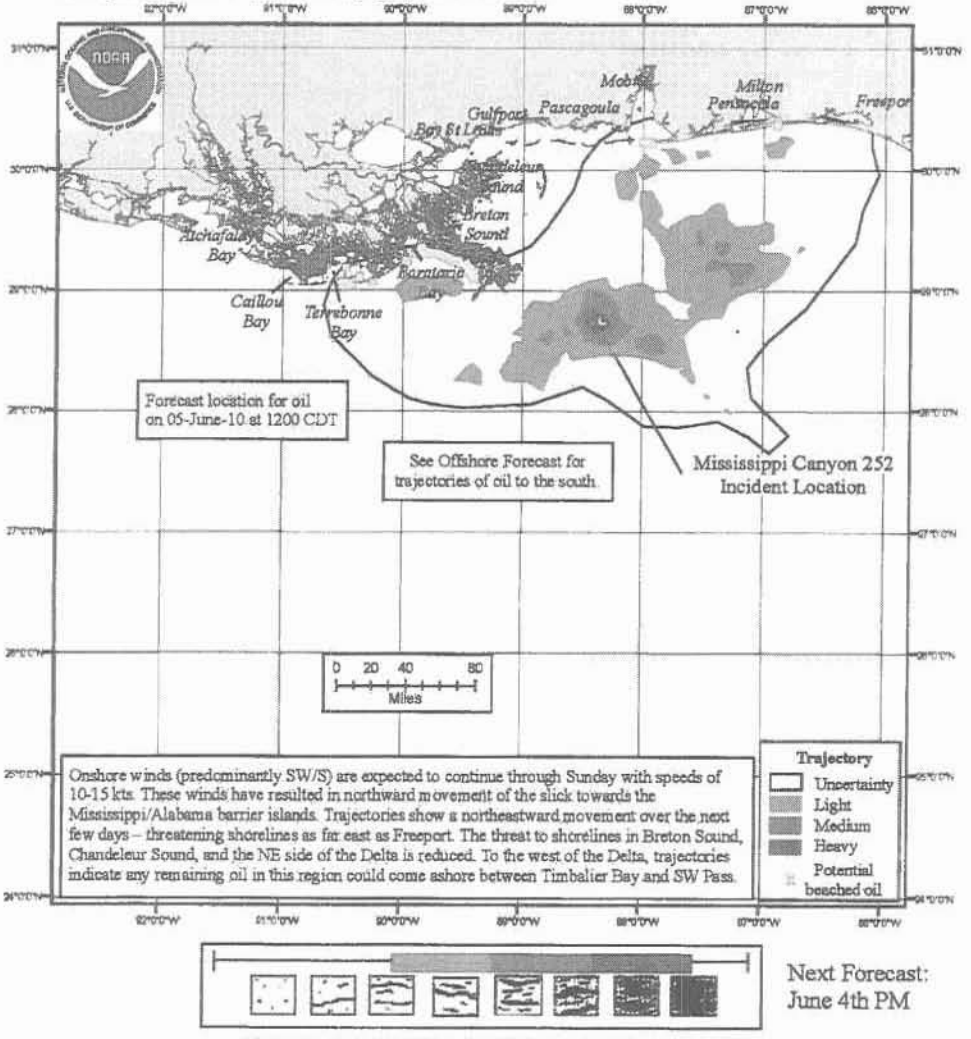
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Saturday, 6/05/10
Date Prepared: 2100 CDT, Thursday, 6/03/10

This forecast is based on the NWS spot forecast from Thursday, June 3 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday-Thursday satellite imagery analysis (NOAA/NESDIS) and Thursday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 4th PM

this scale bar shows the meaning of the distribution terms at the current time

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 6, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has eleven (7) spotter visual reports from 5 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 6 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates weather will be suitable for dispersant operations: winds of 12-14 knots, with waves of 2-4 feet, ceilings and visibility above minimums outside of isolated thunderstorms.

BP anticipates that, due to the weather, location, distribution (7,200 sqmi) and size of the multiple oil slicks identified (106 sqmi), and since weather will prevent or limit the use of mechanical recovery and ISB to recover or remove the oil in the target area these response techniques will be insufficient to remove the spill volume on June 6, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes on the highest priority oil slicks shown in Table 1 not to exceed 2,000 gallons for a period not to exceed 12 hours.

Sincerely,

pp Douglas J. Suttles

Exemption approved subject to the above:

Date: 6-6-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 6 June 2010 with Oil Targets

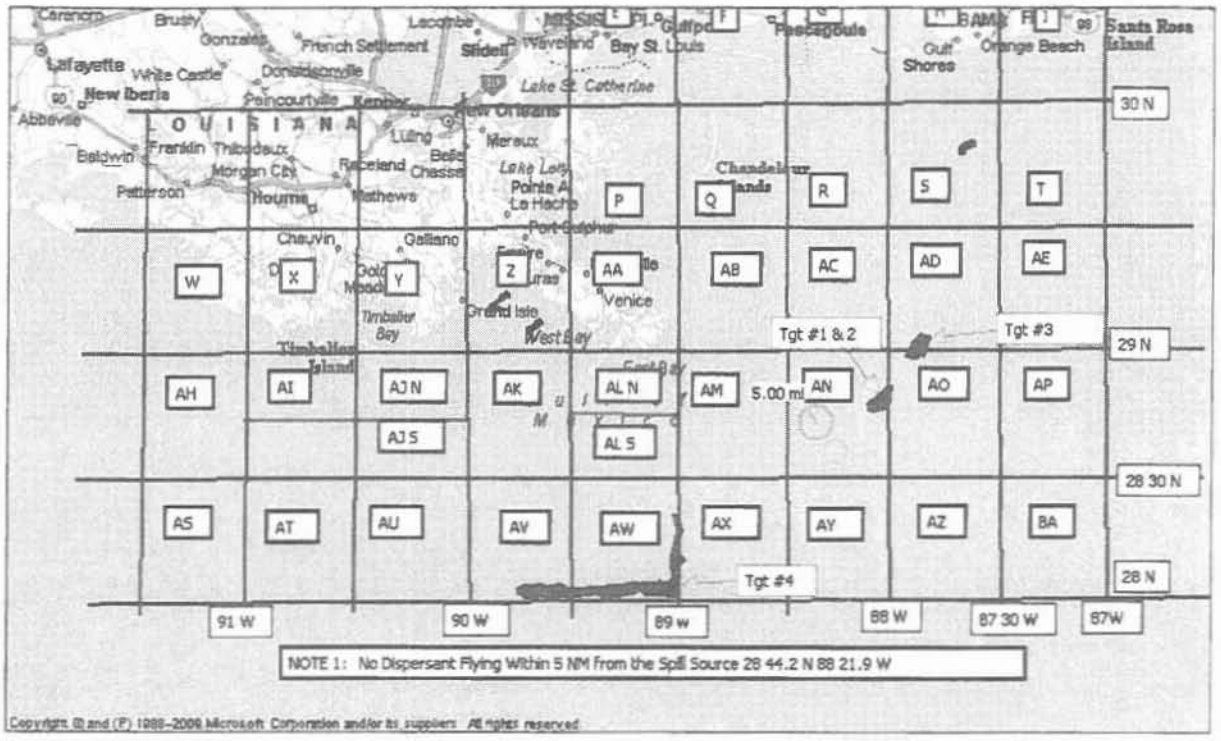
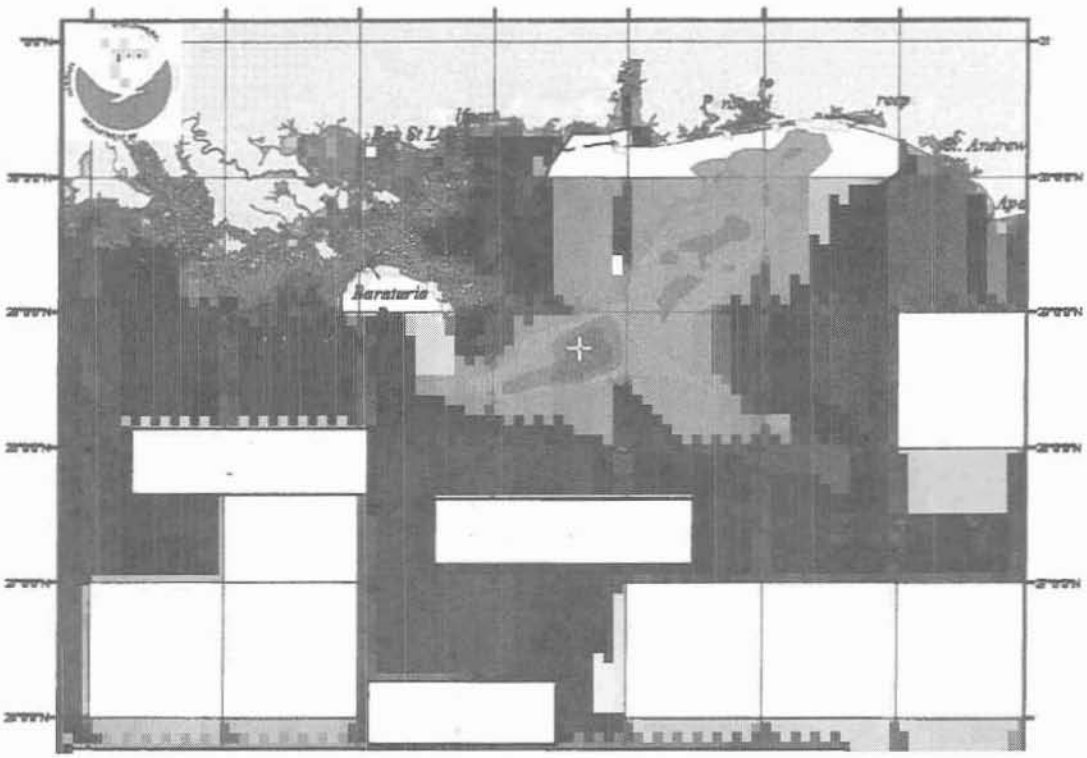


TABLE 1

DISPERSIBLE OIL REPORT
(June 5, 2010)

	Targeted Oil Slick	Area (sqmi)	Dispersant Needed (1/20 DOR)	Aircraft
Priority 1	1	0.625	2,000	1 - C130
Priority 2	2	16	51,000	2 – C130 & BT-67
Priority 3	3	20	64,000	3 – C130
Priority 4	4	70	224,000	All Spray aircraft
Total		106.625	341,000	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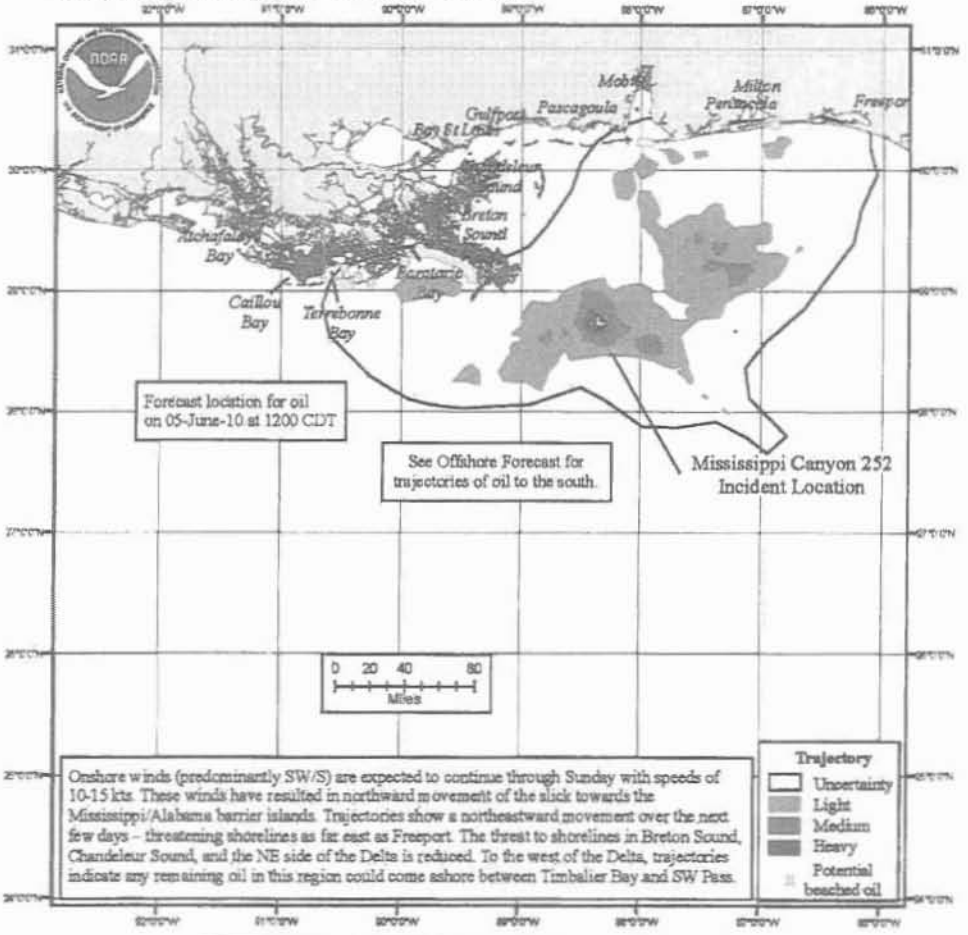
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Saturday, 6/05/10
Date Prepared: 2100 CDT, Thursday, 6/03/10

This forecast is based on the NWS spot forecast from Thursday, June 3 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday-Thursday satellite imagery analysis (NOAA/NESDIS) and Thursday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 4th PM

this scale bar shows the meaning of the distribution terms at the current time

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 6, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has eleven (7) spotter visual reports from 5 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 6 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates weather will be suitable for dispersant operations: winds of 12-14 knots, with waves of 2-4 feet, ceilings and visibility above minimums outside of isolated thunderstorms.

BP anticipates that, due to the weather, location, distribution (7,200 sqmi) and size of the multiple oil slicks identified (106 sqmi), and since weather will prevent or limit the use of mechanical recovery and ISB to recover or remove the oil in the target area these response techniques will be insufficient to remove the spill volume on June 6, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests an exemption to apply EC9500A in volumes on the highest priority oil slicks shown in Table 1 not to exceed 2,000 gallons for a period not to exceed 12 hours.

Sincerely,

pp Douglas J. Suttles

Exemption approved subject to the above:

Date: 6-6-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 6 June 2010 with Oil Targets

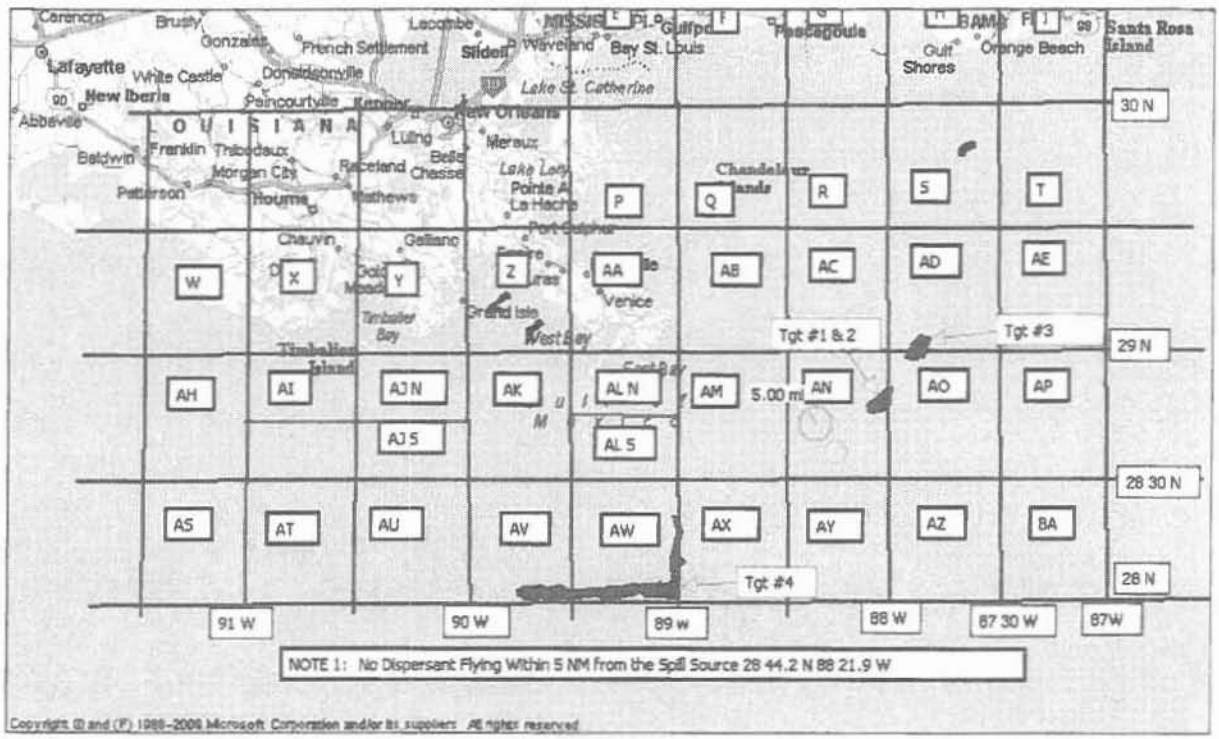


TABLE 1

DISPERSIBLE OIL REPORT
(June 5, 2010)

	Targeted Oil Slick	Area (sqmi)	Dispersant Needed (1/20 DOR)	Aircraft
Priority 1	1	0.625	2,000	1 - C130
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Priority 3	3	20	64,000	3 – C130
Priority 4	4	70	224,000	All Spray aircraft
Total		106.625	341,000	

Attachment 2

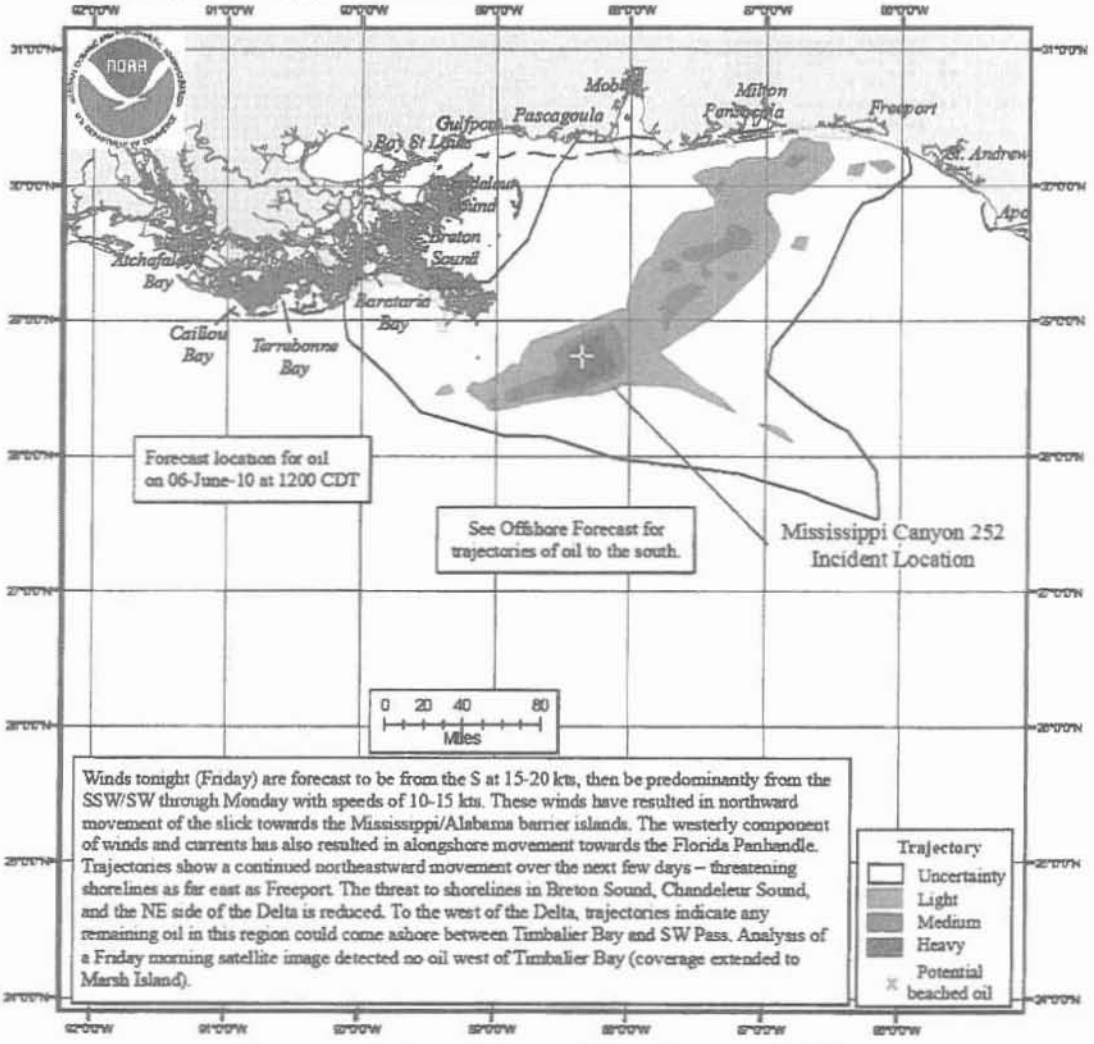
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

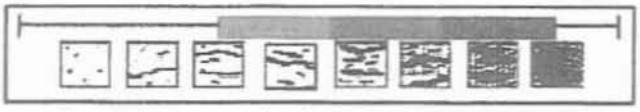
Nearshore

Estimate for: 1200 CDT, Sunday, 6/06/10
Date Prepared: 2100 CDT, Friday, 6/04/10

This forecast is based on the NWS spot forecast from Friday, June 4 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Thursday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Winds tonight (Friday) are forecast to be from the S at 15-20 kts, then be predominantly from the SSW/SW through Monday with speeds of 10-15 kts. These winds have resulted in northward movement of the slick towards the Mississippi/Alabama barrier islands. The westerly component of winds and currents has also resulted in alongshore movement towards the Florida Panhandle. Trajectories show a continued northeastward movement over the next few days – threatening shorelines as far east as Freeport. The threat to shorelines in Breton Sound, Chandeleur Sound, and the NE side of the Delta is reduced. To the west of the Delta, trajectories indicate any remaining oil in this region could come ashore between Timbalier Bay and SW Pass. Analysis of a Friday morning satellite image detected no oil west of Timbalier Bay (coverage extended to Marsh Island).



this scale bar shows the meaning of the distribution terms at the current time

Next Forecast: June 5th PM

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 6, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has limited the surface application of dispersants to cases where the Federal On-Scene Coordinator determines its use is justified, and BP has acted to hold subsurface dispersant to a maximum of 15,000 gallons per calendar day. However, as a result of a problem with the measurement equipment, for several days subsurface dispersant application exceeded the 15,000 gallon limit.

At 17:00 on June 2, 2010, BP replaced the 1"meter used to monitor and report subsurface application of dispersant with a 2" meter. Relying on the readings from the 2" meter, BP set the dispersant flow to approximately 10 gallons per minute, a setting at which the total dispersant use would be within the 15,000 gallon daily limit. On June 5, 2010, BP discovered that the volume of dispersant in the storage tank was lower than it should have been given the flow that BP had set. After discovering the problem, BP determined the actual flow, adjusted the flow to put it back within limits, and ordered a new meter. There was no operational requirement identified for application of increased dispersant with the exception of June 3rd, which was authorized separately for VOC excursions following the installation of the LMRP cap. The reconciliation of reported to actual deployed dispersant is in the table below:

Subsurface Dispersant (gallons per calendar day)

	Previously Authorized	Previously Reported	Actual	Requested Authorization
June 2, 2010	15,000	7,226	7,616	n/a
June 3, 2010	15,000	11,361	17,753	17,753
June 4, 2010	23,000	14,048	20,655	n/a
June 5, 2010	15,000	13,670	19,666	19,666

BP respectfully requests retroactive authorization for June 3, 2010 and June 5, 2010 to cover the actual volumes of dispersant that BP applied on those dates.

Sincerely,

Douglas J. Suttles

Exemption approved subject to the above:

Date: 6-6-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 7, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has seven (7) spotter visual reports from 6 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 7 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-8 knots, ceilings unlimited and visibility 10nm.

BP anticipates that, due to the weather, location, distribution (5,400 sqmi) and size of the multiple oil slicks identified (58 sqmi), the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 7, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests in accordance with the Huoma Unified Command request an exemption to apply EC9500A in volumes on the highest priority oil slicks shown in Table 1 not to exceed 32,000 gallons for a period not to exceed 12 hours.

Sincerely,

Doug Suttles

Exemption approved subject to the above:

_____ Date: _____

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 7 June 2010 with Oil Targets

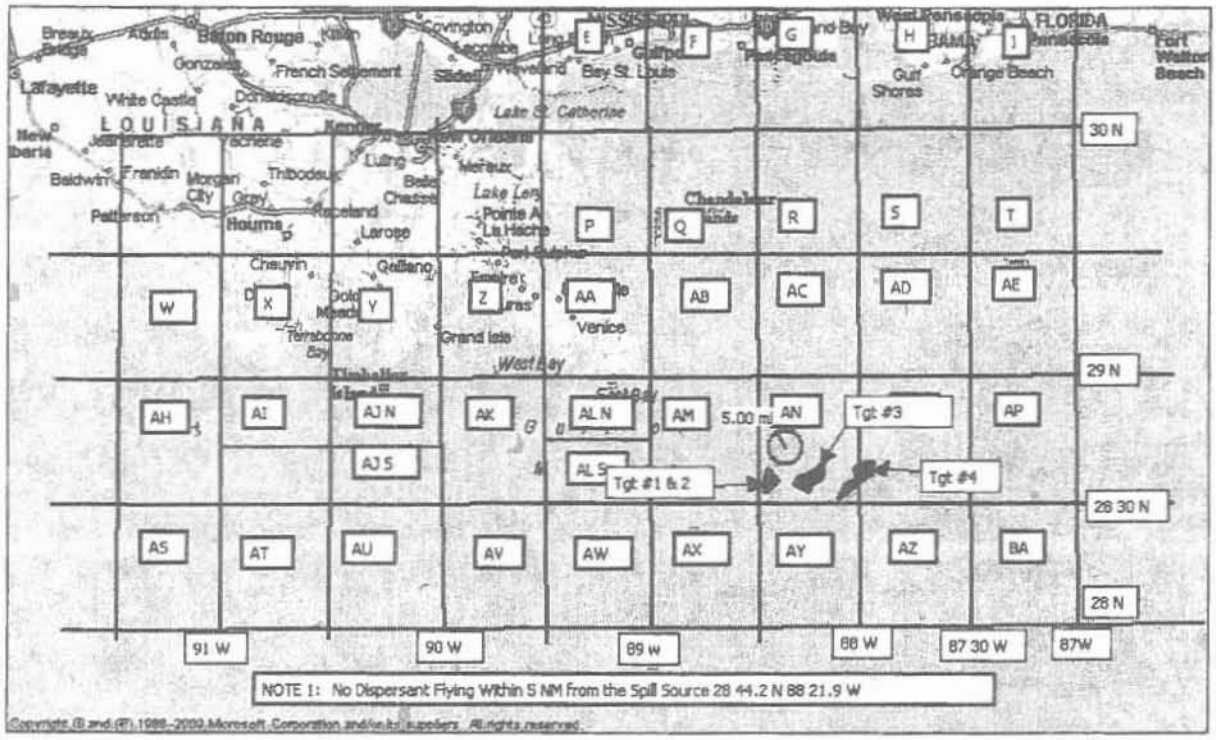


TABLE 1

DISPERSIBLE OIL REPORT
(June 6, 2010)

	Targeted Oil Slick	Area (sqmi)	Dispersant Needed (1/20 DOR)	Aircraft
Priority 1	1	0.625	2,000	1 - C130
Priority 2	2	10	16,000	1 – C130 & BT-67
Priority 3	3	22	39,000	2 – C130 & BT-67
Priority 4	4	26	47,000	All Spray aircraft
Total		58.625	104,000	

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

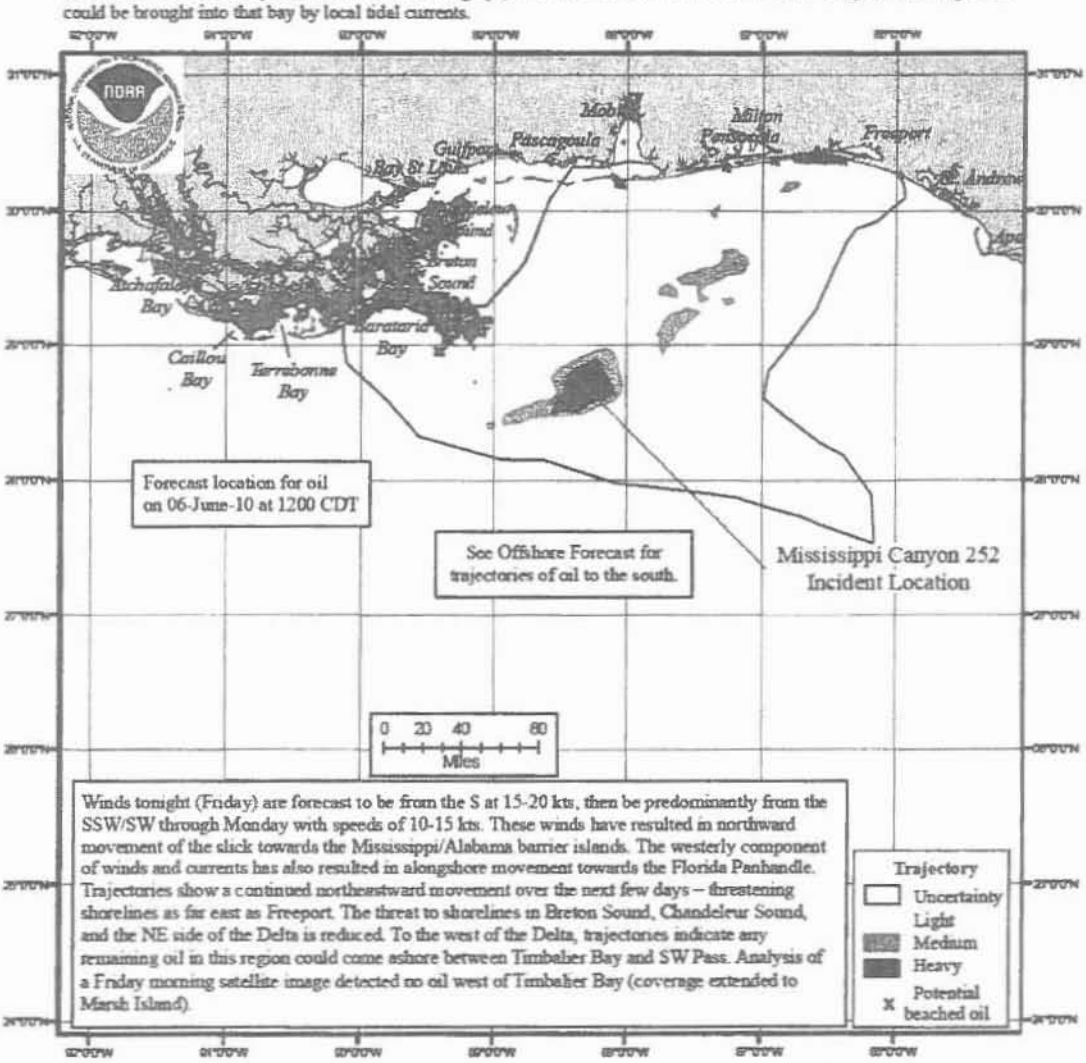
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Sunday, 6/06/10
Date Prepared: 2100 CDT, Friday, 6/04/10

Nearshore Surface Oil Forecast for 6-7-10 was unavailable.

This forecast is based on the NWS spot forecast from Friday, June 4 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Thursday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 5th PM

this scale bar shows the meaning of the distribution terms at the current time

[redacted]

From: [redacted]
Sent: Monday, June 07, 2010 4:21 PM
To: [redacted]
Subject: FW: Request for Supporting Documentation

-----Original Message-----
From: Watson, James RADM
Sent: Monday, June 07, 2010 4:45 PM
To: Hanzalik, James CAPT; Laferriere, Roger CAPT; Austin, Meredith CAPT; 'dana.tulis@epa.gov'
Cc: [redacted]
Subject: RE: Request for Supporting Documentation

Roger and Mary
Please urge BP (Mike) to email the response to EPA questions directly to Ms Dana Tulis.

Dana,
As FOSC I have determined aerial dispersant the best and only way to mitigate the pending landfall effect of the oil spotted at position 28-39.93 N 88-28.78W. It requires 32K gals. Conditions are ideal. No other removal methods are there. Monitoring wiil be conducted.
JW

Sent with Good (www.good.com)

-----Original Message-----
From: Hanzalik, James CAPT
Sent: Monday, June 07, 2010 02:16 PM Eastern Standard Time
To: Watson, James RADM
Cc: [redacted]
Subject: FW: Request for Supporting Documentation

FYI - RRT 6 approves. I will forward EPA concerns to BP. RRT notes to follow.

VR.

James

Sent with Good (www.good.com)

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 8, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), the Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has six (6) spotter visual reports from 7 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 8 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-8 knots, ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (5,400 sqmi) and size of the multiple oil slicks identified (290 sqmi), the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 8, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Further data to underpin this request is as follows:

- The physical dimensions of identified targets proposed are included in Table A and given in approximate acreage and average length and width perimeter dimensions.

- The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for June 8, 2010. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere in the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils. The amount of oil located today and shown herein, will require alternative response methods to be employed in order to minimize potential shoreline and wildlife impact.

- A daily summation of skimmers in the source area and outside the source will be provided to the Aerial Dispersant Group for insertion in this report. Skimming resources outside of the source area are not available for this request but will be made available for any future requests.

  Skimming Resources within the source area.

ource		Date/Time	7 June 0700	
Vessel	Assignment	Status	Location	ETA
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
SRC 402 Barge (Kimberly Collie)	TF Storage	On scene	MC 252	
SRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
SRC 570 Barge (Crosby Clipper)	TF Storage	On scene	MC 252	
Sea OBL 155 (Rebel)	TF Storage	On scene	MC 252	

In Transit

- It is our understanding that it has been agreed within the RRT that going forward with SMART Tier II & III will no longer be required. What has been accepted in lieu of these activities is the "Surface Water Sampling Plan for Dispersant Application Monitoring", Version 1, approved on June 3, 2010 by [redacted] Environmental Unit Leader; Mike Utsler, BP IC, Jerome Zeringue, SOSC and Captain Merideth, FOSC. To implement this plan, we have Exponent and OSR personnel who will be onboard our vessel as our science team. Accommodations will be available for two Federal representatives who will act as observers while the science team implements the aforementioned plan. The intended vessel will be the International Peace (IP). It is not anticipated that the IP will be performing sampling/monitoring for each application of dispersant nor for the full track of the spray applied, but a representative sampling will be accomplished. Please note the IP is currently in dry dock for repairs. We anticipate her returning to service on June 9th to recommence her science duties.

Accordingly, in accordance with the Directive, Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 32,000 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 8 JUN 10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 8 June 2010 with Oil Targets

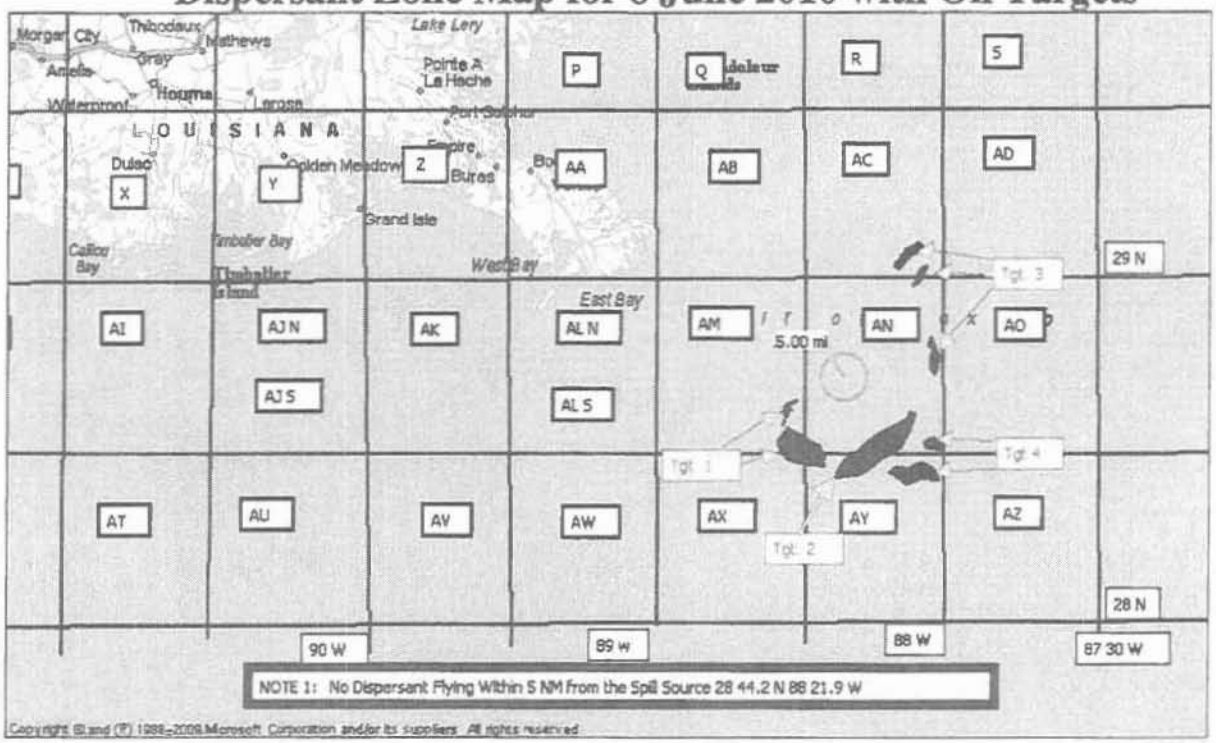


TABLE 1

	DISPERSIBLE OIL REPORT (June 7, 2010)					
	Targeted Oil Slick	Estimated Dimensions in Miles	Estimated Area (sq.mi)	Dispersant Needed (1/20 DOR)	Dispersant Requested	Difference
Priority 1	1	10X5	50	80,000	6,000	74,000
Priority 2	2	20X6	120	192,000	26,000	166,000
Priority 3	3	12X3	36	90,000	0	90,000
Priority 4	4	14X6	84	134,000	0	134,000
Total		NA	290	496,000	32,000	464,000

Note: The above Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slicks, e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

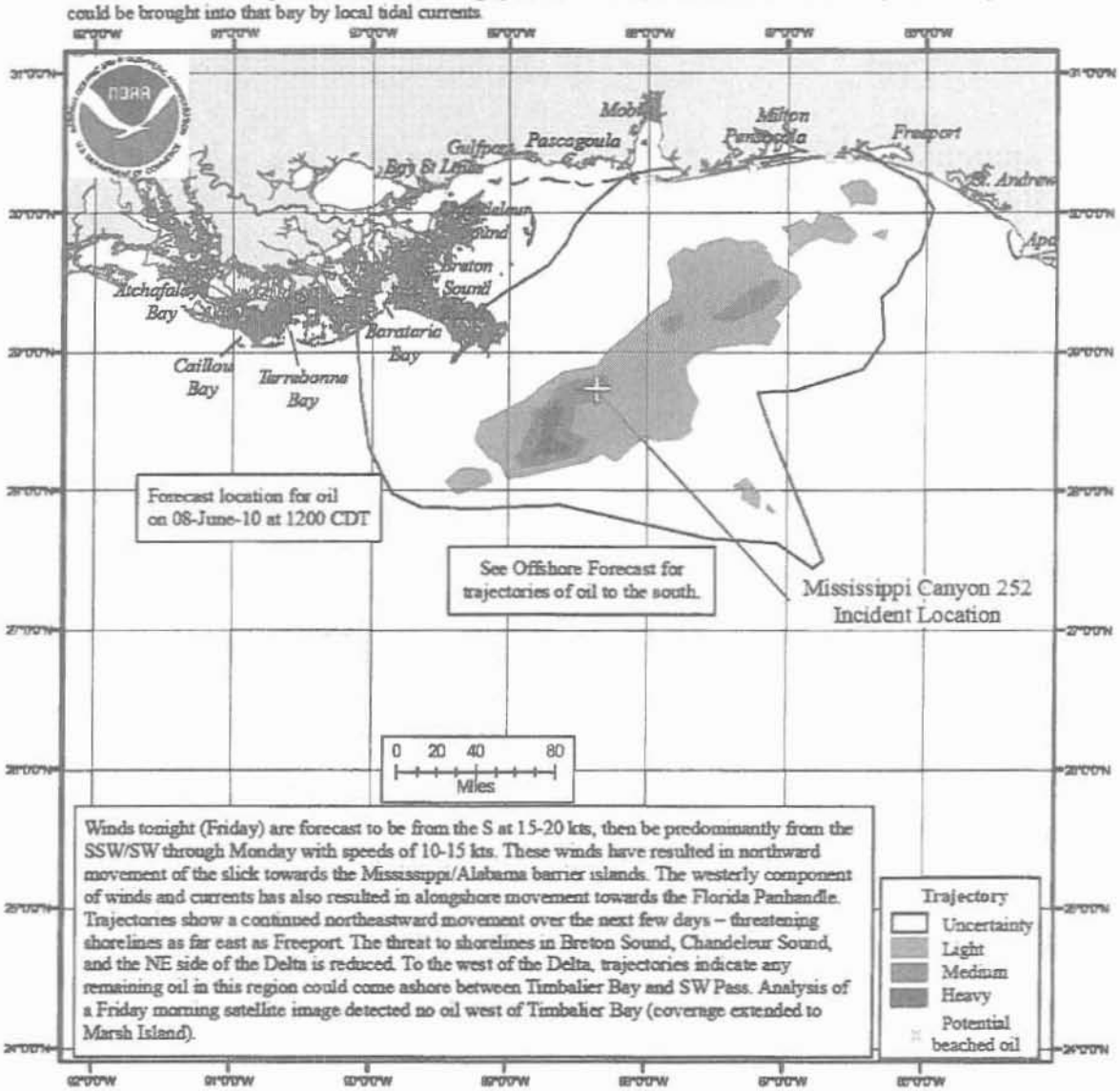
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

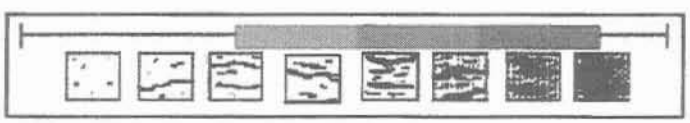
Nearshore

Estimate for: 1200 CDT, Tuesday, 6/08/10
Date Prepared: 2100 CDT, Saturday, 6/05/10

This forecast is based on the NWS spot forecast from Friday, June 4 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Thursday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Winds tonight (Friday) are forecast to be from the S at 15-20 kts, then be predominantly from the SSW/SW through Monday with speeds of 10-15 kts. These winds have resulted in northward movement of the slick towards the Mississippi/Alabama barrier islands. The westerly component of winds and currents has also resulted in alongshore movement towards the Florida Panhandle. Trajectories show a continued northeastward movement over the next few days – threatening shorelines as far east as Freeport. The threat to shorelines in Breton Sound, Chandeleur Sound, and the NE side of the Delta is reduced. To the west of the Delta, trajectories indicate any remaining oil in this region could come ashore between Timbalier Bay and SW Pass. Analysis of a Friday morning satellite image detected no oil west of Timbalier Bay (coverage extended to Marsh Island).



Next Forecast: June 6th PM

this scale bar shows the meaning of the distribution terms at the current time

June 9, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

RE: Weekly Source Control Surface Dispersant Plan (June 10 through 16, 2010)

Dear Admiral Watson,

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") submitted a weekly Source Control Surface Dispersant Plan for the week June 3 to June 9, which you approved on June 3. The plan allowed for a maximum daily application volume (calendar day) of 6,000 gallons, unless more was required to control VOCs. During the week in question, the average daily volume acquired was 4,225 gallons. High VOC conditions required that the expected maximum volume was exceeded on the 4th, 6th, and 7th of June.

The current offshore air monitoring plan for source control (2200-T2-DO-PN-4002-4 signed May 25, 2010) identifies air monitoring instrumentation, location and action levels to respond to VOC excursions. In addition, vapor suppression guidelines (attachment 1) were put in place May 29, 2010 to provide additional granularity for action requirements. The air monitoring data is transparent to USCG and EPA.

BP respectfully requests approval of to the Weekly Source Control Dispersant Plan for June 10 though June 16, as follows

Date	Expected Maximum Volume per calendar day (gals)
June 10	6000
June 11	6000
June 12	6000
June 13	6000
June 14	6000
June 15	6000
June 16	6000

Should VOC monitoring dictate further deployment in accordance with the Air Monitoring Plan for Source Control, BP also respectfully requests to exceed these volumes as required.

Sincerely,

Douglas J. Suttles

Approval granted subject to the above:

Date: June 9, 2010

Jim Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1
Vapor Suppression Guidelines
May 29, 2010

These guidelines pertain to deployment and use of dispersant vessels and fire fighting vessels in Source Control Operations. The guidance provides additional detail around action levels specified in the Offshore Air Monitoring Plan for Source Control (2200-T2-DO-PN-4002-4). In addition, this guidance aligns with Dispersant Procedures for Vessels Adriatic and HOS Super H (2200-T2-LC-RP-4091) and Fire Fighting Vessels Operating (Priorities and Procedures (2200-T2-DO-PR-4057).

All vessels experiencing VOC levels exceeding 50PPM are directed to report it to Source Control SimOps Branch Director. Application of dispersant should be coordinated through the Source Control SimOps Branch Director.

Recommended actions for VOC management:

- VOC levels of 20 to 70ppm
  - Use Rem Forza and Kay Marine 5 vessels for wide spray water pattern to suppress and redirect vapors

- VOC over 70ppm
  - Notify Source Control SimOps Branch Director to coordinate dispersant use
  - Use HOS Super H and Adriatic as primary dispersant vessels
  - Use Rem Forza and Kay Marine 5 vessels to apply dispersant when wide spray water pattern is not effective

Cover letter dated June 10.

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June ~~9~~ 10, 2010

For 10th

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has ten (10) spotter visual reports from 9 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 10 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 8-10 knots, wave height 1.5'-2.5', ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (8,100 sqmi) and size of the multiple oil slicks identified (180 sqmi), the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 10, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Area Command, the following information is provided.

- Include physical dimensions of identified targets proposed: this information is included in Table A and given in approximate acreage and average length and width perimeter dimensions.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for June 10, 2010. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere in the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report. Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

Offshore Skimming Resources

SOURCE		Date/Time 9 June 1200		
Vessel	Attachment	Status	Location	ETA
[redacted]				
Sea Raven (Ocean Saver)	Boom	Service	Neptune	
[redacted]				
Nic. Carolina (NOAA FRV)	CSI	Destroyed	Return Venice	
Pirat (Navy Vessel)	Rod	Destroyed		
[redacted]				
NOAC 402 barge (Jack Crosby)	TF Storage	Standby	Pt Jackson	
NOAC 306 Barge (Crosby Clipper)	TF Storage	Standby	Port Tiwas	
[redacted]				

Boom Scoop				
Vessel	Attachment		Location	ETA
Chasse G	Control	Standby	Venice	
Sea Pox	Control	Standby	Venice	
[redacted]				
Ms. Addison	Control	Standby	Venice	
Inflatoon Hose	Control	Standby	Venice	
[redacted]				
Sea Hawk	Control	Standby	Venice	

Crane/Rig-supply				
Mr. Leroy	Shuttle/Re-s	Supply Run	Venice Based	
Fox	Shuttle/Re-s	Supply Run	Venice Based	
Jess Perry	Shuttle/Re-s	Supply Run	Venice Based	
Corbica Shark	Shuttle/Re-s	Supply Run	Venice Based	
Katie Lynn	Shuttle/Re-s	Supply Run	Venice Based	
Ben Chouinard	Shuttle/Re-s	Supply Run	Venice Based	

Inland Barges				
Omac 301 Barge	TF Storage	5,000 bbl open	Pt Jackson	
Omac 323 Barge	TF Storage	21,000 bbl open	Venice	
Omac 334 Barge	TF Storage	21,000 bbl open	Venice	
Higman 3046 Barge	TF Storage	Full	Pt Jackson	Delivery
Higman 3045 Barge	TF Storage	6,000 bbl open	Venice New Park	

[redacted]
In Transit
Out of Service
Unknown

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C Aggressor	RBD	Lightering	Fourchon	
Odyssea Mariner	RBD	Mechanical	Fourchon	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Orleans HOS Iron	RBD	Skimming Decanting	Fourchon Fourchon	
Crew/Re-Supply				
Transporter	RBD	Stand-by	Fourchon	
Whitney	RBD	Stand-by	Fourchon	

Offshore Federal Skimming Resources

Vsl Name	Proposed Box to Operate	Future Plans	Notes
OGC Harry Claiborne; Date O/R: 25 May 0800R	General OP area	Active ops; Provide support	Port Fourchon to offload VOSS gear
M/V Transporter; Date O/R: 25 May 0800R	N/A – unavailable	[illegible]	W/O LOOP
Tug Angelina & TB Valiant Date O/R: 25 May 2000R	General OP area	Active ops; Lightering	Moored Port Fourchon / Pump issues 6.8.10
Tug Cheramie Cenac & TB 2500 Date O/R: 28 May 1900R	General OP area	Active ops; Lightering	Moored Port Fourchon / Pump issues 6.8.10
M/V Odyssea Mariner Date O/R: 25 May 1100R	General OP area	Skimming	45 nm NE of SW Pass
M/V Odyssea Quest Date O/R: 25 May 0600R	General OP area	Skimming	W/O LOOP
M/V Gulf Scout; Date O/R: May	General OP area	Skimming	W/O LOOP
M/V Lauren Latiolais; Date O/R	N/A	Skimming	W/O LOOP
M/V C Aggressor; Date O/R: May	N/A	Skimming	Offloading Product 270 BBLS
M/V Seminole Bee; Date O/R: 24 May 2000R	N/A	C/C On Scene	W/O LOOP
M/V Whitney; Date O/R: 4 June		Transport	o/w with supplies
M/V Hos South; Date O/R: June	N/A	Skimming	85 ETA June 10
M/V Gulf Influence; Date O/R: 6 June	N/A	Skimming	Need to have tanks cleaned (16 hr evolution)
M/V Orleans; Date O/R: 7 June 10	General OP area	Skimming	Enroute to LOOP 0330 on 6.8.10
M/V Rob Bordelon; Date O/R 9 June 10	General OP area	Skimming	
M/V Pope Benedict; Date O/R 9 June 10	General OP area	Skimming	

- How we intend to sample water following application to test for effects such as toxicity and conduct SMART Tier III monitoring/sampling: **The NOAA SSC, Mr. Ed Levine has advised that the RRT has agreed as follows; *"The agreement was to do Tier I and the traditional Tier 2/3 monitoring until the IP could go out and then switch to just Tier I and the IP."*** The IP (M/V International Peace) will implement the "Surface Water Sampling Plan for Dispersant Application Monitoring", Version 1, approved on June 3, 2010 by Ron Dippo, Environmental Unit Leader; Mike Utsler, BP IC, Jerome Zeringue, SOSC and Captain Merideth, FOSC. Exponent and OSR personnel will be the onboard science team. Accommodations will be available for two Federal representatives that will act as observers to the science team. The intended vessel will be the International Peace (IP). It is not anticipated that the IP will be performing sampling/monitoring for each application of dispersant nor for the full track of the spray applied, but a representative

sampling will be accomplished. The IP commenced operations this date and is currently engaged in near shore activities.

Accordingly, in accordance with the Directive, Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~32,000~~ 21,000 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

James A. Watson Date: 6-10-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 9 June 2010 with Oil Targets from Spotter Operations this Date

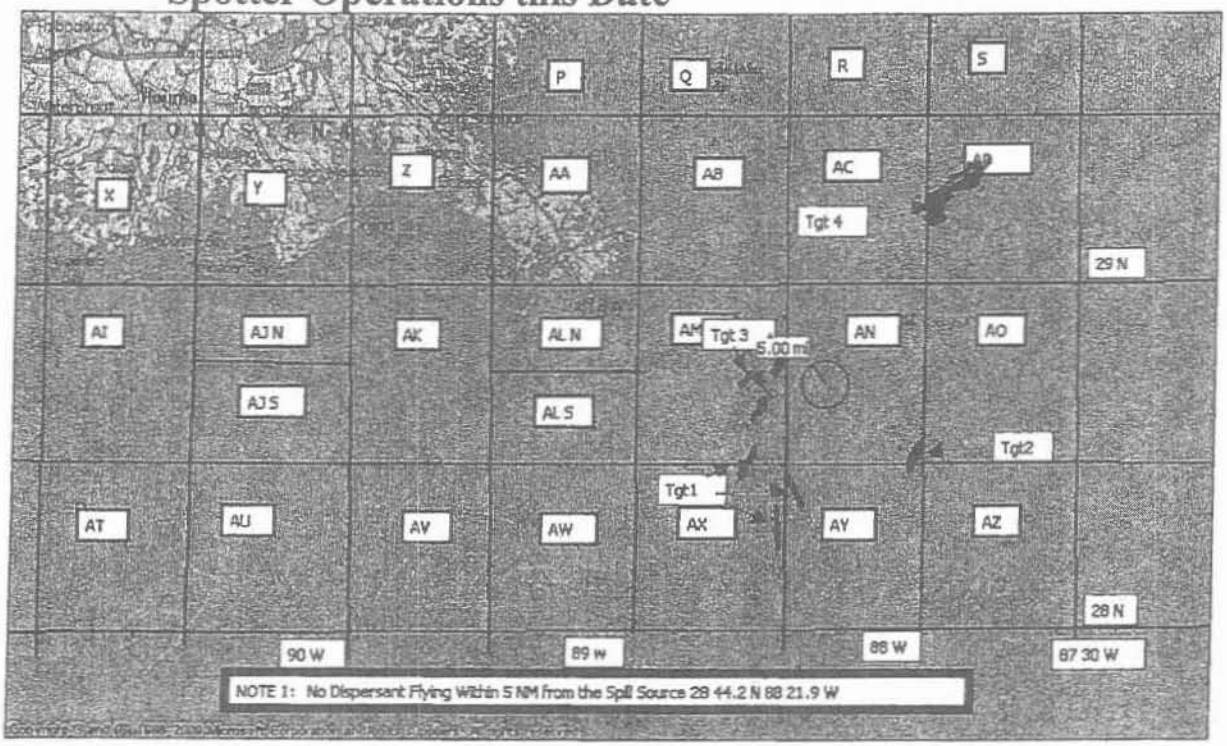


TABLE 1

	DISPERSIBLE OIL REPORT (June 9, 2010)					
	Targeted Oil Slick	Estimated Dimensions in Miles	Estimated Area (sq.mi)	Dispersant Needed (1/20 DOR)	Dispersant Requested	Difference
Priority 1	1	21X3	16	133,000	6,000	127,000
Priority 2	2	7X2	14	2,000	2,000	0
Priority 3	3	17X4	24	28,000	24,000	4,000
Priority 4	4	21X6	126	200,000	0	200,000
Total		NA	180	363,000	32,000	332,000

Note: The above Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slicks, e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

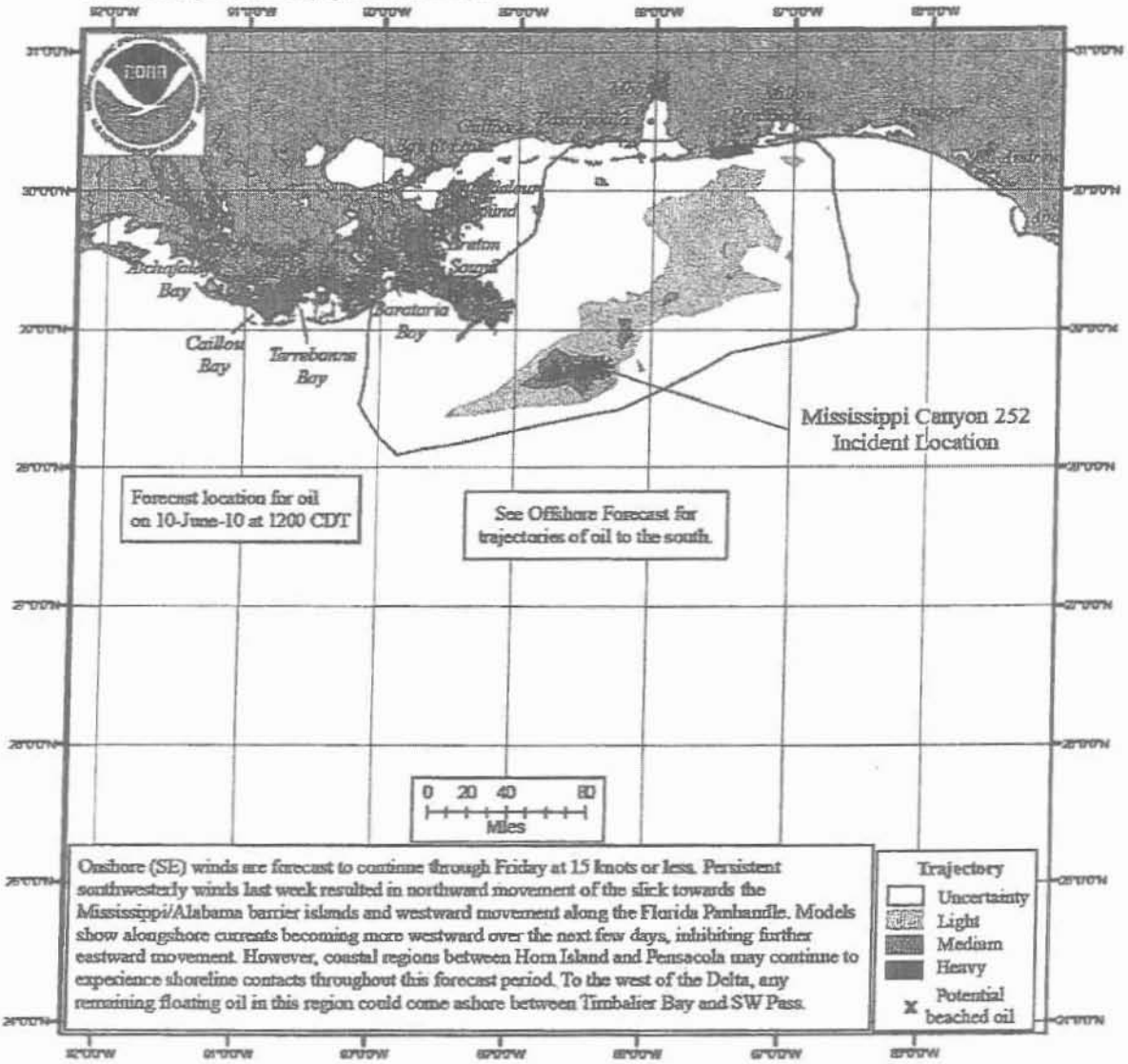
Attachment 2

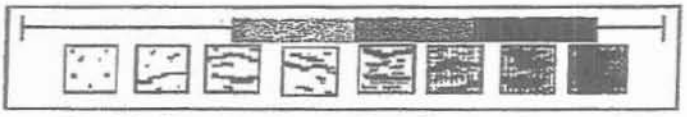
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Thursday, 6/10/10
Date Prepared: 2100 CDT, Tuesday, 6/08/10

This forecast is based on the NWS spot forecast from Tuesday, June 8 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Monday-Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast: June 9th PM

this scale bar shows the meaning of the distribution terms at the current time

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 10, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has twelve (12) spotter visual reports from 10 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 11 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 8-10 knots, wave height 1.5'-2.5', ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (7,200 sqmi) and size of the multiple oil slicks identified (42 sqmi), the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 11, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Area Command, the following information is provided.

- Include physical dimensions of identified targets proposed: this information is included in Table 1 and given in approximate acreage and average length and width perimeter dimensions.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere in the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report. Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

Offshore Skimming Resources

SOURCE			Date/Time 10 June 1700		
Designator	Vessel	Assignment	Status	Location	ETA
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
[illegible]	[illegible]	MSRC	Skimming	MO-252	
BR	Bay Rover (Cross Barter)	Barter	Re-Mob	Fourchon	
[illegible]	[illegible]	Barter	Skimming	MO-252	
JO	John Crabb	Barter	Skimming	MO-252	
LR	Lone Ranger (NRC 9055)	NRC	Skimming	MO-252	
PT	Pauline T (NRC 9055)	NRC	Skimming	MO-252	
RP	Rustler Pioneer (NRC Marine)	NRC	Skimming	MO-252	
[illegible]	[illegible]		Skimming	MO-252	
PER	NRC Pennsylvania	NRC	Skimming	MO-252	
LIB	NRC Liberty (Dual)	NRC	Skimming	MO-252	
SR	Seaborne R (NRC 9055)	NRC	Skimming	MO-252	
MG	Maggie G (LaCOA FRU)	LCOA	Skimming	MO-252	
[illegible]	[illegible]		Skimming	MO-252	
RED	Angel Recovery (w/ CGA FRU)	CGA	Re-assigned Mobile	MO252	
RES	Angel Responder (w/ CGA FRU)	CGA	Re-assigned Mobile	MO252	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	CGA	Skimming	MO-252	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	Fed	Skimming	MO-252	
[illegible]	[illegible]	Fed	Skimming	MO-252	
[illegible]	[illegible]	Fed	Skimming	MO-252	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		Skimming	MO-252	
451	MSRC 451 Barge (Tara Crabby)	TF Storage	[illegible]	MO-252	
452	MSRC 452 Barge (Tara Crabby)	TF Storage	Standby	Ft Jackson	
570	MSRC 570 Barge (Great Lakes)	TF Storage	Offline	Port Texas	
155	[illegible]	TF Storage	Out of Service	MO-252	

	Boom Boats				
Designator	Vessel	Assignment		Location	ETA
CC	Chenaro G	Central	Standby	Venice	
SF	SeaFax	Central	Standby	Venice	
[illegible]	[illegible]	Central	Boomsu	MO-252	
[illegible]	[illegible]	Central	Boomsu	Venice	
MSE	Mr. Addison	Central	Standby	Venice	
JN	Julienne Marie	Central	Standby	Venice	
[illegible]	[illegible]	Central	Boomsu	MO-252	
SH	Sea Hawk	Central	Standby	Venice	

	Crew/Re-supply				
ML	Mr. Leroy	Shuttle/Re	Supply Run	Venice Based	
FO	Fax	Shuttle/Re	Supply Run	Venice Based	
JP	Jean Perry	Shuttle/Re	Supply Run	Venice Based	
CS	Carissa Shane	Shuttle/Re	Supply Run	Venice Based	
KL	Katie Lynn	Shuttle/Re	Supply Run	Venice Based	
EV	Everaedy	NRC Re-sup	Supply Run	Venice Based	
MW	Mizz Winter	NRC Re-sup	Supply Run	Venice Based	
BC	Ben Cheramie	Shuttle/Re	Supply Run	Venice Based	

	Inland Barges				
[illegible]	[illegible]	TF Storage	[illegible]	Ft Jackson	
323	Conoco 323 Barge	TF Storage	21,000 bbl open	Venice	
324	Conoco 324 Barge	TF Storage	21,000 bbl open	Venice	
[illegible]	[illegible]	TF Storage	Full	Enroute	Houston
[illegible]	[illegible]	TF Storage	[illegible]	Venice, New Port	

Designator	Vessel	Assigned	Status	Location	ETA
	NON SOURCE				
NO	[illegible]	FED	[illegible]	[illegible]	
SO	[illegible]	FED	[illegible]	[illegible]	
QS	[illegible]	FED	[illegible]	[illegible]	
QS	[illegible]	FED	[illegible]	[illegible]	
SS	[illegible]	FED	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
GI	Gulf Influence	FED	Enroute		4-Jun
[illegible]	[illegible]	FED	[illegible]	[illegible]	
[illegible]	[illegible]	FED	[illegible]	[illegible]	
[illegible]	[illegible]	FED	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	Crew/Re-Supply				
TR	Transporter	FED	Stand-by	Fourchon	
W	Weteree	FED	Stand-by	Fourchon	

- It is planned to conduct multiple Tier 1 helicopter overflights to observe dispersant operations. Additionally the M/V International Peace will conduct water chemistry and toxicology sampling. All depending upon approval to apply dispersants.

Accordingly, in accordance with the Directive, Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 15,300 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: Jun 10, 2010

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 11 June 2010 with Oil Targets from Spotter Operations 10 June

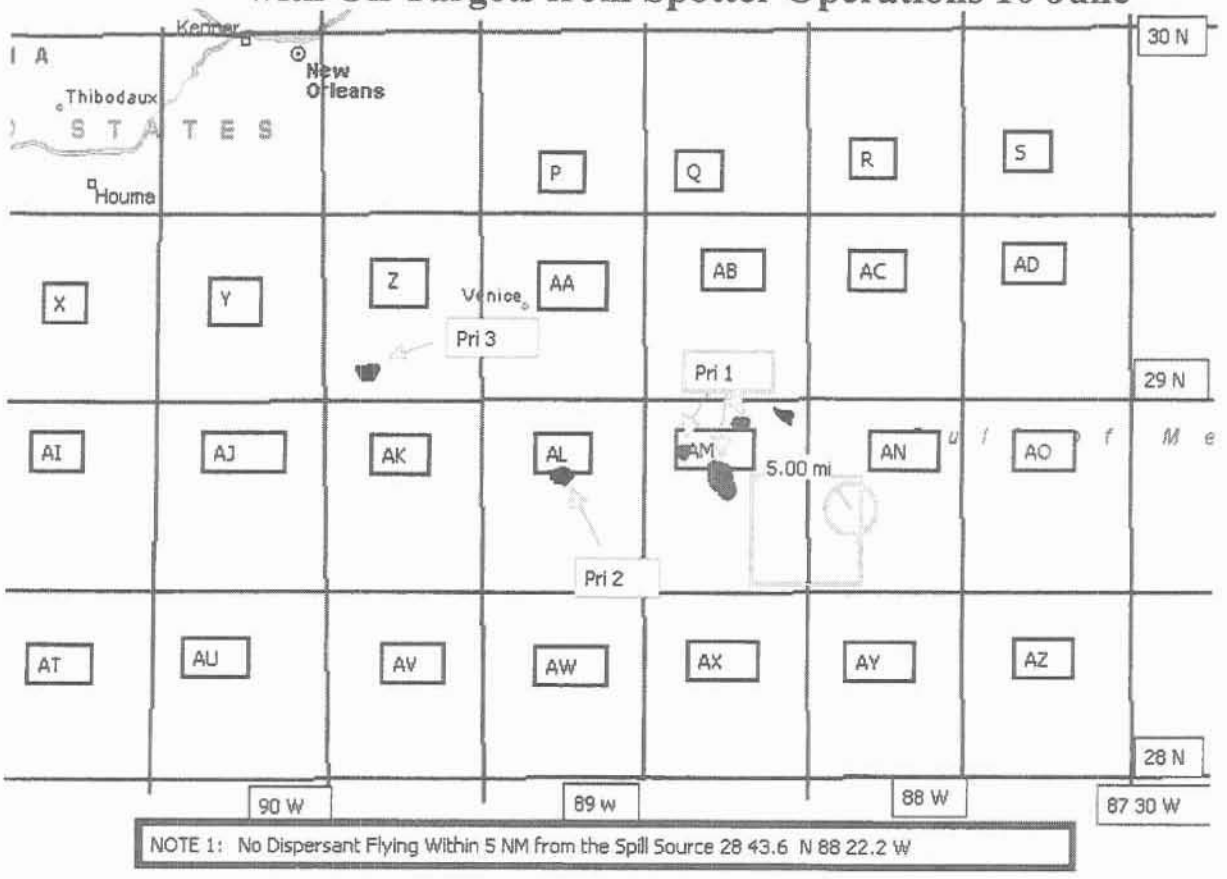


TABLE 1

Dispersable Oil Report June 10, 2010					
	Estimated Dimensions in Miles	Estimated Area (sq.mi)	Dispersant Needed (1/20 DOR)	Dispersant Requested	Difference
Priority 1	4x6	24	38,400	21,000	17,400
Priority 2	4x4	16	25,600	12,000	13,600
Priority 3	2x1	2	3,200	3,200	0
Total		42	67,200	36,200	31,000

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slicks, e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

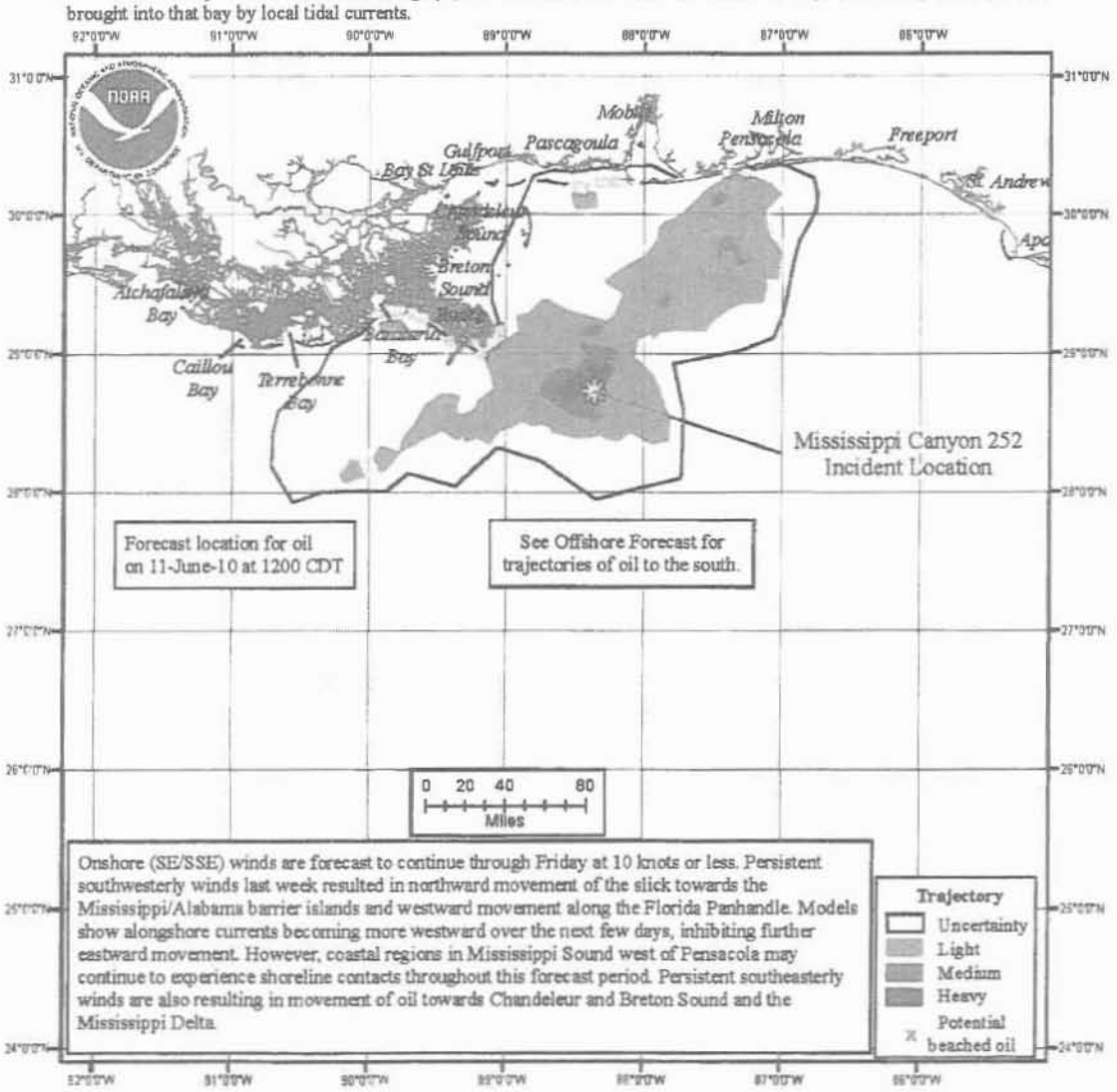
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Friday, 6/11/10
Date Prepared: 2100 CDT, Wednesday, 6/09/10

This forecast is based on the NWS spot forecast from Wednesday, June 9 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Onshore (SE/SSE) winds are forecast to continue through Friday at 10 knots or less. Persistent southwesterly winds last week resulted in northward movement of the slick towards the Mississippi/Alabama barrier islands and westward movement along the Florida Panhandle. Models show alongshore currents becoming more westward over the next few days, inhibiting further eastward movement. However, coastal regions in Mississippi Sound west of Pensacola may continue to experience shoreline contacts throughout this forecast period. Persistent southeasterly winds are also resulting in movement of oil towards Chandeleur and Breton Sound and the Mississippi Delta.

Next Forecast: June 10th PM

this scale bar shows the meaning of the distribution terms at the current time

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 11, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command requests that the M/V *International Peace* be permitted to spray dispersant with its boat spray application system on targeted oil slicks. The purpose of this dispersant application program is to:

- Collect samples pre and post dispersant application to assess dispersant effectiveness, subsurface dispersant plume characteristics and to generate data which can be used to assess environmental and safety issues.
- Conduct toxicity testing at multiple depths according to the *Surface Water Sampling Plan for Dispersant Application Monitoring* approved by Houma UC on June 3, 2010.
- Evaluate the effectiveness of applying dispersants to emulsified oil as recommended by SINTEF.

Conducting a sampling and monitoring plan to assess the extent of the 3D area after multiple applications of dispersant at the surface was recommended by the assembled experts in the *Deepwater Horizon Dispersant Use Meeting Report* dated May 26-27, 2010.

In conducting this vital monitoring effort, the M/V *International Peace* will work closely with spotter aircraft to identify appropriate spill targets for application by the boat spray system. The M/V *International Peace* will also work with aerial spray assets for the acquisition of data following aerial application.

Two federal observers were requested by the NOAA SSC (at request of RRT) to be onboard (two USCG Strike Team members are currently assigned to the vessel).

Accordingly, in accordance with the Directive, Houma Unified Command respectfully requests an exemption to apply EC9500A on targeted oil slicks using the boat spray system in volumes of approximately 50 gallons per test for a total amount not to exceed 500 gallons for a period not to exceed 14 days.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-14-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 11, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command requests that the M/V *International Peace* be permitted to spray dispersant with its boat spray application system on targeted oil slicks. The purpose of this dispersant application program is to:

- Collect samples pre and post dispersant application to assess dispersant effectiveness, subsurface dispersant plume characteristics and to generate data which can be used to assess environmental and safety issues.
- Conduct toxicity testing at multiple depths according to the *Surface Water Sampling Plan for Dispersant Application Monitoring* approved by Houma UC on June 3, 2010.
- Evaluate the effectiveness of applying dispersants to emulsified oil as recommended by SINTEF.

Conducting a sampling and monitoring plan to assess the extent of the 3D area after multiple applications of dispersant at the surface was recommended by the assembled experts in the *Deepwater Horizon Dispersant Use Meeting Report* dated May 26-27, 2010.

In conducting this vital monitoring effort, the M/V *International Peace* will work closely with spotter aircraft to identify appropriate spill targets for application by the boat spray system. The M/V *International Peace* will also work with aerial spray assets for the acquisition of data following aerial application.

Two federal observers were requested by the NOAA SSC (at request of RRT) to be onboard (two USCG Strike Team members are currently assigned to the vessel).

Accordingly, in accordance with the Directive, Houma Unified Command respectfully requests an exemption to apply EC9500A on targeted oil slicks using the boat spray system in volumes of approximately 50 gallons per test for a total amount not to exceed 500 gallons for a period not to exceed 14 days.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-15-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 11 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has eleven (11) spotter visual reports from 11 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 12 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-13 knots, wave height 2-3 feet, ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (2,700 sqmi) and size of the multiple oil slicks identified (34 sqmi), the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 12, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Include physical dimensions of identified targets proposed: this information is included in Table 1 and given in approximate acreage and average length and width perimeter dimensions.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere in the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter overflights to observe dispersant operations. Additionally the M/V International Peace will conduct water chemistry and toxicology sampling. All depending upon approval to apply dispersants.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~38,160~~ 7,000 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-12-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 12, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has ten (10) spotter visual reports from 12 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 13June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-9 knots, wave height 2 feet, ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 13, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* is planned to conduct water chemistry and toxicology sampling. These operations depend upon approval to apply dispersants either aerial or with boat spray systems onboard the M/V *International Peace*.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 36,000 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

James A. Watson Date: 6/13/10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 13 June 2010 with Oil Targets from Spotter Operations 12 June

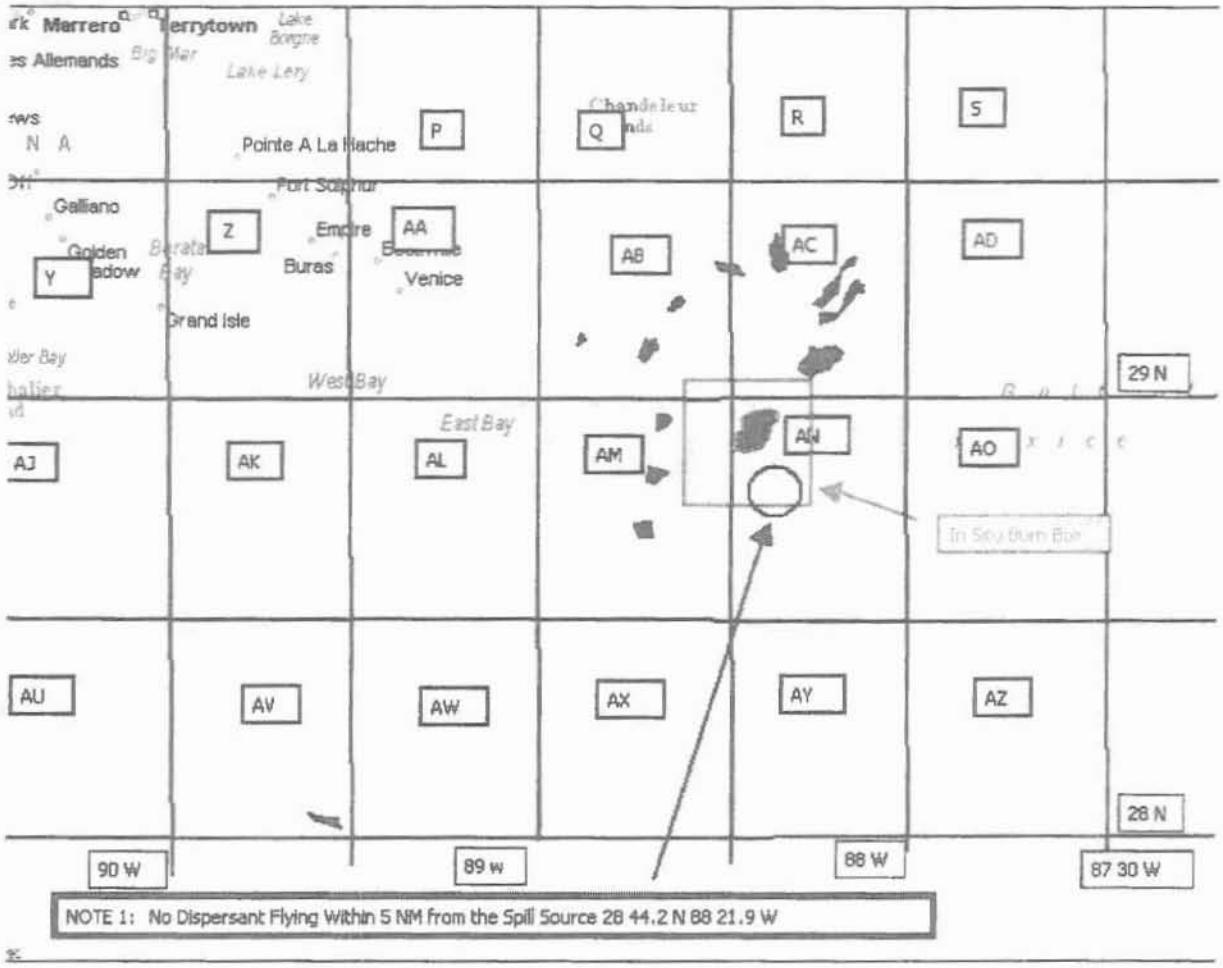


TABLE 1 Dispersible Oil Report June 11, 2010

	Zone	Estimated Area (sq.mi)	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
Priority 1	AC	900	1	28,800
Priority 2	AM	900	0.2	5,760
Priority 3	AB	900	0.05	1,440
Total				36,000

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

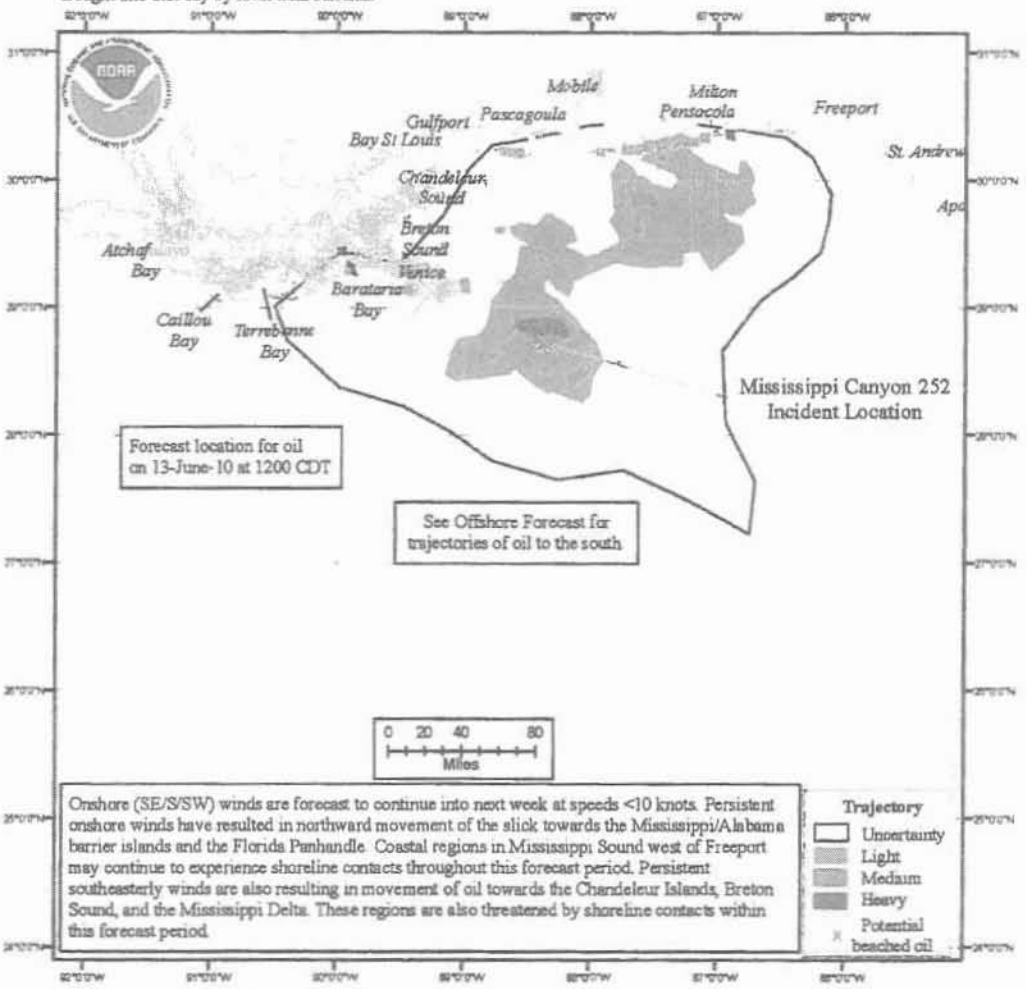
Attachment 2

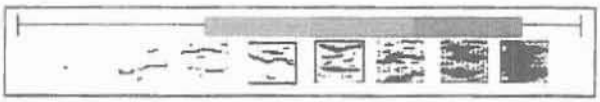
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Sunday, 6/13/10
Date Prepared: 2100 CDT, Friday, 6/11/10

This forecast is based on the NWS spot forecast from Friday, June 11 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Friday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast: June 12th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

On-scene/Ops
In Transit
Out of Service
Lightering

	SOURCE					Date/Time 12 June 1600	
	Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
1	LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
2	GCR	RV1/Weir	Gulf Coast Responder	MSRC	Pit Stop	Ft Jackson	
3	TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252	
4	MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
5	MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC 252	
6	SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC 252	
7	DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC 252	
8	VAR	RV1/Weir	Virginia Responder	MSRC	Skimming	MC 252	
9	HOSS	RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
10	SV	RV1/Weir	Seacor Vanguard (Current Buster 2 e	Buster	Skimming	MC-252	
11	JC	RV1/Weir	John Coghill (Current Buster)	Buster	Skimming	MC-252	
12	LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Skimming	MC-252	
13	PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Skimming	MC-252	
14	RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Skimming	MC-252	
15	SW	RV1/Weir	Seacor Washington (Dutch arm)	NRC	Skimming	MC 252	
16	PER	RV1/Belt	NRC Perseverence	NRC	Skimming	MC-252	
17	LIB	RV1/Disk	NRC Liberty (Disc)	NRC	Skimming	MC-252	
18	SH	RV1/Disk	Seahorse VI (NRC VOSS)	NRC	Skimming	MC 252	
19	NG	RV1/Weir	Noonie G (w/CGA FRU)	CGA	Skimming	MC 252	
20	IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Skimming	MC 252	
21	CAR	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Skimming	MC 252	
22	MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Skimming	MC-252	
23	RE	RV1/Belt	Rene (Navy Marco)	Fed	Skimming	MC 252	
24	HM	RV1/Weir	HOS Meytique (Dutch arm)		Skimming	MC-252	
	402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
	452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
	570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	Pilot Town	
	155	TV1	K-Sea OBL-155 (Rebel)	TF Storage	On-scene	MC-252	
	Costner	TV1	Energy 8001(Superior Service) Costr	TF Storage	Enroute	MC-252	

		NON SOURCE				
Designator		**Vessel**	**Assignment**	**Status**	**Location**	**ETA**
HC	WB1	Harry Claiborne	FED	On-scene	Off Grand Isle	
AG	RV1	C Agressor	FED	Skimming	E of SW Pass	
GS	RV1	Gulf Scout	FED	Skimming	Off Grand Isle	
OQ	RV1	Odysea Quest	FED	Skimming	Off Grand Isle	
LL	RV1	Lauren LaCoste	FED	Skimming	Off Grand Isle	
OM	RV1	Odysea Mariner	FED	Fueling	Fourchon	
GI	RV1	Gulf Influence	FED	Enroute		9-Jun
2602	RV1	Cenac 2602 w/Clinton Cenac	FED	Stand-by	Off Grand Isle	
VA	TV	Vallant w/Agelica	FED	On-scene	S of LOOP	
O	RV1	Orleans	FED	Skimming	E of SW Pass	
PB	RV1	Pope Benedict	FED	Skimming	E of SW Pass	
GW	RV1	Great White	FED	Skimming	E of SW Pass	
QB	RV1/Weir	Queen Bee (USCG VOSS)	Fed	Skimming	MC-252	
SL	RV1/Weir	Sir Lancelot (USCG VOSS)	Fed	Skimming	MC-252	
MM	RV1/Weir	Miss Megan (USCG VOSS)	Fed	Skimming	MC-252	
AD	RV1/Belt	NRC Admiral (Manco)	NRC	Skimming	MC-252	
HN	RV1	HOS North		Outfitting	Fourchon	

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 13, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has ten (10) spotter visual reports from 13 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 14 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-10 knots, wave height 1-2 feet, ceilings unlimited and visibility 10 nm.

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sqmi) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 14, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the

heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* is planned to conduct water chemistry and toxicology sampling. These operations depend upon approval to apply dispersants either aerial or with boat spray systems onboard the M/V *International Peace*.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed ~~38,880~~ 17,800 gallons for a period not to exceed 12 hours.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6-14-10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 14 June 2010 with Oil Targets from Spotter Operations 13 June

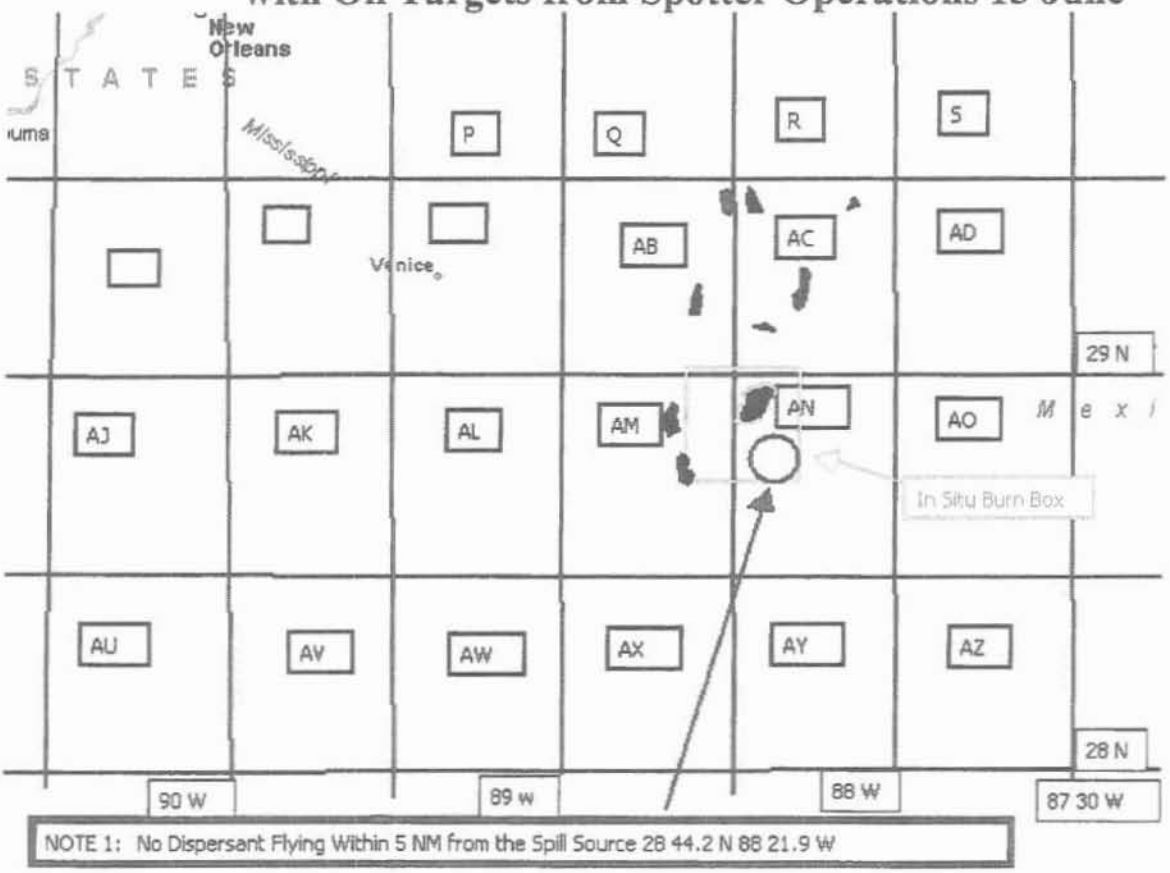


TABLE 1
Dispersible Oil Report June 13, 2010

	Zone	Estimated Area (sq.mi)	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
Priority 1	AC	900	1	28,800
Priority 2	AM	900	0.3	8,640
Priority 3	AB	900	0.05	1,440
Total		2,700		38,880

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

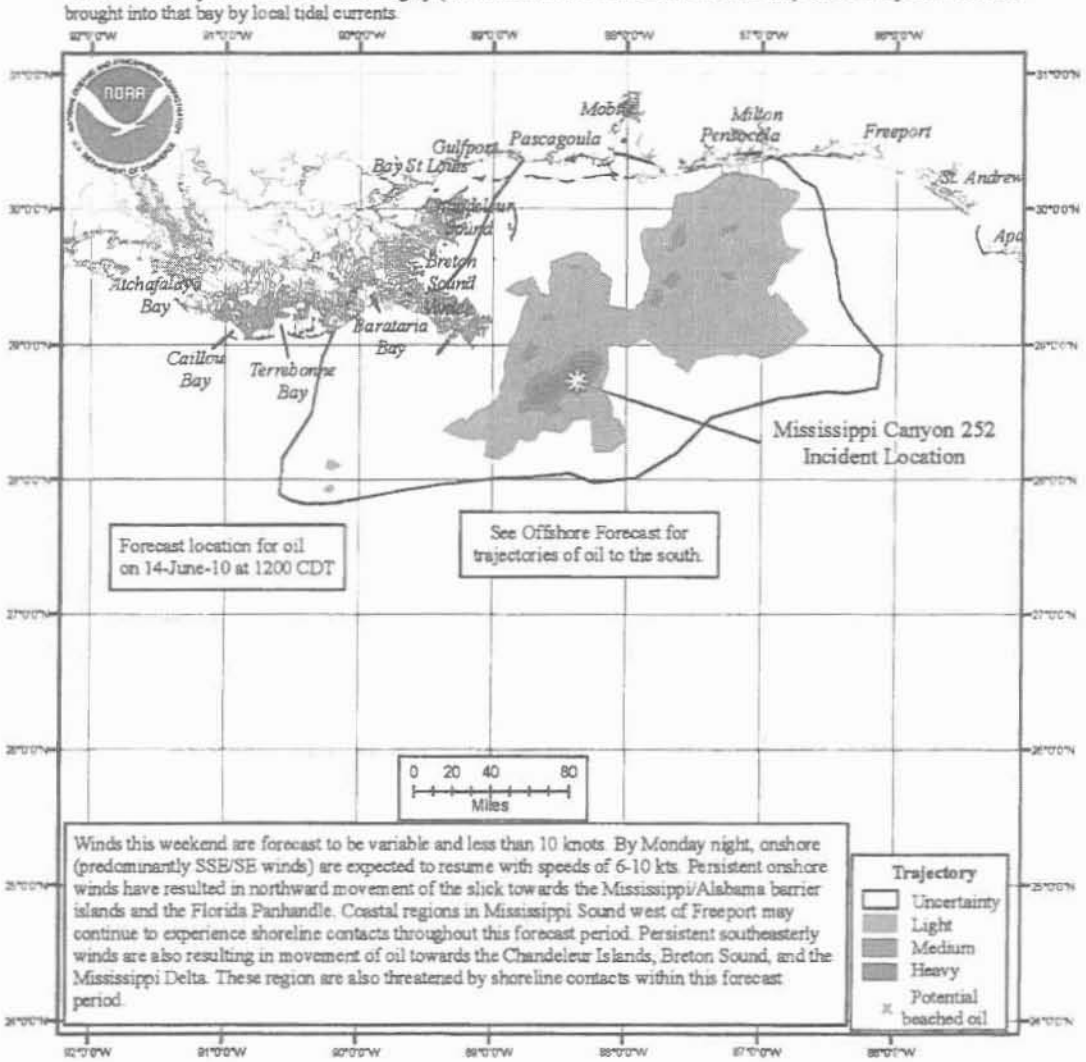
Nearshore Surface Oil Forecast Deepwater Horizon MC252

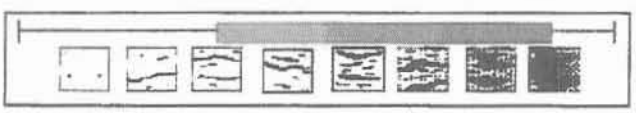
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Monday, 6/14/10
Date Prepared: 2100 CDT, Saturday, 6/12/10

This forecast is based on the NWS spot forecast from Saturday, June 12 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Saturday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast: June 13th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Offshore Skimming Resources

On-scene/Ops
In Transit
Lightering

	SOURCE				Date/Time 12 June 1600		
	Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
1	LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
3	TXR	RV1/Weir	Texas Responder	MSRC	Skimming	MC-252	
4	MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
5	MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
6	SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC-252	
7	DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC-252	
8	VAR	RV1/Weir	Virginia Responder	MSRC	Skimming	MC-252	
9	HOSS	RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
10	SV	RV1/Weir	Seazor Vanguard (Current Buster 2 ea)	Buster	Skimming	MC-252	
11	JC	RV1/Weir	John Coghill (Current Buster)	Buster	Skimming	MC-252	
12	LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Skimming	MC-252	
13	PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Skimming	MC-252	
14	RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Skimming	MC-252	
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
16	PER	RV1/Belt	NRC Perseverance	NRC	Skimming	MC-252	
17	LIB	RV1/Disk	NRC Liberty (Disc)	NRC	Skimming	MC-252	
18	SM	RV1/Disk	Seamarge VI (NRC VOSS)	NRC	Skimming	MC-252	
19	NG	RV1/Weir	Noonie G (w/CGA FRU)	CGA	Skimming	MC-252	
20	IT	RV1/Weir	International Trooper (w/CGA FRU)	CGA	Skimming	MC-252	
21	CAR	RV1/Weir	Ms. Caroline (w/CGA FRU)	CGA	Skimming	MC-252	
22	MA	RV1/Weir	Mr. Alex (w/CGA FRU)	CGA	Skimming	MC-252	
23	RE	RV1/Belt	Rene (Navy Marco)	Fed	Skimming	MC-252	
24	HM	RV1/Weir	HOS Maybique (Dutch arm)		Skimming	MC-252	
		RV1/Weir	Sweetwater (Dutch Arm)		Skimming	MC-252	
	402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
	452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
	570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Standby	Pilot Town	
	155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	
	Costner	TV1	Energy 8001(Superior Service) Costner	TF Storage	Enroute	MC-252	

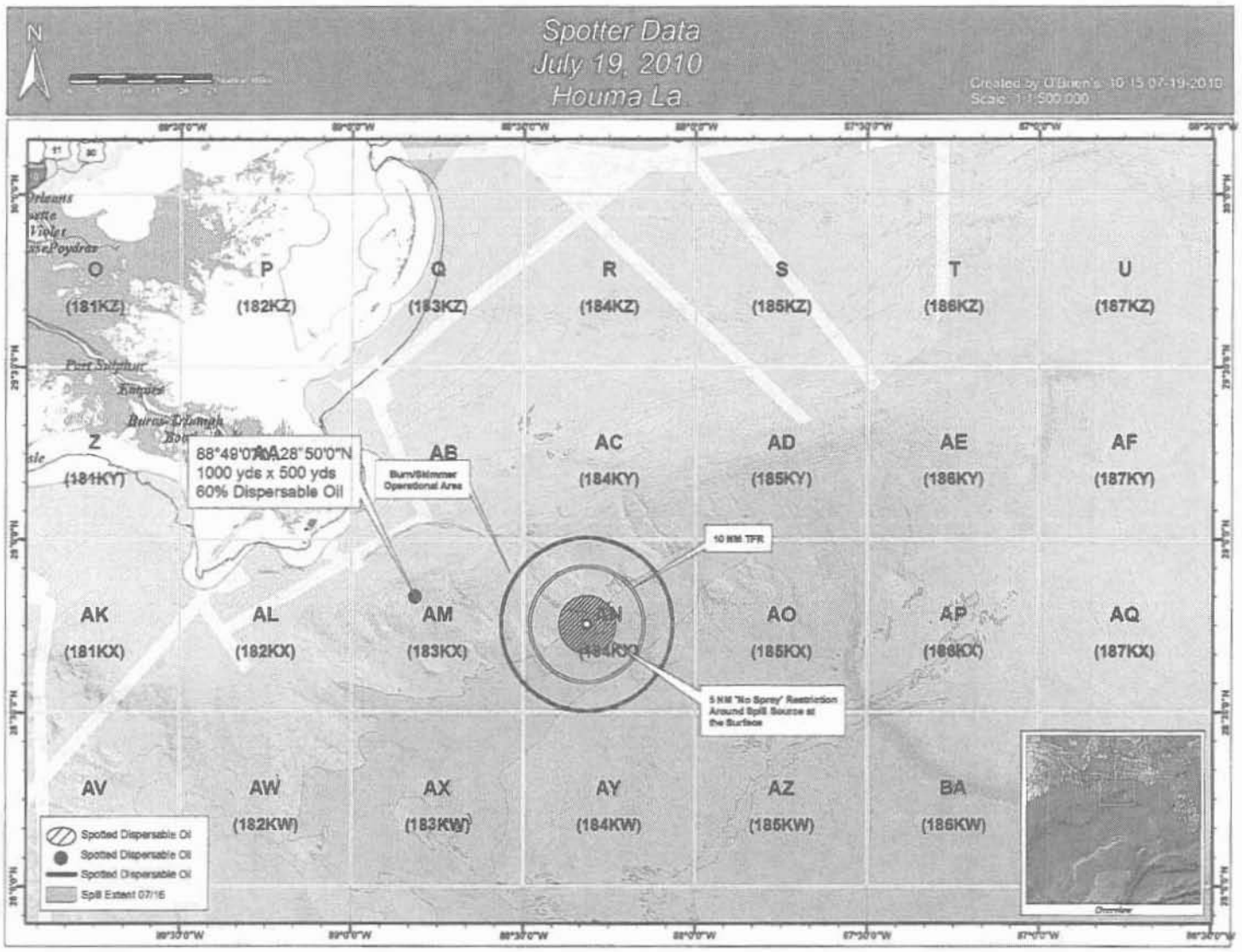
	NON SOURCE						
	Designator		Vessel	Assignment	Status	Location	ETA
	HC	WB1	Harry Claiborne	FED	On-scene	Off Grand Isle	
	AG	RV1	C Agressor	FED	Skimming	E of SW Pass	
	GS	RV1	Gulf Scout	FED	Skimming	Off Grand Isle	
	OQ	RV1	Odyssea Quest	FED	Skimming	Off Grand Isle	
	LL	RV1	Lauren LaCoste	FED	Skimming	Off Grand Isle	
	OM	RV1	Odyssea Mariner	FED	Skimming	Fourchon	
	GI	RV1	Gulf Influence	FED	Enroute		12-Jun
	2602	RV1	Cenac 2602 w/Clinton Cenac	FED	Stand-by	Off Grand Isle	
	VA	TV	Valiant w/Agelica	FED	On-scene	S of LOOP	
	O	RV1	Orleans	FED	Skimming	E of SW Pass	
	PB	RV1	Pope Benedict	FED	Skimming	E of SW Pass	
	GW	RV1	Great White	FED	Skimming	E of SW Pass	
	QB	RV1/Weir	Queen Bee (USCG VOSS)	Fed	Skimming	MC-252	
	SL	RV1/Weir	Sir Lancelot (USCG VOSS)	Fed	Skimming	MC-252	
	MM	RV1/Weir	Miss Megan (USCG VOSS)	Fed	Skimming	MC-252	
	AD	RV1/Belt	NRC Admiral (Marco)	NRC	Skimming	MC-252	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

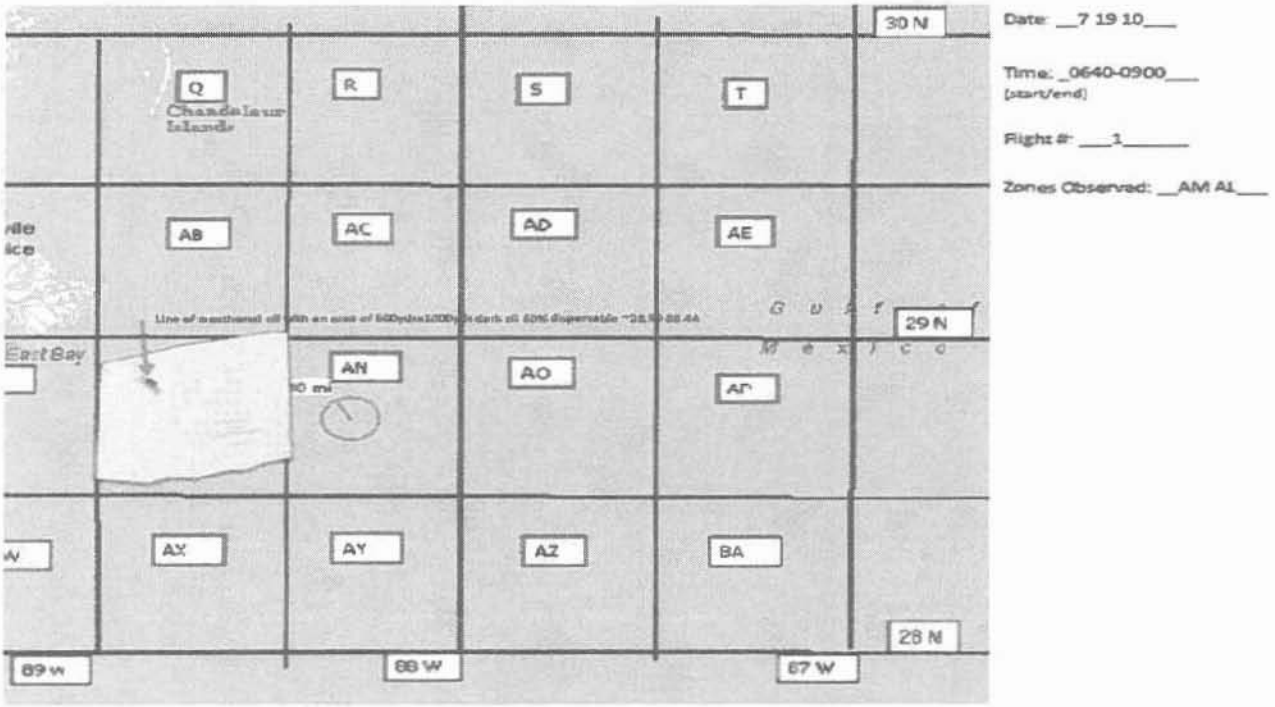
ATTACHMENT 1

Requirement-a. Operational Justification

a.1) Visible chart demonstrating target slick outside offshore skimmer recovery and in-situ burn operations zone. Dimensions of spray box and percent of oil to be dispersed shall also be provided.

Information provided in compliance with this requirement as follows;





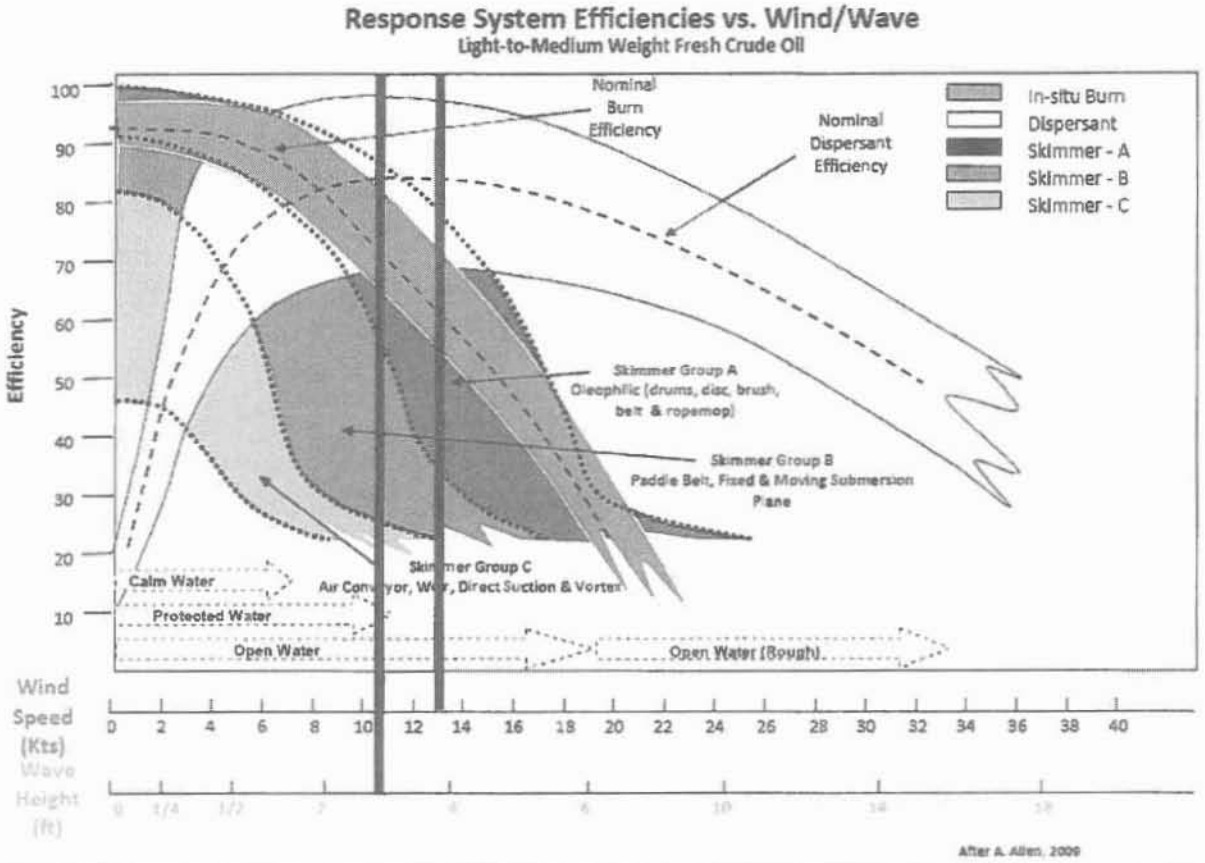
Requirements

a.2) Visual justification and written explanation of why offshore skimmers and in-situ burn resources are unable to intercept and recover target prior to landfall. This justification may also include those slicks that have moved past skimmers and in-situ burn operations.

a.3) If skimming operations and/or in-situ burn operations are not being performed, provide written justification for reasons (i.e., outside weather parameters, resupply and refit). Explain whether the current weather and forecasted weather are favorable to support dispersant spray missions, spotter, and SMART flights.

Information provided in compliance with these requirements as follows;

The current weather (winds @ 13 knots) and sea state (waves up to 3') is not conducive to efficient skimming but current conditions does greatly favor aerial dispersants, however, as the following graphic clearly illustrate skimmers, particularly Weir skimmers, operating in the open water source area are ineffective and indicating the potential of **skimming capabilities being insufficient to remove oil from the environment, thus the need to supplement with alternate response technologies, e.g., aerial dispersants.**



Skimming Assets	Group I	Group II	Group III	Group IV	TOTALS
Operational	9	18	9	12	48
Standby	0	0	0	0	0
Enroute	1	0	0	1	2
Maintenance	1	1	2	4	8
TOTALS	11	19	11	17	58

Available offshore skimming resources are shown in the previous table. It should be noted that **14% (8 vessels) of the fleet are not operational due to maintenance**. The operating fleet is largely composed of vessels utilizing Weir skimming units. Weir skimming units are inefficient in open water areas particularly with certain wind and sea states. The previous graphic shows that **approximately 85% of the skimming fleet is less than 20% effective at this weather conditions with the remaining 15% of the fleet operating at reduced effectiveness.** This low level of mechanical recovery effectiveness in these weather conditions will lead to dispersible quantities of oil escaping further away from the source due to the inability of skimmers to contain the oil within a restricted geographic area. In-situ burn activities in these weather conditions is feasible and skimming activities are largely inefficient for Weir skimmers. Once the oil moves out of the confined area around the source, skimming resources will find it difficult to recapture and recover the oil at ever increasing distances and larger geographic areas.

The forecast weather is suitable for aerial dispersant flight operations with 20% chance of precipitation, 1500-4000 feet-unlimited ceilings and 7-15 nm visibility.

Requirement

a.4) Visual photographic imagery showing spotted target and area to be dispersed.

Information provided in compliance with this requirement, e.g., photos of the observation.

The spotter plane reported poor light conditions and the photo may not depict the oil sufficiently

Requirement

a.5) List of other environmental considerations such as vulnerabilities such as bird nesting, fledglings, mating, plant, rare species, that provide tradeoff justifications.
a.6) List of economic extenuating circumstances, such as prevention of fishery closures and marine transportation system impacts.

Information provided in compliance with this requirement.

Resources at Risk in the Offshore at the MC252

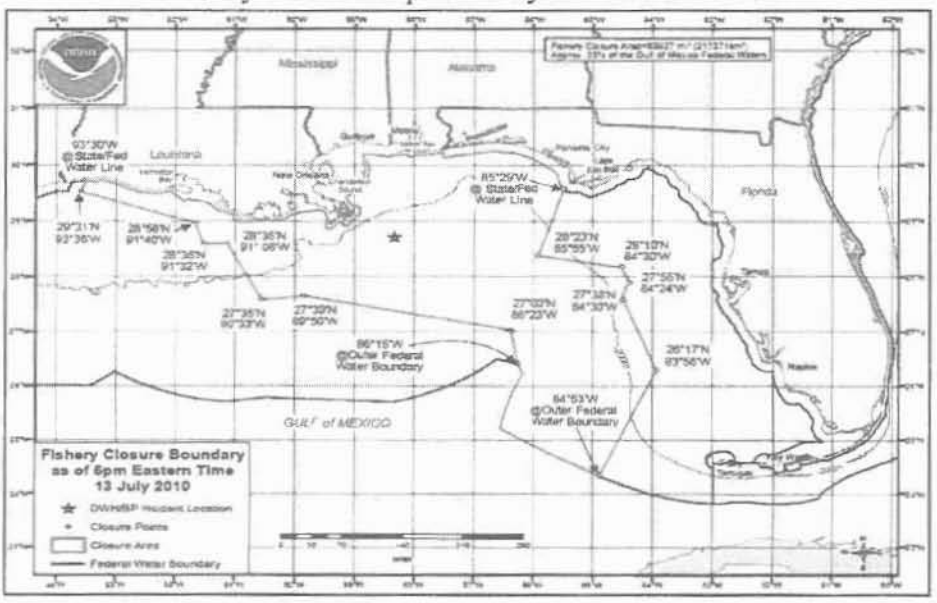
- Fish & Invertebrates – The fish in the area would primarily be pelagic open-water species such as tuna, jacks, and sailfish. There is an extensive recreational fishing for marlin and recreational and commercial fishing for yellow fin and blue fin tuna throughout the area. This area is also considered a nursery area for crevalle jack.
- Shellfish – This area is outside the normal range of spiny lobster, crabs and shrimp fisheries

- Birds – pelagic birds such as shearwaters and frigate birds may be in the area, but have likely removed themselves from the area. The birds may become oiled when foraging in the area. Direct oiling of birds reduced the buoyancy, water repellency, and insulation provided by the feathers and may result in death by drowning of hypothermia. Preening of oiled feathers may also result in ingestion of oil resulting in irritation, sickness and death.
- Mammals – whales (fin, and sperm, both federally and state endangered) and dolphins are commonly found throughout the area. Oil may irritate the skin, eyes, and nostrils of the cetaceans. Unless exposed to oil for prolonged periods, mortality is not expected.
- Reptiles – Loggerhead sea turtles (state/federally threatened) and Kemp's Ridley sea turtles (state /federally endangered) are found throughout the area in all life stages and water depths; other species are also known to be in the area (leatherback, green). The young of year of the various species are especially susceptible to oiling, often leading to mortality when exposed. In addition, weathered crude oil (in tar ball form or trapped in Sargasso weed) is known to be consumed by the turtles who mistake it for a food source, typically resulting in toxic effects, intestinal blockages, and often resulting in death.

The ICS 232 – Resources at Risk should be consulted to completely define the shoreline and near shore resources at risk (including wildlife, socioeconomic, and historic resources) and should be consulted to determine the potential extent of impacts from oil reaching these environments. Every effort should be taken to prevent this oil from reaching and impacting the extensive sensitive resources in these environments.

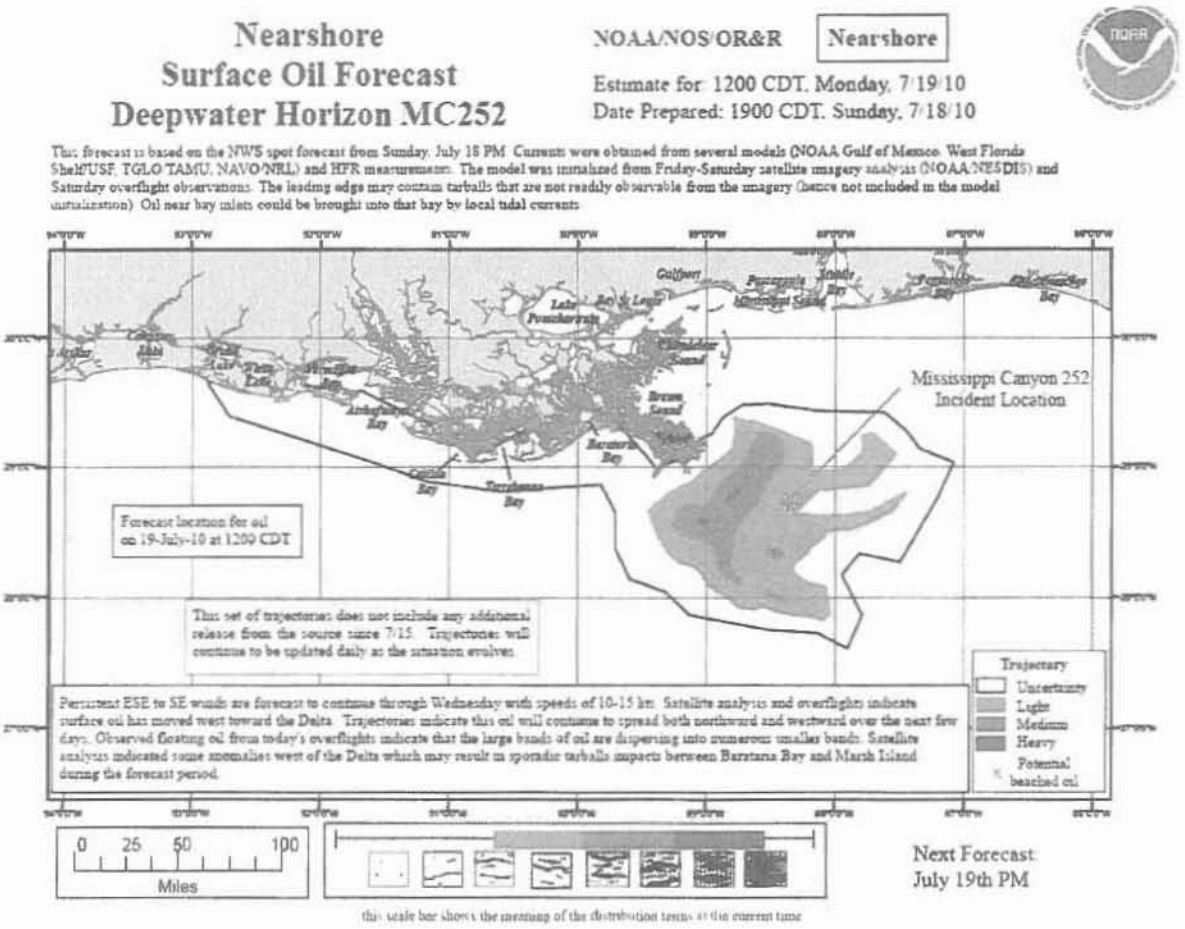
The longer oil remains on the surface without removal or dispersal, the negative impact of closures to the fishery will continue. Louisiana's $2.5-billion commercial fishing industry, provides much of the country's domestic shrimp and oysters.

The most recent fishery closure area provided by NOAA is shown below.

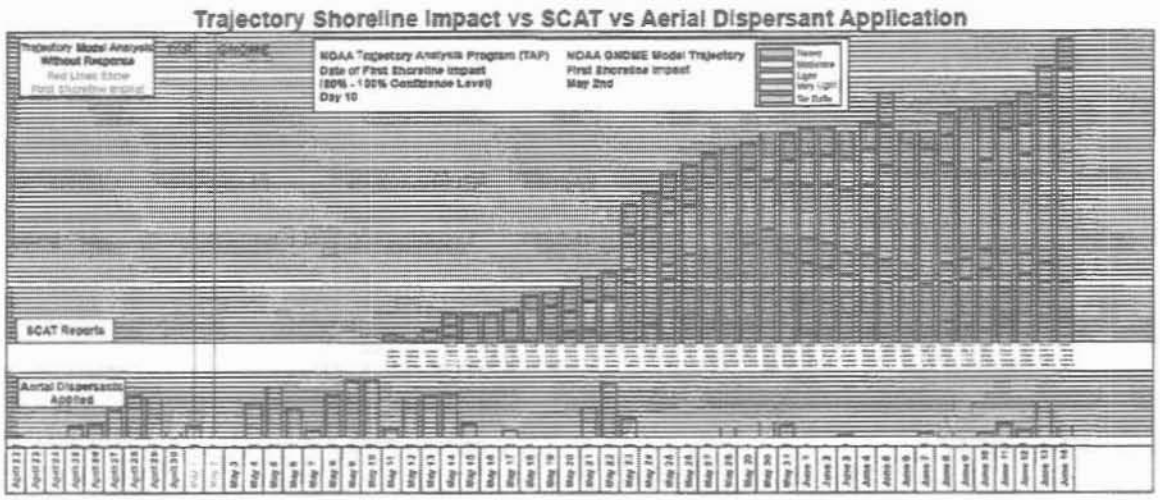


The threat to maritime commerce remains to the Louisiana Offshore Oil Platform (LOOP). LOOP handles 13 percent of the nation's foreign oil, about 1.2 million barrels a day, and connects by pipeline to 50 percent of the U.S. refining capability. The potential threat remains for marine commerce transiting the Mississippi River.

The NOAA Surface Oil Forecast shows extensive areas of heavy and medium oil that may adversely impact the shoreline, including sensitive resources (See the NOAA Near Shore Trajectory Map). The NOAA Surface Oil Forecast for July 18th shows extensive areas of heavy and medium oil that are or may adversely impact the shoreline, including sensitive wetlands.



The data shown on the bar graph below indicates a correlation between shoreline impact and dispersant volume usage. Although this is raw data that requires future peer review and evaluation, it is shown here to illustrate that if oil escapes the source area and the skimming and in-situ burn operations around the source, and aerial dispersants are not utilized, in all likelihood, shoreline impact with subsequent negative impact to the aforementioned Resources at Risk, will occur. Shoreline impact is forecast at Barataria Bay.



a. **Requirements: Ensure entire process is documented and a report completed for all dispersant applications. Spotters aboard reconnaissance flights are able to identify oil slicks estimated to require a specific number of gallons of dispersants. State that spotters will, within 6 hours of the dispersant spray operations, identify high value targeted slicks and prepare a report specifying the location and dispersant volumes needed for each application.**

Information provided in compliance with this requirement: Spotters have been trained by the NOAA SSC Ed Levine to differentiate various conditions of oil, e.g., dispersible, emulsified, heavy metallic slicks, etc. Replacement spotter personnel, prior to being designated a spotter, make 4 training flights with experienced trained spotters. Many of the experienced spotters have been trained by the NOAA SSC. The spotters evaluate the oil and estimate percent coverage, length and width of the slick. The oil condition, size and coverage are provided to the Aerial Dispersant Group in the Houma ICP that reviews the evaluation and calculates the quantity of dispersants from the information provided by the spotter. An appropriately sized aircraft and payload are ordered for the mission. Spotter reports are typically filed and submitted immediately after the recon flight completes and is used in evaluation of spray missions.

The Aerial Dispersant Group, Houma ICP, coordinates closely with the USCG SMART 1 team on our spray missions and will advise the SMART Team Leader in advance of any spray missions being conducted so they can arrange observation flights. The USCG SMART 1 team posts mission observation reports and photos on the EPA website for review.

bp

Doug Suttles
Chief Operating Officer

Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, TX 77079

May 21, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Samuel Coleman, P.E.
Director, Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Direct [redacted]
Fax 281 366 7239
[redacted]

Request for Temporary Waiver of Dispersant Monitoring

Dear Admiral Landry and Mr. Coleman:

In compliance with the May 9, 2010 Dispersant Monitoring and Assessment Directive (the "Directive"), BP Exploration & Production Inc. ("BP") has been monitoring the application of subsurface dispersant with the RV Brooks McCall. As discussed in detail below, BP requests a waiver of the requirement of dispersant monitoring for the period of time required for RV Brooks McCall to return to port, for BP to install required equipment, and return to its station and resume monitoring.

Under Addendum 1 to the Directive, to continue application of subsurface dispersant after midnight of May 21, 2010, BP must install additional equipment on the RV Brooks McCall that requires it to return to port. In addition, to assure the RV Brooks McCall will be available to apply subsurface dispersant during the entire anticipated time period for the "Top Kill" operation, it will need to return to port for resupply.

BP plans to bring the RV Brooks McCall to port, departing 1830 Friday, May 21 and arriving Port Fourchon at 0600 Saturday, May 22, and it anticipates that the RV Brooks McCall will be able to return on station and resume monitoring by approximately 0900 hrs on Sunday, May 23. BP requests a waiver of the requirement of dispersant monitoring for the period of time required for RV Brooks McCall to return to port, for BP to install required equipment, and return to its station and resume monitoring.

Sincerely,

Douglas J. Suttles

U.S. Department of Homeland Security
United States Coast Guard

Commander
Eighth Coast Guard District

Hale Boggs Federal Building.
500 Poydras Street
New Orleans, LA 70130
Staff Symbol (dl)
Phone: [redacted]

16480
May 21, 2010

Doug Suttles
Chief Operating Officer
Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, Texas 77079

Re: Request for Temporary Waiver of Dispersant Monitoring

I received your letter request dated May 21, 2010, in which you requested a waiver of the requirement of dispersant monitoring for the period of time required for RV Brooks McCall to return to port, for BP to install required equipment, and return to its station and resume monitoring.

Your request is approved, subject to the estimated schedule outlined in your request, and subject to the following terms: You shall continue to use an integrated management approach to control the oil, including prioritization of offshore response efforts that focuses on mechanical recovery, skimming, and burning on the surface, as well as subsurface dispersant application. If mechanical recovery and other surface efforts are not feasible, you will employ surface application of dispersant. You must minimize, to the maximum extent feasible, application of surface and subsurface dispersants. In coordination with the Coast Guard, you shall immediately comply with the monitoring provisions of the May 9, 2010 Directive, Section II "Special Monitoring of Applied Response Technologies ("SMART") Protocol for Surface Application of Dispersants" to determine efficiency and short term impacts of dispersant application.

Separately, EPA and the Coast Guard will pursue the use of less toxic dispersants with you if feasible.

Mary E Landry

MARY E. LANDRY
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 24 June 2010 with Oil Targets from Spotter Operations on 23 June

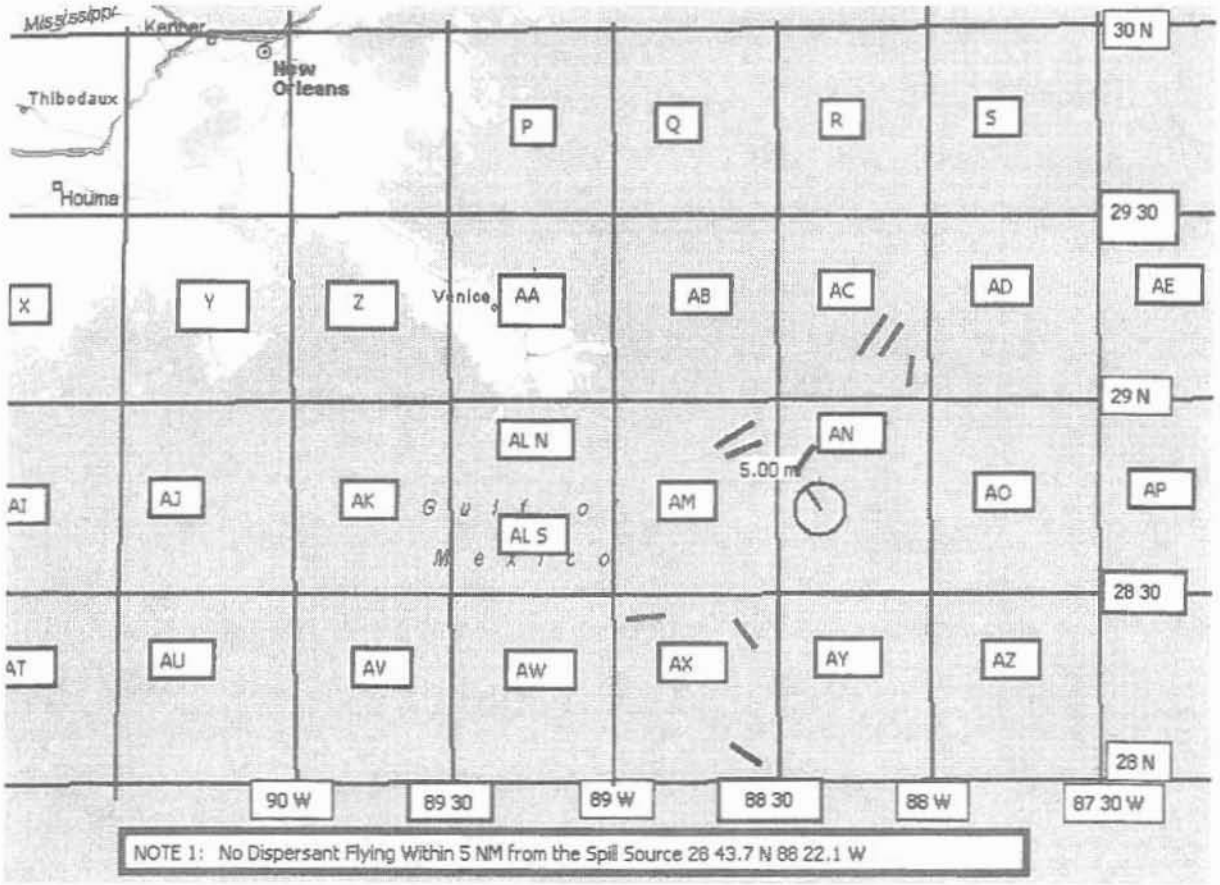


TABLE 1
Dispersible Oil Report June 24, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	3	12,800	20%	10,800
AM	2	72	40%	140
AN	1	31	30%	960

AX	3	810	30%	1,850
TOTAL	9	12,903		**13,750**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

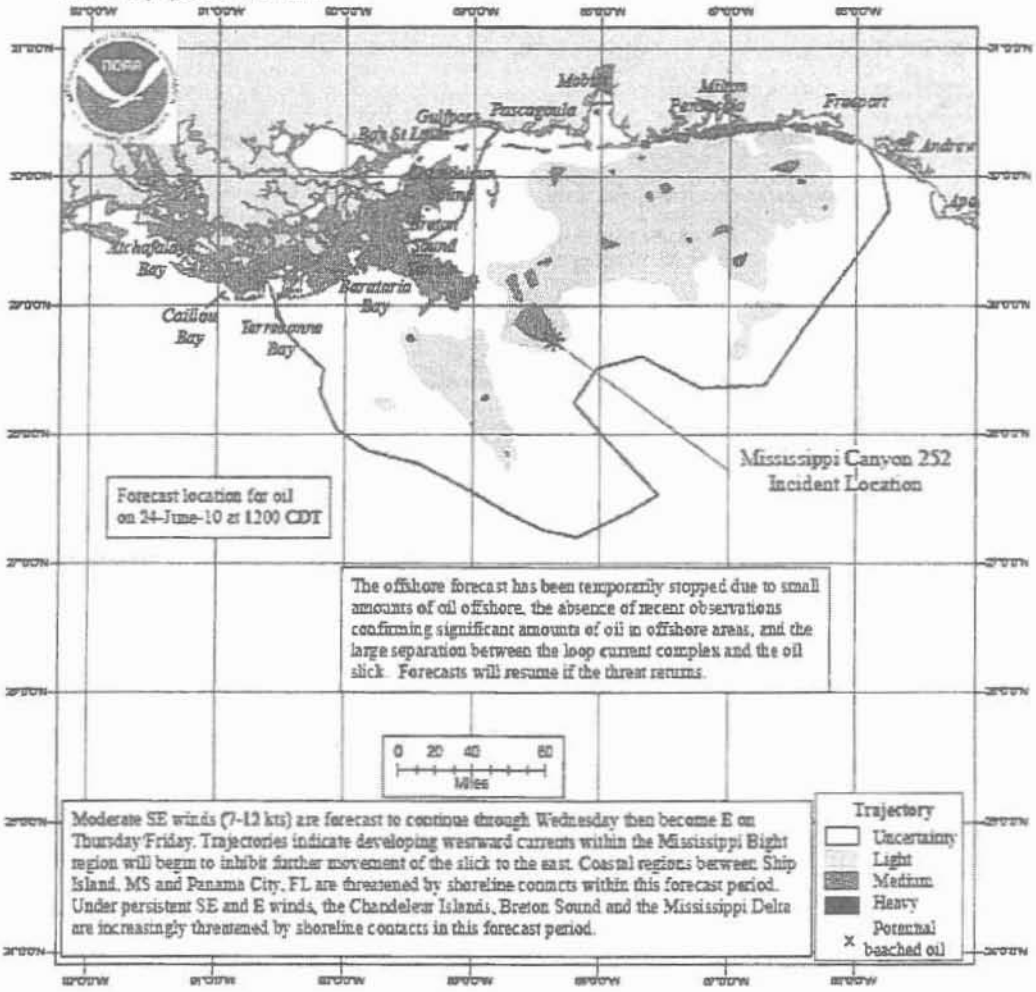
Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R **Nearshore**

Estimate for: 1200 CDT, Thursday, 6/24/10
Date Prepared: 2100 CDT, Tuesday, 6/22/10

This forecast is based on the NWS spot forecast from Tuesday, June 22 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 23rd PM

the wide bar shows the percentage of the distribution across the current time

Attachment 3

Vessel Status Board

SOURCE				Date/Time 23 June 1400		
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Weir	Texas Responder	MSRC	Scheduled Pit Stop	Ft Jackson - 6/23 - 6/23	
MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC 252	
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC 252	
VAR	RV1/Weir	Virginia Responder	MSRC	Skimming	MC 252	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
HOSS	RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
SV	RV1/Weir	Seacor Vanguard (Current Buster 2 sea)	Buster	Equipment	Fourchon - 6/22	
JC	RV1/Weir	Seacor John Coghill (Current Buster)	Buster	Skimming	MC-252	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Skimming	MC-252	
PER	RV1/Belt	NRC Pescevergine	NRC	Reassign Non-Source	Non-Source	
LF	RV1/Belt	Lynne Finn (NRC Marco)	NRC	Equipment	Venice - 6/22	
LB	RV1/Disk	NRC Liberty (Disk)	NRC	Equipment	Venice - 6/22	
NG	RV1/Weir	Noonie G (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
IT	RV1/Weir	International Trooper (w/CGA FRU) - Ampol	CGA	Skimming	MC-252	
KB	RV1/Weir	Kim B (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
MA	RV1/Weir	Mr. Alex (w/CGA FRU) - Ampol	CGA	Skimming	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	Gulfport - 6/22	
RP	RV1/Belt	Rapolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Skimming	MC 252	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Skimming	MC-252	
HM	RV1/Weir	HOS Mystique (Dutch arm)		Skimming	MC 252	
SW	RV1/Weir	HOS Sweetwater (Dutch Arm)		Skimming	MC-252	
JMS	RV1/Weir	Ocean Raider 170/MCS009	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	Gulp	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse V (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Pauline T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
402	TV2	MSRC 402 Barge (Kimberly Colla)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Offloading	Pilottown	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	
Costner	TV1	Energy 8001 (Superior Service), Costner	TF Storage	Non Operational	Fourchon	

Watson, James RADM

From: Carroll.Craig@epamail.epa.gov
Sent: Thursday, June 24, 2010 10:59 AM
To: Perry, Raymond CAPT; Watson, James RADM
Cc: Austin, Meredith CAPT; Laferriere, Roger CAPT; Mason.Steve[redacted]; Coleman.Sam[redacted] Crossland.Ronnie[redacted]; R6_DWH_REOC_RIC@epamail.epa.gov
Subject: Fw: Final dispersant request for 24 June

Admiral Watson,

Per the request of Capt. Perry just now via phone call, I have reviewed the request below for 22,400 gallons for June 24, 2010 and consulted with EPA Region 6. EPA concurs with the request of 17,400 gallons, in addition to the 5,000 gallons approved this morning, based on spotter plane reconnaissance which brings the total to 22,400 gallons for aerial dispersant application for June 24, 2010.

As EPA and USCG have discussed in the past, EPA expects dispersant use will continue to decline as more oil is collected from the source and as mechanical recovery capabilities increase. We look forward to continuing our discussions on reducing dispersant use and achieving 90% source recovery.

Craig Carroll
Chief, Emergency Readiness Section
EPA Region 6
Ph: [redacted]
Fax: 214-665-9718
----- Forwarded by Craig Carroll/R6/USEPA/US on 06/24/2010 10:50 AM -----

From: "Charlie Huber" <[redacted]
To: "Utsler, Mike J" [redacted]
Cc: "'Ken Schacht'" [redacted], "'Marie [redacted], "[redacted], <[redacted] "Ed Rosenberg" [redacted], [redacted]>, [redacted], "Perry, Raymond CAPT" <[redacted], "Austin, Meredith CAPT" [redacted], "Roger LaFerriere" [redacted]>, Ronnie Crossland/R6/USEPA/US@EPA, Sam Coleman/R6/USEPA/US@EPA, [redacted], [redacted], Craig Carroll/R6/USEPA/US@EPA, "Black, James P \(PLBU\)" [redacted]
Date: 06/24/2010 09:44 AM
Subject: Final dispersant request for 24 June

Mike,

We request approval to spray a TOTAL of 22,400 gallons of dispersant on June 24th based upon the spotter reports of dispersible oil from this mornings overflights (See table below). Since RADM Watson approved the 5,000 gallon initial spray this morning, the final request today is for an additional 17,400 gallons.

Regards,
Charlie

DISPERSIBLE OIL SUMMARY 24 JUNE 2010
Reports to 0930

Zone
# of slicks reported

June 23/24 Area

(acres)
Estimated percentage dispersible oil
DOR 1:20
Request
Dispersant Needed
(1/20 DOR)

23 June
Spotter Report

Dispersant Required
(gallons)
24 June AM
R
0/1

512
AN
1/0
31
30%
960
-
AD
0/1

600
AX
0/3
810
30%
1,850
Waiting on spotter reports
AC
3/0

12,800
20%
10,800
Waiting on spotter reports
AB
0/1

10,240
AL
0/1

800
AM
2/2
72
40%
140
10,240
TOTAL
For Today

13,713

22,400
Initial Sprayed approved

5,000
Total Remaining

17,400

****

Charles A. Huber
Five Captain's Court
Williamsburg, VA 23185
Office [redacted]
Cell
Fax 757-253-8123
Email HuberCharlesA@hotmail.com <mailto:HuberCharlesA@hotmail.com>

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 23, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has nine (9) spotter visual reports from 23 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 24 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating isolated showers and thunderstorms with winds 10-15 knots SE, waves 2 feet, ceiling good except 1,000 around thunderstorms, visibility 5-10 nm and chance of rain is 20%..

Houma Unified Command anticipates that, due to the weather, location, distribution (3,600 sq.mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 24, 2010.

Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the

dispersible oils and are therefore otherwise engaged. Generally the skimming vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Other skimming assets are deployed nearshore to recover oil before it comes ashore.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. Additionally, the M/V *International Peace* will be conducting sampling operations. QA/QC SMART report for June 22, 2010 are not available.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks determined after tomorrow mornings reconnaissance flights. The reason for this request is we expect to see substantially more oil slicks due to the removal of the top cap, no ISB operations and reduced skimming operations. We request to commerce early operations with 5,000 gallons of dispersant to initial slicks identified and then request a subsequent amount to spray based on the full spotter reports

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Roy A Nash

ROY A. NASH
~~James A. Watson~~
Rear Admiral, USCG
Deputy Federal On-Scene Coordinator

Date: 6/24/2010

Attachment 1

Dispersant Zone Map for 24 June 2010 with Oil Targets from Spotter Operations on 23 June

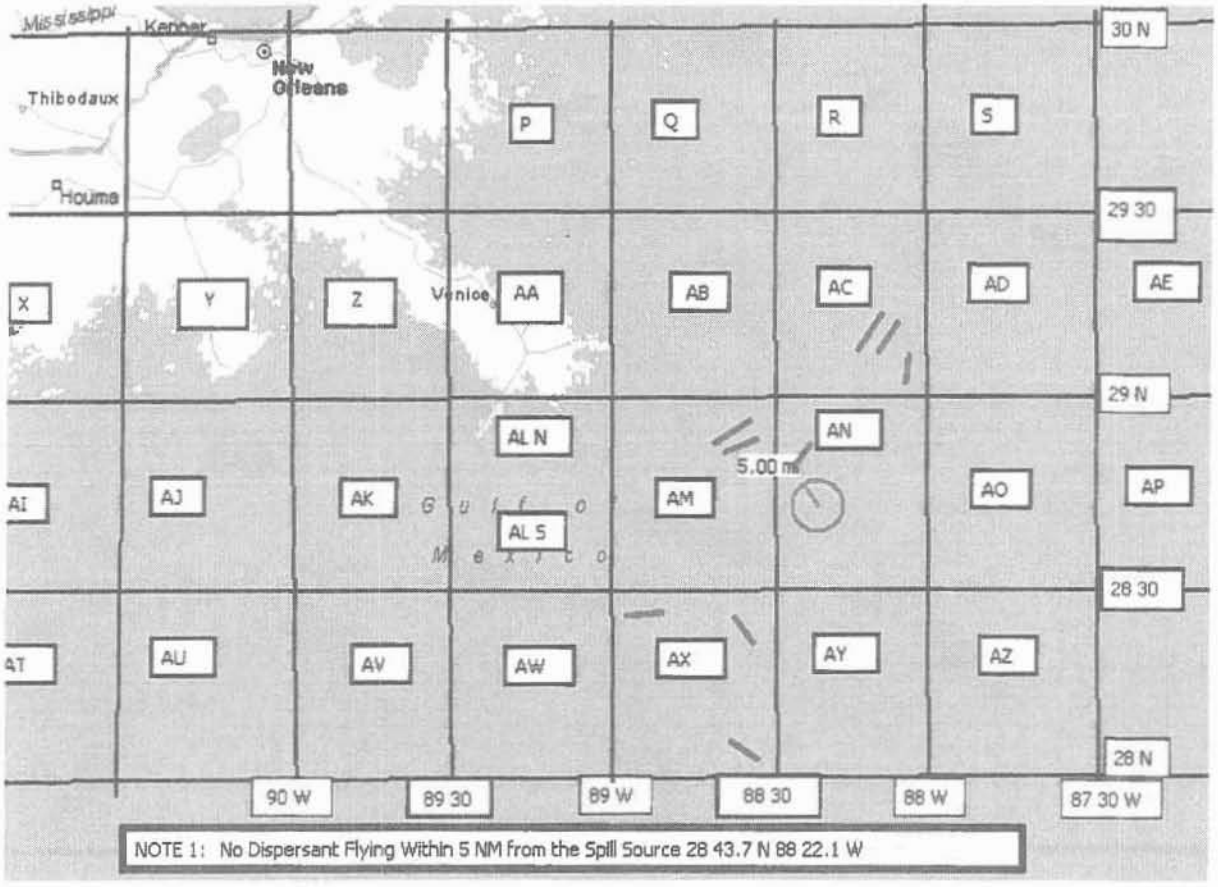


TABLE 1
Dispersible Oil Report June 24, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	3	12,800	20%	10,800
AM	2	72	40%	140
AN	1	31	30%	960

AX	3	810	30%	1,850
TOTAL	9	12,903		**13,750**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

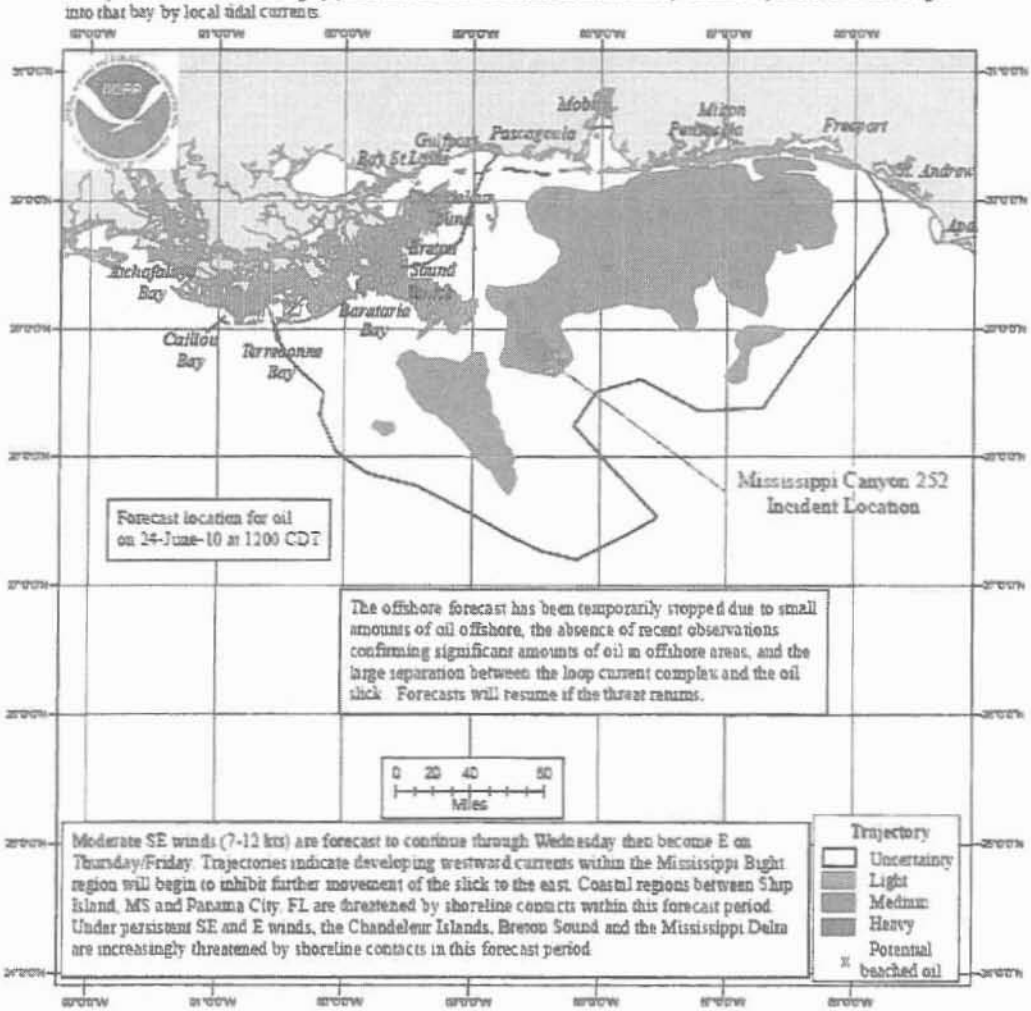
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Thursday, 6/24/10

Date Prepared: 2100 CDT, Tuesday, 6/22/10

This forecast is based on the NWS spot forecast from Tuesday, June 22 PM. Currents were obtained from several models (West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 23rd PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Vessel Status Board

SOURCE					Date/Time 23 June 1400	
Designator	Kind/Type	Vessel	Assignment	Status	Location	ETA
LAR	RV1/Weir	Louisiana Responder	MSRC	Skimming	MC-252	
GCR	RV1/Weir	Gulf Coast Responder	MSRC	Skimming	MC-252	
TXR	RV1/Weir	Texas Responder	MSRC	Scheduled Pit Stop	Ft Jackson - 6/23	6/24
MER	RV1/Weir	Maine Responder	MSRC	Skimming	MC-252	
MSR	RV1/Weir	Mississippi Responder	MSRC	Skimming	MC-252	
SOR	RV1/Weir	Southern Responder	MSRC	Skimming	MC 252	
DER	RV1/Weir	Delaware Responder	MSRC	Skimming	MC 252	
VAR	RV1/Weir	Virginia Responder	MSRC	Skimming	MC 252	
FLR	RV1/Weir	Florida Responder	MSRC	Reassigned Mobile	Mobile	
NJR	RV1/Weir	New Jersey Responder	MSRC	Reassigned Mobile	Mobile	
HOSS	RV1/Belt	CGA HOSS Barge (Crosby Sun)	TF HOSS	Skimming	MC-252	
SV	RV1/Weir	Seacor Vanguard (Current Buster 2 Sea)	Buster	Equipment	Fourchon - 6/23	
JC	RV1/Weir	Seacor John Coghill (Current Buster)	Buster	Skimming	MC-252	
LR	RV1/Weir	Lana Rose (NRC VOSS)	NRC	Skimming	MC-252	
PER	RV1/Belt	NRC Perseverance	NRC	Reassign Non-Source	Non-Source	
LF	RV1/Belt	Lynne Fink (NRC Marco)	NRC	Equipment	Venice - 6/22	
LB	RV1/Disk	NRC Liberty Belt	NRC	Equipment	Venice - 6/22	
NG	RV1/Weir	Noonie G (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
IT	RV1/Weir	International Trooper (w/CGA FRU) - Ampol	CGA	Skimming	MC-252	
KB	RV1/Weir	Kim B (w/CGA FRU) - Ampol	CGA	Skimming	MC 252	
MA	RV1/Weir	Mr. Alex (w/CGA FRU)- Ampol	CGA	Skimming	MC-252	
RE	RV1/Belt	Rene (Navy Marco)	Fed	Equipment	Gulfport - 6/23	
RP	RV1/Belt	Resolve Pioneer (NRC Marco)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Paulins T (NRC VOSS)	NRC	Skimming	MC 252	
SW	RV1/Weir	Seacor Washington (Dutch arm)		Skimming	MC-252	
HM	RV1/Weir	HOS Mystique (Dutch arm)		Skimming	MC 252	
SW	RV1/Weir	HOS Sweetwater (Dutch Arm)		Skimming	MC-252	
JMC	RV1/Weir	Ocean Reliler 17/JMC3009	Gulp	Reassigned Mobile	Mobile	
AD	RV1/Belt	NRC Admiral	Gulp	Reassign Non-Source	Non-Source	
SH	RV1/Disk	Seahorse VI (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
PT	RV1/Weir	Paulins T (NRC VOSS)	NRC	Reassign Non-Source	Non-Source	
REC	RV1/Weir	Ampol Recovery (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	
RES	RV1/Weir	Ampol Responder (w/ CGA FRU)	CGA	Reassigned Mobile	Mobile	

402	TV2	MSRC 402 Barge (Kimberly Colle)	TF Storage	On-scene	MC-252	
452	TV1	MSRC 452 Barge (Tara Crosby)	TF Storage	Standby	Ft Jackson	
570	TV1	MSRC 570 Barge (Crosby Clipper)	TF Storage	Offloading	Pilottown	
155	TV1	K-Sea DBL-155 (Rebel)	TF Storage	On-scene	MC-252	
Cortner	TV1	Energy 200 (Superior Service) Cortner	TF Storage	Non Operational	Fourchon	

POB Status Report MC 252 Source Control site
23nd June

			Personnel			Heli		Return		
Drilling Vessels	**Evade Sequence**	**Operational Activity (or comment)**	**Non Essential**	**Essential**	**Total**	**Deck**	**T-Time (hrs)**	**Return Sequence**	**Restart time (once in field) (hrs)**	**Restart Operation**
Development Driller 2	Per T-Time	Relief well	37	126	163	Yes	96	Asap	72	relief well
Development Driller 3	Per T-Time	Relief well	78	118	196	Yes	114	Asap	90	relief well
Containment Vessels	**Evade Sequence**	*Drilling sub totals*	*115*	*244*	*359*			**Return Sequence**		
Discoverer Enterprise	1	Containment & flare	44	142	186	Yes	114	2	38	Top hat #4
Helix Q4000	2	flare	0	134	134	Yes	69	1	72	Containment
Helix Producer 1	Not It Field	Containment	33	43	76	Yes	1	-	-	-
Clear Leader	Not It Field	Containment	25	119	144	Yes	24	-	-	-
Tolsa Pisces	Not It Field	Containment			0	Yes		-	-	-
Construction Vessels	**Priority to Remain**	*Containment sub totals*	*102*	*438*	*540*			**Priority to Return**		
Skandi Neptune	P1	Dispersant	49	27	76	Yes	6	P1	12	Dispersant
Ocean Intervention 3	P1	Multipurpose construction	6	53	59	Yes	1	P1	Typically 6 hours	Construction
HOS Achiever	P2	CDP construction						P1		CDP construction
Boa Deep C	P2	Multipurpose construction	38	37	75	Yes	1	P2		Construction
Olympic Challenger	P2	Construction	47	21	68	Yes	0	P2		Construction
Helix Express	P3	CDP construction	13	94	107	Yes	12	P3		CDP construction
Chouest Holiday	P3	CDP construction						P3		CDP construction
West Sirius	P3	CDP construction			0	Yes	64	P3		CDP construction
Support Vessels	**Evade Sequence**	*Construction sub totals*	*153*	*232*	*385*			**Priority to Return**		
Off-take hose string	1	Off-take hose string	-	-	-	-	28	2	6	
↳ Seacor Venture		Hose Support Vsl	-			No				
↳ Mary Moran		Hose Support Vsl	-			No				
Massachusetts & Paul T.	1	Off-take ATB	-		0	Yes	4	3	6	
↳ Catherine C. Moran		Support Tug	-							
Overseas Cascade	1	Off-take Tanker	-		0	No	4	3	6	
↳ Forte		Support Tug	-	10	10	No				
Loch Rannoch	Not It Field	Storage Tanker	-	-	-	Yes	Typically 2	3	Typically 4	
Navion Fennia	Not It Field	Storage Tanker	-	-	-	-		3		
Evi Knutson	Not It Field	Storage Tanker	-	-	-	-		3		
Normand Commander	3	Large vsl - fire support	-	20	20	Yes	1	1	1	Fire support
Rem Forza	3	Large vsl - fire support	-	27	27	Yes	1	1	1	Fire support
Tyler Stephen	1	Fire support	-	20	20	No	1	1	1	Fire support
Monica Ann	1	Fire support	-	20	20	No	1	1	1	Fire support
Adriatic	2	Dispersant	-		0	No	0	1	0	Dispersant
HOS Super H	2	Dispersant	5	7	12	No	1	1	1	Dispersant
		Support sub totals	*5*	*104*	*109*					
		Total Personnel	**222**	**786**	**1008**					

** MODU's and Off-take hose have additional 24 hours evade time*

To be added or removed from this distribution list email MC252_simops@bp.com

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 24, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has ten (10) spotter visual reports from 24 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 25 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating isolated showers and thunderstorms in PM with winds 8 -13 knots East, waves 1-2 feet, ceiling good except 1,000 around thunderstorms, visibility 5-10 nm and chance of rain is 20% in the afternoon.

Houma Unified Command anticipates that, due to the weather, location, distribution (5,400 sq.mi.) and size of the multiple oil slicks identified the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 25, 2010.
Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of mechanical recovery to recover or remove the oil in the identified target areas will be insufficient to remove the estimated dispersible oil volumes that we have estimated for tomorrow. The targeted oil herein is dispersible oil and dispersible oil is not the only oil demanding mechanical recovery assets. The geographic area of the spill site contains a combination of dispersible oil, heavy sheens and emulsified oil. Mechanical recovery devices are required elsewhere throughout the entire geographic area to address all areas and all oils that can be recovered mechanically and not just the dispersible oils and are therefore otherwise engaged. Generally the skimming

R	2	4,800	45%	10,400
T	1	1,600	50%	4,000
TOTAL	12	18,400		**30,640**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 1

Dispersant Zone Map for 26 June 2010 with Oil Targets from Spotter Operations on 25 June

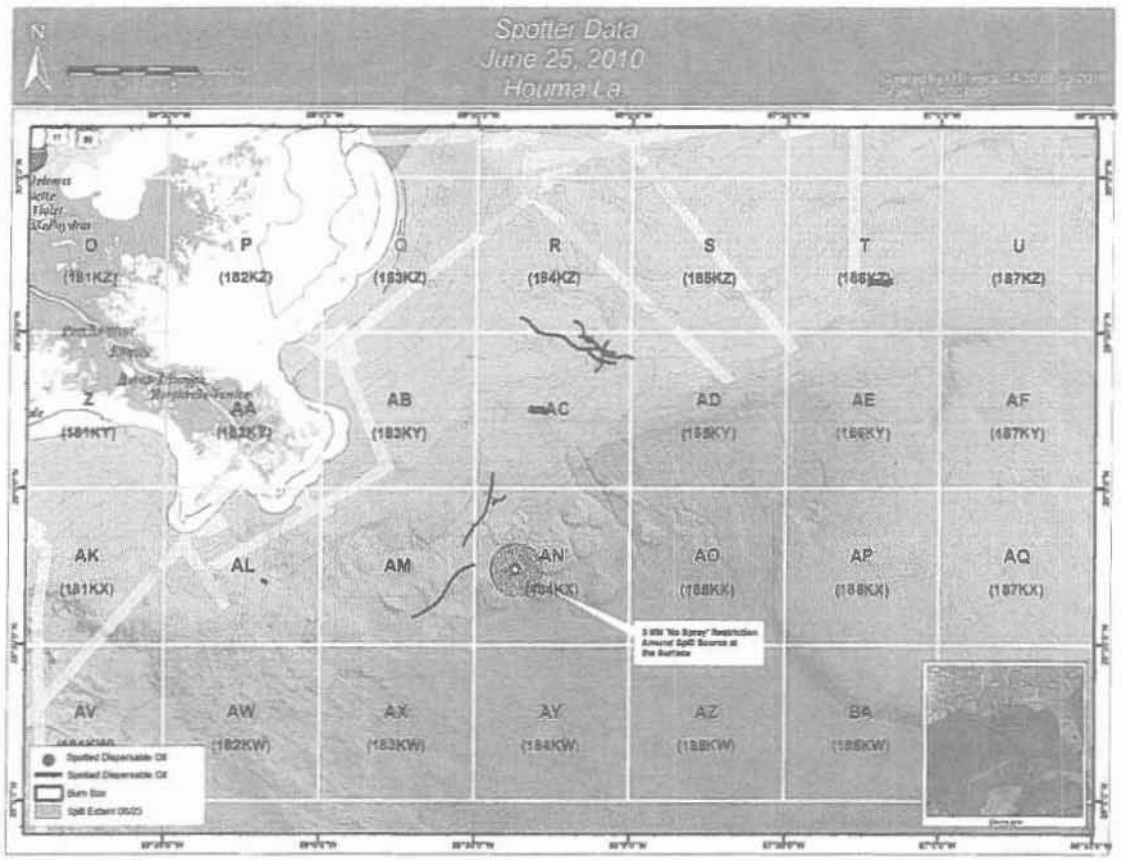


TABLE 1
Dispersible Oil Report June 25, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
AC	4	6,400	25%	9,440
AL	1	640	30%	960
AM	2	960	50%	3,040
AN	2	4,000	10%	2,800

R	2	4,800	45%	10,400
T	1	1,600	50%	4,000
TOTAL	12	18,400		**30,640**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

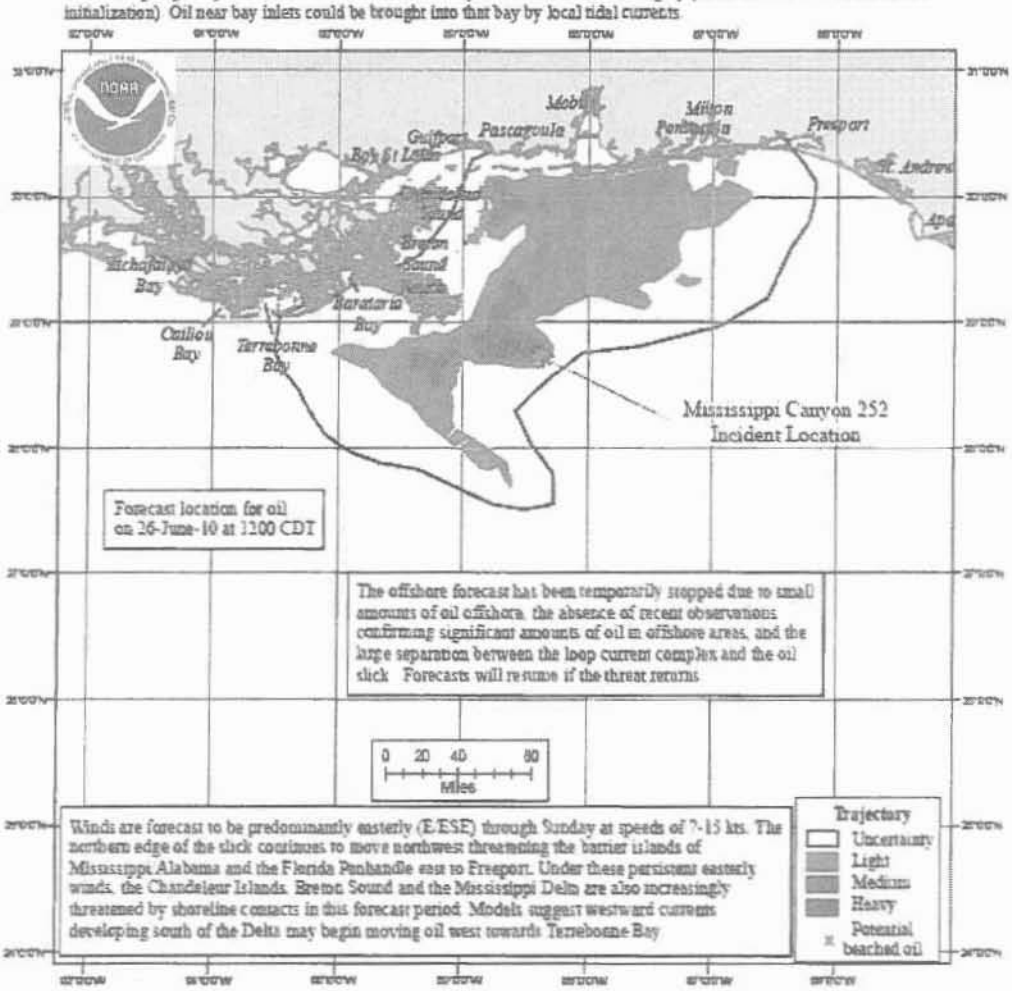
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Saturday, 6/26/10

Date Prepared: 2100 CDT, Thursday, 6/24/10

This forecast is based on the NWS spot forecast from Thursday, June 24 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TGLO/TAMU, NAVO/NRL) and HFR measurements. The model was initialized from Wednesday-Thursday satellite imagery analysis (NOAA/NESDIS) and Thursday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 25th PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Vessel Status Board

DEEPWATER HORIZON SOURCE GROUP

Date/Time 6/25/10 15:30

	TOTAL	SKIMMING	S/T/LOADING	Unscheduled Maintenance	Scheduled Maintenance
SKIMMERS	25	23	1	1	4
TANK BARGES	5	N/A	1	0	
INLAND BARGES	9	N/A	0	0	
WORKBOATS	32	N/A	N/A	0	

	ON SCENE WEATHER	COMMENTS: Partly cloudy, good visibility
WIND	05 8-10	
WAVE	02 1-	
SWELL	02 1-2'	

Kind/Type	Vessel	Assignment	Status	Location	ETA
RV/Wer	Louisiana Responder	MSRC	Skimming	MC-252	
RV/Wer	Gulf Coast Responder	MSRC	Skimming	MC-252	
RV/Wer	[illegible]	MSRC	Scheduled Maint	[illegible]	[illegible]
RV/Wer	Maine Responder	MSRC	Skimming	MC-252	
RV/Wer	Mississippi Responder	MSRC	Skimming	MC-252	
RV/Wer	Southern Responder	MSRC	Skimming	MC-252	
RV/Wer	Delaware Responder	MSRC	Skimming	MC-252	
RV/Wer	Virginia Responder	MSRC	Skimming	MC-252	
RV/Deb	CGA HOSS Barge (Crosby Sub)	TF HOSS	Skimming	MC-252	
RV/Wer	Seaton Vanguard (Current Buster 2 sk)	Buster	Skimming	MC-252	
RV/Wer	Seaton John Cognet (Current Buster)	Buster	Skimming	MC-252	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
RV/Deb	Lynne Fries (NRC Marco)	NRC	Skimming	MC-252	
RV/Deb	NRC Liberty (Dbs)	NRC	Skimming	MC-252	
RV/Wer	Nancy G (w/CGA FRU) - Arrow	CGA	Skimming	MC-252	
RV/Wer	[illegible] (w/CGA FRU) - Arrow	CGA	Skimming	MC-252	
RV/Wer	Kim B (w/CGA FRU) - Arrow	CGA	Skimming	MC-252	
RV/Wer	Mr. Alex (w/CGA FRU) - Arrow	CGA	Skimming	MC-252	
RV/Deb	Rena (Navy Marco)	Fed	Skimming	MC-252	
RV/Wer	Pauline T (NRC MOB)	NRC	Skimming	MC-252	
RV/Wer	Seaton Washington (Dutch arm)		Skimming	MC-252	
[illegible]	[illegible]		[illegible]	[illegible]	
RV/Wer	HOS Deepwater (Dutch Arm)		Skimming	MC-252	
RV/Deb	Reactive Pioneer (NRC Marco)		Skimming	MC-252	
RV/Deb	NRC Admiral (Marco)		Skimming	MC-252	
RV/Wer	JMC-300/RHEA (Guto 2)		Skimming	MC-252	

	Offshore Barges				
TV2	MSRC 452 Barge (Hibbert Crite)	TF Storage	On-Scene	MC-252	
TV1	MSRC 453 Barge (Tim Lindley)	TF Storage	Standby	Ft Jackson	
TV2	MSRC 570 Barge (Crosby Client)	TF Storage	Offloading	Pathfoam	
TV1	K-Sea 051-150 (Relief)	TF Storage	On-Scene	MC-252	
TV2	Energy [illegible] Service Center	TF Storage	Standby	Fourchon	

	Offshore Barges				
TV2	MSRC 452 Barge (Hibbert Crite)	TF Storage	On-Scene	MC-252	
TV1	MSRC 453 Barge (Tim Lindley)	TF Storage	Standby	Ft Jackson	
TV2	MSRC 570 Barge (Crosby Client)	TF Storage	Offloading	Pathfoam	
TV1	K-Sea 051-150 (Relief)	TF Storage	On-Scene	MC-252	
TV2	Energy [illegible] Service Center	TF Storage	Standby	Fourchon	

	Boom Sweep				
	Vessel	Assignment		Location	ETA
WS2	Sea Fox	Source	Standby	Venice	
WS2	Betty D	Source	Boom tow	MC-252	
WS2	Ms. Alexa	Source	Boom tow	MC-252	
WS2	[illegible]	Source	Overhaul/Maint	Venice	
WS2	Julianna Marie	Source	Standby	MC-252	
WS1	St. Ignatius Lorde	Source	Boom tow	MC-252	
WS1	Hercules	Source	The Nathalies	MC-252	
WS1	Drylak	Source	Boom tow	MC-252	
WS1	Ms Micky	Source	Boom tow	MC-252	
WS1	Mr. Wendell	Source	Boom tow	MC-252	
WS1	Black Tip	Source	Boom tow	MC-252	
WS1	Dop Fish	Source	Mechanical	MC-252	

	Crewlife supply				
WS2	Mr. Leroy	Crewlife/Re-supply	Supply Run	Venice Based	
WS2	Kay	Airport Re-supply	Supply Run	Venice Based	
WS2	Jason Perry	Crewlife/Re-supply	Supply Run	Venice Based	
WS2	Captain Stacey	Crewlife/Re-supply	Supply Run	Venice Based	
WS2	Keystone	NRC Re-supply	Supply Run	Venice Based	
WS2	Miss Winter	NRC Re-supply	Supply Run	Venice Based	
WS2	Sea Hawk	Crewlife/Re-supply	Supply Run	Venice Based	
WS2	Christine G	Crewlife/Re-supply	Supply Run	Venice Based	
WS2	Lady Elaine	Crewlife/Re-supply	Standby	Venice	
WS2	Ben Champion	Crewlife/Re-supply	Supply Run	Venice Based	

Kind/Type	Inland Barges	Assignment	Status	Location	Remaining Storage
TV2	Cenac 201 Barge	TF Storage			
TV2	Cenac 203 Barge	TF Storage	21,000 bbl cap		
TV2	Cenac 204 Barge	TF Storage	offloading M/V/C 572	Pathfoam	
TV2	Tighten 30-49 Barge	TF Storage	Standby	Fort Jackson	
TV2	Tighten 30-49 Barge	TF Storage	scheduled offload 570	Port Sulphur	

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team # 1 Date: 6/23/2010

Operational Period: 0000 23 June 2010 to 2359 23 June 2010

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 9)

☑ Photo Log

☐ Dispersant Observation Reporting Form 30

Assessment (Check appropriate box(s))

☑ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log

☐ Results inconclusive with respect to dispersant effectiveness

☐ Other. Briefly describe

Reviewed by Dispersant Assessment Group Member (Print name, title, and date)

Name [redacted] Signature [redacted] Date: 6/25/10

Reviewed by NOAA SSS (Print name, sig

Name [redacted] Signature [redacted] Date 6/25/10

Template updated 20100619

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date: 6/23/2010

Operational Period: 20100623 0700 to 20100623 1526

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 7)

☑ Photo Log

☑ Dispersant Observation Reporting Form 30

Assessment (Check appropriate box(s))

☐ Concur with SMART observer findings (reasonableness of findings)

☑ Issues of note from data review Briefly describe

notation about subsurface oil treatment - more likely spotter perspective than oil below sfc.

☐ Dispersant is effective based on review of Activity Log, photographs, and photo log

☑ Results inconclusive with respect to dispersant effectiveness.

☑ Other Briefly describe

Spotter on station only 1 min. after last dispersant pass - insufficient time for observations

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

Name [redacted] Signature: [redacted] 6/24/10

Reviewed by NOAA SSC (Print name, sign, and date)

Name [redacted] Signature: [redacted] 6/25/10

Template Updated 20100619

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 26, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Houma Unified Command has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

Houma Unified Command has thirteen (13) spotter visual reports from 26 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 27 June shows extensive areas of heavy and medium oil (Attachment 2). Weather is suitable for aerial dispersant operations with forecast indicating isolated showers and thunderstorms with winds 14 -17 knots SE, waves 2.5 feet, ceiling 2000, visibility 6 nm and chance of rain is 30% in the afternoon.

Houma Unified Command anticipates that, due to the weather, location, distribution (7,200 sq.mi.) and size of the multiple oil slicks identified, the decreased use, due to weather, of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 27, 2010.

Prior to spray operations the spotter aircraft will identify the high value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Pursuant to a request this date from Unified Command, the following information is provided.

- Estimated size of identified dispersible oil slick targets proposed in designated zones: this information is included in Table 1 with the estimate of the amount of dispersant needed to treat these slicks.

- Explicit justification for why these targets can't be skimmed or addressed by other mechanical means: The use of current mechanical recovery assets as defined in Attachment 3 are fully engaged in collecting oil in the areas shown in Attachment 1. It is not productive to detach vessels from skimming to relocate to other slicks as this would reduce overall recovery due to transit time and equipment recovery and deployment time which can require 6 hours or more depending on the transit distances involved. Generally, the skimming vessels are concentrated near the source site so that they can remain in the heaviest oil and collect the highest volume of oil. Non-source skimming assets are deployed in designated areas of heavy oil outside of the ISB burn box and the source skimming setback area.

- Tabulation of number of assets (skimmers, etc.) in service today and how many assets are available yet not in service: A daily summation of skimmers in the source area and outside the source is now being provided daily to the Aerial Dispersant Group for insertion in this report (Attachment 3). Our review of the assets listed below reveal that they are engaged in skimming operations with some out of service for various reasons.

- It is planned to conduct multiple Tier 1 helicopter SMART overflights to observe dispersant operations. M/V *International Peace* is currently at sea conducting samplings.
- QA/QC SMART reports are for June 24, 2010.
- No burn box is shown at this time. A decision based on weather will be made by tomorrow morning as to whether ISB operation will be held.
- Weather for next 7 days showing skimming and ISB limitations is provided as Attachment 5.

Accordingly, in accordance with the Directive, the Houma Unified Command respectfully requests an exemption to apply EC9500A in volumes on oil slicks located today shown in Table 1 not to exceed 10,880 ~~50,000~~ gallons for a period not to exceed 12 hours. We request to commence early operations to apply 5,000 gallons of dispersant to initial slicks identified and then request a subsequent amount to spray based on the full spotter reports.

Sincerely,

Houma Unified Command

Exemption approved subject to the above:

Date: 6/27/10

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 27 June 2010 with Oil Targets from Spotter Operations on 26 June

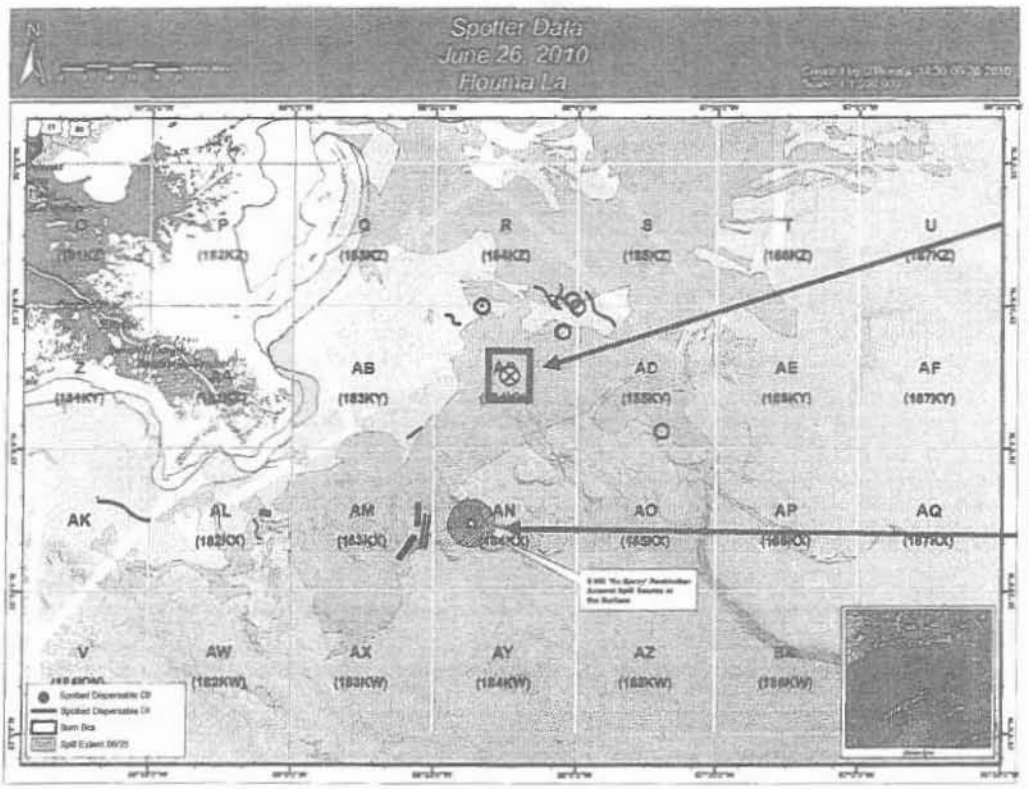


TABLE 1
Dispersible Oil Report June 27, 2010

Zone	# of slicks reported	Area in acres	Estimated percentage dispersible oil	Dispersant Needed (1/20 DOR)
R/S/AC/AD	5	18,662	50	53,325
AB	1	640	60	1,920
AK	2	4,000	50	10,000
AM	3	6,569	40	9,654
AL	2	359	30	538
TOTAL	13	30,230		**75,437**
Significant oil was encountered today and 23,027 gallons were sprayed, therefore, the requested amount for tomorrow is:				**52,400**

Note: Table 1 shows our intentions based upon our observations the day before these actions take place. Size and location of slicks will change. Activities within slick areas e.g., skimming operations, in-situ burning, etc., or weather conditions may require revisions to the actual operational plan implemented.

Attachment 2

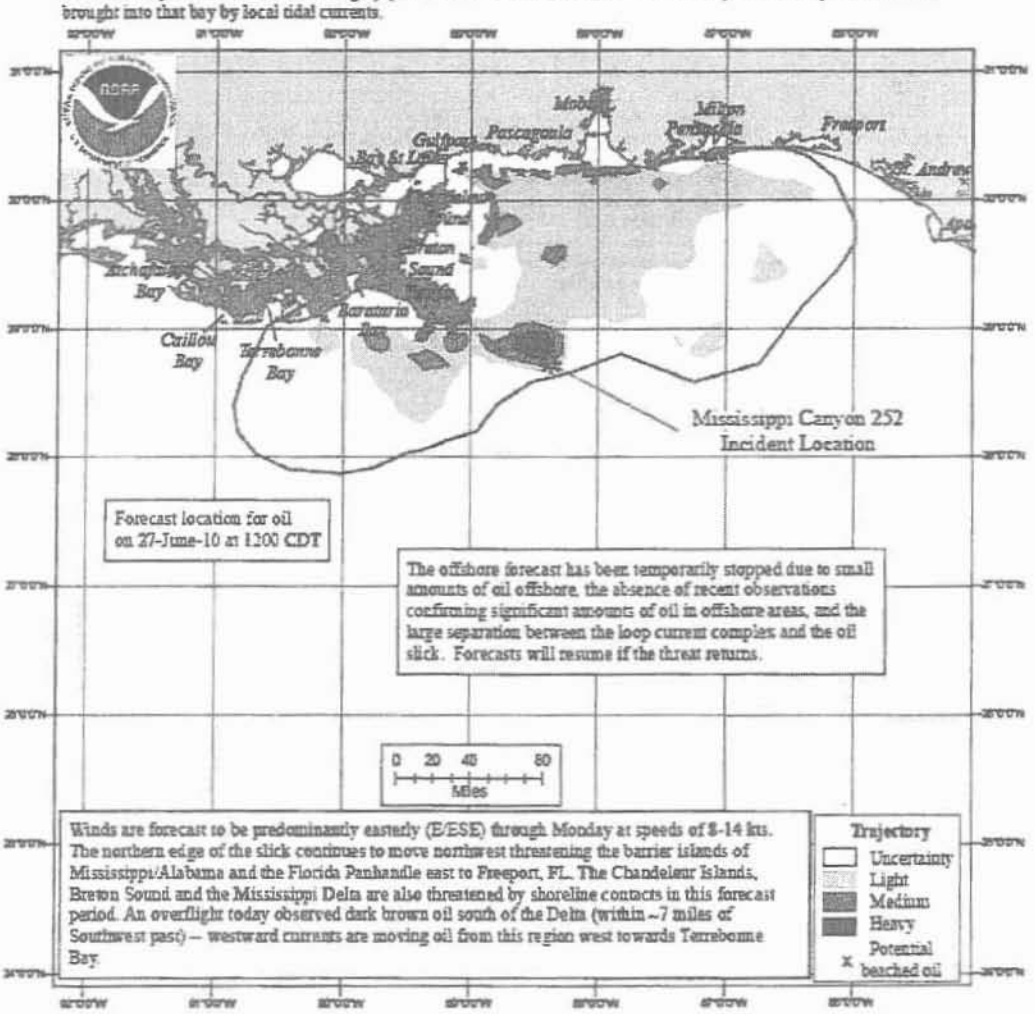
Nearshore Surface Oil Forecast Deepwater Horizon MC252

NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Sunday, 6/27/10
Date Prepared: 2100 CDT, Friday, 6/25/10

This forecast is based on the NWS spot forecast from Friday, June 25 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Friday satellite imagery analysis (NOAA/NESDIS) and overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.



Next Forecast: June 26st PM

this scale bar shows the meaning of the distribution terms at the current time

Attachment 3

Vessel Status Board

DEEPWATER HORIZON
SOURCE GROUP

Date/Time 6/26/10 19:51

	TOTAL	SKIMMING	OFFLOADING	Unscheduled Maintenance	Scheduled Maintenance	Enroute	Ordered
SKIMMERS	33	32	0	2	1	3	
TANK VESSELS	11	N/A	1	0			
VESSELS OTHER	3	N/A	0	0			
WORKBOATS	26	N/A	N/A	0			26

	ON SCENE WEATHER	COMMENTS: Partly cloudy, good visibility, current setting to NW
WIND	SE 5-15	
WAVE	1 - 3'	
SWELL	0'	

Kind/Type	Vessel	Assignment	Status	Location	ETA	Notes:
Mt	Louisiana Responder	MSRC	Skimming	MC-252		
Rh/Wear	Gulf Coast Responder	MSRC	Skimming	MC-252		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Rh/Wear	Maine Responder	MSRC	Skimming	MC-252		
Rh/Wear	Mississippi Responder	MSRC	Skimming	MC-252		
Rh/Wear	Southern Responder	MSRC	Skimming	MC-252		
Rh/Wear	Delaware Responder	MSRC	Skimming	MC-252		
Rh/Wear	Virginia Responder	MSRC	Skimming	MC-252		
Rh/Barc	OSA HOES Barge (Shelly Sam)	TF HOES	Skimming	MC-252		
Rh/Wear	George Vanguard (Current Buster 2 sec)	Buster	Skimming	MC-252		
Rh/Wear	George John Cuttill (Current Buster)	Buster	Skimming	MC-252		
Rh/Wear	Lana Rose (NRC M-252)	NRC	Skimming	MC-252		
Rh/Barc	Lorna Fay (NRC Marco)	NRC	Skimming	MC-252		
Rh/Boat	NRC Liberty (Dac)	NRC	Skimming	MC-252		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Rh/Wear	International Trader (a/OSA FRLA - Argos)	OSA	Skimming	MC-252		
Rh/Wear	Kim D (a/OSA FRLA - Argos)	OSA	Skimming	MC-252		
Rh/Wear	Mr. Alex (a/OSA FRLA - Argos)	OSA	Skimming	MC-252		
Rh/Barc	Rena (Lake Marco)	Tad	Skimming	MC-252		
Rh/Wear	Pauline T (NRC HOES)	NRC	Skimming	MC-252		
Rh/Wear	George Washington (Current Buster)		Skimming	MC-252		
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	
Rh/Wear	HOS Invincible (South Argos)		Skimming	MC-252		
Rh/Barc	Barbara Pioneer (NRC Marco)		Skimming	MC-252		
Rh/Barc	H.R.C. Admiral (Marco)		Skimming	MC-252		
Rh/Wear	JMC 300 (SHEA Key 2)		Skimming	MC-252		
vSO	Seacor Pride (offloading vessel)			MC-252		
TVI	NRC Defender	NRC		MC-252		
Rh/Wear	Kyle Williams (Ocean Buster)		Skimming	MC-252		
Rh/Wear	Southern Cross (Ocean Buster)		Skimming	MC-252		
vSO	Seacor Lea			MC-252		Command vessel
Rh/Wear	California Responder	MSRC	Enroute	Pacific Ocean	7/9/10	Destroyer Venice LA
Rh/Wear	Pacific Responder	MSRC	Enroute	Pacific Ocean	7/11/10	Destroyer Venice LA

	Offshore Barges				Remaining Storage bbls	
TVI	MSRC 452 Barge (Nantech Sally)	TF Storage	On Scene	MC-252	2x700	
TVI	MSRC 452 Barge (Sea Cousin)	TF Storage	Standby	Galveston	45000	
TVI	MSRC 570 Barge (Cross Clipper)	TF Storage	Offloading	Pleasure	57000	
TVI	K-Sea DBL-55 (Rebel)	TF Storage	On Scene	MC-252	130000	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	Boom Boats					
	Vessel	Assignment		Location	ETA	
wBO	Sea Fox	Source	Standby	MC-252		
wBO	Betty G	Source	Boom Tow	MC-252		
wBO	Mr. Alex	Source	Boom Tow	MC-252		
wBO	Mr. Addison	Source	Boom Tow	MC-252		
wBO	Juliette Marie	Source	Standby	MC-252		
wBO	St Ignatius Loyola	Source	Boom Tow	MC-252		
wBO	Penelope	Source	Boom Tow	MC-252		
wBO	Shula	Source	Boom Tow	MC-252		
wBO	Miss Marie	Source	Boom Tow	MC-252		
wBO	Mr. Ronald	Source	Boom Tow	MC-252		
wBO	Miss Tip	Source	Boom Tow	MC-252		
wBO	Dog Fish	Source	Boom Tow	MC-252		
	Crew/Re-supply					
wBO	Mr. Larry	Shuttle/Re-supply	Supply Run	Venice Beach		
wBO	Fox	Airport Re-supply	Supply Run	Venice Beach		
wBO	Jean Pierre	Shuttle/Re-supply	Supply Run	Venice Beach		
		Shuttle/Re-supply	Supply Run			
wBO	Chevalier	NRC Re-supply	Supply Run	Venice Beach		
wBO	Miss Verner	NRC Re-supply	Supply Run	Venice Beach		
wBO	Sea Haven	Shuttle/Re-supply	Supply Run	Venice Beach		
wBO	Charlie-G	Shuttle/Re-supply	Standby	Venice Beach		
		Shuttle/Re-supply	Standby			
wBO	Sea Crescent	Shuttle/Re-supply	Supply Run	Venice Beach		

Kind/Type	Inland Barges	Assignment	Status	Location	Remaining Storage	
TVD	Canal 334 Barge	TF Storage				
TVD	Canal 335 Barge	TF Storage	2 - 500 bbl cages			
TVD	Canal 334 Barge	TF Storage	offloading MSRC 570	Pleasure		
TVB	Higman 304 Barge	TF Storage	Standby	Fort Jackson		
TVB	Higman 304 Barge	TF Storage	scheduled offload 570	Port Fourchon		

Attachment 4

QA / QC Report for 6.24.10

Deepwater Horizon Incident – Houma Incident Command Center

SMART Tier 1 Data Quality Assessment and Review

SMART Tier 1 data consists of observations summarized in an Activity Log (Unit Log ICS 214-CG) and pre- and post-application photographs and associated photo log of dispersant spray operations. This form documents the results of a preliminary quality assessment review of these documents.

Smart Air Team #: 2 Date: 6/24/2010

Operational Period: 20100624 0800 to 20100624 1432

Data Review (Check documents that were reviewed)

☑ Unit Log – ICS 214-CG

☑ Photographs (How many reviewed? 17)

☑ Photo Log

☑ Dispersant Observation Reporting Form 30

Assessment (Check appropriate box(s))

☐ Concur with SMART observer findings (reasonableness of findings)

☐ Issues of note from data review. Briefly describe.

No immediate change to emulsified streamers

☑ Dispersant is effective based on review of Activity Log, photographs, and photo log.

☐ Results inconclusive with respect to dispersant effectiveness.

☐ Other. Briefly describe.

Based on photos dispersion of black oil; no dispersion of emulsified edge

Reviewed by Dispersant Assessment Group Member (Print name, sign, and date)

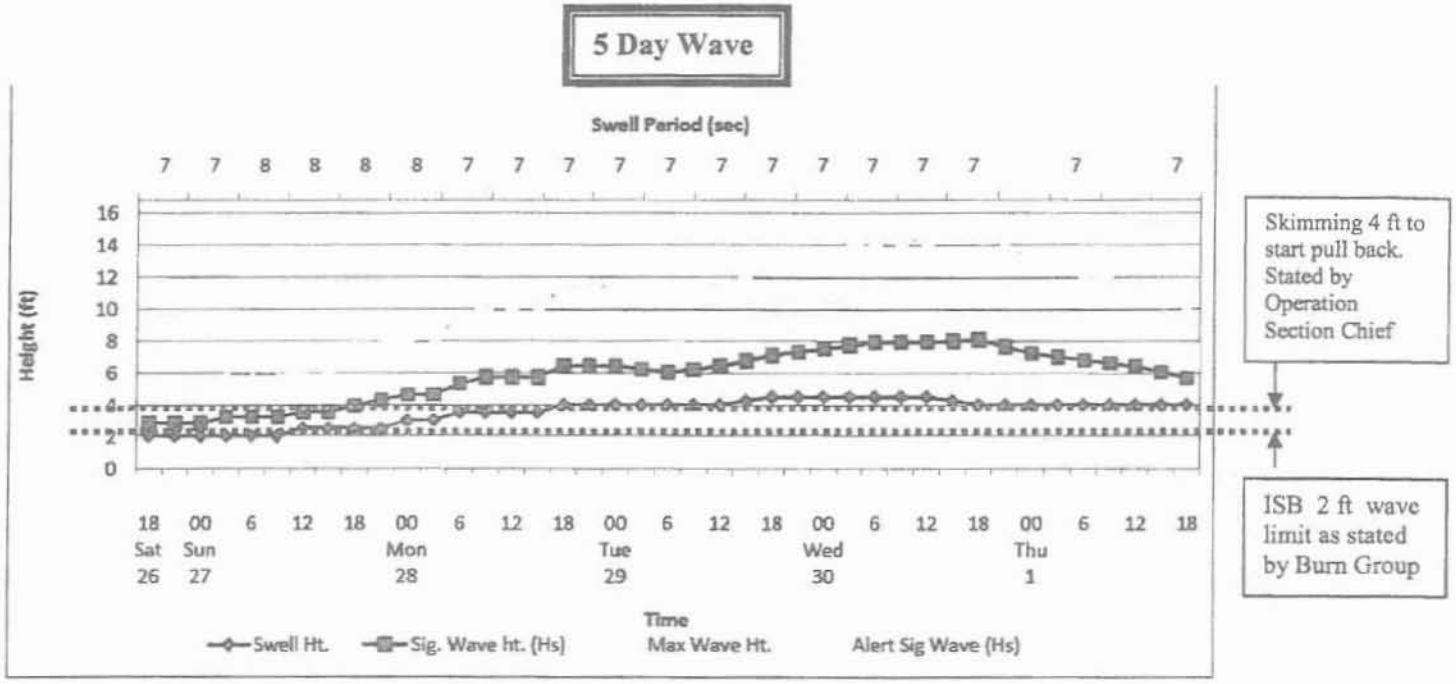
Nam[redacted]nature[redacted]te: 6/24/10

Reviewed by NOAA SSC (Print name, sig[redacted]

Nam[redacted] Signature:[redacted]te: 6/25/10

Template Updated 20100619

Attachment 5



CENTER *for* BIOLOGICAL DIVERSITY

Via Certified Mail and Electronic Mail

June 2, 2010

Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Mail Code: 1101A
Washington, DC 20460
[redacted]

Rowan Gould, Acting Director
U.S. Fish and Wildlife Service
1849 C Street, NW, 3256 MIB
Washington, D.C. 20240
[redacted]

Admiral Robert J. Papp, Jr., Commandant
U.S. Coast Guard Headquarters
2100 Second Street, SW
Stop 7101
Washington, DC 20593-7101
[redacted]

Eric Schwaab, Assistant Administrator
NOAA Fisheries/NMFS
1315 East-West Highway
Silver Springs, MD 20910
Fax: 301-713-1940
[redacted]

RE: 60-Day Notice of Intent to Sue: Violations of the Endangered Species Act related to the Approval and Use of Chemical Dispersants

Dear Ms. Jackson and Admiral Papp:

This letter serves as a sixty day notice on behalf of the Center for Biological Diversity of intent to sue the U.S. Environmental Protection Agency ("EPA") and the U.S. Coast Guard ("Coast Guard") over violations of Section 7 of the Endangered Species Act ("ESA")(16 U.S.C. § 1531 *et seq.*) for actions and inactions related to the continued authorization of the use of chemical dispersants, including Corexit, pursuant to the Clean Water Act, 33 C.F.R. § 1321(d) and its implementing regulations. These dispersants are known to or likely to adversely affect multiple threatened and endangered species, including sea turtles, sperm whales, Gulf sturgeon, and others. This letter is provided pursuant to the 60-day notice requirement of the citizen suit provision of the ESA, to the extent such notice is deemed necessary by a court. *See* 16 U.S.C. § 1540(g).

The ongoing BP Deepwater Horizon oil spill disaster in the Gulf has already become the worst oil spill in U.S. history, dwarfing even the 1989 Exxon Valdez disaster in scope and

Andrea A. Treece, Senior Attorney, Oceans Program • 351 California St., Suite 600 • San Francisco, CA 94104
Phone: 415-436-9682 x306 • Fax: 415-436-9683 • atreece@biologicaldiversity.org

complexity. The amount of oil spewing into the Gulf of Mexico is unprecedented, as is the extensive use of dispersants to break up the oil. To date, spill responders have applied over 980,000 gallons of dispersants, mostly Corexit 9500A and Corexit 9527A, in an effort to minimize the oil reaching the ocean surface and shore. Approximately 755,000 gallons have been applied to the surface, while about 225,000 gallons have been applied near the source of the leak, nearly a mile below the ocean surface. As wildlife officials have openly acknowledged, the deployment of massive quantities of chemical dispersants, including significant quantities deployed in very deep water, constitutes an uncontrolled experiment on the Gulf of Mexico ecosystem. In her May 24 press conference, EPA Administrator Lisa Jackson noted that the amount of dispersant being used to break up the oil spewed by the Deepwater Horizon was approaching a world record.[1] The effects of using such enormous volumes of these chemicals, or of using them at such depths, have never been tested, much less thoroughly evaluated. However, at least two of the dispersants EPA and the Coast Guard have approved for use, Corexit 9500 and Corexit 9527, have been banned by the United Kingdom due to their adverse effects on the marine environment.

EPA's and the Coast Guard's decision to authorize the use of chemical dispersants without ensuring that the use of such chemicals is not likely to jeopardize the continued existence of threatened and endangered species, or destroy or adversely modify critical habitat, violates the agency's duties under the ESA. The agencies have violated these duties in at least three respects. First, EPA has violated ESA Section 7 by listing Corexit 9500A, 9527A, and other dispersants for use in oil spill response activities as part of the NCP Product Schedule without undertaking consultation and otherwise ensuring that such approval would not result in jeopardy to a species or destruction or adverse modification of critical habitat. Second, EPA and the Coast Guard failed to undertake timely and adequate Section 7 consultation with respect to the use of dispersants authorized by the Region 4 and Region 6 Regional Response Team policies for dispersant use in ocean and coastal waters in response to offshore oil spills. Third, EPA and the Coast Guard have failed to ensure that their current decision to allow the unprecedented and unstudied use of huge volumes of dispersants, with significant amount deployed at great depth, to respond to the BP Deepwater Horizon disaster is not likely to jeopardize listed species or adversely modify their critical habitat.

EPA and the Coast Guard must examine or re-examine each of these agency actions pursuant to its obligations under Section 7 of the ESA in order comply with its duty to ensure against harm to species and their critical habitat. The reinitiation of Section 7 consultation and completion of a thorough new biological opinion are necessary to inform the ongoing spill response activities, however long they may endure, ensure that future response activities do not pose an unnecessary threat to listed species and their habitats, and foster improved planning and response in the future.

---

[1] Statement by EPA Administrator Lisa P. Jackson from Press Conference on Dispersant Use in the Gulf of Mexico with U.S. Coast Guard Rear Admiral Landry (May 24, 2010).

I. LEGAL AND FACTUAL BACKGROUND

A. Oil Spill Response and Dispersant Approval under the Federal Water Pollution Control Act ("Clean Water Act") and the National Contingency Plan

The federal government's oil spill response duties and procedures are set forth in Section 311 of the federal Clean Water Act. In the event of an oil spill, this provision requires the President to take actions necessary to ensure effective and immediate removal of the discharged oil, as well as mitigation or prevention of a substantial risk of discharge of oil into the waters of the United States.[2] The President's duties with respect to responding to oil spills have been delegated to EPA and the Coast Guard, among others.[3] Removal activities must be conducted pursuant to a detailed National Contingency Plan ("NCP") for the removal of oil and hazardous substances.[4] Among other requirements, the NCP must contain:

> A schedule, prepared in cooperation with the States, identifying--
> (i) dispersants, other chemicals, and other spill mitigating devices and substances, if any, that may be used in carrying out the Plan,
> (ii) the waters in which such dispersants, other chemicals, and other spill mitigating devices and substances may be used, and
> (iii) the quantities of such dispersant, other chemicals, or other spill mitigating device or substance which can be used safely in such waters, which schedule shall provide in the case of any dispersant, chemical, spill mitigating device or substance, or waters not specifically identified in such schedule that the President, or his delegate, may, on a case-by-case basis, identify the dispersants, other chemicals, and other spill mitigating devices and substances which may be used, the waters in which they may be used, and the quantities which can be used safely in such waters.[5]

This schedule is known as the NCP Product Schedule.[6]

EPA's regulations implementing Section 311(d) set forth the process for maintaining the NCP Product Schedule as well as adding products to it.[7] These regulations require that a dispersant product attain a 45% or greater effectiveness value to be added to the schedule. Results of toxicity testing factor into the product's effectiveness value.[8] EPA retains the right to conduct its own testing to verify industry results and to weigh EPA testing results in determining whether the product meets listing criteria.[9] The regulations specify that "[t]he listing of a

---

[2] 33 C.F.R. § 1321(c)-(d).
[3] Exec. Order 12777 (Oct. 18, 1991).
[4] 33 C.F.R. § 1321(c)-(d).
[5] 33 C.F.R. § 1321(d)(2)(G).
[6] 40 C.F.R. 300.905(a).
[7] *Id.* at 300.905(a) and 300.920.
[8] 40 C.F.R 300.915(a)(8), 300.920(a).
[9] *Id.* at 300.920(a).

product on the NCP Product Schedule does not constitute approval of the product" for use on an oil spill.[10] However, EPA's listing of a given product on the NCP Product Schedule is a prerequisite that makes the product lawfully available for use in future oil response activities.

Regional response teams ("RRTs") and Area Committees, both of which include representatives from and are overseen by EPA and the Coast Guard, may authorize the use of a given dispersant listed on the NCP Product Schedule as part of their planning activities and include these as part of their preauthorization plans.[11] Preauthorization plans may address factors such as the type of oil likely to be spilled, likely source of spill, and environmentally sensitive areas. The plans must be approved by EPA representatives, among others.[12] For situations that are not addressed by the preauthorization plan, the federal on-scene coordinator ("FOSC") may authorize the use of dispersants listed on the NCP Product Schedule with the concurrence of EPA and other representatives of the RRT.[13] Generally, the Coast Guard acts as the lead agency with respect to responding to offshore oil spills and the FOSC is a representative of the Coast Guard.[14]

1. Listing of Dispersants on NCP Product Schedule

EPA's NCP Product Schedule currently lists 14 dispersants, 4 of which belong to the Corexit brand.[15] EPA most recently updated its NCP Product Schedule on May 11, 2010, 21 days after the Deepwater Horizon explosion. The only change in listed dispersants was the re-listing of Corexit 7664 under the name Corexit EC7664. The two principal dispersants being employed by BP – despite significant questions regarding their safety – have been listed and remain listed today. Corexit 9500 was listed under Subpart J on April 13, 1994; it was re-listed December 18, 1995 under the name Corexit EC9500A (commonly referred to as "Corexit 9500A"). Corexit 9527 was originally listed on March 10, 1978 and was re-listed December 18, 1995. This dispersant is now listed under the name Corexit EC9527A (commonly referred to as "Corexit 9527A").[16] EPA's NCP Product Schedule Guide indicates that Corexit 9500A and 9527A are most appropriate for surface application and have average effectiveness rates around 50%.[17]

The recommended application volume for Corexit 9500A and 9527A is 2 to 10 gallons per acre.[18] Thus far, BP has applied more 755,000 gallons of these dispersants to the surface of the Gulf of Mexico, and more than 225,000 gallons to the deep waters near the source of the leak – nearly a mile below the depth at which the product is generally supposed to be applied.

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[10] *Id.* at 300.920(e).
[11] *Id.* at 300.910(a).
[12] *Id.*
[13] *Id.* at 300.910(b).
[14] *Id.* at 300.5.
[15] EPA, NCP Product Schedule (May 11, 2010).
[16] *Id.*
[17] EPA, Guide to Using the NCP Product Schedule Notebook (May 11, 2010) at 2-3 and 12-13.
[18] *Id.*

2. EPA and Coast Guard Authorization of Dispersant Use through Regional Response Team Dispersant Use Policies and Guidelines

EPA and the Coast Guard have also approved policies and guidelines at the regional level for the use of dispersants in response to offshore oil spills. EPA Region 4, which includes the states of Mississippi, Alabama, and Florida, and Region 6, which includes Louisiana and Texas, have both approved such policies and guidelines to implement Subpart J of the National Oil and Hazardous Substances Contingency Plan ("NCP"). These approvals are federal agency actions subject to ESA Section 7 consultation.

Region 4

EPA and the Coast Guard, as co-chairs of the Region 4 RRT, approved the Regional Response Team Oil Spill Dispersant Use Policy ("Region 4 Policy") in 1996. The Region 4 Policy "preauthorizes limited use of dispersants by the pre-designated United States Coast Guard (USCG) On-Scene Coordinator (OSC) on oil discharges impacting Federal waters and other specifically designated areas...."[19] The Region 4 Policy specified that further consultation would not be required for dispersant use within pre-authorized areas so long as the appropriate RRT agencies are immediately notified and applicable protocols followed. Dispersant use is pre-authorized for "green zone" areas, which are defined as offshore areas at least three miles from shore, outside state jurisdictions, where the water is at least ten meters deep. In "yellow zones," the Coast Guard must request authorization from the RRT. Yellow zones are waters under state or federal special management, such as wildlife refuges, National Park Service areas, or proposed or designated critical habitats; waters within three miles of shore or within state jurisdiction; or waters less than ten meters deep. EPA and the affected states must concur, and consultation with NMFS and FWS must be completed before use may be authorized.[20] Dispersant use is prohibited in "red zones" unless necessary to prevent or mitigate risk to human health or safety. No red zones have been designated.[21]

The Region 4 RRT, including EPA and the Coast Guard, conducted biological assessments ("BAs") of the effects of the Region 4 Policy on species under the jurisdiction of NMFS and FWS. Notably, the assumptions made in the BAs regarding the amounts of dispersants that would be applied, the depth at which they would be applied, and the duration of wildlife and ecosystem exposure are nothing like the situation occurring in the Gulf right now. The BAs assumed that dispersants would largely be applied at the surface of the water, in moderate amounts, early in the spill response effort.[22] For example, the BAs assumed that food chain effects from prey contamination were unlikely due to "low concentrations and short duration of exposure to dispersed oil."[23] The BAs also opined that dispersants would not likely

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[19] Biological Assessment of Effects on Listed Species of Region IV Regional Response Team Oil Spill Dispersant Use Policy (NMFS & FWS) at 33 & 72.
[20] *Id.* at 34 & 73.
[21] *Id.* at 34-35 & 73.
[22] *See, e.g.*, *id.* at 35, 39-40, 83-84.
[23] *Id.* at 40; *see also id.* at 84.

cause significant additional harm to birds or fur-bearing mammals, despite destroying their ability to insulate themselves or repel water, because "[w]ithin the normal range of operating dosages, biological effects are due to the dispersed oil, not the dispersant."[24] The BAs acknowledged that sea turtles could experience higher exposure to oil and dispersants in the water column following dispersant application, but simply assumed that "exposure will be short-term and concentrations low" due to rapid dilution.[25]

Based on these assumptions – and scant information regarding dispersant effects in general, the BAs opined that dispersant use "under appropriate conditions" was "not likely to adversely affect listed species beyond the potential effects of the spilled oil or add to the cumulative environmental stresses currently acting on the species."[26] The document also specified that "[c]onsultation will be reinitiated if additional information not previously considered becomes available indicating adverse effects to listed species or critical habitat form the identified action."[27]

Region 6

EPA Region 6 re-approved its Dispersant Pre-Approval Guidelines and Checklist ("Region 6 Guidelines") on January 24, 2001.[28] The Region 6 Guidelines provide pre-approval authority to the FOSC for dispersant use in the U.S. Exclusive Economic Zone off the Texas and Louisiana coasts. Under the Guidelines, "[t]he only requirement for dispersant product selection is that the dispersant must be included on the NCP Product Schedule and considered appropriate by the FOSC for existing environmental and physical conditions.[29] The guidelines clearly contemplate surface application of dispersants, setting forth pre-approval and criteria for aerial spraying and surface boat spray systems.[30] While "alternative platforms" may be considered, none are specified or discussed.

The "Bioassessment of the Potential Impacts Resulting from Dispersant Use in Offshore Waters in the Gulf of Mexico" ("Region 6 BA") likewise bases its findings on the assumption that dispersants will be applied to the surface of the ocean at "recommended" application rates.[31] The Region 6 BA bases its evaluation of species' risk from dispersant effects largely on the whether species occurs at the surface and/or in offshore waters. For example, it assumes that sea turtles, sperm whales, and red snapper are only at "medium" risk of by directly affected by dispersant use because the species were thought to have low numbers occurring offshore (sea

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[24] *Id.* at 39, 83.
[25] *Id.*
[26] *Id.* at 86.
[27] *Id.*
[28] Federal Region VI Regional Response Team, FOSC Dispersant Pre-Approval Guidelines and Checklist (Jan. 24, 2001) ("Region 6 Guidelines").
[29] Region 6 Guidelines at 1.
[30] *Id.* at 2-3, 14.
[31] *Id.* at App. D, pp. Appendix-5 to Appendix-9; *see also* Minerals Management Service, Final Supplemental Environmental Impact Statement: Gulf of Mexico Oil and Gas Lease Sales: 2009-2012 (Sept. 2008) at 3-26 (assuming a 4,600 barrels as the most likely size of an offshore oil spill).

turtles) or preferred deep water habitat (sperm whales and red snapper).[32] The Region 6 BA found that important prey species, such as Gulf menhaden and blue crabs, had a high risk of negative impacts from dispersant use, since these organisms occur in the water column in offshore waters.[33] The Region 6 BA did not discuss particular impacts to sea turtles or marine mammals, relying instead on a 1994 statement by NMFS, made in response to a request for ESA consultation, that "the species under our purview are not likely to be adversely affected by the use of chemical countermeasures in response to an oil spill."[34] The Region 6 BA also discounted the possibility that dispersants could adversely affect birds.[35]

3. EPA and Coast Guard Authorization of Dispersant Use in Response to the BP Deepwater Horizon Oil Spill in the Gulf of Mexico and Species Affected

As demonstrated above, the use of dispersants in response to the BP Deepwater Horizon disaster is completely different in methodology, scale, and scope of impacts than anything EPA or the Coast Guard has considered or authorized in the past. BP has applied dispersants that are known to be toxic to the marine environment in a wholly unprecedented, unanalyzed, and arguably unauthorized manner. Yet these agencies have continued to allow the use of enormous amounts of Corexit and other dispersants on the surface and deep waters of the Gulf of Mexico without ensuring that this massive ecological experiment will not jeopardize protected species or adversely affect their critical habitat.

Early in the response effort, EPA and the Coast Guard simply deferred to BP's choice of dispersants and allowed the company to apply virtually unlimited amounts. Within 3 weeks of the start of the Deepwater Horizon disaster, EPA issued its updated NCP Product Schedule and accompanying guide, both of which retained Corexit 9500A and 9527A as permissible dispersants and neither of which addressed subsurface use of the chemicals, even though such deployment was already well way. On May 10, EPA issued a directive to BP regarding its subsurface use of dispersants. The directive essentially authorized a large-scale experiment by BP, under which BP was first required to determine that subsurface dispersant application was chemically breaking up the oil and then to sample and delineate the dispersed plume.[36] The directive set forth minimal criteria for subsurface dispersant application, requiring the Regional Response Team to be consulted if dissolved oxygen near the plume falls below 2 mg/L or toxicity tests reveal "excessive exertion of a toxicity response."[37]

Testing soon revealed that use of the Corexit dispersants has killed up to 25% of all organisms living 500 feet below the surface in areas where the dispersant was used.[38] After

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[32] *Id.* at Appendix-7.
[33] *Id.* at Appendix-8.
[34] *Id.* at Appendix-13.
[35] *Id.* at Appendix-13 to Appendix-14.
[36] EPA, Dispersant Monitoring and Assessment Directive for Subsurface Dispersant Application (May 10, 2010).
[37] *Id.* at 3.
[38] Farren, L. and B. Blackburn, May 21, 2010, "EPA May Not Force BP to Change Dispersants," ABC World News, avail. at http://abcnews.go.com/WN/epa-bp-dispersants/story?id=10711367.

significant outcry by the public and scientific experts regarding the toxicity of Corexit products and the utterly untested manner of their use, EPA issued an addendum to its directive wherein the agency gave BP 24 hours to identify dispersants on the NCP Product Schedule that were more effective at dispersal and less toxic than BP's favored Corexit products. The addendum further provided that

> [w]ithin 72 hours after submitting the list of alternatives, and after receiving EPA approval, BP shall immediately use only the approved alternative dispersant. Should BP not be able to identify alternative dispersant products, BP shall provide the FOSC and EPA RRT CO-Chair a detailed description of the products investigated, the reason the products did not meet the standards described above.[39]

The next day, BP responded to EPA, refusing to use alternative dispersants on the grounds that the alternative products either posed environmental risks or were not available in sufficient quantities. EPA expressed disappointment in BP's response and initiated its own toxicity testing of alternative products.[40] However, EPA permitted BP to keep using Corexit 9500A and 9527A.

Finally, on May 26, EPA issued a third addendum to its directive to BP, this time directing BP to cease surface application of dispersants in order to reduce overall dispersant use by as much as 75%.[41] However, EPA expressly allowed the continued use of subsurface – the method with the least testing and most uncertain effects, and limited the quantity applied in a single day to 15,000 gallons.[42] As of June 1, EPA and the Coast Guard have permitted the application of over 755,000 gallons of dispersants to the surface of the Gulf and over 225,000 gallons deep below the surface.

B. The Endangered Species Act

1. Procedural and Substantive Duties under the ESA

The Endangered Species Act, 16 U.S.C. §§ 1531-1544, ("ESA") was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved...[and] a program for the conservation of such endangered species and threatened species..."[43]

The ESA vests primary responsibility for administering and enforcing the statute with the Secretaries of Commerce and Interior. The Secretaries of Commerce and Interior have delegated this responsibility to the National Marine Fisheries Service ("NMFS") and the U.S. Fish and

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[39] EPA, Dispersant Monitoring and Assessment Directive – Addendum 2 (May 20, 2010).
[40] Statement by EPA Administrator Lisa P. Jackson from Press Conference on Dispersant Use in the Gulf of Mexico with U.S. Coast Guard Rear Admiral Landry (May 24, 2010).
[41] EPA, Dispersant Monitoring and Assessment Directive – Addendum 3 (May 26, 2010).
[42] *Id.*
[43] 16 U.S.C. § 1531(b).

Wildlife Service ("FWS") respectively.[44] NMFS has responsibility for the sperm whale and other listed whale species, Gulf sturgeon, smalltooth sawfish, and listed coral species. FWS has responsibility fro the piping plover, wood stork, and other listed bird species, as well as terrestrial and freshwater species. NMFS and FWS share responsibility for the five listed sea turtle species that occur in the Gulf: Kemp's ridley, loggerhead, hawksbill, leatherback, and green sea turtles.

Section 2(c) of the ESA establishes that it is "...the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."[45] The ESA defines "conservation" to mean "...the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary."[46] Similarly, Section 7(a)(1) of the ESA directs that the Secretary review "...other programs administered by him and utilize such programs in furtherance of the purposes of the Act."[47]

In order to fulfill the substantive purposes of the ESA, federal agencies are required to engage in Section 7 consultation with FWS or NMFS, depending on the species at issue, to "insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species... determined...to be critical..."[48]

Section 7 consultation is required for "any action [that] may affect listed species or critical habitat."[49] Agency "action" is defined in the ESA's implementing regulations to include "(b) the promulgation of regulations; (c) the granting of licenses, contracts, leases, easements, rights-of-way, permits, or grants-in-aid; or (d) actions directly or indirectly causing modifications to the land, water, or air."[50]

At the completion of consultation, FWS or NMFS will issue a biological opinion that determines if the agency action is likely to jeopardize the species. If so, the opinion may specify reasonable and prudent alternatives that will avoid jeopardy and allow the agency to proceed with the action.[51] FWS or NMFS may also "suggest modifications" to the action during the course of consultation to "avoid the likelihood of adverse effects" to the listed species even when not necessary to avoid jeopardy.[52]

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[44] 50 C.F.R. §402.01(b).
[45] 16 U.S.C. § 1531(c)(1).
[46] 16 U.S.C. § 1532(3).
[47] 16 U.S.C. § 1536(a)(1).
[48] 16 U.S.C. § 1536(a)(2) (Section 7 consultation).
[49] 50 C.F.R. § 402.14.
[50] 50 C.F.R. § 402.02.
[51] 16 U.S.C. § 1536(b).
[52] 50 C.F.R. § 402.13.

An agency's duty to avoid jeopardy is continuing, and "where discretionary Federal involvement or control over the action has been retained or is authorized by law," the agency must in certain circumstances reinitiate formal consultation:

> (a) If the amount or extent of taking specified in the incidental take statement is exceeded;
> (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
> (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or
> (d) If a new species is listed or critical habitat designated that may be affected by the identified action.[53]

Section 7(d) of the ESA, 16 U.S.C. § 1536(d), provides that once a federal agency initiates consultation on an action under the ESA, the agency, as well as any applicant for a federal permit, "shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section." The purpose of Section 7(d) is to maintain the environmental status quo pending the completion of consultation. Section 7(d) prohibitions remain in effect throughout the consultation period and until the federal agency has satisfied its obligations under Section 7(a)(2) that the action will not result in jeopardy to the species or adverse modification of its critical habitat.

EPA's listing of dispersants on the NCP Product Schedule under the Clean Water Act is a federal agency action subject to the ESA Section 7 consultation requirement. Clean Water Act Section 311(d) and its implementing regulations set forth the process and requirement by which EPA selects dispersants for that may be used in oil response activities. Clean Water Act Section 311(d)(2)(G) authorizes EPA to select dispersants for the NCP Product Schedule and to subscribe the location and manner of their use as well as the quantities in which each dispersant may be used.[54] EPA's regulations further specify that, before being placed on the NCP Product Schedule, a dispersant must be demonstrated to achieve a minimum rate of effectiveness, which includes consideration of the product's toxicity.[55] EPA expressly retains discretion to conduct its own, separate analyses of a dispersant's effectiveness and toxicity, as well as to request further information from the manufacturer, to aid its determination whether to place the dispersant on the NCP Product Schedule.[56]

While the use of a particular dispersant is, in theory, subject to further approval through Regional Response Team plans, RRTs and RRT plans rely heavily on EPA's

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[53] 50 C.F.R. § 402.16.
[54] 33 U.S.C. § 1321(d)(2)(G).
[55] 40 C.F.R. 300.915(a)(7)-(8), 300.920(a).
[56] *Id.* at 300.920(a).

determination via listing on the NCP Product Schedule that the dispersant is appropriate, effective, and safe for use in responding to oil spills. None of the dispersants being used in the Gulf of Mexico or elsewhere could lawfully be used without EPA's first listing the product on the NCP Product Schedule. By establishing that a product's use is permissible and establishing guidelines for its use, EPA has undertaken an agency action subject to ESA Section 7 obligations. Yet EPA has failed entirely to comply with those obligations.

2. Consultation Duties and Requirements during Oil Spill Response Actions

The procedures by which EPA and the Coast Guard are to consult with expert wildlife agencies regarding oil spill effects are outlined in the 2001 Interagency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act's National Oil and Hazardous Substances Pollution Contingency Plan and the ESA ("MOA").[57] The MOA authorizes emergency ESA consultations pursuant to 40 C.F.R. § 402.05 for spill response activities.[58] When listed species or critical habitat are or could be present in the area affected by the spill, the Federal On Scene Coordinator ("FOSC") designated under the NCP must initiate emergency ESA consultation by contacting the FWS and NMFS ("Services"). The NOAA Regional Response Coordinator ("RRC") and Scientific Support Coordinator ("SSC") are tasked with coordinating species expertise, which may involve participation by Service staff from local field offices as well as Service participation in the FOSC Incident Command System.[59]

During the course of emergency consultation, the Services must provide and collect certain information. The Services must provide the FOSC with species expertise as well as timely recommendations for avoiding or minimizing impacts to listed species and their critical habitat. The Services must also advise the FOSC if incidental take is anticipated but no means of reducing or avoiding such take are apparent. Any such incidental take must be documented.[60] The Services must also notify the FOSC of circumstances such as seasonal migration or other natural occurrences affecting the resources. In turn, the FOSC must keep the Services apprised of changes in response actions due weather, extended operations, or other factors.[61]

In addition, the FOSC and the Services must maintain a record of written and oral communications during the spill response and specific information required to initiate formal consultation in cases where listed species or critical habitat have been adversely affected by response activities.[62] Information required for formal consultation includes, among other things,

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[57] U.S. Coast Guard, U.S. EPA, FWS, NMFS, National Ocean Service, and Department of the Interior, Interagency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act's National Oil and Hazardous Substances Pollution Contingency Plan and the Endangered Species Act (2001) ("MOA").
[58] *Id.* at 7; *see also* 50 C.F.R. 402.05.
[59] MOA at 7.
[60] *Id.* at 8.
[61] *Id.*
[62] *Id.*

a description of the oil spill response, "evaluation of emergency response actions and their impacts on listed species and their habitats, including documentation of how the Services' recommendations were implemented, and the results of implementation in minimizing take."[63] All such information should be collected by the time the emergency response actions are complete.[64]

When response actions are complete and have adversely affected a listed species or critical habitat, formal Section 7 consultation must be initiated. Informal emergency consultation must remain active until the response action is complete and the case is closed in accordance with 40 C.F.R. 300.320(b).[65]

D. Impacts of Dispersants on Listed Species

1. Endangered and Threatened Species in the Gulf of Mexico and Florida

The Gulf of Mexico is home to numerous threatened and endangered species of marine mammals, sea turtles, seabirds, and fish. Endangered whales in the Gulf include sperm whale (*Physeter macrocephalus*), blue whale (*Balaenoptera musculus*), fin whale (*B. physalus*), sei whale (*B. borealis*), and humpback whale (*Megaptera novaeangliae*). In addition, the West Indian manatee (*Trichechus manatus*) frequents shallow coastal waters of the Gulf. Five of the world's seven sea turtles species occur in the Gulf of Mexico; all are protected under the ESA. The Kemp's ridley (*Lepidochelys kempii*), hawksbill (*Eretmochelys imbricata*), and leatherback (*Dermochelys coriacea*) are listed as endangered. Green sea turtles (*Chelonia mydas*) are listed as endangered in Florida and threatened elsewhere. Loggerheads (*Caretta caretta*) are currently listed as threatened but NMFS and FWS have proposed to change the status of the Northwest Atlantic distinct population segment, which is the one affected by the Deepwater Horizon spill, to endangered.[66] Protected fish species include the Gulf sturgeon (*Acipenser oxyrinchus desotoi*) and smalltooth sawfish (*Pristis pectinata*).

A number of ESA-listed coastal birds may also be affected by dispersants directly or indirectly. These include piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), and wood stork (*Mycteria americana*).

Protected elkhorn *(Acropora palmata)* and staghorn corals *(A. cervicornis)*, which occur in the Florida Keys, are also at risk as dispersed oil droplets and dispersants become entrained in the Loop Current and carried through the Florida Strait.

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[63] *Id.* at App. B.
[64] *Id.* at 8.
[65] *Id.* at 9.
[66] 75 Fed. Reg. 12598 (March 16, 2010).

Several of these species, including elkhorn and staghorn coral and smalltooth sawfish, were listed after EPA and the Coast Guard completed and approved the Region 4 Policy and Region 6 Guidelines.[67] In addition, critical habitat was designated for the Gulf sturgeon, smalltooth sawfish, and elkhorn and staghorn coral after these plans were approved.[68] To our knowledge, neither EPA nor the Coast Guard ever reinitiated Section 7 consultation on either of these Policies or Guidelines in response to these new listings and designations. Moreover, to our knowledge EPA did not engage in or complete Section 7 consultation regarding the effects of re-listing Corexit 9500A or 9527A or any other dispersant when it updated the NCP Product Schedule in May 2010.

2. Likely Effects of Dispersants on Wildlife and Habitat

Dispersants and dispersed oil have been shown to have significant negative impacts on many forms of marine life, including plankton, fish, corals, and birds. Dispersants release toxic break-down products from oil that, alone or in combination with oil droplets and dispersant chemicals, can make dispersed oil more harmful to marine life than untreated oil. Both the short-term and long-term impacts of dispersants on marine life have not been adequately tested. As acknowledged by the EPA, the "long term effects [of dispersants] on aquatic life are unknown."

Species in the Gulf can be affected by dispersants through a number of pathways. For example, humpback, fin, blue, and sei whales feed by skimming plankton, small fish, and squid from the surface. This feeding mechanism puts them at risk of ingesting dispersants and dispersed oil, as well as food contaminated with these chemicals. In addition, both whales and sea turtles must surface to breathe, and in doing so can breathe in fumes from or ingest dispersants and dispersed oil. According to the Minerals Management Service, dispersant components absorbed by sea turtles can affect their organs and interfere with digestion, excretion, and respiration.[69]

Birds diving into the water to feed may be exposed through direct contact with dispersants and dispersed oil as well as through contaminated prey. Studies have found that dispersed oil, including oil dispersed by Corexit 9527, damages the insulating properties of seabird feathers more than untreated oil, making the birds more susceptible to hypothermia and death.[70] Dispersants and dispersed oil have also been shown to have toxic effects on bird eggs

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[67] 68 Fed. Reg. 15674 (April 1, 2003) (listing smalltooth sawfish under ESA); 71 Fed. Reg. 26852 (May 4, 2006) (listing elkhorn and staghorn coral).

[68] 68 Fed. Reg. 13370 (March 19, 2003) (Gulf sturgeon critical habitat designation); 73 Fed. Reg. 72210 (Nov. 26, 2008) (staghorn and elkhorn coral critical habitat designation); 74 Fed. Reg. 45353 (Sept. 2, 2009) (smalltooth sawfish critical habitat designation).

[69] Minerals Management Service, Final Environmental Impact Statement: Gulf of Mexico Oil and Gas Lease Sales: 2007-2012 (April 2007) ("MMS FEIS") at 4-282.

[70] Jenssen, B.M., Review Article: Effects of Oil Pollution, Chemically Treated Oil, and Cleaning on the Thermal Balance of Birds, *Environmental Pollution*, 86: 207-15 (1994).

that are similar or worse than from untreated oil.[71] Birds exposed to dispersed oil that return to their nests risk contaminating their eggs, which can lead to the death of those eggs.[72]

Dispersants and dispersed oil in the water column are of at least equal concern, particularly given the unprecedented use of large volumes of dispersants in very deep water. Sea turtles, whales, and fish may all be exposed to dispersants and dispersed oil as the swim and feed in the water column. While the effects of such exposure are not well known for whales and sea turtles, studies have shown that dispersants create a toxic environment for fish by releasing harmful oil break-down products into the water. Dispersed oil has been shown to be toxic to fish at all life stages, from eggs to larval fish to adults, according to numerous laboratory studies that have tested a variety of species.[73]

Should dispersants and dispersed oil reach the Florida Keys, they could wreak havoc on sessile staghorn and elkhorn corals. Dispersants and dispersed oil are particularly toxic to corals, leading scientists to call for a ban on dispersant use near coral reefs. Dispersants and dispersed oil harm the early stages of corals by increasing death rates, reducing settlement on reefs, and altering behavior.[74] A formulation of one of the dispersants being used in the BP spill response, Corexit 9527, has been shown to prevent fertilization of mature eggs and hinder the development of young life stages of reef-building corals.[75]

Moreover, the extensive use of dispersants the EPA has permitted appears to have resulted in the formation of massive deepwater oil plumes extending as far as twenty miles from the leak.[76] Species that frequent and feed in deep water, like the pod of sperm whales residing in this area of the Gulf, could suffer serious adverse impacts from this deep water contamination. Sperm whales are likely being exposed to significant levels of toxins by swimming through these dispersed oil plumes and through feeding on tainted squid and other prey. Furthermore, the effects of these plumes are unlikely to remain isolated to deep water habitats.

Indeed, the enormous volumes of dispersants and dispersed oil now circulating in the Gulf of Mexico have the potential to harm the entire ecosystem from the bottom up. Reports on monitoring data have indicated that the use of the Corexit dispersants killed up to 25% of all

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[71] MMS FEIS at 2-17.

[72] Albers, P.H., Effects of Corexit 9527 on the Hatchability of Mallard Eggs, *Bull. Environm. Contam. Toxicol.*, 23: 661-68 (1979).

[73] Khan, R.A. and J.F. Payne, Influence of a Crude Oil Dispersant, Corexit 9527, and Dispersed Oil on Capelin (*Mallotus villosus*), Atlantic Cod (*Gadus morhua*), Longhorn Sculpin (*Myoxocephalus octodecemspinosus*) and Cunner (*Tautogolabrus adspersus*), *Bull. Environm. Contam. Toxicol.* 75: 50-56 (2005); Anderson, B.S. *et al.*, Preliminary investigation of the effects of dispersed Prudhoe Bay Crude Oil on developing topsmelt embryos, *Atherinops affinis*, *Environmental Pollution*, 157: 1058-61 (2009).

[74] Shafir, S., J. Van Rijn, and B. Rinkevich, Short and Long Term Toxicity of Crude Oil and Oil Dispersants on Two Representative Coral Species, *Environ. Sci. Technol.* 41: 5571-74 (2007).

[75] Venn, A.A., J. Quinn, R. Jones, and A. Bodnar, P-glycoprotein (multi-xenobiotic resistance) and heat shock protein gene expression in the reef coral *Monastraea franksi* in response to environmental toxicants, *Aquatic Toxicology* 93: 188-95 (2009).

[76] Eilperin, J., D. Fahrenthold, and A. MacGillis, "Oil spreading much farther than thought; Obama returns to Gulf Coast," *Washington Post* (May 29, 2010).

organisms living 500 feet below the surface in areas where the dispersant was used.[77] Significant reductions in dissolved oxygen have been reported in the vicinity of underwater dispersed oil plumes. These phenomena are likely to lead to severe reductions in plankton, fish, and other prey species upon which listed species – and their ecosystems – depend. These effects are occurring on top of the ecological crisis of the summertime "dead zone" formation in the Gulf – the annual formation of a large area of oxygen-poor ocean that can barely support life. Species that normally move to deeper water farther from shore in order to escape the dead zone will now be moving into plumes of dispersant and dispersed oil. There can be no doubt that EPA's and the Coast Guard's authorization of dispersant use is having and will continue to have significant adverse effects of threatened and endangered species and their critical habitat.

II. VIOLATIONS OF LAW

A. Failure to Insure Against Jeopardy to Listed Species

As demonstrated above, EPA and the Coast Guard have violated their procedural and substantive obligations under ESA Section 7 to ensure that their actions are not likely to jeopardize listed species or destroy or adversely modify their critical habitat. First, EPA has listed dispersants on the NCP Product Schedule, including Corexit 9500A and 9527A, that "may affect" listed species without engaging in Section 7 consultation regarding the effects of listing these products for use in oil spill response. None of the dispersants on the NCP Product Schedule, including Corexit 9500A and 9527A, could be lawfully used in the United States absent listing by the EPA. EPA's listing of dispersants constitutes "agency action" under the ESA, and since such action, at a minimum, "may affect" listed species and their critical habitat, EPA is required by Section 7 of the ESA to ensure through consultation that listing of these dispersants does not jeopardize the continued existence of listed species or destruction or modification of their critical habitat. EPA has utterly failed to comply with this procedural and substantive mandate.[78]

Second, EPA and the Coast Guard, in their role as members and overseers of the RRTs, failed to comply with their Section 7 duties regarding the effects of authorizing dispersant use, including the use of Corexit 9500A and 9527A, through the Region 4 Policy and Region 6 Guidelines. As EPA and the Coast Guard recognized when preparing the BAs that accompanied these plans, the Region 4 Policy and Region 6 Guidelines are agency actions subject to Section 7 consultation. The duty to consult regarding the effects of these authorizations and ensure that they are not likely to result in jeopardy or adverse modification is ongoing. Therefore, even if the "no adverse effect" findings of the outdated BAs were valid at the time they were made,

---

[77] Farren, L. and B. Blackburn, May 21, 2010, "EPA May Not Force BP to Change Dispersants," ABC World News, avail. at http://abcnews.go.com/WN/epa-bp-dispersants/story?id=10711367.

[78] Clearly, ESA-listed species in the Gulf of Mexico and Florida face the most immediate consequences of EPA's failure to comply with its Section 7 consultation duties. However, both the consequences of listing dispersants on the NCP Product Schedule and EPA's related duties under Section 7 to ensure that these listings do not cause jeopardy or adverse modification extend to all ESA-listed coastal and marine species that occur in areas that may be affected by U.S.-authorized dispersant use.

intervening circumstances render these findings completely inapplicable now. Specifically, the listing of new species, designation of new critical habitat areas, and the unprecedented, never before considered manner and volume of dispersant application currently occurring in the Gulf of Mexico clearly trigger the duty to reinitiate consultation on the Region 4 Policy and Region 6 Guidelines. EPA and the Coast Guard must therefore reinitiate consultation and obtain a new biological opinion in order to comply with their duties to ensure that their actions are not likely to cause jeopardy or adverse modification.

Finally, EPA's and the Coast Guard's case-specific decision to allow the use of dispersants, including Corexit 9500A and 9527A, in a novel and wholly untested manner to disperse oil leaking from the BP Deepwater Horizon rig also violates the agencies' duties under ESA Section 7(a)(2). The agencies have continued to authorize the use of products known to be toxic to the marine environment in a manner never before contemplated in any environmental analysis. The agencies have allowed this to happen despite evidence that excessive dispersant use is causing serious adverse effects, including oxygen depletion and the formation of massive subsea plumes of dispersed oil. These authorizations, like the others, violate EPA's and the Coast Guard's duty to ensure against jeopardy and adverse modification, using the best available scientific information.

In order to correct these violations, EPA must undertake consultation regarding the listing of Corexit 9500A, 9527A, and other dispersants on the NCP Product Schedule, and EPA and the Coast Guard must reinitiate consultation regarding their authorization of dispersant use via the Region 4 Policy and Region 6 Guidelines. Finally the agencies must engage in rigorous monitoring, data collection, and analysis of the effects of dispersants already injected into the Gulf ecosystem. This undertaking must include gathering and releasing to the public sufficient information to demonstrate that jeopardy to listed species or destruction or adverse modification of critical habitat are not likely to occur. Thus far, public statements made by these agencies, as well as the Services, indicate that none of the agencies has such information, much less any confidence that dispersant use is not causing jeopardy or adverse modification.

C. Violation of Conservation Obligations

Section 2(c) of the ESA establishes that it is "...the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." 16 U.S.C. § 1531(c)(1). The ESA defines "conservation" to mean "...the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." 16 U.S.C. § 1532(3). Similarly, Section 7(a)(1) of the ESA directs that the Secretary review "...other programs administered by him and utilize such programs in furtherance of the purposes of the Act." 16 U.S.C. § 1536(a)(1). The Supreme Court stated in *TVA v. Hill* that these provisions of the ESA create a "stringent mandatory language [that] reveals an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species." *TVA v. Hill*, 437 U.S. 153, 183 and 185 (1978). EPA has failed to satisfy this duty by

failing to use its authorities to regulate dispersant use in the Gulf of Mexico so as to avoid the adverse impacts of dispersants on the Gulf of Mexico ecosystem, threatened and endangered species that occur therein, and their critical habitat.

III. CONCLUSION

In sum, EPA and the Coast Guard have failed to comply with their ESA Section 7 duties to protect listed species and their habitats at virtually every step of the process. EPA's listing of Corexit 9500A, Corexit 9527A, and other dispersants without completing consultation on the impacts of their use on multiple threatened and endangered species constitute ongoing violations of Section 7 of the ESA. Similarly, EPA's and the Coast Guard's authorization of dispersant use via the Region 4 Policy and Region 6 Guidelines, as well as their current, case-specific authorization of dispersant use in response to the BP Deepwater Horizon disaster, constitute plain and continuing violations of ESA Section 7. If EPA and the Coast Guard do not act within 60 days to correct the violations described in this letter, the Center will pursue litigation against your agencies in Federal Court and seek declaratory and injunctive relief. An appropriate remedy that would prevent litigation would be for the EPA to initiate formal consultation regarding the effects of the dispersants it has listed and continues to list on the NCP Product Schedule on threatened and endangered species, particularly in the Gulf of Mexico, and for EPA and the Coast Guard to reinitiate formal consultation under ESA Section 7 regarding the effects of these dispersants on threatened and endangered species, particularly in the Gulf of Mexico, including analyzing the effects of using large quantities of the dispersants and deploying the dispersants at significant depths below the surface.

If you have any questions, wish to meet to discuss this matter, or feel this notice is in error, please contact me at 415-436-9682 x306. Thank you for your concern.

Sincerely,

Andrea A. Treece
Senior Attorney, Oceans Program

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

June 7, 2010

Dear Admiral Watson:

In compliance with the May 26, 2010, Dispersant Monitoring and Assessment Directive - Addendum 3 (the "Directive"), BP Exploration & Production Inc. ("BP") has eliminated the surface application of dispersants, except in cases where an exemption is requested and justified, and approved by the Federal On-Scene Coordinator.

BP has seven (7) spotter visual reports from 6 June of multiple slicks of dispersible oil (Attachment 1) and the NOAA Surface Oil Forecast for 7 June shows extensive areas of heavy and medium oil (Attachment 2). Weather forecast indicates excellent flying weather with winds of 5-8 knots, ceilings unlimited and visibility 10nm.

BP anticipates that, due to the weather, location, distribution (5,400 sqmi) and size of the multiple oil slicks identified (58 sqmi), the use of mechanical recovery and ISB to recover or remove the oil in the target area will be insufficient to remove the spill volume on June 7, 2010. Prior to spray operations the spotter aircraft will identify the highest value targeted slicks and will direct spray aircraft to the heaviest portions of the slick.

Accordingly, in accordance with the Directive, BP respectfully requests in accordance with the Huoma Unified Command request an exemption to apply EC9500A in volumes on the highest priority oil slicks shown in Table 1 not to exceed 32,000 gallons for a period not to exceed 12 hours.

Sincerely,

Doug Suttles

Exemption approved subject to the above:

_____ Date: _____

James A. Watson
Rear Admiral, USCG
Federal On-Scene Coordinator

Attachment 1

Dispersant Zone Map for 7 June 2010 with Oil Targets

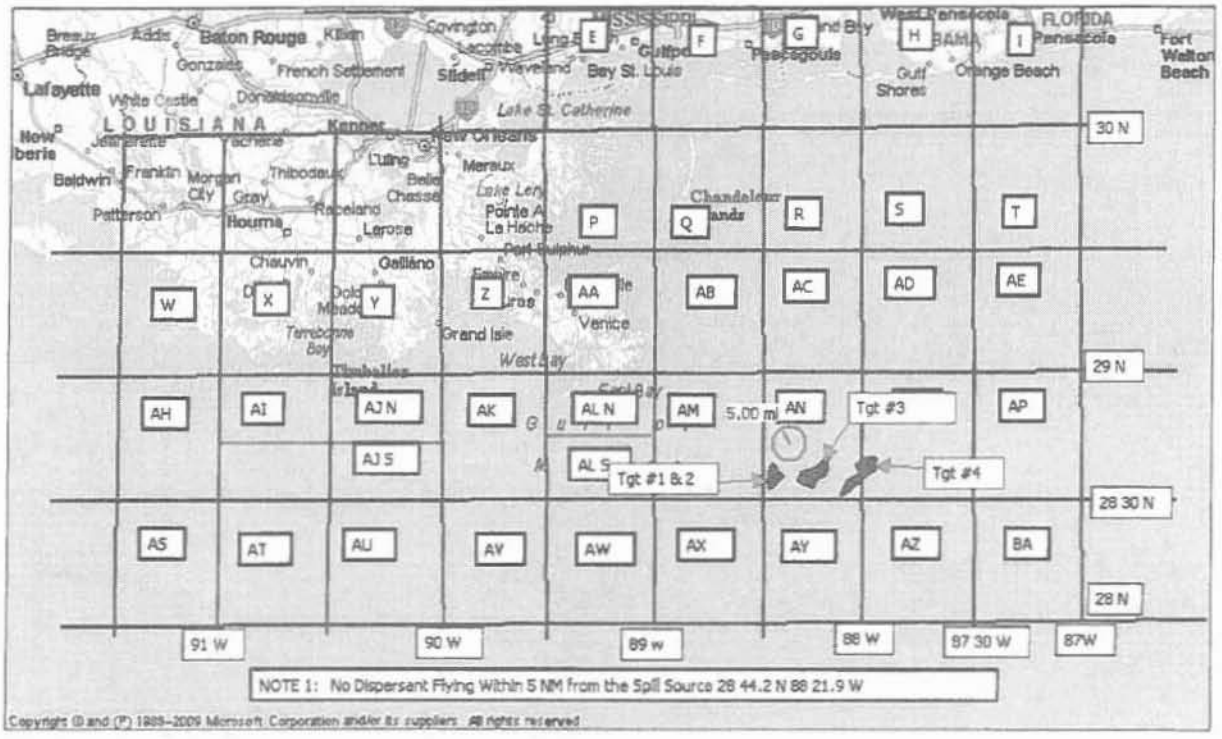


TABLE 1

DISPERSIBLE OIL REPORT
(June 6, 2010)

	Targeted Oil Slick	Area (sqmi)	Dispersant Needed (1/20 DOR)	Aircraft
Priority 1	1	0.625	2,000	1 - C130
Priority 2	2	10	16,000	1 – C130 & BT-67
Priority 3	3	22	39,000	2 – C130 & BT-67
Priority 4	4	26	47,000	All Spray aircraft
Total		58.625	104,000	

Attachment 2

Nearshore Surface Oil Forecast Deepwater Horizon MC252

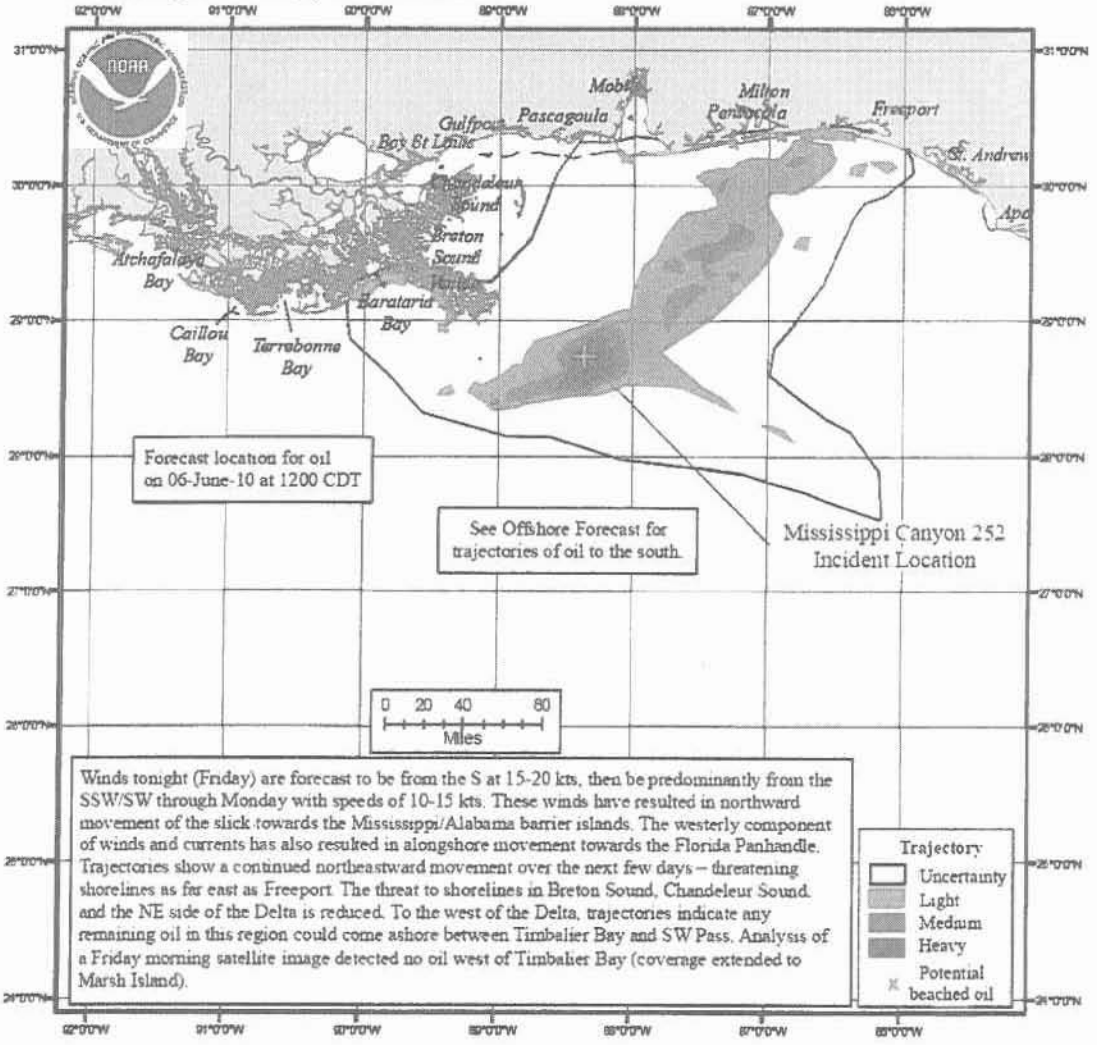
NOAA/NOS/OR&R

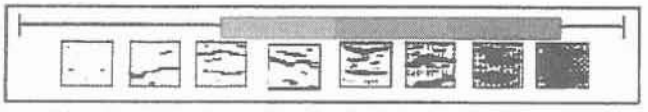
Nearshore

Estimate for: 1200 CDT, Sunday, 6/06/10
Date Prepared: 2100 CDT, Friday, 6/04/10

Nearshore Surface Oil Forecast for 6-7-10 was unavailable.

This forecast is based on the NWS spot forecast from Friday, June 4 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, NAVO/NRL) and HFR measurements. The model was initialized from Thursday satellite imagery analysis (NOAA/NESDIS) and Friday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.





Next Forecast: June 5th PM

this scale bar shows the meaning of the distribution terms at the current time

U.S Department of
Homeland Security

United States
Coast Guard

Commander
United States Coast Guard
Eighth District

Hale Boggs
Federal Building
500 Poydras St
New Orleans, LA 70130
Phone: [redacted]
Fax: (504) 589-2077

MEMORANDUM

From: MARY E. LANDRY, RADM, USCG
Federal On-Scene Coordinator

To: E.M. STANTON, CAPT, USCG
On-Scene Coordinator Representative

Subj: DELEGATION OF AUTHORITY TO APPROVE REQUESTS AND AUTHORIZE FUNDING FOR ASSISTANCE ASSIGNMENT 10-001 (BP- OIL SPILL)

1. Effective date. This delegation is effective 1 May 2010.

2. Delegation. Pursuant to the authority vested in me under 40 CFR 300.135, authority is hereby delegated to E.M. Stanton, CAPT, USCG, to request the assistance of the Louisiana National Guard, and to authorize reimbursement for the Louisiana National Guard's costs in providing assistance to the spill which are reasonably necessary for and incidental to the implementation, administration, and enforcement of the Oil Pollution Act.

#

ORIGINAL

USCG Legal Service Command
(OPFAC: 69-33601)

DAILY FOIA REPORT for 28 January 2011

Date Rec'd	Date of Letter	Unit File #	Requestor's Name & Organization	Address/Email Address	Description of Records Sought
1/6/2011	1/6/2011		Mary Ryan Gordon, Muir and Foley, LLP	Ten Columbus Boulevard Hartford, CT 06106	Correspondence, Notices, Payment Documentation, Performance Rating

ZULLER & BONDY, LLP

ATTORNEYS AT LAW
42 WEST 38th STREET
NEW YORK, N Y 10018

THOMAS L BONDY, P.C.
MICHAEL E ZULLER, P.C.

OF COUNSEL
PHILIP J HOFFMAN
STEVEN L ROSENBERG
MICHELE J BELCZYNSKI

(212) 279-8833
FAX (212) 279-2633

November 15, 2010

Never received 1st request - Telephone notified - 1/20/11

Unites States Coast Guard
Sector New York
212 Coast Guard Drive
Staten Island, NY 10305
Att: Antoinette Ruberti

SECOND REQUEST- 1/14/11

Re: Ann-Marie Schwartz
Our file C308
Acc: 10/10/10

Dear Sir/Madam,

We are the attorneys representing Ann-Marie Schwartz in a personal injury claim stemming from a ferry boat accident occurring on October 10, 2010 at the 38th Street Pier in Manhattan. Our client was traveling to Manhattan from Weehawken, NJ on a NY Waterway vessel. Under Freedom of Information Laws we request copies of any accident or incident reports prepared by the Coast Guard or other US agency relative to the imperfect docking of this boat. We shall remit copying costs when advised the amount owed.

Thank you most sincerely for any prompt attention you might devote to this request.

Very truly yours,

Michael E. Zuller

U.S. Department of Homeland Security
United States Coast Guard

Commander
United States Coast Guard
Sector New York

212 Coast Guard Drive
Staten Island, NY 10305
Staff Symbol: Prevention
Phone: (718) 354-4200
Fax: (718) 354-3905

5720
11-013
January 18, 2011

Zuller & Bondy, LLP
Attorneys at Law
42 West 38th Street
New York, NY 10018
Att: Michael E. Zuller

Dear Mr. Zuller:

This acknowledges receipt of your Freedom of Information Act (FOIA) request to the U.S. Coast Guard (USCG), dated January 14, 2011 requesting copies of any accident or incident reports prepared by the Coast Guard or other US agency relative to the imperfect docking of a NY Waterway vessel.

After careful review of your FOIA request, we determined that your request is too broad in or did not specifically identify the records which you are seeking. Records must be described in reasonably sufficient detail to enable government employees who are familiar with the subject area to locate records without placing an unreasonable burden upon the agency. For this reason, §5.3(b) of the DHS regulations, 6 C.F.R. Part 5, require that you describe the records you are seeking with as much information as possible to ensure that our search can locate them with a reasonable amount of effort. Whenever possible, a request should include specific information about each record sought, such as the date, title or name, author, recipients, and subject matter of the records, if known, or the USCG unit or office you believe created and/or controls the record. The FOIA does not require an agency to create new records, answer questions posed by requesters, or attempt to interpret a request that does not identify specific records.

Please resubmit your request containing a reasonable description of the records you are seeking. If we do not hear from you within 10 days from the date of this letter, we will assume you are no longer interested in this FOIA request, and the case will be administratively closed.

This is not a denial of your request. Upon receipt of a perfected request, you will be advised as to the status of your request.

Your request has been assigned reference number 11-013. Please refer to this identifier in future correspondence.

Sincerely,

Antoinette Ruberti

Antoinette Ruberti
Freedom of Information/Privacy Act Officer
By direction of the Commander

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 10 June, 2010
Update: 0900 11 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>
- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>>
- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>>
- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>>
- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>
- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>

Status of RV Brooks McCall:
- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:
- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions
- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>

Status of RV Brooks McCall:

- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:

- Left station evening 05/29; at port 05/30
- >>>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
- Rate: 10 gpm
- Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
- Disruptions: No disruptions reported.
- >>
- The following represents a brief synopsis of vessel sampling activity:
- The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>
>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>
- The following represents a brief synopsis of vessel sampling activity:
- The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
- >>>
- Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
  Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
- Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
- The Ocean-Veritas remains O/S this reporting period.
- >>>>>>>>>>>>>>>>>>>>>>>>>>>>
- Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
  Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
- Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
- >>>
- The Ocean-Veritas remains O/S today (Friday 04 June).
- >>
- Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
- Sub-Sea Dispersant Injection continues
- On 6/4/10 Injection rate 9 – 14 gallons per minute
- Injection disrupted 2 times for SIMOPS
- (0 hours and 55 minutes not injected)
- Volume: 13,931 gallons this period
- (TOTAL Cumulative: 270,668 gallons)
- >>
- The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
- The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE On Station to resume sub-sea sampling.
- >>
- Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
- Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
  Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
- >>
  Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:
- Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
  Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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  Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
- Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
  Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
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- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.

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- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
- Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
- Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
- NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.

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- The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
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- Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
- Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
- Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
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- The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
- >>>
  Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
  Injection rate: Average not provided.
  Injection disrupted 1 time for a total of 10 min
- Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
- Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
- >>>
- The Ocean Veratas departed station pm of 10 June for Port Fourchon.
- The Brooks McCall is on-station since am of 11 June conducting required sampling.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 10 June, 2010
Update: 0900 11 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
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- 7222 gallons COREXIT 9500 pumped this time period.

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- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>>
- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>>
- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>>
- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>>
- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>
Status of RV BROOKS McCALL:
Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.
>>
- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
>>
- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
>>>
- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>
Status of RV Brooks McCall:
- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:
- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions
- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:

- Left station evening 05/29; at port 05/30
- >>>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
- Rate: 10 gpm
- Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
- Disruptions: No disruptions reported.
- >>>
- The following represents a brief synopsis of vessel sampling activity:
- The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>
>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>
- The following represents a brief synopsis of vessel sampling activity:
- The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
- >>
- Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
  Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
- Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
- The Ocean-Veritas remains O/S this reporting period.
- >>>>>>>>>>>>>>>>>>>>>>>>>>>
- Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
  Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
- Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
- >>>
- The Ocean-Veritas remains O/S today (Friday 04 June).
- >>
- Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
- Sub-Sea Dispersant Injection continues
- On 6/4/10 Injection rate 9 – 14 gallons per minute
- Injection disrupted 2 times for SIMOPS
- (0 hours and 55 minutes not injected)
- Volume: 13,931 gallons this period
- (TOTAL Cumulative: 270,668 gallons)
- >>
- The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
- The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE On Station to resume sub-sea sampling.
- >>
- Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
- Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
  Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
- >>>
  Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:
- Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
  Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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  Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
- Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
  Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
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- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
- Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
- Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
- NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.

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- The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
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- Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
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- Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
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  Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
  Injection rate: Average not provided.
  Injection disrupted 1 time for a total of 10 min
- Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
- Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

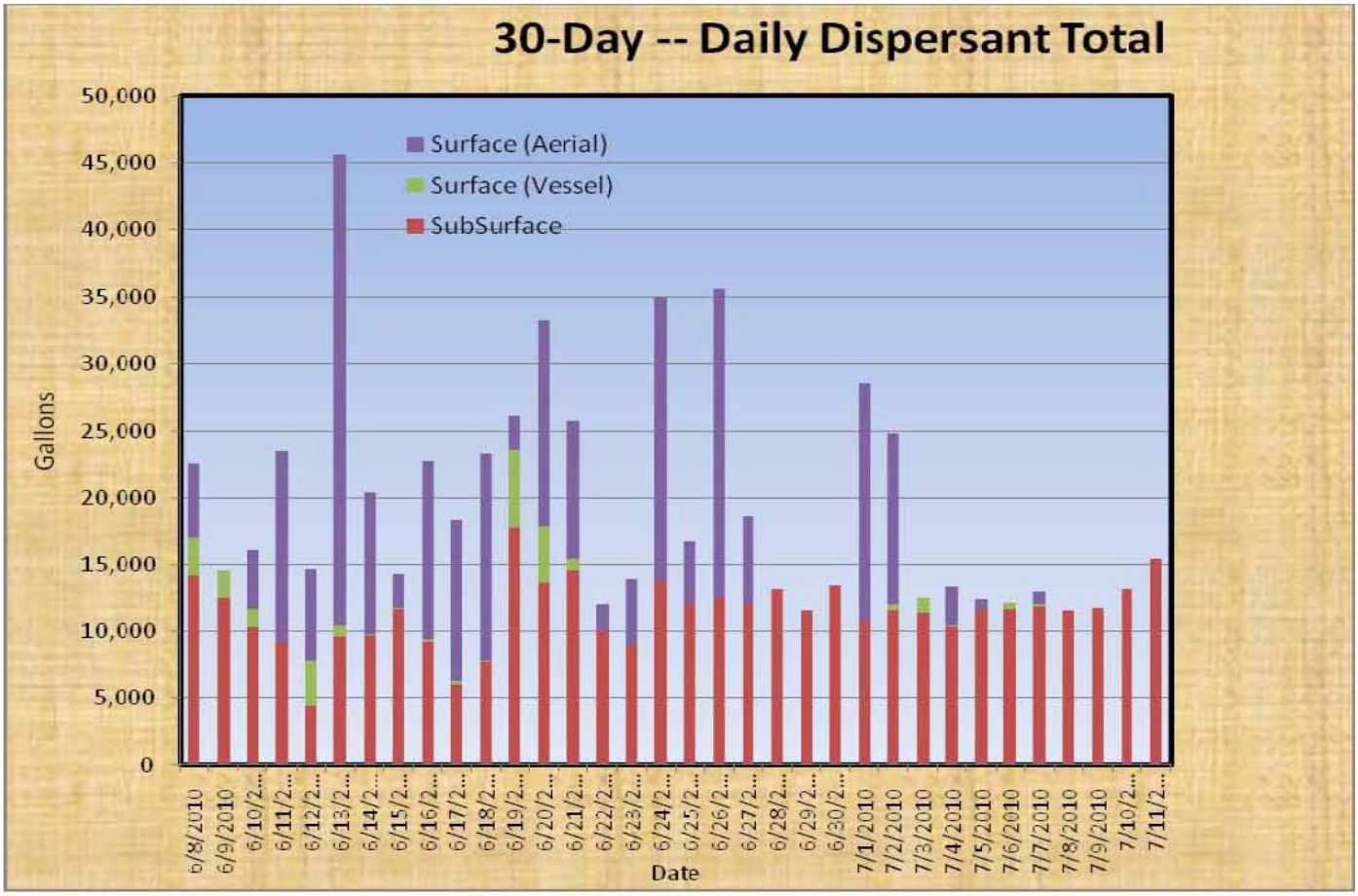
Date: 07/11/2010

Reporting Period: 15 MAY – 11 JULY, 2010

Update: 0900 12 July 2010

1. Current Activities

- Sunday 11 July update: period from 0000 hrsL on 07/11/10 to 2400 hrsL on 07/11/10:
- Injection rate average: approximately 12 gpm **(estimate by calculation is 10.7 gallons/minute).**
- Flow disrupted for: several short disruptions during the period due to capping operations.
- Period Volume: 15,420 gallons (Total Cumulative: 721,100 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:

- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>

- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:

- Left station evening 05/29; at port 05/30
- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY

Rate: 10 gpm
Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
Disruptions: No disruptions reported.

>>

The following represents a brief synopsis of vessel sampling activity:
The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application

Rate: 10 gpm
Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.

>>

The following represents a brief synopsis of vessel sampling activity:
The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.

>>>

Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
The Ocean-Veritas remains O/S this reporting period.

>>>>>>>>>>>>>>>>>>>>>>

Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
Volume: 10,241 gallons (Total Cumulative 256,216 gallons)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

The Ocean-Veritas remains O/S today (Friday 04 June).

>>

Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
Sub-Sea Dispersant Injection continues
On 6/4/10 Injection rate 9 – 14 gallons per minute
Injection disrupted 2 times for SIMOPS
(0 hours and 55 minutes not injected)
Volume: 13,931 gallons this period
(TOTAL Cumulative: 270,668 gallons)

>>

The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE 0n Station to resume sub-sea sampling.

>>

Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.

>>

Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>
Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
>>
The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.
>>
- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
>>>
The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>
Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
>>>
The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
>>>
Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
Injection rate: Average not provided.
Injection disrupted 1 time for a total of 10 min
Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
>>>
The Ocean Veratas departed station pm of 10 June for Port Fourchon.
The Brooks McCall is on-station since am of 11 June conducting required sampling.
>>>
Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
>>>
Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:
Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins
Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.
>>>
Sunday 13 June Update for: Period from 2200 hrs on 6/11/10 to 2200 hrs on 6/12/10: Injection rate: Average not provided. Injection disrupted numerous times for a total of 12:50 hrs/mins Volume: 4371 gallons (Total Cumulative 382,872 gallons) The Brooks McCall will remain on station thru pm today (Sunday 13 June) for required sampling. The Ocean Veratas is expected on station am 14 June.

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>
Monday 14 June update for: period from 2200 hrs on 6/12/10 to 2200 hrs on 6/13/10: Injection rate: Average not provided. Volume: 9,596 gallons (Total Cumulative 392,468 gallons)
The Ocean Veratas reported ETA for on- station is early am of 14 June to perform required sampling. The Brooks McCall departed station evening of Sunday 13 June for Port Fourchon.
>>>
Tuesday 15 June update: period from 2200hrsL on 6/13/10 to 2200hrsL on 6/14/10:
Injection rate average not provided. Period Volume: Subsea dispersant injected 9,689 gal,
Total Cumulative: 402,157 gals applied to date via sub-sea injection of dispersant.
The Ocean Veratas remains on-station for required sampling.
>>>
Wednesday 16 June update: period from 2200hrsL on 6/14/10 to 2200hrsL on 6/15/10:
Injection rate average not provided. Injection disrupted 1 time for a total of 44 min. Period Volume: 11, 578 gallons (Total Cumulative 413,922 gallons). The Ocean Veratas remains on station for required sampling.
>>>
Thursday 17 June update: period from 2200hrsL on 6/15/10 to 2200hrsL on 6/16/10:
Injection rate average not provided. Number and time period of injection disruptions also not provided this reporting interval. Period Volume: 9152 gallons (Total Cumulative 423,074 gallons). The Brooks McCall is on station starting am 17 June for required sampling. The Ocean Veratas departed station pm of 16 June.
>>>

- Friday 18 June update: period from 2200hrsL on 6/16/10 to 2200hrsL on 6/17/10:
- Injection rate average not provided
- Flow disrupted for 1:06 hrs/min to change flow meter
- Period Volume: 5,962 gallons (Total Cumulative 429,036 gallons).

The Brooks McCall is on station starting am 17 June for required sampling.
>>>

- Saturday 19 June update: period from 2200hrsL on 6/17/10 to 2200hrsL on 6/18/10:
- Injection rate average not provided **(estimate by calculation is 5.78 gallons/minute)**
- Flow disrupted for 2:20 hrs/min
- Period Volume: 7,642 gallons (Total Cumulative 436,600 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.

>>>

- Saturday 19 June update: period from 2200hrsL on 6/18/10 to 2200hrsL on 6/19/10:
- Injection rate average not provided **(estimate by calculation is 12.6 gallons/minute)**
- Flow disrupted for :33 hrs/min
- Period Volume: 17,780 gallons (Total Cumulative 454,440 gallons). Cumulative was adjusted up 60 gals.
- The Brooks McCall left station on 19 June, arrive at port 20 June. The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Sunday 20 June update: period from 2200hrsL on 6/19/10 to 2200hrsL on 6/20/10:
- Injection rate average not provided **(estimate by calculation is 9.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,695 gallons (Total Cumulative 468,135 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>

- Monday 21 June update: period from 2200hrsL on 6/20/10 to 2200hrsL on 6/21/10:
- Injection rate average not provided **(estimate by calculation is 10.1 gallons/minute)**
- Flow disrupted for: none

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>

- Tuesday 22 June update: period from 2200hrsL on 6/21/10 to 2200hrsL on 6/22/10:
- Injection rate average not provided **(estimate by calculation is 7.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,046 gallons (Total Cumulative 492,764 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Wednesday 23 June update: period from 2200hrsL on 6/22/10 to 2200hrsL on 6/23/10:
- Injection rate average not provided **(estimate by calculation is 6.2 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 8,886 gallons (Total Cumulative 501,650 gallons).
- The Brooks McCall left port on 6/22; arrived on station to start sampling on 6/23

>>

- Thursday 24 June update: period from 2200hrsL on 6/23/10 to 2200hrsL on 6/24/10:
- Injection rate average not provided **(estimate by calculation is 9.6 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,808 gallons (Total Cumulative 515,458 gallons).
- The Brooks McCall left port on 6/22; arrived on station to start sampling on 6/23

>>

- Friday 25 June update: period from 2200hrsL on 6/24/10 to 2200hrsL on 6/25/10:
- Injection rate average not provided **(estimate by calculation is 8.4 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 12,085 gallons (Total Cumulative 527,543 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>

- Saturday 26 June update: period from 2200hrsL on 6/25/10 to 2200hrsL on 6/26/10:
- Injection rate average not provided **(estimate by calculation is 8.7 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 12,535 gallons (Total Cumulative 540,078 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>

- Sunday 27 June update: period from 2200hrsL on 6/26/10 to 2200hrsL on 6/27/10:
- Injection rate average not provided **(estimate by calculation is 8.3 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 11,982 gallons (Total Cumulative 552,060 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>

- Monday 28 June update: period from 2200hrsL on 6/27/10 to 2200hrsL on 6/28/10:
- Injection rate average not provided (estimate by calculation is 9.2 gallons/minute)
- Flow disrupted for: none
- Period Volume: 13,195 gallons (Total Cumulative 565,255 gallons).
- The Brooks McCall left port on 6/28; arrived on station to start sampling on 6/29

>>

- Wednesday 30 June update: period from 2200hrsL on 6/30/10 to 2200hrsL on 07/01/10:
- Injection rate average not provided **(estimate by calculation is 9.4 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,474 gallons (Total Cumulative 590,213 gallons).

>>

- Thursday 01 July update: period from 2200hrsL on 07/01/10 to 2200hrsL on 07/02/10:
- Injection rate average not provided **(estimate by calculation is 7.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,758 gallons (Total Cumulative 600,971 gallons).

>>>

- Friday 02 July update: period from 2200hrsL on 07/01/10 to 2200hrsL on 07/02/10:
- Injection rate average not provided **(estimate by calculation is 8.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 11,505 gallons (Total Cumulative 612,476 gallons).

- Veritas on station for sampling, as weather permits

>>>

- Saturday 03 July update: period from 2200hrsL on 07/02/10 to 2200hrsL on 07/03/10:
- Injection rate average not provided **(estimate by calculation is 7.9 gallons/minute)**
- Flow disrupted for: 1.5 hours for the period
- Period Volume: 11,363 gallons (Total Cumulative 623,839 gallons).
- Veritas on station for sampling

>>>

- Sunday 04 July update: period from 2200hrsL on 07/03/10 to 2200hrsL on 07/04/10:
- Injection rate average not provided **(estimate by calculation is 7.2 gallons/minute)**
- Flow disrupted for: No interruptions
- Period Volume: 10,323 gallons (Total Cumulative 634,162 gallons).
- Veritas on station for sampling; left for port in evening

>>>

- Monday 05 July update: period from 2200hrsL on 07/04/10 to 2200hrsL on 07/05/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,649 gallons (Total Cumulative 645,811 gallons).
- Brooks McCall on station for sampling.

>>>

- Tuesday 06 July update: period from 2200hrsL on 07/05/10 to 2200hrsL on 07/06/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,654 gallons (Total Cumulative: 657,465 gallons).
- Brooks McCall on station for sampling.

>>>

- Wednesday 07 July update: period from 2200hrsL on 07/06/10 to 2200hrsL on 07/07/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,779 gallons (Total Cumulative: 669,244 gallons).
- No sampling due to high seas. Brooks McCall returned to port.

>>>

- Thursday 08 July update: period from 2200hrsL on 07/07/10 to 2200hrsL on 07/08/10:
- Injection rate average not provided **(estimate by calculation is 8.0 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,553 gallons (Total Cumulative: 680,797 gallons).
- Ocean Vertias is on site and conducting monitoring

>>>

- Friday 09 July update: period from 2200hrsL on 07/08/10 to 2200hrsL on 07/09/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,673 gallons (Total Cumulative: 692,470 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

>>>

- Saturday 10 July update: period from 2200 hrsL on 07/09/10 to **2400** hrsL on 07/11/10: Note **26-hour** reporting period.
- Injection rate average: varied from 10 - 12 gpm **(estimate by calculation is 9.2 gallons/minute).**
- Flow disrupted for: There were several disruptions during the period due to capping operations.
- Period Volume: 13,210 gallons (Total Cumulative: 705,680 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 11 June, 2010
Update: 0900 12 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>
- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>
- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>
- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>
- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>
- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.
>>>
- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
>>>
- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
>>
- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>
Status of RV Brooks McCall:
- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:
- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200   5/25
- Stop: 2200   5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions
- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
- Rate: 10 gpm
- Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
- Disruptions: No disruptions reported.
- >>
- The following represents a brief synopsis of vessel sampling activity:
- The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>
>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>
- The following represents a brief synopsis of vessel sampling activity:
- The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
- >>>
- Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
  Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
- Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
- The Ocean-Veritas remains O/S this reporting period.
- >>>>>>>>>>>>>>>>>>>>>>>>>>>
- Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
  Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
- Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
- >>
- The Ocean-Veritas remains O/S today (Friday 04 June).
- >>>
- Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
- Sub-Sea Dispersant Injection continues
- On 6/4/10 Injection rate 9 – 14 gallons per minute
- Injection disrupted 2 times for SIMOPS
- (0 hours and 55 minutes not injected)
- Volume: 13,931 gallons this period
- (TOTAL Cumulative: 270,668 gallons)
- >>>
- The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
- The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE On Station to resume sub-sea sampling.
- >>>
- Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
- Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
  Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
- >>
  Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:
- Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
  Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
- >>
  Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
- Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
  Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
- >>>
- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.

>>>
- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
- Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
- Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
- NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.

>>
- The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
- >>
- Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
- Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
- Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
- >>
- The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
- >>

  Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:

  Injection rate: Average not provided.

  Injection disrupted 1 time for a total of 10 min
- Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
- Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
- >>
- The Ocean Veratas departed station pm of 10 June for Port Fourchon.
- The Brooks McCall is on-station since am of 11 June conducting required sampling.
- >>
- Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
- >>

  Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:

  Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins

  Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 11 June, 2010
Update: 0900 12 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>
- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>
- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>
- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>
- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.

FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>>
- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>>
- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring

>>>
- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>
Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring

>>
- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>
Status of RV Brooks McCall:
- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:
- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions
- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>

Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
- Rate: 10 gpm
- Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
- Disruptions: No disruptions reported.
- >>>
- The following represents a brief synopsis of vessel sampling activity:
- The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>>
>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>
- The following represents a brief synopsis of vessel sampling activity:
- The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
- >>
- Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
  Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
- Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
- The Ocean-Veritas remains O/S this reporting period.
- >>>>>>>>>>>>>>>>>>>>>>>>>>
- Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
  Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
- Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
- >>>
- The Ocean-Veritas remains O/S today (Friday 04 June).
- >>
- Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
- Sub-Sea Dispersant Injection continues
- On 6/4/10 Injection rate 9 – 14 gallons per minute
- Injection disrupted 2 times for SIMOPS
- (0 hours and 55 minutes not injected)
- Volume: 13,931 gallons this period
- (TOTAL Cumulative: 270,668 gallons)
- >>
- The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
- The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE On Station to resume sub-sea sampling.
- >>
- Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
- Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
  Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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  Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:
- Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
  Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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- Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
  Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
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- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.

>>
- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
- Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
- Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
- NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.

>>>
- The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
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- Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
- Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
- Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
- >>>
- The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
- >>>

  Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:

  Injection rate: Average not provided.

  Injection disrupted 1 time for a total of 10 min
- Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
- Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
- >>>
- The Ocean Veratas departed station pm of 10 June for Port Fourchon.
- The Brooks McCall is on-station since am of 11 June conducting required sampling.
- >>>
- Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
- >>>

  Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:

  Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins

  Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

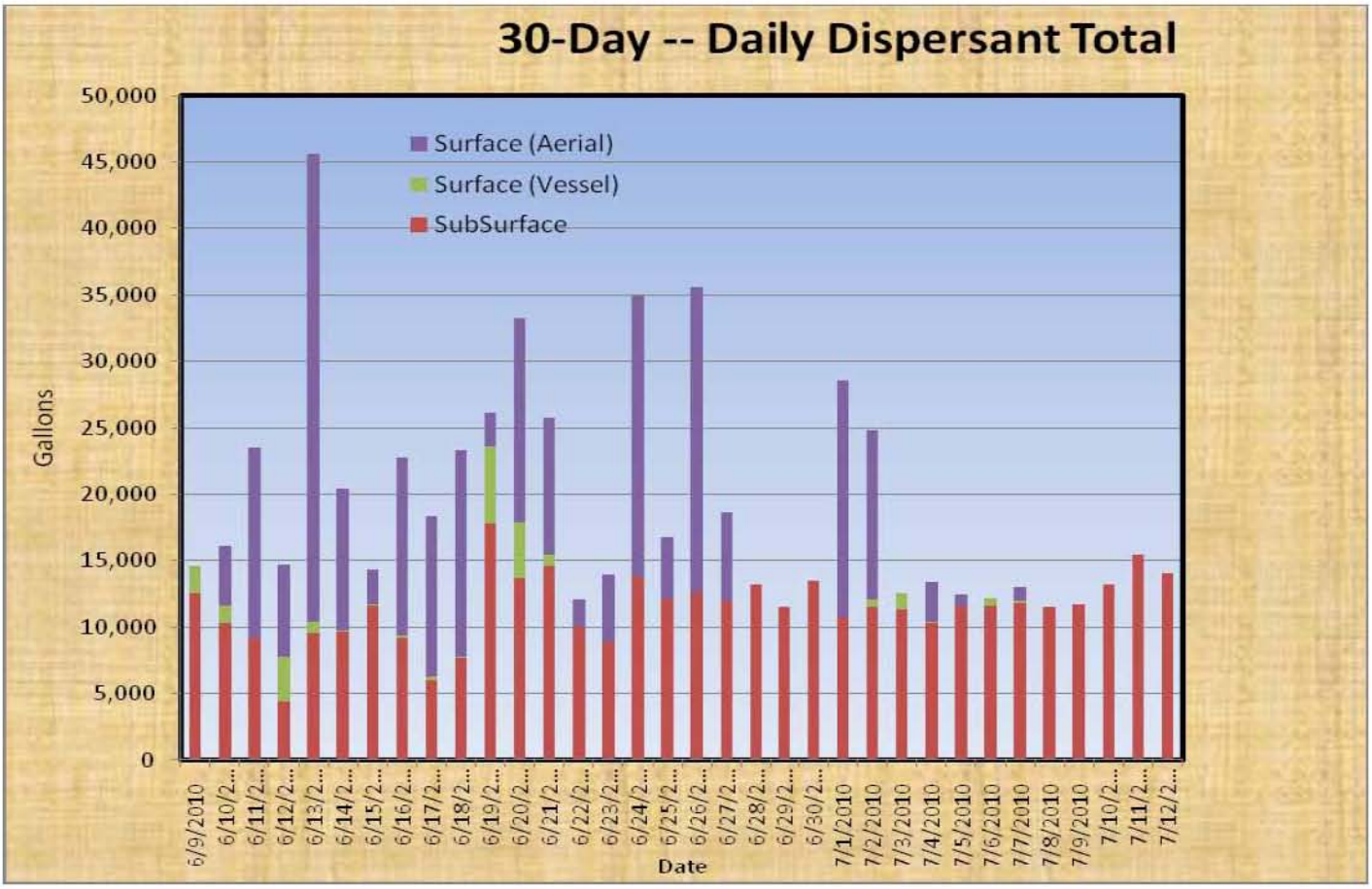
Date: 07/12/2010

Reporting Period: 15 MAY – 12 JULY, 2010

Update: 0900 13 July 2010

1. Current Activities

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:

- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>

- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:

- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:

- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY

Rate: 10 gpm

Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)

Disruptions: No disruptions reported.

>>>

The following represents a brief synopsis of vessel sampling activity:

The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application

Rate: 10 gpm

Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)

Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.

>>>

The following represents a brief synopsis of vessel sampling activity:

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.

>>

Reporting Period 2200L 01 JUNE – 2200 02 JUNE:

Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)

Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)

The Ocean-Veritas remains O/S this reporting period.

>>>>>>>>>>>>>>>>>>>>>>>>>>>

Reporting Period 2200L 02 JUNE – 2200 03 JUNE:

Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)

Volume: 10,241 gallons (Total Cumulative 256,216 gallons)

>>>

The Ocean-Veritas remains O/S today (Friday 04 June).

>>

Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:

Sub-Sea Dispersant Injection continues

On 6/4/10 Injection rate 9 – 14 gallons per minute

Injection disrupted 2 times for SIMOPS

(0 hours and 55 minutes not injected)

Volume: 13,931 gallons this period

(TOTAL Cumulative: 270,668 gallons)

>>

The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon

The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE 0n Station to resume sub-sea sampling.

>>

Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:

Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)

Volume: 13,513 gallons (Total Cumulative 284,193 gallons)

The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.

>>>

Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>
Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
>>>
The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.
>>>
- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
>>
The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>
Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
>>
The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
>>
Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
Injection rate: Average not provided.
Injection disrupted 1 time for a total of 10 min
Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
>>
The Ocean Veratas departed station pm of 10 June for Port Fourchon.
The Brooks McCall is on-station since am of 11 June conducting required sampling.
>>
Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
>>
Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:
Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins
Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.
>>
Sunday 13 June Update for: Period from 2200 hrs on 6/11/10 to 2200 hrs on 6/12/10: Injection rate: Average not provided. Injection disrupted numerous times for a total of 12:50 hrs/mins Volume: 4371 gallons (Total Cumulative 382,872 gallons) The Brooks McCall will remain on station thru pm today (Sunday 13 June) for required sampling. The Ocean Veratas is expected on station am 14 June.

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>
Monday 14 June update for: period from 2200 hrs on 6/12/10 to 2200 hrs on 6/13/10: Injection rate: Average not provided. Volume: 9,596 gallons (Total Cumulative 392,468 gallons)
The Ocean Veratas reported ETA for on- station is early am of 14 June to perform required sampling. The Brooks McCall departed station evening of Sunday 13 June for Port Fourchon.
>>>
Tuesday 15 June update: period from 2200hrsL on 6/13/10 to 2200hrsL on 6/14/10:
Injection rate average not provided. Period Volume: Subsea dispersant injected 9,689 gal,
Total Cumulative: 402,157 gals applied to date via sub-sea injection of dispersant.
The Ocean Veratas remains on-station for required sampling.
>>>
Wednesday 16 June update: period from 2200hrsL on 6/14/10 to 2200hrsL on 6/15/10:
Injection rate average not provided. Injection disrupted 1 time for a total of 44 min. Period Volume: 11, 578 gallons (Total Cumulative 413,922 gallons). The Ocean Veratas remains on station for required sampling.
>>>
Thursday 17 June update: period from 2200hrsL on 6/15/10 to 2200hrsL on 6/16/10:
Injection rate average not provided. Number and time period of injection disruptions also not provided this reporting interval. Period Volume: 9152 gallons (Total Cumulative 423,074 gallons). The Brooks McCall is on station starting am 17 June for required sampling. The Ocean Veratas departed station pm of 16 June.
>>>

- Friday 18 June update: period from 2200hrsL on 6/16/10 to 2200hrsL on 6/17/10:
- Injection rate average not provided
- Flow disrupted for 1:06 hrs/min to change flow meter
- Period Volume: 5,962 gallons (Total Cumulative 429,036 gallons).

The Brooks McCall is on station starting am 17 June for required sampling.
>>>

- Saturday 19 June update: period from 2200hrsL on 6/17/10 to 2200hrsL on 6/18/10:
- Injection rate average not provided **(estimate by calculation is 5.78 gallons/minute)**
- Flow disrupted for 2:20 hrs/min
- Period Volume: 7,642 gallons (Total Cumulative 436,600 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.

>>>

- Saturday 19 June update: period from 2200hrsL on 6/18/10 to 2200hrsL on 6/19/10:
- Injection rate average not provided **(estimate by calculation is 12.6 gallons/minute)**
- Flow disrupted for :33 hrs/min
- Period Volume: 17,780 gallons (Total Cumulative 454,440 gallons). Cumulative was adjusted up 60 gals.
- The Brooks McCall left station on 19 June, arrive at port 20 June. The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Sunday 20 June update: period from 2200hrsL on 6/19/10 to 2200hrsL on 6/20/10:
- Injection rate average not provided **(estimate by calculation is 9.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,695 gallons (Total Cumulative 468,135 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>

- Monday 21 June update: period from 2200hrsL on 6/20/10 to 2200hrsL on 6/21/10:
- Injection rate average not provided **(estimate by calculation is 10.1 gallons/minute)**
- Flow disrupted for: none

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>

- Tuesday 22 June update: period from 2200hrsL on 6/21/10 to 2200hrsL on 6/22/10:
- Injection rate average not provided **(estimate by calculation is 7.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,046 gallons (Total Cumulative 492,764 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Wednesday 23 June update: period from 2200hrsL on 6/22/10 to 2200hrsL on 6/23/10:
- Injection rate average not provided **(estimate by calculation is 6.2 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 8,886 gallons (Total Cumulative 501,650 gallons).
- The Brooks McCall left port on 6/22; arrived on station to start sampling on 6/23

>>

- Thursday 24 June update: period from 2200hrsL on 6/23/10 to 2200hrsL on 6/24/10:
- Injection rate average not provided **(estimate by calculation is 9.6 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,808 gallons (Total Cumulative 515,458 gallons).
- The Brooks McCall left port on 6/22; arrived on station to start sampling on 6/23

>>

- Friday 25 June update: period from 2200hrsL on 6/24/10 to 2200hrsL on 6/25/10:
- Injection rate average not provided **(estimate by calculation is 8.4 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 12,085 gallons (Total Cumulative 527,543 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>>

- Saturday 26 June update: period from 2200hrsL on 6/25/10 to 2200hrsL on 6/26/10:
- Injection rate average not provided **(estimate by calculation is 8.7 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 12,535 gallons (Total Cumulative 540,078 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>>

- Sunday 27 June update: period from 2200hrsL on 6/26/10 to 2200hrsL on 6/27/10:
- Injection rate average not provided **(estimate by calculation is 8.3 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 11,982 gallons (Total Cumulative 552,060 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>>

- Monday 28 June update: period from 2200hrsL on 6/27/10 to 2200hrsL on 6/28/10:
- Injection rate average not provided (estimate by calculation is 9.2 gallons/minute)
- Flow disrupted for: none
- Period Volume: 13,195 gallons (Total Cumulative 565,255 gallons).
- The Brooks McCall left port on 6/28; arrived on station to start sampling on 6/29

>>

- Wednesday 30 June update: period from 2200hrsL on 6/30/10 to 2200hrsL on 07/01/10:
- Injection rate average not provided **(estimate by calculation is 9.4 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,474 gallons (Total Cumulative 590,213 gallons).

>>

- Thursday 01 July update: period from 2200hrsL on 07/01/10 to 2200hrsL on 07/02/10:
- Injection rate average not provided **(estimate by calculation is 7.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,758 gallons (Total Cumulative 600,971 gallons).

>>

- Friday 02 July update: period from 2200hrsL on 07/01/10 to 2200hrsL on 07/02/10:
- Injection rate average not provided **(estimate by calculation is 8.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 11,505 gallons (Total Cumulative 612,476 gallons).

- Veritas on station for sampling, as weather permits

>>

- Saturday 03 July update: period from 2200hrsL on 07/02/10 to 2200hrsL on 07/03/10:
- Injection rate average not provided **(estimate by calculation is 7.9 gallons/minute)**
- Flow disrupted for: 1.5 hours for the period
- Period Volume: 11,363 gallons (Total Cumulative 623,839 gallons).
- Veritas on station for sampling

>>

- Sunday 04 July update: period from 2200hrsL on 07/03/10 to 2200hrsL on 07/04/10:
- Injection rate average not provided **(estimate by calculation is 7.2 gallons/minute)**
- Flow disrupted for: No interruptions
- Period Volume: 10,323 gallons (Total Cumulative 634,162 gallons).
- Veritas on station for sampling; left for port in evening

>>

- Monday 05 July update: period from 2200hrsL on 07/04/10 to 2200hrsL on 07/05/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,649 gallons (Total Cumulative 645,811 gallons).
- Brooks McCall on station for sampling.

>>

- Tuesday 06 July update: period from 2200hrsL on 07/05/10 to 2200hrsL on 07/06/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,654 gallons (Total Cumulative: 657,465 gallons).
- Brooks McCall on station for sampling.

>>

- Wednesday 07 July update: period from 2200hrsL on 07/06/10 to 2200hrsL on 07/07/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,779 gallons (Total Cumulative: 669,244 gallons).
- No sampling due to high seas. Brooks McCall returned to port.

>>

- Thursday 08 July update: period from 2200hrsL on 07/07/10 to 2200hrsL on 07/08/10:
- Injection rate average not provided **(estimate by calculation is 8.0 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,553 gallons (Total Cumulative: 680,797 gallons).
- Ocean Vertias is on site and conducting monitoring

>>

- Friday 09 July update: period from 2200hrsL on 07/08/10 to 2200hrsL on 07/09/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,673 gallons (Total Cumulative: 692,470 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

>>

- Saturday 10 July update: period from 2200 hrsL on 07/09/10 to **2400** hrsL on 07/11/10: Note **26-hour** reporting period.
- Injection rate average: varied from 10 - 12 gpm **(estimate by calculation is 9.2 gallons/minute).**
- Flow disrupted for: There were several disruptions during the period due to capping operations.
- Period Volume: 13,210 gallons (Total Cumulative: 705,680 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

>>

- Sunday 11 July update: period from 0000 hrsL on 07/11/10 to 2400 hrsL on 07/11/10:
- Injection rate average: approximately 12 gpm **(estimate by calculation is 10.7 gallons/minute).**
- Flow disrupted for: several short disruptions during the period due to capping operations.
- Period Volume: 15,420 gallons (Total Cumulative: 721,100 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 12 June, 2010
Update: 0900 13 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
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>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>

Status of RV Brooks McCall:

- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:

- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions
- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY

Rate: 10 gpm
Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
Disruptions: No disruptions reported.

>>

The following represents a brief synopsis of vessel sampling activity:
The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application

Rate: 10 gpm
Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.

>>

The following represents a brief synopsis of vessel sampling activity:

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
>>>
Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
The Ocean-Veritas remains O/S this reporting period.
>>>>>>>>>>>>>>>>>>>>>>>>>>
Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
>>
The Ocean-Veritas remains O/S today (Friday 04 June).
>>>
Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
Sub-Sea Dispersant Injection continues
On 6/4/10 Injection rate 9 – 14 gallons per minute
Injection disrupted 2 times for SIMOPS
(0 hours and 55 minutes not injected)
Volume: 13,931 gallons this period
(TOTAL Cumulative: 270,668 gallons)
>>>
The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE 0n Station to resume sub-sea sampling.
>>>
Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>
Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:
Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>
Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
>>>
The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.
>>>
- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
>>
The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>
Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
>>
The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
>>
Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
Injection rate: Average not provided.
Injection disrupted 1 time for a total of 10 min
Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
>>
The Ocean Veratas departed station pm of 10 June for Port Fourchon.
The Brooks McCall is on-station since am of 11 June conducting required sampling.
>>
Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
>>
Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:
Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins
Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.

>>>

Sunday 13 June Update for: Period from 2200 hrs on 6/11/10 to 2200 hrs on 6/12/10: Injection rate: Average not provided. Injection disrupted numerous times for a total of 12:50 hrs/mins Volume: 4371 gallons (Total Cumulative 382,872 gallons) The Brooks McCall will remain on station thru pm today (Sunday 13 June) for required sampling. The Ocean Veratas is expected on station am 14 June.

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387
5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

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Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

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Update: 0900 13 June 2010

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Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:

- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

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- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

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Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY

Rate: 10 gpm
Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
Disruptions: No disruptions reported.
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The following represents a brief synopsis of vessel sampling activity:
The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.
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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application

Rate: 10 gpm
Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
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The following represents a brief synopsis of vessel sampling activity:

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
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Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
The Ocean-Veritas remains O/S this reporting period.
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Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
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The Ocean-Veritas remains O/S today (Friday 04 June).
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Sub-Sea Dispersant Injection continues
On 6/4/10 Injection rate 9 – 14 gallons per minute
Injection disrupted 2 times for SIMOPS
(0 hours and 55 minutes not injected)
Volume: 13,931 gallons this period
(TOTAL Cumulative: 270,668 gallons)
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The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE 0n Station to resume sub-sea sampling.
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NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
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Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
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The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
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Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
Injection rate: Average not provided.
Injection disrupted 1 time for a total of 10 min
Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
>>>
The Ocean Veratas departed station pm of 10 June for Port Fourchon.
The Brooks McCall is on-station since am of 11 June conducting required sampling.
>>>
Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
>>>
Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:
Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins
Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.

>>>

Sunday 13 June Update for: Period from 2200 hrs on 6/11/10 to 2200 hrs on 6/12/10: Injection rate: Average not provided. Injection disrupted numerous times for a total of 12:50 hrs/mins Volume: 4371 gallons (Total Cumulative 382,872 gallons) The Brooks McCall will remain on station thru pm today (Sunday 13 June) for required sampling. The Ocean Veratas is expected on station am 14 June.

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387
5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

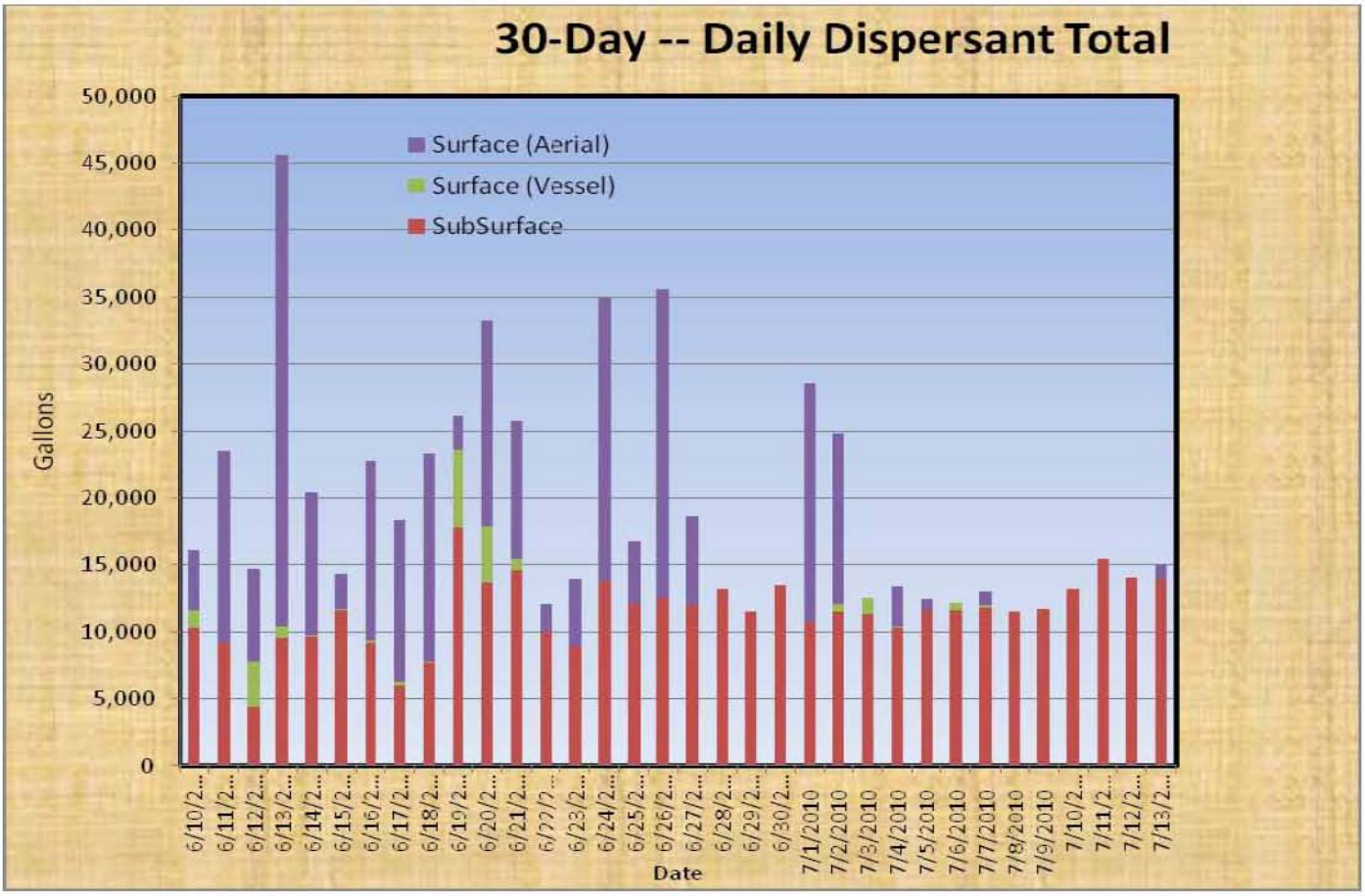
Date: 07/13/2010

Reporting Period: 15 MAY – 13 JULY, 2010

Update: 0900 14 July 2010

1. Current Activities

- Tuesday 13 July update: period from 0000 hrsL on 07/13/10 to 2400 hrsL on 07/13/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.72 gallons/minute).**
- Flow disrupted for: no disruptions reported.
- Period Volume: 13,997 gallons (Total Cumulative: 749,135 gallons).
- International Peace conducted surface dispersant monitoring.
- Brooks McCall conducted subsurface dispersant monitoring.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

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- 14,712 gallons of COREXIT pumped in this time period.
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- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
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- Arrived at station at 0600 on 05/27; depart from station on 05/29
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Injection disrupted 1 time for a total of 10 min
Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
>>>
The Ocean Veratas departed station pm of 10 June for Port Fourchon.
The Brooks McCall is on-station since am of 11 June conducting required sampling.
>>>
Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
>>>
Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:
Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins
Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.
>>>
Sunday 13 June Update for: Period from 2200 hrs on 6/11/10 to 2200 hrs on 6/12/10: Injection rate: Average not provided. Injection disrupted numerous times for a total of 12:50 hrs/mins Volume: 4371 gallons (Total Cumulative 382,872 gallons) The Brooks McCall will remain on station thru pm today (Sunday 13 June) for required sampling. The Ocean Veratas is expected on station am 14 June.

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>
Monday 14 June update for: period from 2200 hrs on 6/12/10 to 2200 hrs on 6/13/10: Injection rate: Average not provided. Volume: 9,596 gallons (Total Cumulative 392,468 gallons)
The Ocean Veratas reported ETA for on- station is early am of 14 June to perform required sampling. The Brooks McCall departed station evening of Sunday 13 June for Port Fourchon.
>>
Tuesday 15 June update: period from 2200hrsL on 6/13/10 to 2200hrsL on 6/14/10:
Injection rate average not provided. Period Volume: Subsea dispersant injected 9,689 gal,
Total Cumulative: 402,157 gals applied to date via sub-sea injection of dispersant.
The Ocean Veratas remains on-station for required sampling.
>>
Wednesday 16 June update: period from 2200hrsL on 6/14/10 to 2200hrsL on 6/15/10:
Injection rate average not provided. Injection disrupted 1 time for a total of 44 min. Period Volume: 11, 578 gallons (Total Cumulative 413,922 gallons). The Ocean Veratas remains on station for required sampling.
>>
Thursday 17 June update: period from 2200hrsL on 6/15/10 to 2200hrsL on 6/16/10:
Injection rate average not provided. Number and time period of injection disruptions also not provided this reporting interval. Period Volume: 9152 gallons (Total Cumulative 423,074 gallons). The Brooks McCall is on station starting am 17 June for required sampling. The Ocean Veratas departed station pm of 16 June.
>>

- Friday 18 June update: period from 2200hrsL on 6/16/10 to 2200hrsL on 6/17/10:
- Injection rate average not provided
- Flow disrupted for 1:06 hrs/min to change flow meter
- Period Volume: 5,962 gallons (Total Cumulative 429,036 gallons).

The Brooks McCall is on station starting am 17 June for required sampling.
>>

- Saturday 19 June update: period from 2200hrsL on 6/17/10 to 2200hrsL on 6/18/10:
- Injection rate average not provided **(estimate by calculation is 5.78 gallons/minute)**
- Flow disrupted for 2:20 hrs/min
- Period Volume: 7,642 gallons (Total Cumulative 436,600 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.

>>

- Saturday 19 June update: period from 2200hrsL on 6/18/10 to 2200hrsL on 6/19/10:
- Injection rate average not provided **(estimate by calculation is 12.6 gallons/minute)**
- Flow disrupted for :33 hrs/min
- Period Volume: 17,780 gallons (Total Cumulative 454,440 gallons). Cumulative was adjusted up 60 gals.
- The Brooks McCall left station on 19 June, arrive at port 20 June. The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>

- Sunday 20 June update: period from 2200hrsL on 6/19/10 to 2200hrsL on 6/20/10:
- Injection rate average not provided **(estimate by calculation is 9.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,695 gallons (Total Cumulative 468,135 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Monday 21 June update: period from 2200hrsL on 6/20/10 to 2200hrsL on 6/21/10:
- Injection rate average not provided **(estimate by calculation is 10.1 gallons/minute)**
- Flow disrupted for: none

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>

- Tuesday 22 June update: period from 2200hrsL on 6/21/10 to 2200hrsL on 6/22/10:
- Injection rate average not provided **(estimate by calculation is 7.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,046 gallons (Total Cumulative 492,764 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Wednesday 23 June update: period from 2200hrsL on 6/22/10 to 2200hrsL on 6/23/10:
- Injection rate average not provided **(estimate by calculation is 6.2 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 8,886 gallons (Total Cumulative 501,650 gallons).
- The Brooks McCall left port on 6/22; arrived on station to start sampling on 6/23

>>

- Thursday 24 June update: period from 2200hrsL on 6/23/10 to 2200hrsL on 6/24/10:
- Injection rate average not provided **(estimate by calculation is 9.6 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,808 gallons (Total Cumulative 515,458 gallons).
- The Brooks McCall left port on 6/22; arrived on station to start sampling on 6/23

>>

- Friday 25 June update: period from 2200hrsL on 6/24/10 to 2200hrsL on 6/25/10:
- Injection rate average not provided **(estimate by calculation is 8.4 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 12,085 gallons (Total Cumulative 527,543 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>

- Saturday 26 June update: period from 2200hrsL on 6/25/10 to 2200hrsL on 6/26/10:
- Injection rate average not provided **(estimate by calculation is 8.7 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 12,535 gallons (Total Cumulative 540,078 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>

- Sunday 27 June update: period from 2200hrsL on 6/26/10 to 2200hrsL on 6/27/10:
- Injection rate average not provided **(estimate by calculation is 8.3 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 11,982 gallons (Total Cumulative 552,060 gallons).
- The Veritas left port on 6/25; arrived on station to start sampling on 6/26

>>

- Monday 28 June update: period from 2200hrsL on 6/27/10 to 2200hrsL on 6/28/10:
- Injection rate average not provided (estimate by calculation is 9.2 gallons/minute)
- Flow disrupted for: none
- Period Volume: 13,195 gallons (Total Cumulative 565,255 gallons).
- The Brooks McCall left port on 6/28; arrived on station to start sampling on 6/29

>>

- Wednesday 30 June update: period from 2200hrsL on 6/30/10 to 2200hrsL on 07/01/10:
- Injection rate average not provided **(estimate by calculation is 9.4 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,474 gallons (Total Cumulative 590,213 gallons).

>>

- Thursday 01 July update: period from 2200hrsL on 07/01/10 to 2200hrsL on 07/02/10:
- Injection rate average not provided **(estimate by calculation is 7.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,758 gallons (Total Cumulative 600,971 gallons).

>>

- Friday 02 July update: period from 2200hrsL on 07/01/10 to 2200hrsL on 07/02/10:
- Injection rate average not provided **(estimate by calculation is 8.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 11,505 gallons (Total Cumulative 612,476 gallons).

- Veritas on station for sampling, as weather permits

>>

- Saturday 03 July update: period from 2200hrsL on 07/02/10 to 2200hrsL on 07/03/10:
- Injection rate average not provided **(estimate by calculation is 7.9 gallons/minute)**
- Flow disrupted for: 1.5 hours for the period
- Period Volume: 11,363 gallons (Total Cumulative 623,839 gallons).
- Veritas on station for sampling

>>

- Sunday 04 July update: period from 2200hrsL on 07/03/10 to 2200hrsL on 07/04/10:
- Injection rate average not provided **(estimate by calculation is 7.2 gallons/minute)**
- Flow disrupted for: No interruptions
- Period Volume: 10,323 gallons (Total Cumulative 634,162 gallons).
- Veritas on station for sampling; left for port in evening

>>

- Monday 05 July update: period from 2200hrsL on 07/04/10 to 2200hrsL on 07/05/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,649 gallons (Total Cumulative 645,811 gallons).
- Brooks McCall on station for sampling.

>>

- Tuesday 06 July update: period from 2200hrsL on 07/05/10 to 2200hrsL on 07/06/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,654 gallons (Total Cumulative: 657,465 gallons).
- Brooks McCall on station for sampling.

>>

- Wednesday 07 July update: period from 2200hrsL on 07/06/10 to 2200hrsL on 07/07/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,779 gallons (Total Cumulative: 669,244 gallons).
- No sampling due to high seas. Brooks McCall returned to port.

>>

- Thursday 08 July update: period from 2200hrsL on 07/07/10 to 2200hrsL on 07/08/10:
- Injection rate average not provided **(estimate by calculation is 8.0 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,553 gallons (Total Cumulative: 680,797 gallons).
- Ocean Vertias is on site and conducting monitoring

>>

- Friday 09 July update: period from 2200hrsL on 07/08/10 to 2200hrsL on 07/09/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,673 gallons (Total Cumulative: 692,470 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

>>

- Saturday 10 July update: period from 2200 hrsL on 07/09/10 to **2400** hrsL on 07/11/10: Note **26-hour** reporting period.
- Injection rate average: varied from 10 - 12 gpm **(estimate by calculation is 9.2 gallons/minute).**
- Flow disrupted for: There were several disruptions during the period due to capping operations.
- Period Volume: 13,210 gallons (Total Cumulative: 705,680 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

>>

- Sunday 11 July update: period from 0000 hrsL on 07/11/10 to 2400 hrsL on 07/11/10:
- Injection rate average: approximately 12 gpm **(estimate by calculation is 10.7 gallons/minute).**
- Flow disrupted for: several short disruptions during the period due to capping operations.
- Period Volume: 15,420 gallons (Total Cumulative: 721,100 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.

>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 13 June, 2010
Update: 0900 14 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>
- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>>
- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>>
- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>>
- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.

FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:

- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:

- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>
- 2200 Central 25 MAY continued subsurface dispersant application through 2200 Central 26 MAY
- Two disruptions for 21 minutes total
- 11,110 gallons of COREXIT pumped in this time period. (155,436 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- Arrived at station at 0600 on 05/27; depart from station on 05/29
- >>>
- 2200 Central 26 MAY continued subsurface dispersant application through 2200 Central 27 MAY
- No disruptions
- 14,400 gallons of COREXIT pumped in this time period. (169,836 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 27 MAY continued subsurface dispersant application through 2200 Central 28 MAY
- No disruptions
- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station

Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling

Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY

Rate: 10 gpm
Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
Disruptions: No disruptions reported.

>>>

The following represents a brief synopsis of vessel sampling activity:
The Brooks-McCall was on station sampling from 30 MAY thru and including 01 JUNE, but will depart pm of 01 JUN; the Ocean-Veritas will depart Port Fourchon, LA, pm of 01 June, and be O/S to resume sampling at approx 0800L on 02 JUNE.

>>

- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application

Rate: 10 gpm
Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.

>>>

The following represents a brief synopsis of vessel sampling activity:

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
>>>
Reporting Period 2200L 01 JUNE – 2200 02 JUNE:
Injection rate: 5 to 20 gal/min. Injection disrupted 7 times for SIMOPS (12 hours and 24 mins not injected)
Volume: 7,465 gallons (Total Cumulative thru 2200L 02 JUN: 245,975 gallons)
The Ocean-Veritas remains O/S this reporting period.
>>>>>>>>>>>>>>>>>>>>>>>>>>>
Reporting Period 2200L 02 JUNE – 2200 03 JUNE:
Injection rate: 8 to 14 gal/min. Injection disrupted 2 times for SIMOPS (6 hours and 33 mins not injected)
Volume: 10,241 gallons (Total Cumulative 256,216 gallons)
>>
The Ocean-Veritas remains O/S today (Friday 04 June).
>>>
Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
Sub-Sea Dispersant Injection continues
On 6/4/10 Injection rate 9 – 14 gallons per minute
Injection disrupted 2 times for SIMOPS
(0 hours and 55 minutes not injected)
Volume: 13,931 gallons this period
(TOTAL Cumulative: 270,668 gallons)
>>>
The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon
The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE 0n Station to resume sub-sea sampling.
>>>
Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:
Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
Volume: 13,513 gallons (Total Cumulative 284,193 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>
Reporting Period: 2200L 05 JUNE – 2200L 06 JUNE 2010:
Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>
Reporting Period: 2200L 06 JUNE – 2200L 07 JUNE 2010:
Injection rate: Average not provided. Injection disrupted 4 times for SIMOPS (3 hours and 28 mins not injected)
Volume: 14,105 gallons (Total Cumulative 331,660 gallons)
>>>
The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.
>>>
- 2200 hrs on 6/7/10 to 2200 hrs on 6/8/10:
Injection rate: Average: Not provided. Injection disrupted 6 times (3 hours and 0 mins not injected)
Volume: 14,207 gallons (Total Cumulative 345,867 gallons)
NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
>>
The Ocean Veratas is confirmed on-station since am of 08 June conducting the required sampling thru Wed and Thurs 9 and 10 June. It is scheduled to depart station pm of 10 June and return to Port Fourchon. The Brooks

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>
Period: 2200 hrs on 6/8/10 to 2200 hrs on 6/9/10:
Injection rate: Average not provided. Injection disrupted 1 time for a total of 17 min
Period Volume: 12,521 gallons (Total Cumulative 358,388 gallons)
>>>
The Ocean Veratas remains on-station thru pm of 10 June for departure to Port Fourchon. The Brooks McCall is scheduled to depart Port Fourchon pm of 10 June for an on-station ETA of early am 11 June for required sampling.
>>>
Period: 2200 hrs on 6/09/10 to 2200 hrs on 6/10/10:
Injection rate: Average not provided.
Injection disrupted 1 time for a total of 10 min
Period Volume: 10,279 gallons (Approx: Total Cumulative* 368,667 gallons)
Note*: Cumulative remains an approximate at this time with a delta of plus or minus approx 10,000 gallons as the flow meter was adjusted and calibrated earlier in the week, and BP engineers are expected to report a revised cumulative due to the calibration issues. The total period volume previously reported 2200L 6/5/10 – 2200L 6/6/10 is expected to be revised as well for the Saturday 12 June 0900L POLREP Update.
>>>
The Ocean Veratas departed station pm of 10 June for Port Fourchon.
The Brooks McCall is on-station since am of 11 June conducting required sampling.
>>>
Saturday 12 June Update: BP sub-sea engineering staff continue to deconflict some previously reported daily totals due to the flow meter calibration reported on an earlier update. When corrected values are obtained, details will be provided.
>>>
Period: 2200 hrs on 6/10/10 to 2200 hrs on 6/11/10:
Injection rate: Average not provided. Injection disrupted 6 times for a total of 2:12 hrs/mins
Period Volume: 9193 gallons (Total Cumulative 378,501 gallons). Sub Sea dispersant cumulative total was adjusted up by 641 gallons. Over 3 days (June 2-4). The Brooks McCall remains on-station for required sampling.

>>
Sunday 13 June Update for: Period from 2200 hrs on 6/11/10 to 2200 hrs on 6/12/10: Injection rate: Average not provided. Injection disrupted numerous times for a total of 12:50 hrs/mins Volume: 4371 gallons (Total Cumulative 382,872 gallons) The Brooks McCall will remain on station thru pm today (Sunday 13 June) for required sampling. The Ocean Veratas is expected on station am 14 June.

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387
5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>
Monday 14 June Update for: period from 2200 hrs on 6/12/10 to 2200 hrs on 6/13/10: Injection rate: Average not provided. Volume: 9,596 gallons (Total Cumulative 392,468 gallons)
The Ocean Veratas reported ETA for on- station is early am of 14 June to perform required sampling. The Brooks McCall departed station evening of Sunday 13 June for Port Fourchon.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 13 June, 2010
Update: 0900 14 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>
- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>
- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>
- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>
- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.

FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY
- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

Receipt of scintillation tubes and glass bottles will enable maintaining full functionality. Vessel completed refit of cable etc. for 'Real Time' CDT analyses with greater flexibility for picking/taking samples, and left Port Fourchon @ 1600h 5/22 and headed for spill site. New crew members briefed and new equipment/supplies stowed.

Trials of new gear initiated en route @ appx. 0200. Resumed progress to spill site where work will focus on the SW (more specifically WSW) quadrant to further characterize new plume. Expect to be at first station around 0800h.

>>

- 2200 Central 22 MAY continued subsurface dispersant application through 2200 Central 23 MAY
- No disruptions
- 14,712 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 23 MAY continued subsurface dispersant application through 2200 Central 24 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

Status of RV BROOKS McCALL:

VSL was O/S during injection application to perform Sampling & Monitoring

>>

- 2200 Central 24 MAY continued subsurface dispersant application through 2200 Central 25 MAY
- Subsea dispersant injection continued until approximately 2000, then restarted at approximately 0430 on 5/26
- 12,766 gallons of COREXIT pumped in this time period. (143,637 gallons cumulative)

>>>

Status of RV Brooks McCall:

- The vessel departed station at dusk to return to port; unload samples

Status of RV Veritas:

- The vessel is in port at Port Fourchon to taken on crew and equipment; expected to depart evening; arrive on station to get sampling by 0800 tomorrow morning.
- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
>>>

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

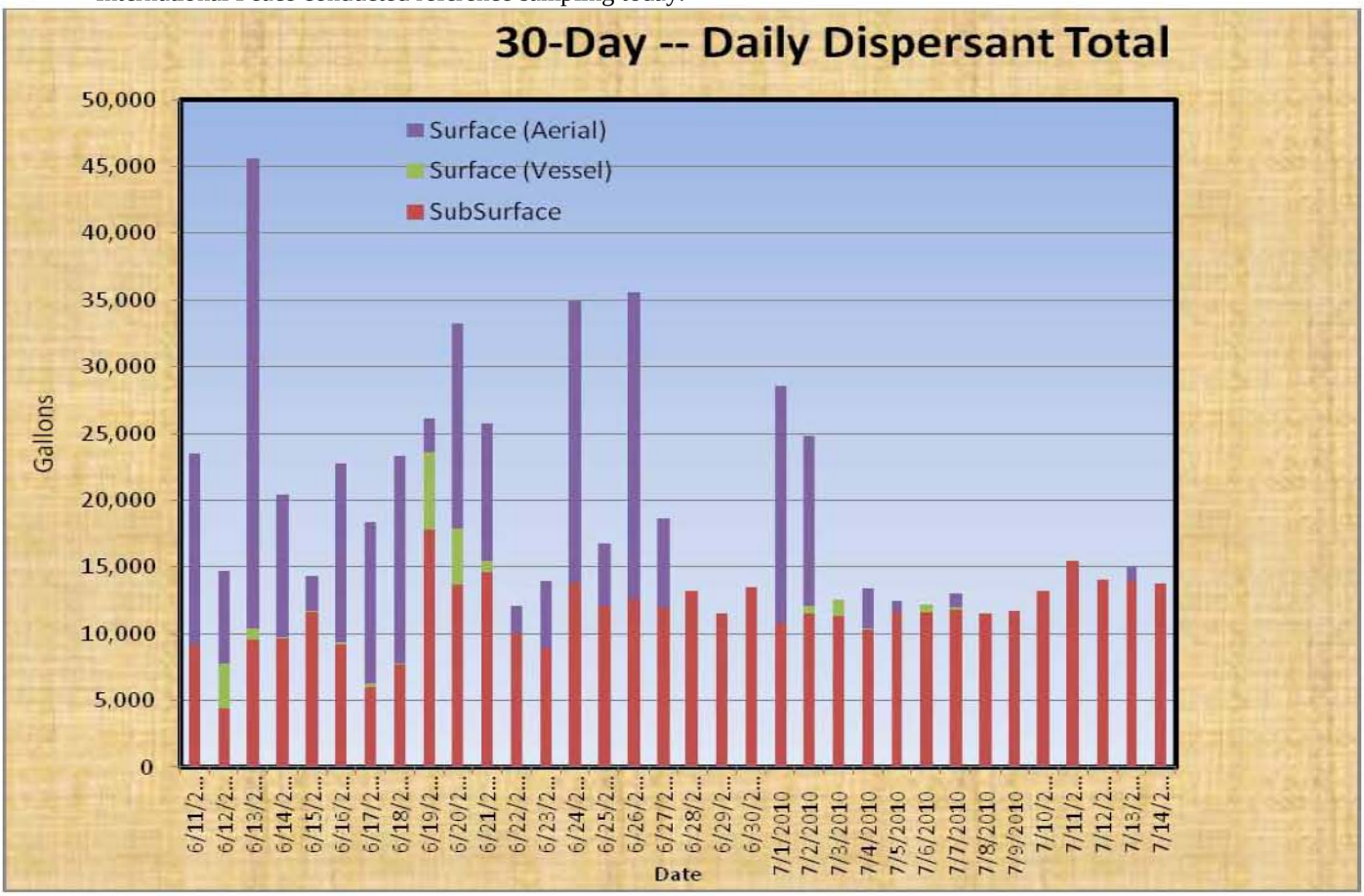
Date: 07/14/2010

Reporting Period: 15 MAY – 14 JULY, 2010

Update: 0900 15 July 2010

1. Current Activities

- Wednesday 14 July update: period from 0000 hrsL on 07/14/10 to 2400 hrsL on 07/14/10:
- Injection rate average: average rate not reported **(estimate by calculation is 9.54 gallons/minute).**
- Flow disrupted for: one disruption for 1.5 hours reported.
- Period Volume: 13,746 gallons (Total Cumulative: 762,881 gallons).
- Brooks McCall conducted subsurface dispersant monitoring today. Stations sampled were far removed from the source due to restrictions imposed during pressure integrity testing.
- International Peace conducted reference sampling today.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 14 June, 2010
Update: 0900 15 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
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Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
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The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
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McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

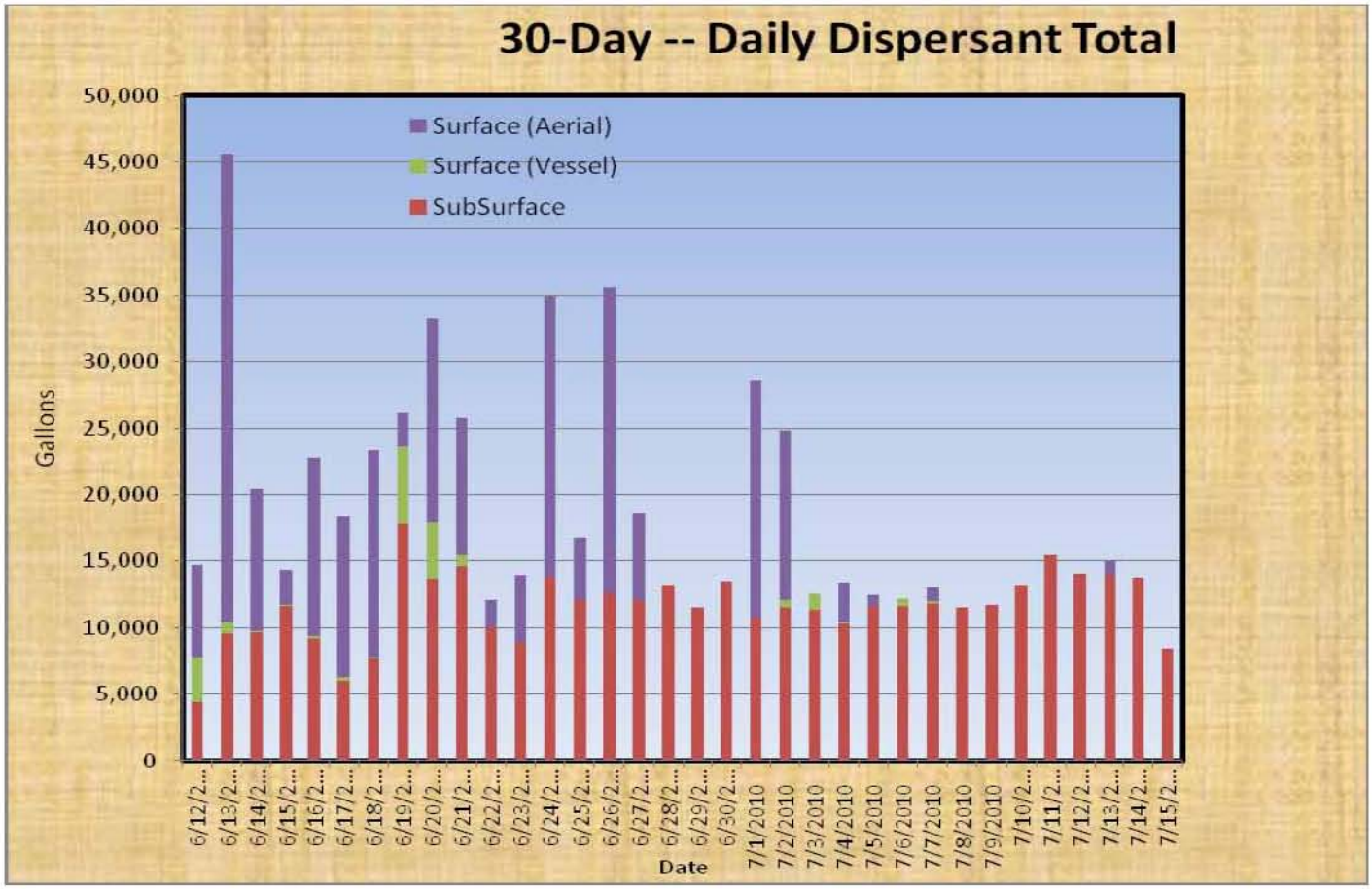
Date: 07/15/2010

Reporting Period: 15 MAY – 15 JULY, 2010

Update: 0900 16 July 2010

1. Current Activities

- Thursday 15 July update: period from 0000 hrsL on 07/15/10 to 2400 hrsL on 07/15/10:
- Injection rate average: average rate not reported.
- Flow disrupted for: subsea dispersant use stopped at approximately 1420 on July 15, 2010.
- Period Volume: 8,391 gallons (Total Cumulative: 771,272 gallons).
- Brooks McCall conducted subsurface dispersant monitoring today
- International Peace conducted reference sampling today.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 15 June, 2010
Update: 0900 16 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

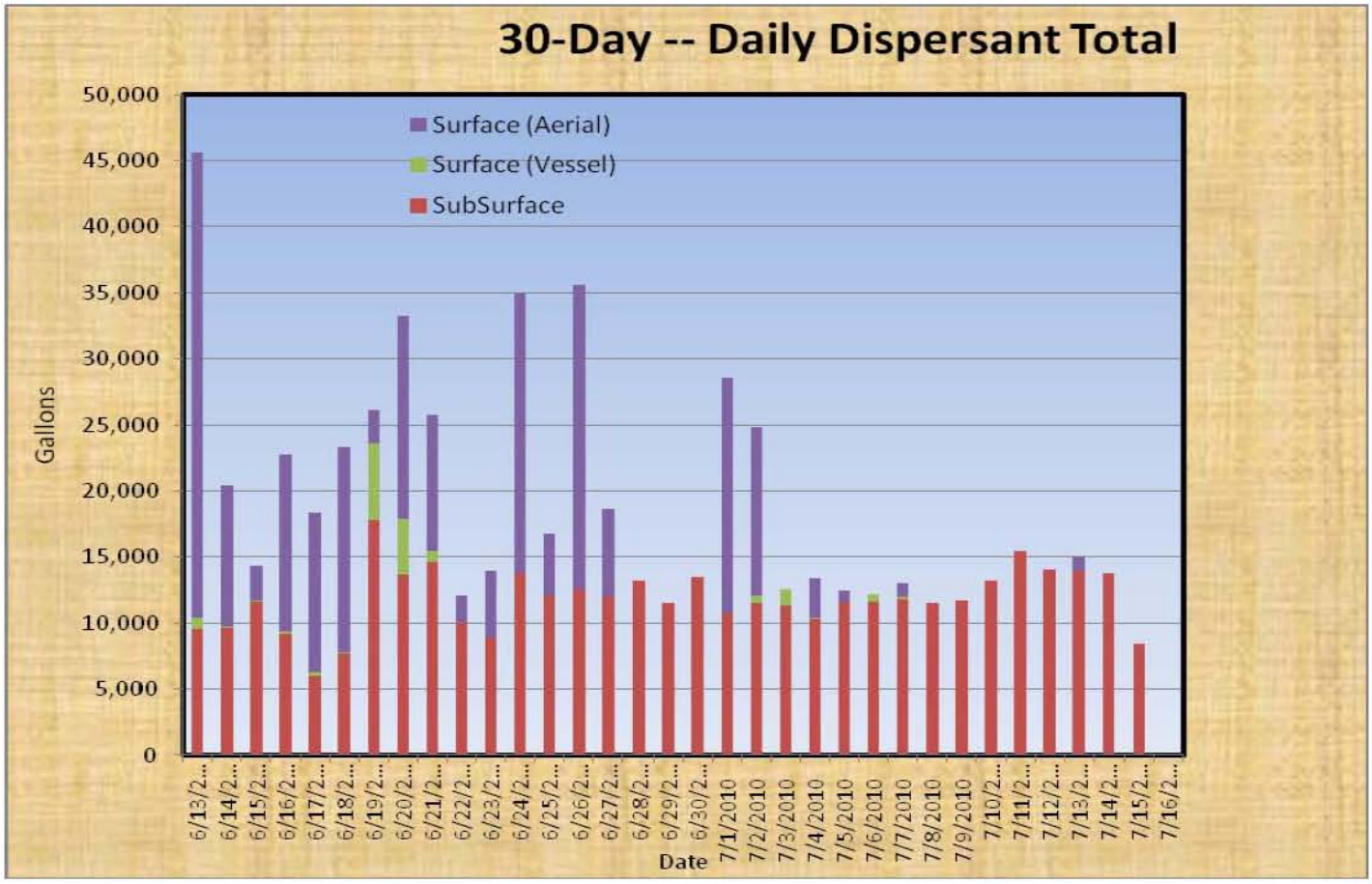
Date: 07/16/2010

Reporting Period: 15 MAY – 16 JULY, 2010

Update: 0900 17 July 2010

1. Current Activities

- Friday 16 July update: period from 0000 hrsL on 07/16/10 to 2400 hrsL on 07/16/10:
- Flow disrupted for: No subsea dispersant use.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons)..
- Ocean Veritas continued its mission to characterize the subsurface plume. Sampling began approximately 3 km NE of the wellhead.
- International Peace conducted reference sampling, collecting background information for SCAT testing.
- Brooks McCall was in port Friday afternoon, and was scheduled to deploy Friday evening.



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- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 16 June, 2010
Update: 0900 17 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

>>>

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
>>>

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>

>>>

Thursday 17 June update: period from 2200hrsL on 6/15/10 to 2200hrsL on 6/16/10:
Injection rate average not provided. Number and time period of injection disruptions also not provided this reporting interval. Period Volume: 9152 gallons (Total Cumulative 423,074 gallons). The Brooks McCall is on station starting am 17 June for required sampling. The Ocean Veratas departed station pm of 16 June.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

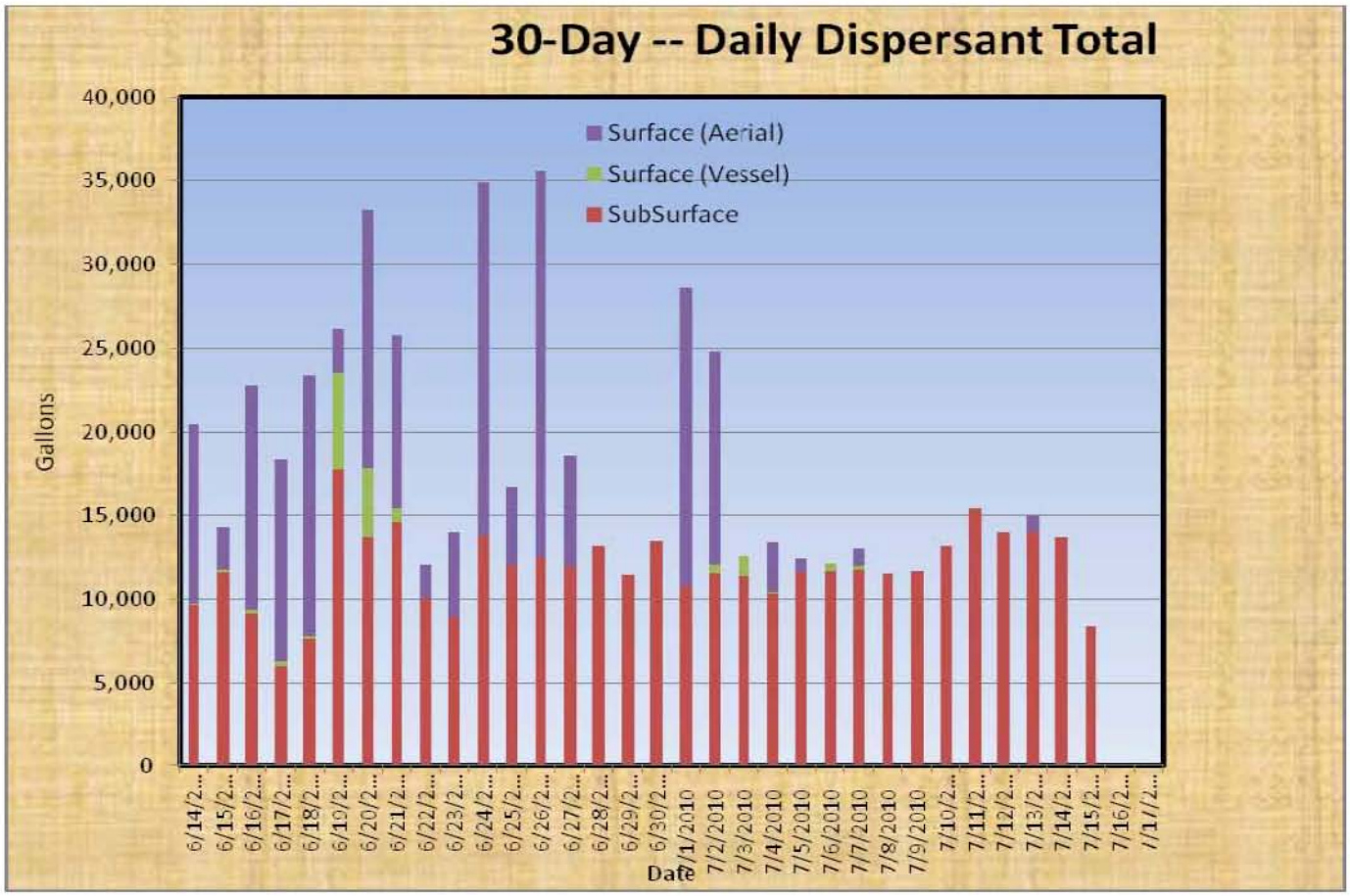
Date: 07/17/2010

Reporting Period: 15 MAY – 17 JULY, 2010

Update: 0900 18 July 2010

1. Current Activities

- Saturday 17 July update: period from 0000 hrsL on 07/16/10 to 2400 hrsL on 07/17/10:
- No subsea dispersant use.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons)..
- Ocean Veritas is in port.
- International Peace conducted background sampling.
- Brooks McCall monitored the subsurface plume. 4 casts were completed. Samples were no closer than 14 km due to seismic testing near source.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
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UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
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>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

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>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
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- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

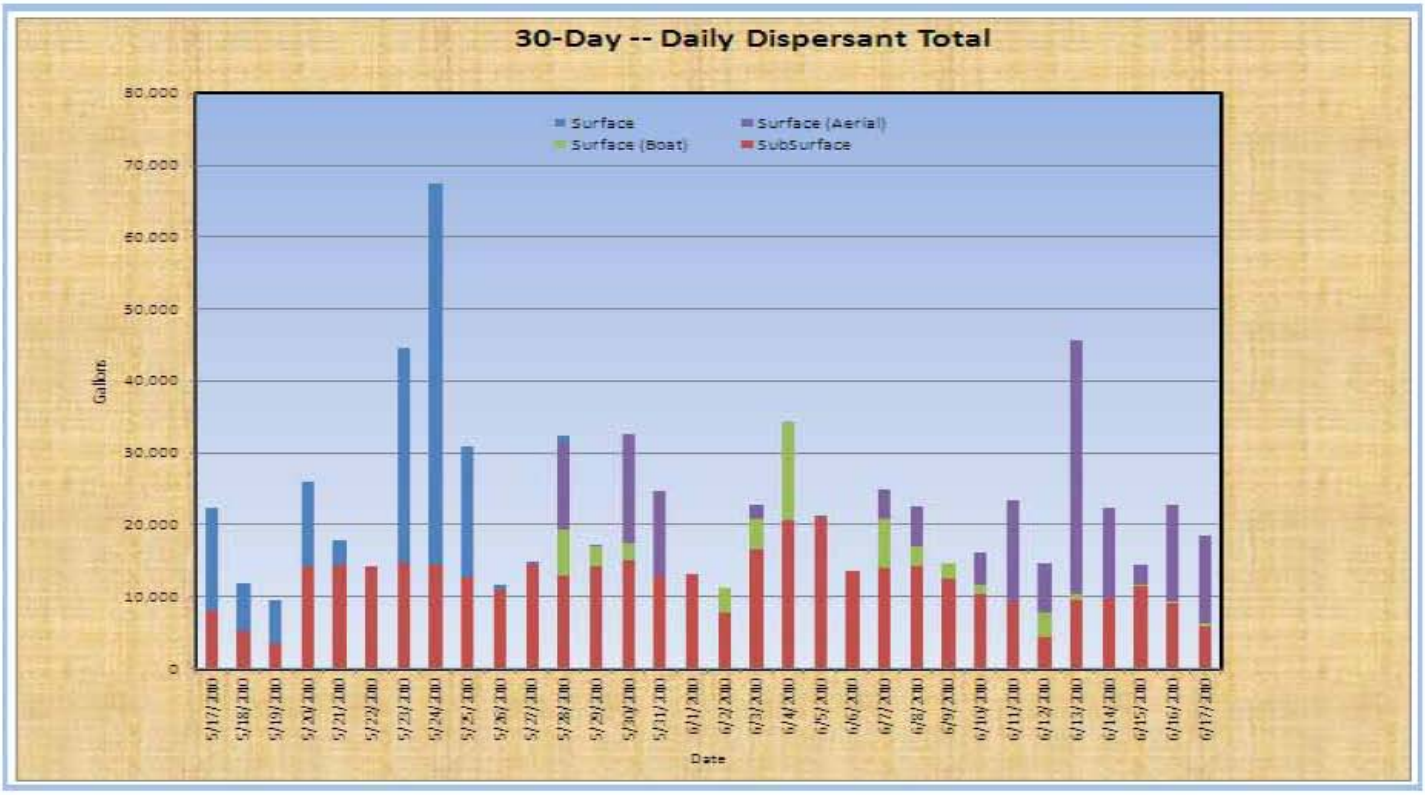
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/18/2010

Reporting Period: 16 MAY - 17 June, 2010
Update: 0900 18 June 2010

1. Current Activities

- Friday 18 June update: period from 2200hrsL on 6/16/10 to 2200hrsL on 6/17/10:
- Injection rate average not provided
- Flow disrupted for 1:06 hrs/min to change flow meter
- Period Volume: 5,962 gallons (Total Cumulative 429,036 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.



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- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.
  >>
- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>

Rate: 10 gpm
Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
>>>

NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
>>>

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387
5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

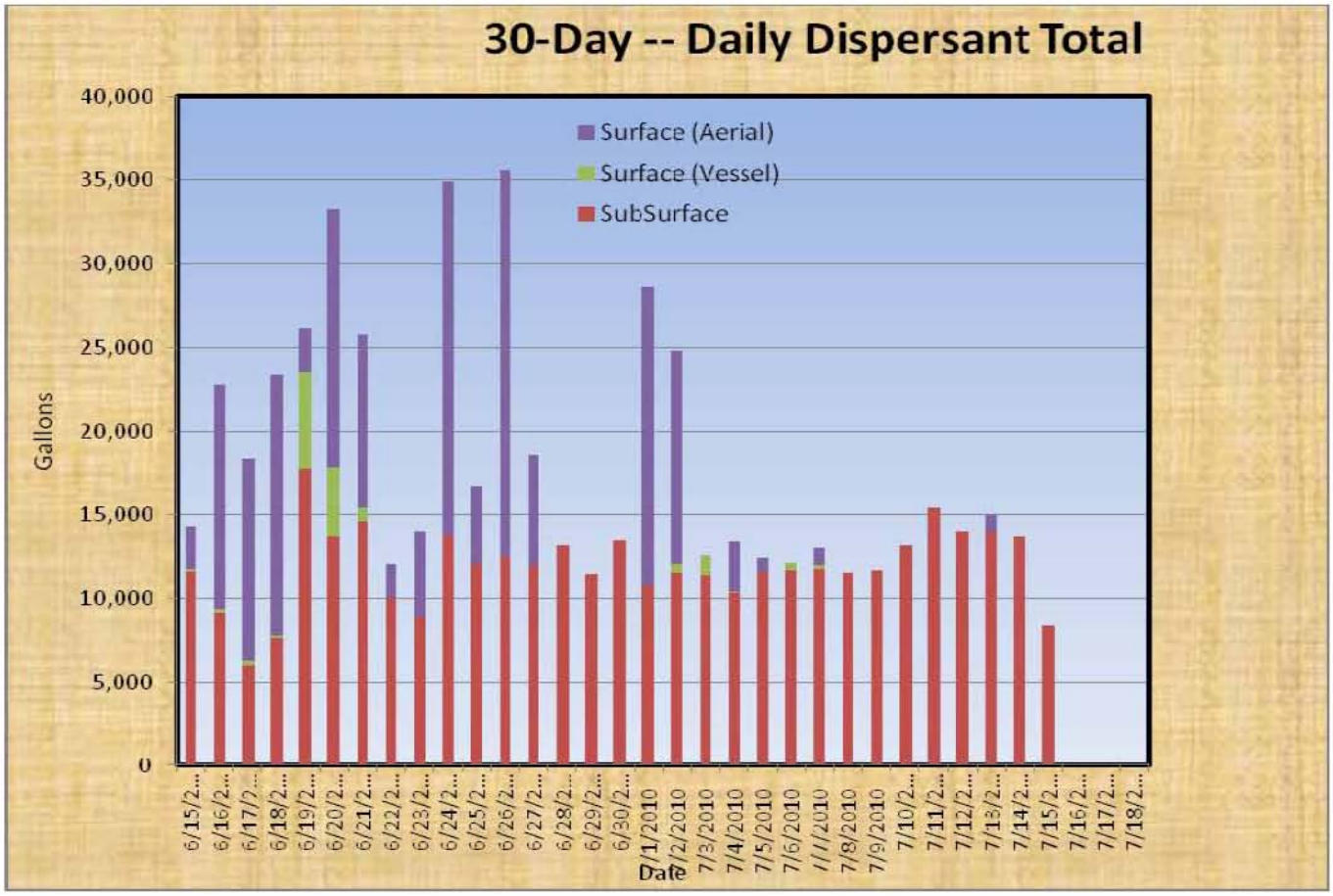
Date: 07/18/2010

Reporting Period: 15 MAY – 18 JULY, 2010

Update: 0900 19 July 2010

1. Current Activities

- Sunday 19 July update: period from 0000 hrsL on 07/18/10 to 2400 hrsL on 07/18/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Ocean Veritas arrived in port Saturday morning, so no samples were collected. Will deploy again Sunday at 1700..
- International Peace arrived in port at 1400 Saturday, so no samples were collected. Will deploy again on Sunday at 0100 hours.
- Brooks McCall monitored the subsurface plume. Samples were no closer than 14 km due to seismic testing near source.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
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6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

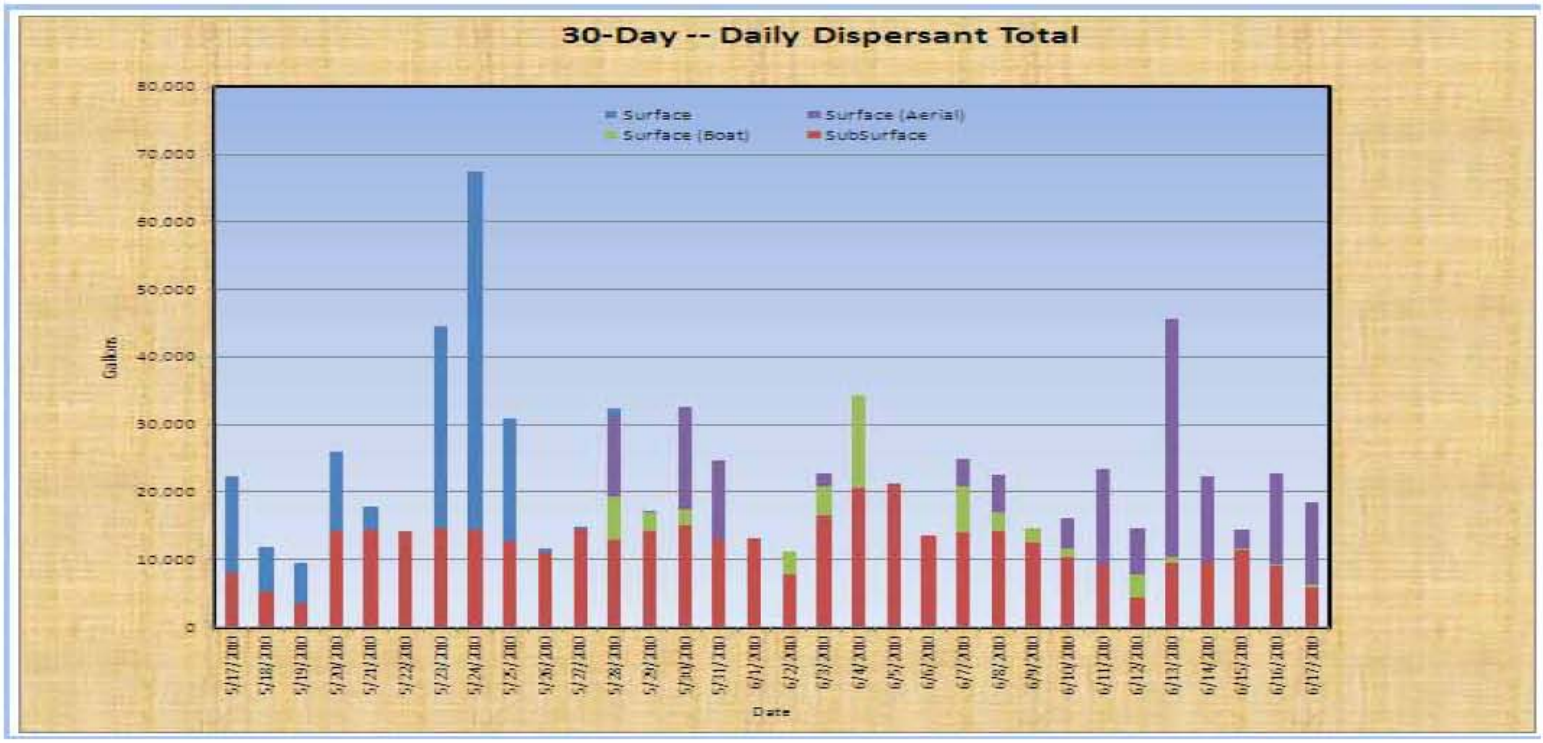
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/19/2010

Reporting Period: 17 MAY - 18 June, 2010
Update: 0900 19 June 2010

1. Current Activities

- Saturday 19 June update: period from 2200hrsL on 6/17/10 to 2200hrsL on 6/18/10:
- Injection rate average not provided **(estimate by calculation is 5.78 gallons/minute)**
- Flow disrupted for 2:20 hrs/min
- Period Volume: 7,642 gallons (Total Cumulative 436,600 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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1. If there is a significant reduction in DO from background to below 2 mg/L; or
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1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 7222 gallons COREXIT 9500 pumped this time period.

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- 12380 gallons COREXIT 9500 pumped this time period.

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

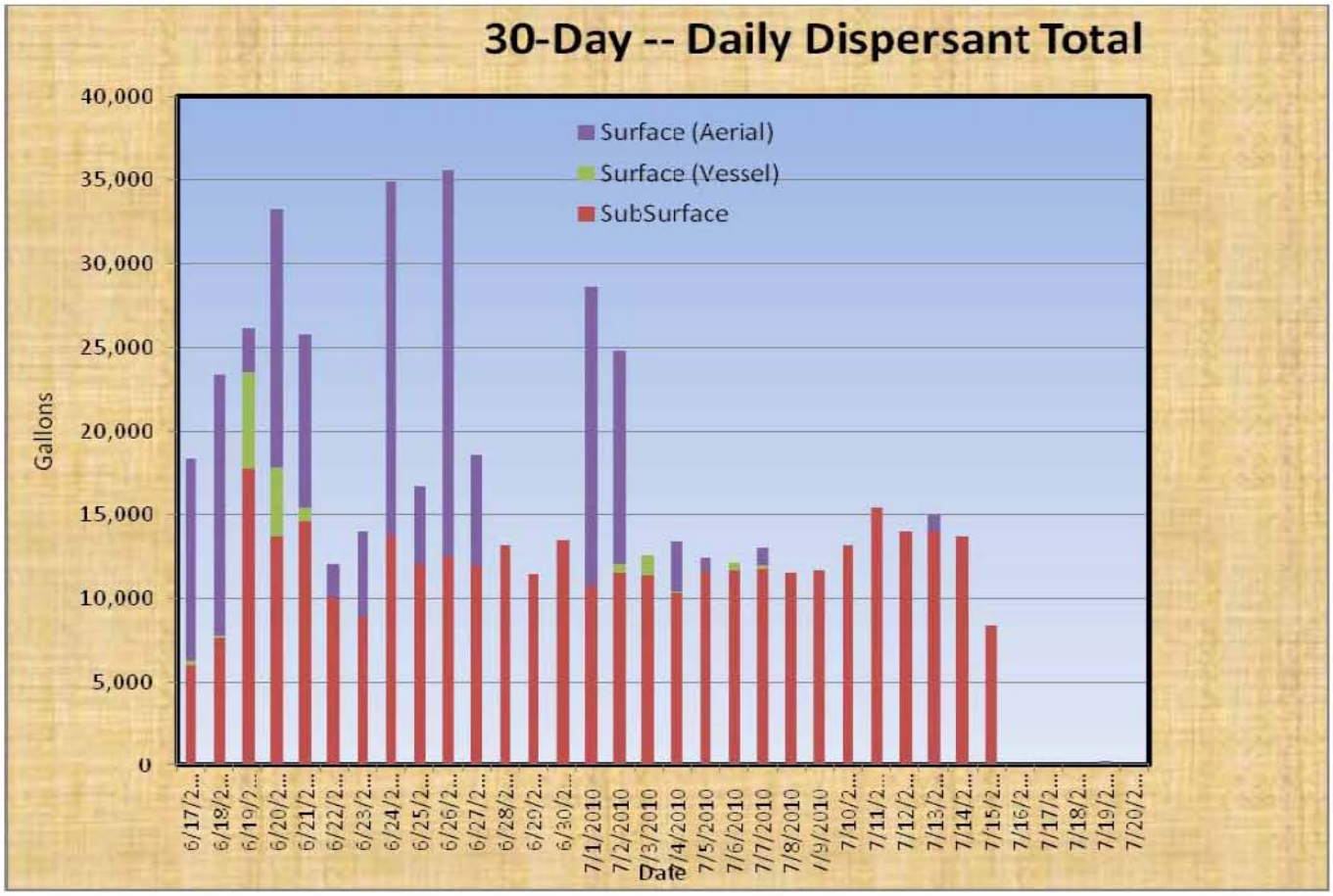
Date: 07/20/2010

Reporting Period: 15 MAY – 20 JULY, 2010

Update: 0900 21 July 2010

1. Current Activities

- Tuesday 21 July update: period from 0000 hrsL on 07/18/10 to 2400 hrsL on 07/20/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Brooks McCall is in port. No samples were collected.
- Ocean Veritas is collecting samples.
- International Peace remains in port until 7/22 unless the DWH cap is removed.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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Water sampling from surface to 550 meters for PAH analysis
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Rate of Dispersant Injection
Process for monitoring pump rate
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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

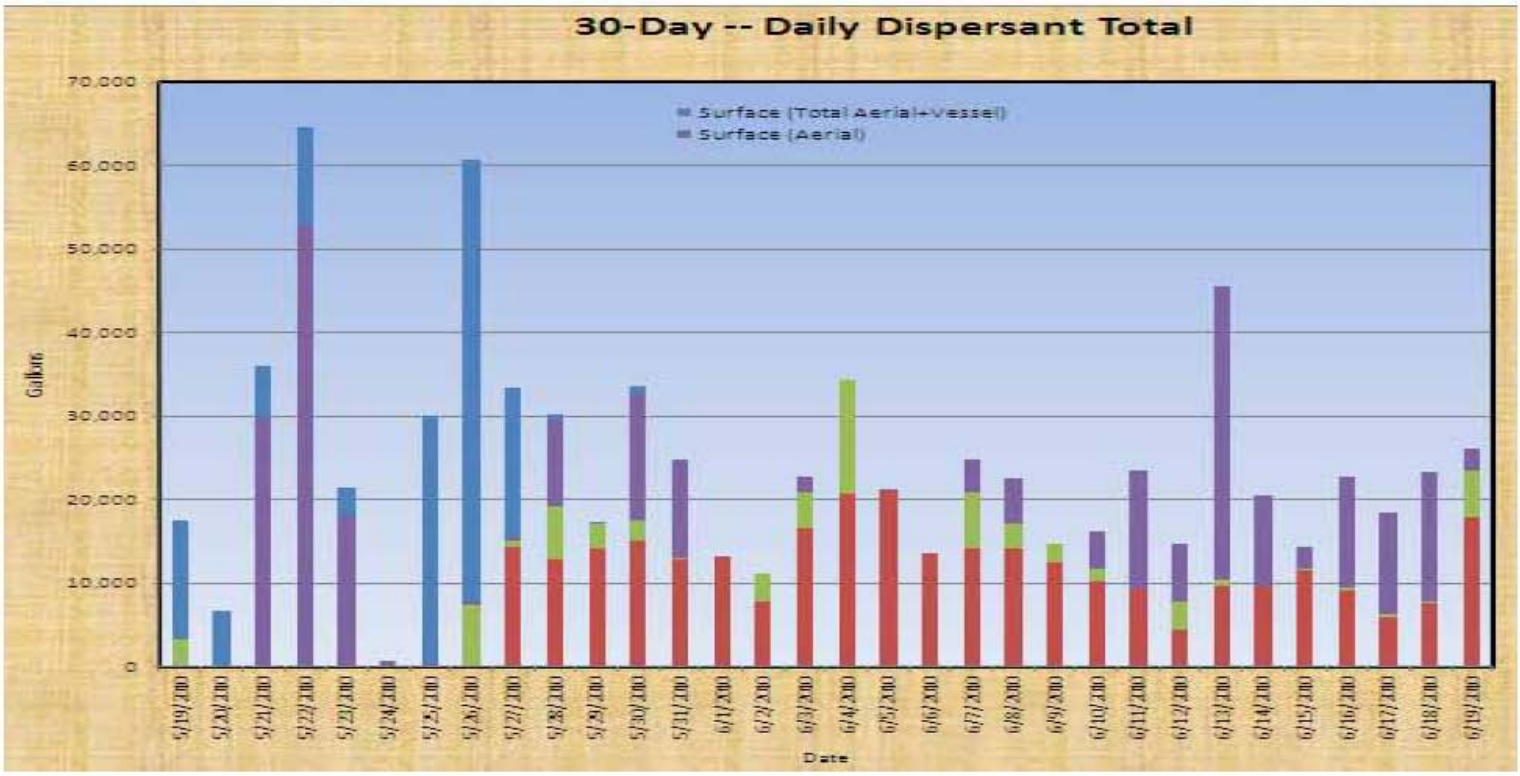
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/20/2010

Reporting Period: 18 MAY - 19 June, 2010
Update: 0900 20 June 2010

1. Current Activities

- Saturday 19 June update: period from 2200hrsL on 6/18/10 to 2200hrsL on 6/19/10:
- Injection rate average not provided **(estimate by calculation is 12.6 gallons/minute)**
- Flow disrupted for :33 hrs/min
- Period Volume: 17,780 gallons (Total Cumulative 454,440 gallons). Cumulative was adjusted up 60 gals.
- The Brooks McCall left station on 19 June, arrive at port 20 June. The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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Status of RV BROOKS McCALL:
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The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

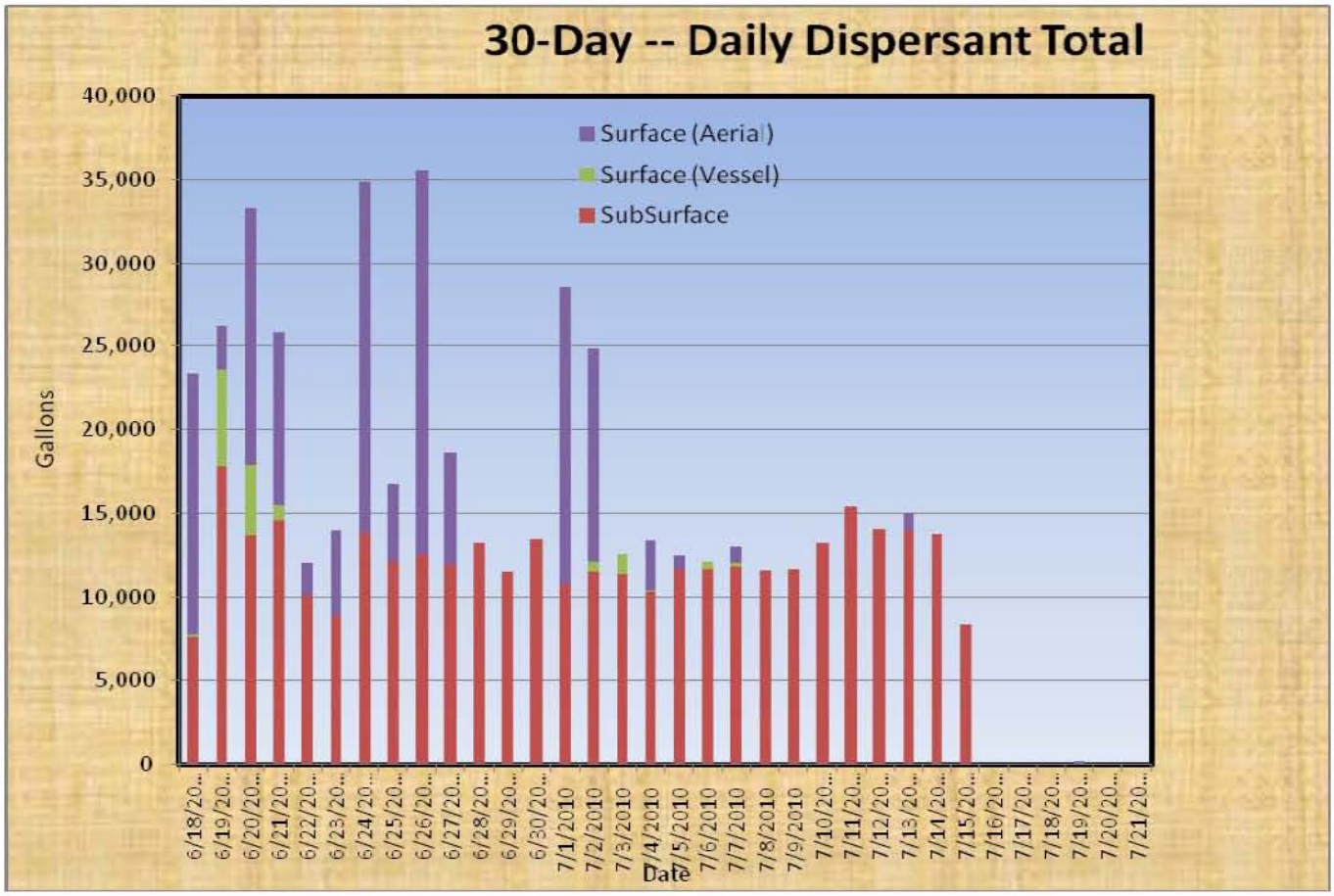
Date: 07/21/2010

Reporting Period: 15 MAY – 21 JULY, 2010

Update: 0900 22 July 2010

1. Current Activities

- Wednesday 21 July update: period from 0000 hrsL on 07/18/10 to 2400 hrsL on 07/21/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Ocean Veritas is collecting subsurface samples offshore. Sampling is focused 15 km and beyond from the wellhead.
- The International Peace is scheduled to depart at 0100 hours on 7/23.



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- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
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- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
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- Veritas on station for sampling, as weather permits

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- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

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- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

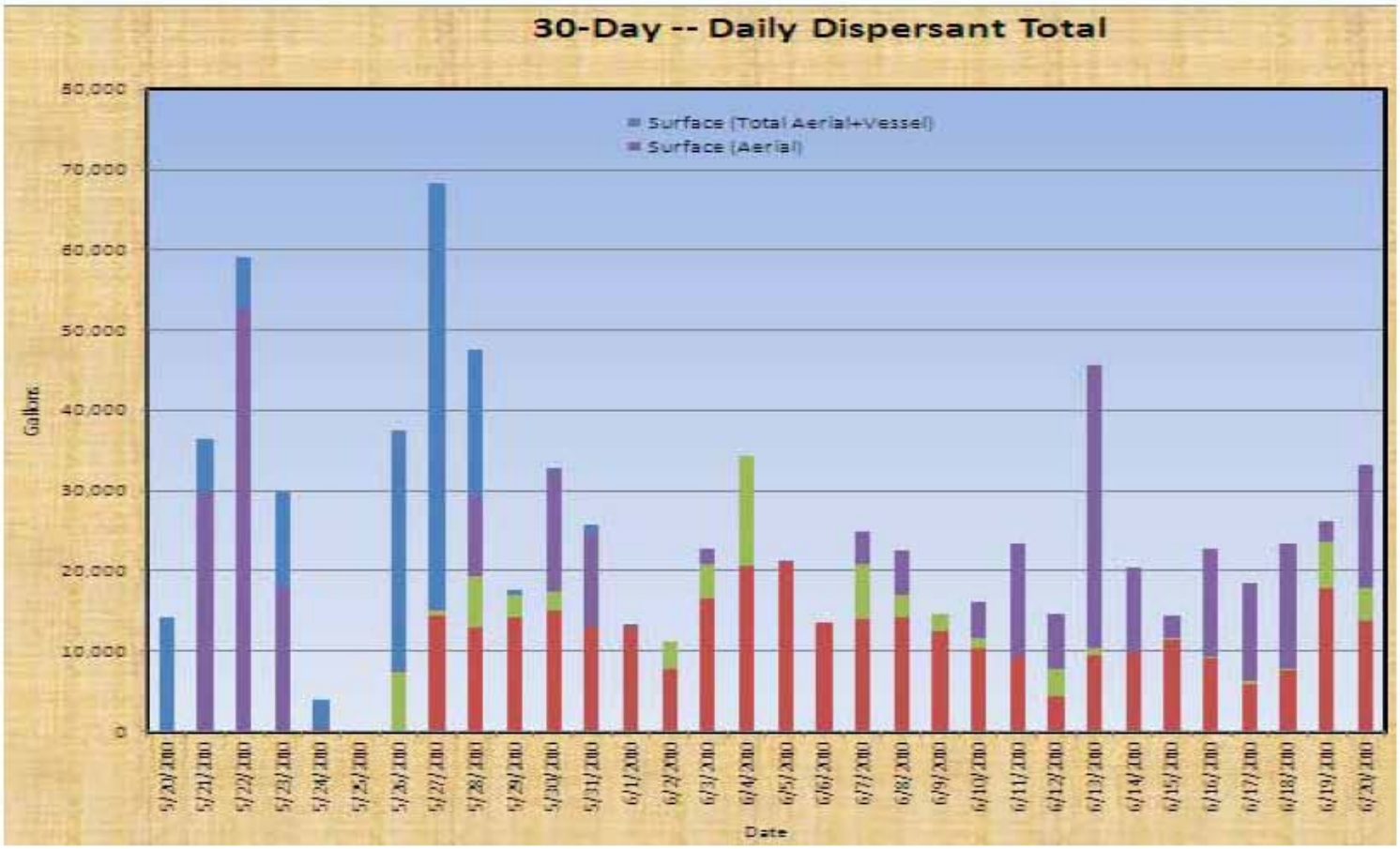
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/21/2010

Reporting Period: 19 MAY - 20 June, 2010
Update: 0900 21 June 2010

1. Current Activities

- Sunday 20 June update: period from 2200hrsL on 6/19/10 to 2200hrsL on 6/20/10:
- Injection rate average not provided **(estimate by calculation is 9.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,695 gallons (Total Cumulative 468,135 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
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Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 14,130 gallons of COREXIT pumped in this time period.
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>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
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- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

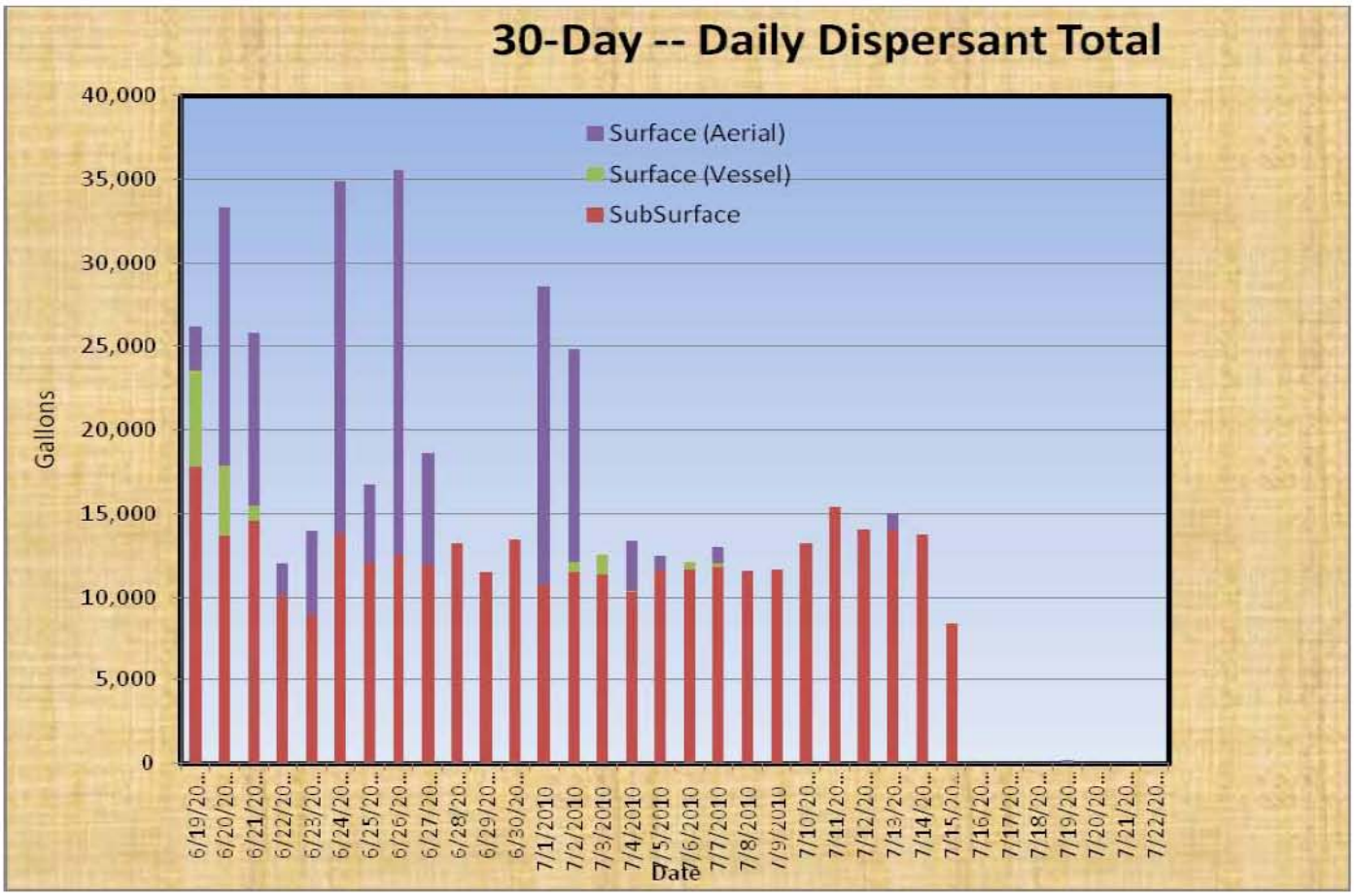
Date: 07/22/2010

Reporting Period: 15 MAY – 22 JULY, 2010

Update: 0900 23 July 2010

1. Current Activities

- Thursday 22 July update: period from 0000 hrsL on 07/22/10 to 2400 hrsL on 07/22/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Ocean Veritas was collecting subsurface samples offshore. It was returning to port last night.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
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VSL was O/S during injection application to perform Sampling & Monitoring
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FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

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- 14,130 gallons of COREXIT pumped in this time period.
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>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
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- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
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  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

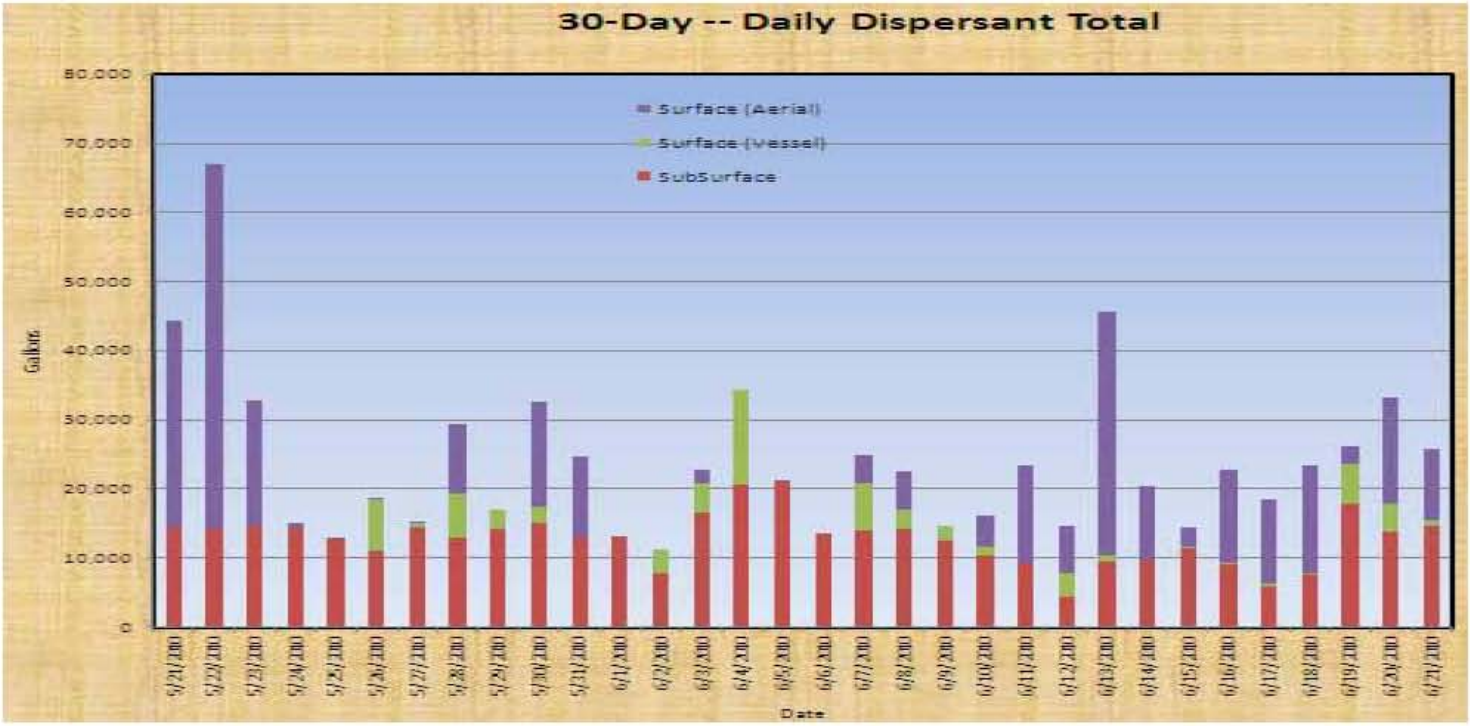
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/22/2010

Reporting Period: 20 MAY - 21 June, 2010
Update: 0900 22 June 2010

1. Current Activities

- Monday 21 June update: period from 2200hrsL on 6/20/10 to 2200hrsL on 6/21/10:
- Injection rate average not provided **(estimate by calculation is 10.1 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

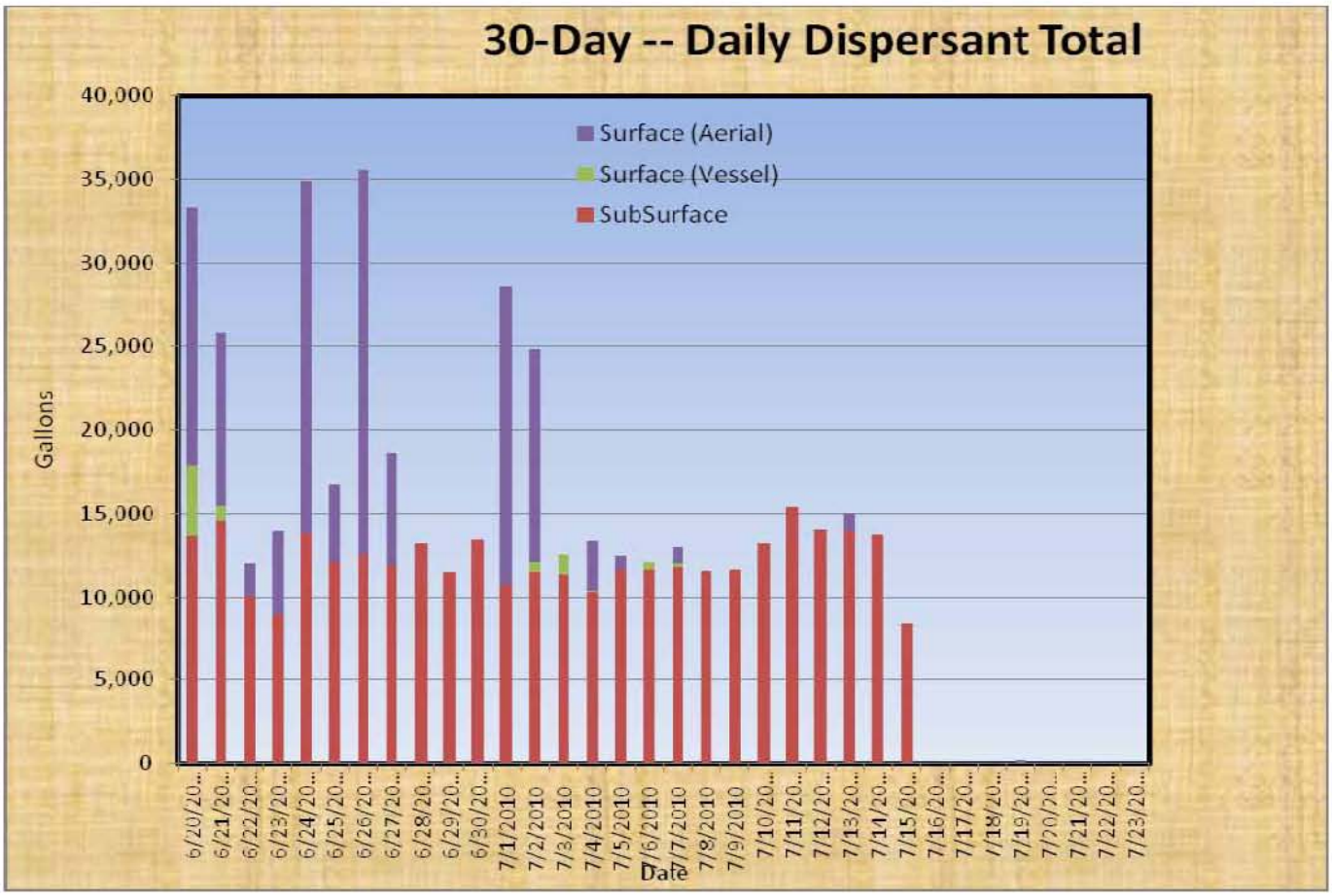
Date: 07/23/2010

Reporting Period: 15 MAY – 23 JULY, 2010

Update: 0900 24 July 2010

1. Current Activities

- Friday 23 July update: period from 0000 hrsL on 07/23/10 to 2400 hrsL on 07/23/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- All monitoring vessels are in port.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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Type of Dispersant to be used
Rate of Dispersant Injection
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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

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- 14,130 gallons of COREXIT pumped in this time period.
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>>>

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- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
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  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

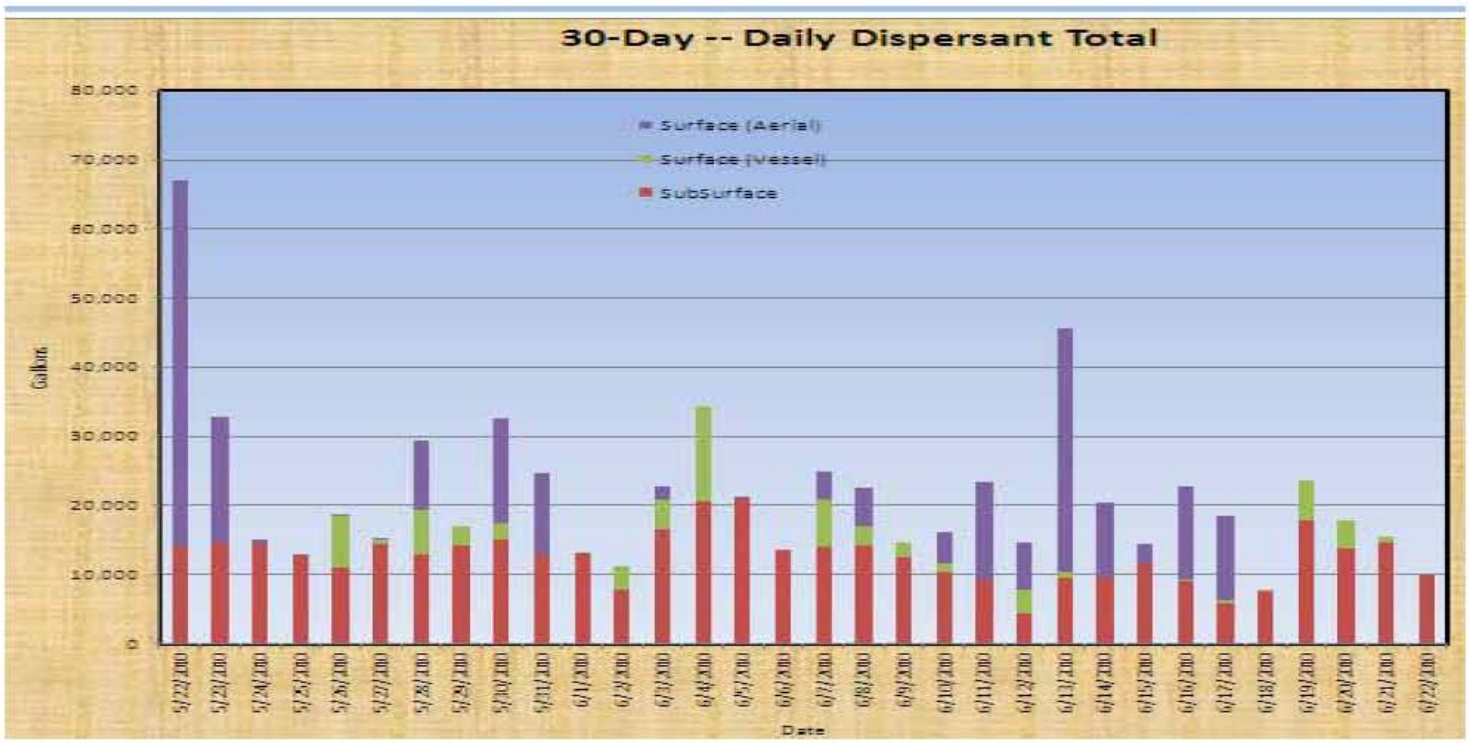
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/23/2010

Reporting Period: 15 MAY - 22 June, 2010
Update: 0900 23 June 2010

1. Current Activities

- Tuesday 22 June update: period from 2200hrsL on 6/21/10 to 2200hrsL on 6/22/10:
- Injection rate average not provided **(estimate by calculation is 7.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,046 gallons (Total Cumulative 492,764 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-23 May, 2010
Update: 0900 23 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
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- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

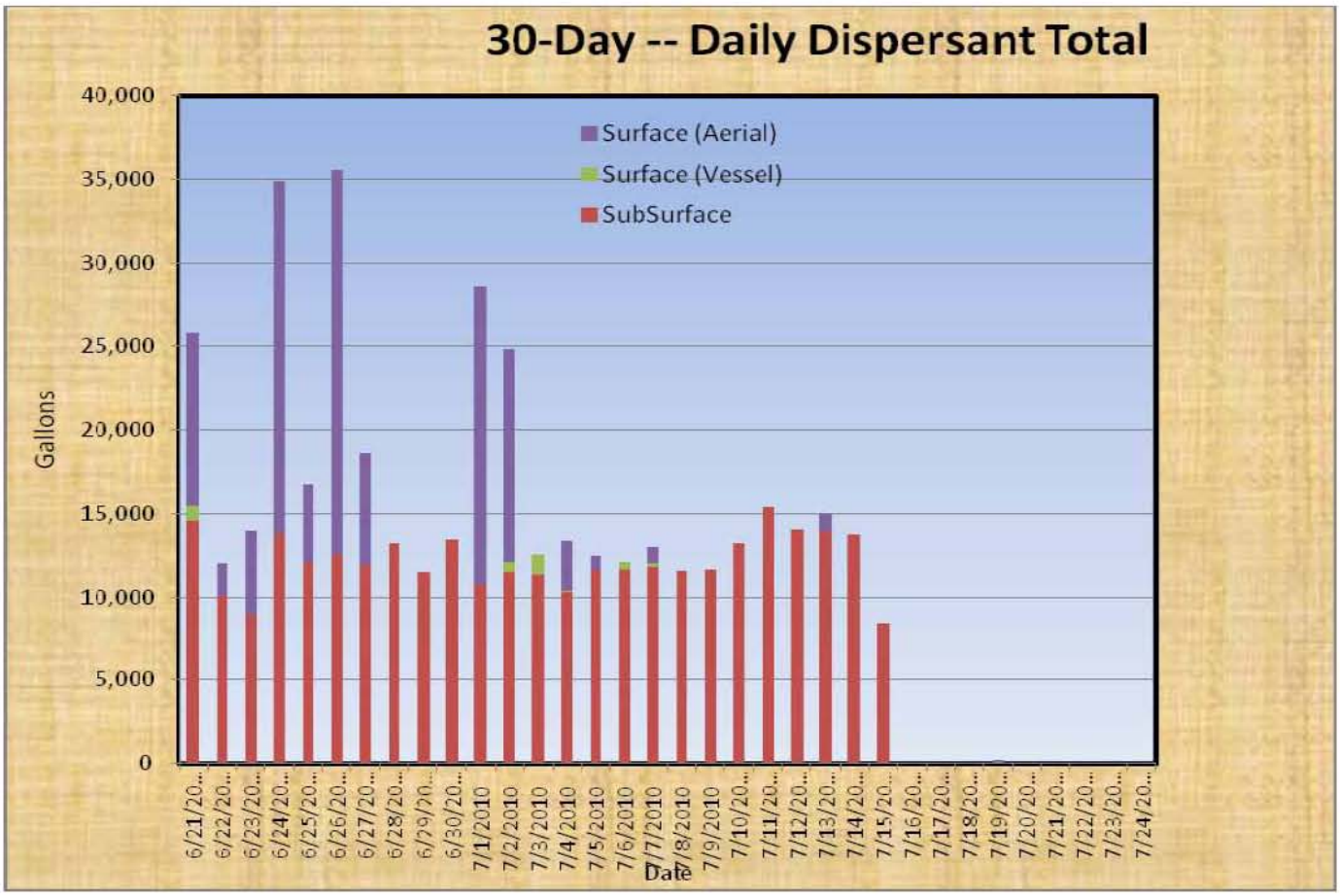
Date: 07/24/2010

Reporting Period: 15 MAY – 24 JULY, 2010

Update: 0900 25 July 2010

1. Current Activities

- Saturday 24 July update: period from 0000 hrsL on 07/24/10 to 2400 hrsL on 07/24/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- All monitoring ships are in port.



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1.1.1 Narrative

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This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
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Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
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6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-24 May, 2010
Update: 0900 24 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

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Type of Dispersant to be used
Rate of Dispersant Injection
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>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

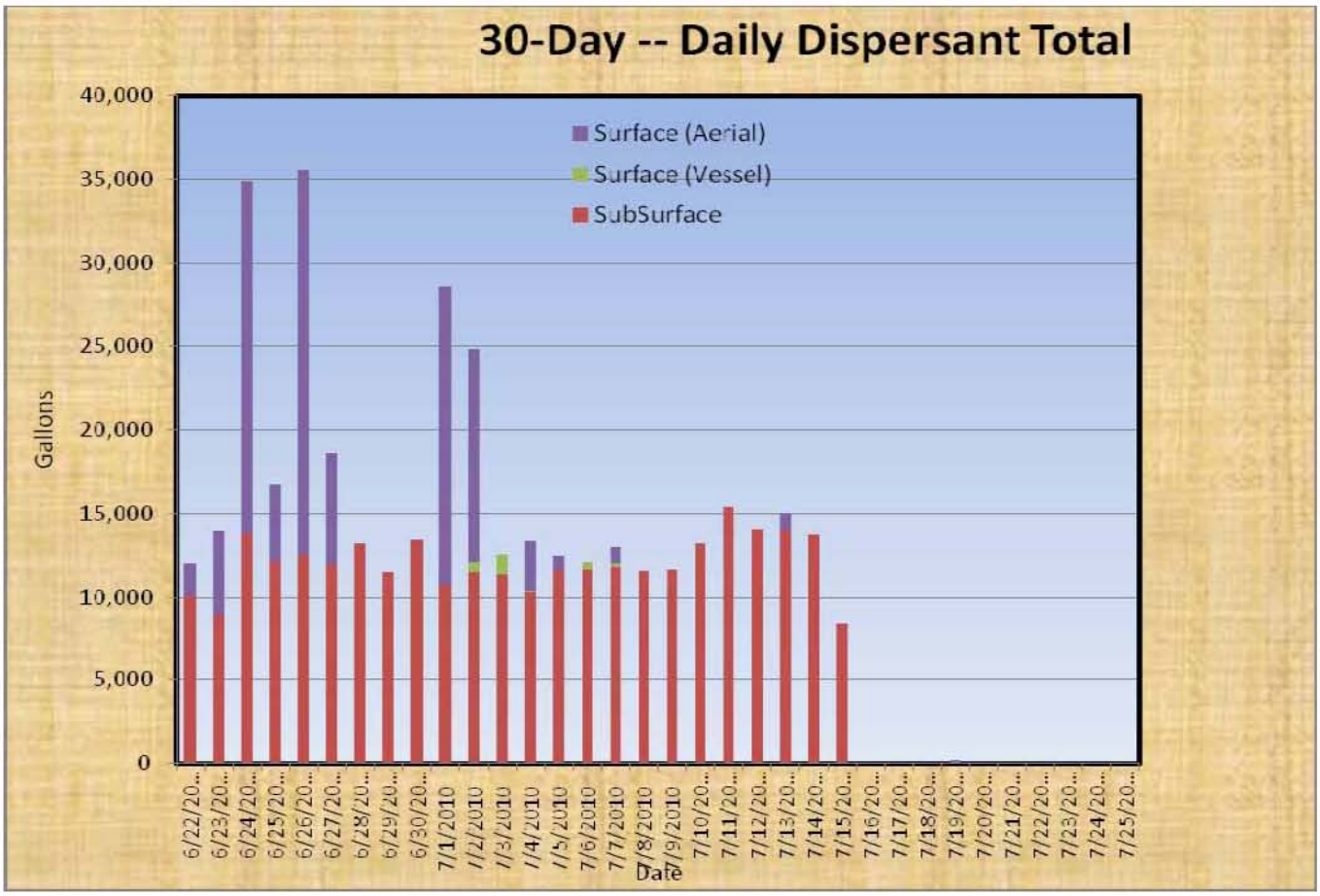
Date: 07/25/2010

Reporting Period: 15 MAY – 25 JULY, 2010

Update: 0900 26 July 2010

1. Current Activities

- Sunday 25 July update: period from 0000 hrsL on 07/25/10 to 2400 hrsL on 07/25/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- All monitoring ships are in port.



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- One disruption of injection from 2145 – 2158
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- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-25 May, 2010
Update: 0700 25 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
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CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-26 May, 2010
Update: 0700 26 May 2010

1. Current Activities

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1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

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Initial (Update)

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Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

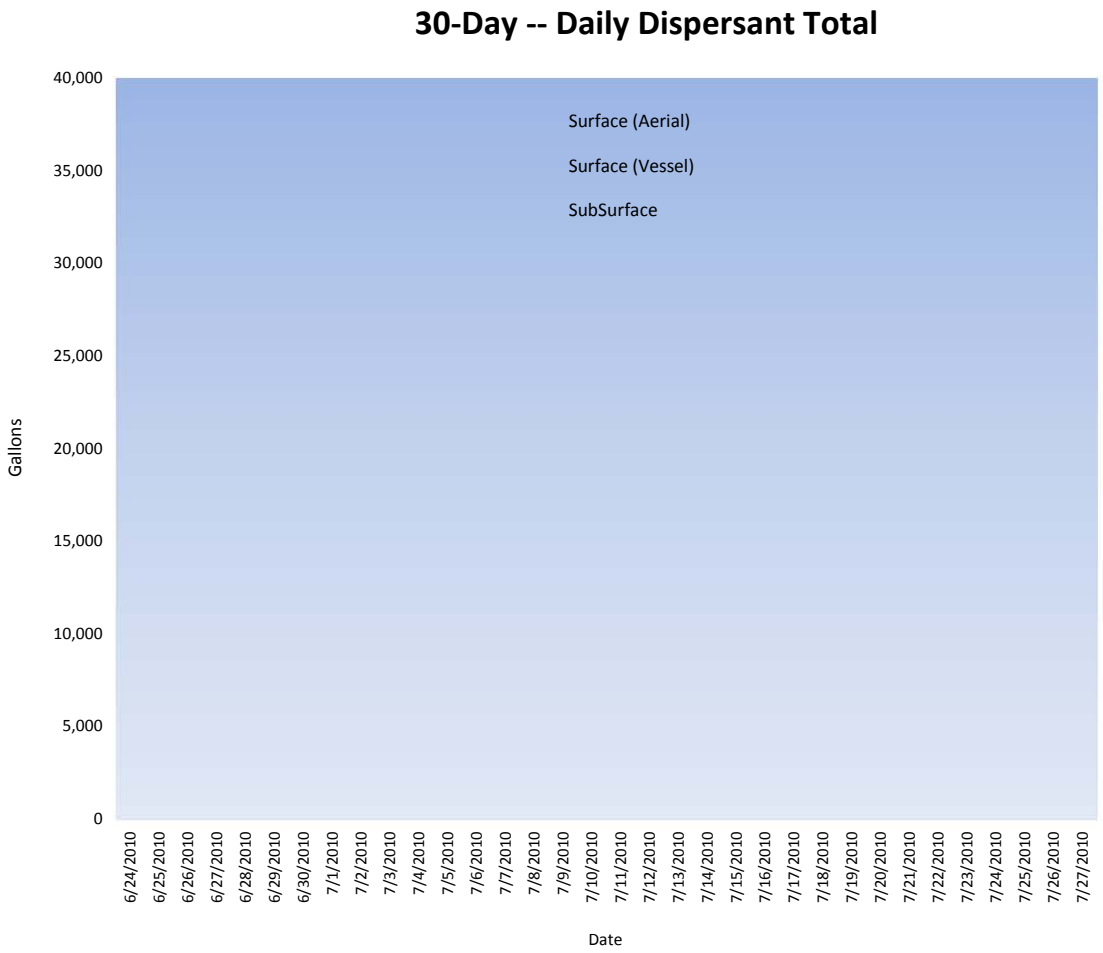
Date: 07/27/2010

Reporting Period: 15 MAY – 27 JULY, 2010

Update: 0900 28 July 2010

1. Current Activities

- TUEDAY 27 July update: period from 0000 hrsL on 07/27/10 to 2400 hrsL on 07/27/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- The Ocean Veritas conducted subsea monitoring on July 26, International Peace left port at midnight July 27.



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- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

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- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-27 May, 2010
Update: 0900 27 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

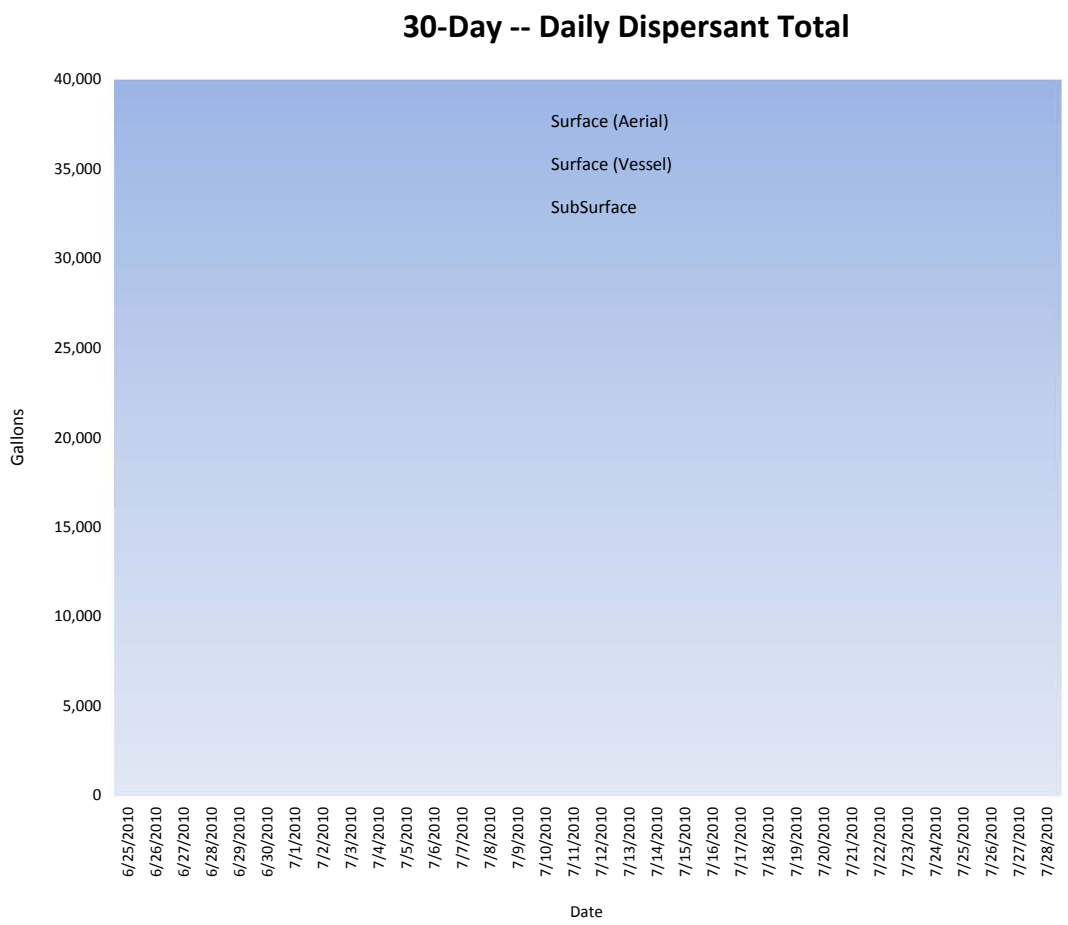
Date: 07/28/2010

Reporting Period: 15 MAY – 28 JULY, 2010

Update: 0900 29 July 2010

1. Current Activities

- WEDNESDAY 28 July update: period from 0000 hrsL on 07/28/10 to 2400 hrsL on 07/28/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- International Peace conducted control sampling with dispersant on July 28, 2010
- Ocean Veritas conducted subsurface monitoring July 28, 2010



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1.1.1 Narrative

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This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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Aerial Visual Observation – Weather Permitting

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Cast Flourometer – surface to sea floor
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Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
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- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-28 May, 2010
Update: 0900 28 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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Rate of Dispersant Injection
Process for monitoring pump rate
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-29 May, 2010
Update: 0900 29 May 2010

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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-30 May, 2010
Update: 0900 30 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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WRITTEN STATEMENT OF
DR. LARRY ROBINSON

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

HEARING ON
THE USE OF DISPERSANT FOR THE BP DEEPWATER HORIZON OIL SPILL

BEFORE THE
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE,
AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

July 15, 2010

Thank you, Chairman Mikulski and Members of the Committee, for the opportunity to testify on the Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) role in the Deepwater Horizon BP oil spill response and the use of dispersants. My name is Dr. Larry Robinson and I am an Assistant Secretary of Commerce for Oceans and Atmosphere. I appreciate the opportunity to discuss the critical roles NOAA serves during oil spills and the importance of our contributions to protect and restore the natural resources, communities, and economies affected by this tragic event.

NOAA's mission is to understand and predict changes in the Earth's environment. NOAA also conserves and manages coastal and marine resources to meet our Nation's economic, social, and environmental needs. As a natural resource trustee, NOAA is one of the federal agencies responsible for protecting, assessing, and restoring the public's coastal natural resources when they are harmed by oil spills. As such, the entire agency is deeply concerned about the immediate and long-term environmental, economic, and social impacts to the Gulf Coast and the Nation from this spill. NOAA is fully mobilized and working tirelessly to reduce impacts on the Gulf Coast and will continue to do so until the spill is controlled, oil is cleaned up, natural resource injuries are assessed, and restoration is complete.

My testimony today will discuss NOAA's role in the Deepwater Horizon response and natural resource damage assessment process associated with the Deepwater Horizon oil spill, for which BP is a responsible party; NOAA's role in use of dispersants as a countermeasure to mitigate the impacts of the spill; and opportunities to strengthen the federal response to future events through research and development.

NOAA'S ROLES DURING OIL SPILLS

NOAA has three critical roles mandated by the Oil Pollution Act of 1990 and the National Contingency Plan (NCP):

1. During the emergency response, NOAA conducts research and monitoring and communicates scientific information to the Federal On-Scene Coordinator (FOSC). The Scientific Support Team is designated as a special team in the NCP and provides a broad array of scientific services to the response.
2. As a natural resource trustee, NOAA conducts a Natural Resource Damage Assessment (NRDA) jointly with co-trustees to assess and restore natural resources injured by the oil spill. NRDA also assesses the lost uses of those resources, such as recreational fishing, and swimming, with the goal of implementing restoration projects to address these losses.
3. Finally, NOAA represents the Department of Commerce in spill response preparedness and decision-making activities through the National Response Team and the Regional Response Teams.

Response

The U.S. Coast Guard (USCG) is the FOSC and has the primary responsibility for managing coastal oil spill response and clean-up activities in the coastal zone. During an oil spill, NOAA's Scientific Support Coordinators deliver technical and scientific support to the USCG. NOAA's Scientific Support Coordinators are located around the country in USCG Districts, ready to respond around the clock to any emergencies involving the release of oil or hazardous substances into the oceans or atmosphere. Currently, NOAA has deployed all of its Scientific Support Coordinators from throughout the country to work on the Deepwater Horizon oil spill.

With over thirty years of experience and using state-of-the-art technology, NOAA continues to serve the Nation by providing its expertise and a suite of products and services critical for making science-based decisions. Examples include trajectory forecasts on the movement and behavior of spilled oil, overflight observations, spot weather forecasts, emergency coastal survey and charting capabilities, aerial and satellite imagery, and real-time coastal ocean observation data. Federal, state, and local entities look to NOAA for assistance, experience, local perspective, and scientific knowledge. NOAA's Office of Response and Restoration was called upon for scientific support 200 times in 2009.

Natural Resource Damage Assessment

Stewardship of the Nation's natural resources is shared among several federal agencies, states, and tribal trustees. NOAA, acting on behalf of the Secretary of Commerce, is the lead federal trustee for many of the Nation's coastal and marine resources, and is authorized by the Oil Pollution Act of 1990 (OPA) to recover damages on behalf of the public for injuries to trust resources resulting from an oil spill. Regulations promulgated by NOAA under the Oil Pollution Act encourage compensation in the form of restoration of the injured resources, and appropriate compensation is determined through the NRDA process. Since the enactment of OPA, NOAA, together with other federal, state, and tribal co-trustees, has recovered approximately $500 million for restoration of natural resources injured by releases of oil or hazardous substances, as well as injuries to national marine sanctuary resources, including vessel groundings.

National and Regional Response Teams

The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP's purpose is to develop a national response capability and promote

overall coordination among the hierarchy of responders and contingency plans. NOAA represents the Department of Commerce on the National Response Team and Regional Response Teams to develop policies on dispersant use, best clean-up practices and communications, and to ensure access to science-related resources, data, and expertise during responses to oil spills.

NOAA'S ROLE IN THE DEEPWATER HORIZON RESPONSE

NOAA's scientific experts have been assisting with the response from the first day of the Deepwater Horizon BP oil spill, both on-scene and through our headquarters and regional offices. NOAA's support includes daily trajectories of the spilled oil, weather data to support short and long range forecasts, and hourly localized 'spot' forecasts to determine the use of weather dependent mitigation techniques such as oil burns and chemical dispersant applications. NOAA uses satellite imagery and real-time observational data on the tides and currents to predict and verify oil spill location and movement. To ensure the safety of fishermen and consumer seafood safety, NOAA scientists are in the spill area taking water and seafood samples, and NOAA has put fisheries closures in place to maintain consumer confidence in the safety of consuming seafood from the Gulf of Mexico region. In addition, NOAA experts are providing expertise and assistance regarding sea turtles, marine mammals, and other protected resources such as corals.

At the onset of this oil spill, NOAA quickly mobilized staff from its Damage Assessment Remediation and Restoration Program to begin coordinating with federal and state co-trustees and the responsible parties to collect a variety of data that are critical to help inform the NRDA. NOAA is coordinating the NRDA effort with the Department of the Interior (another federal co-trustee), as well as co-trustees in five states and representatives for at least one responsible party, BP. NOAA and the co-trustees are in the initial phase of this process and are currently gathering data on resources such as fish, shellfish, birds, and turtles, and mammals; their supporting habitats such as wetlands, beaches, and corals; and human uses of affected resources, such as fishing and recreational uses across the Gulf of Mexico. The trustees will then quantify the total losses and develop restoration projects that compensate the public for their losses.

THE USE OF DISPERSANTS

The Deepwater Horizon spill is a stark reminder that large oil spills still occur, and that we must rebuild and maintain our response capacity. When an oil spill occurs, there are no good outcomes. Once oil has spilled, responders use a variety of oil spill countermeasures to reduce the adverse effects of spilled oil on the environment. The goal of the Unified Command is to minimize the environmental damage and speed recovery of injured resources. The overall response strategy to accomplish this goal is to maximize recovery and removal of the oil being released while minimizing any additional damage that might be caused by the response itself. This philosophy involves making difficult decisions, often seeking the best way forward among imperfect options.

Under section 311 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) is required to prepare and maintain a schedule of dispersants and other mitigating devices and substances that may be used in carrying out the NCP. The NCP requires Regional Response Teams (RRT), in which NOAA participates, and Area Committees to plan for the use or non-use

of dispersants in advance of spills, to ensure that the tradeoff decisions between water column and surface/shoreline impacts are deliberated. As the FOSC for this spill response, the U.S. Coast Guard is responsible for approving the use of the specific dispersant used from the NCP Product Schedule. Because of the unprecedented nature of the dispersant operations, the monitoring and constraints on application volumes and methodologies are being closely managed. In particular, EPA has specified effectiveness and impact monitoring plans, application parameters, and action thresholds. Any changes to specific Deepwater Horizon dispersant plans require the concurrence of EPA and other RRT decision agencies, including NOAA, under the NCP.

NOAA's Scientific Support Team is designated as a special team in the NCP and provides a broad array of scientific services to the response, including recommendations to the FOSC on the appropriate use of dispersants. NOAA is also a member of the Special Monitoring of Applied Response Technologies (SMART) program, an interagency, cooperatively designed program to monitor the efficacy of dispersant and in-situ burning operations. SMART relies on small, highly mobile teams that collect real-time data using portable, rugged, and easy-to-use instruments during dispersant and in situ burning operations. Data are channeled to the Unified Command to help address critical questions. NOAA also uses SMART data to inform 24, 48 and 72 hour oil fate and trajectory models as dispersants can augment the behavior of the spilled oil.

The Gulf of Mexico shorelines, and Louisiana's in particular, possess extensive marsh habitats that are critical for wildlife and fisheries and shoreline protection. NOAA's environmental sensitivity index maps rank shoreline vulnerability to oil spills, and marshes are considered the most sensitive. Louisiana's marshes are already in a weakened condition and large areas are lost every year. These marshes and biota are extremely sensitive to oil, very difficult to clean up, and highly vulnerable to collateral impacts from response efforts.

For the Deepwater Horizon spill, the Unified Command's response posture has been to fight the spill offshore and reduce the amount of oil that comes ashore, using a variety of countermeasures including subsurface recovery, booming, skimming, burning, and dispersants. No single response method is 100 percent effective, and each has its own "window of opportunity" defined by the state of the oil and weather and sea state conditions, thereby establishing a need to consider the use of all available methods. It is important to note that, given the size and complexity of the Deepwater Horizon spill, no combination of response actions can fully contain the oil or completely mitigate the impacts until the well is brought under control. But given the enormous volume and geographic extent of the spill, the response to date has been somewhat successful in limiting shoreline impacts.

Chemical dispersants can be an effective tool in the response strategy, but like all methods, involve trade-offs in terms of effectiveness and potential for collateral impacts. Although mechanical recovery using skimmers is the preferred method of offshore oil spill response because it removes the oil from the environment, it is generally ineffective unless seas are fairly calm. The use of dispersants to mitigate offshore oil spills is a proven and accepted technology to reduce the impacts to shorelines and, under certain conditions, can be more effective than mechanical response. This is largely due to the fact that spray aircraft can encounter much more of the floating oil, and more quickly, than can skimmers Dispersants have been used effectively

to respond to spills both in the U.S. and internationally. In the U.S., notably in the Gulf of Mexico, dispersants have been used during the past 15 years against much smaller spills off Louisiana and Texas. The largest use of dispersants in North America (2.7 million gallons) was in the Gulf of Mexico during the 1979-80 Ixtoc I blowout in Campeche Bay, Mexico.

The NCP establishes a framework for the use of dispersants in an oil spill response. The NCP states that RRT and Area Committees will address, as part of their planning activities, the desirability of using dispersants and oil spill control agents listed on the NCP's National Product Schedule. The NCP goes on to state that Area Contingency Plans (ACP) will include applicable pre-authorization plans and address the specific contexts in which such products should and should not be used. If the RRT representatives for EPA, the Department of Commerce, and Department of the Interior natural resource trustees, and the states with jurisdiction over the regional waters for which the preauthorization plan applies, approve in advance the use of certain dispersant products under specified circumstances as described in the preauthorization plan, the FOSC may authorize the use of the products without obtaining additional concurrences. In Region VI, which includes the Gulf of Mexico, dispersant use is pre-authorized in offshore water, beyond the 3-mile limit. The preauthorization of alternative countermeasures in the response plans allows for quick implementation of the pre-approved countermeasures during a response, when timely action is critical to mitigate environmental impacts.

For all dispersant operations, the FOSC must activate the SMART monitoring team to monitor the effectiveness of the dispersant. Dispersant use for the Deepwater Horizon oil spill was, and continues to be, performed in accordance with ACP guidelines and with RRT approval. NOAA's Scientific Support Coordinators, supported by NOAA's team of scientists at its Emergency Response Division and in consultation with trustees, is advising the FOSC on when and where dispersants should be used to determine the most effective and appropriate use of dispersants. The authorization given to BP to use the dispersant on oil present on the surface of the water included specific conditions to ensure the protection of the environment and the health of residents in affected areas.

Dispersants are chemicals that may be applied directly to the spilled oil in order to remove it from the water surface by dispersing it into the upper layer of the water column. Dispersants are commonly applied through specialized equipment mounted on an airplane, helicopter or ship. The dispersant must be applied as a mist of fine droplets and under a specific range of wind and sea state conditions. Once applied at the surface, dispersants help break up the oil into tiny micron-sized droplets (size of the cross section of a hair) which mix into the upper layer of the ocean. Because of the high encounter rate of aircraft, they allow for the rapid treatment of large areas. Dispersed oil does not sink; rather it forms a "plume" or "cloud" of oil droplets just below the water surface. The dispersed oil mixes vertically and horizontally into the water column and is diluted. Once formed, bacteria and other microscopic organisms then act to degrade the oil within the droplets more quickly than it the oil had not been dispersed. It should be noted that oil spilled from the Deepwater Horizon incident is also naturally dispersing into the water column due to the physical agitation of the wind, waves, and vessel operations.

The Deepwater Horizon spill has also for the first time in the U.S. implemented the use of subsurface dispersants at the wellhead. This is being applied through the use of Remotely

Operated Vehicles (ROV). The decision to use subsurface applications was made by the FOSC with concurrence by RRT Region VI after several test applications to determine the efficiency, and development and implementation of a monitoring protocol. Limitations have been placed on the amount of subsurface dispersants that can be applied each day.

Spill response often involves a series of environmental trade-offs. The overall goal is to use the response tools and techniques that will minimize the overall environmental damage from the oil. The use of dispersants is an environmental trade-off between impacts within the water column, on the sea surface (birds, mammals, and turtles in slicks) and on the shore. Dispersants do not remove the oil from the environment. When a decision is made to use dispersants, the decision maker is reducing the amount of oil on the surface where it may affect birds, mammals and turtles, when they are at or near the surface, and ultimately that oil that may come ashore, in exchange for increasing the amount of oil in the upper layer of the water column 40 miles off shore. The effects of dispersants and dispersed oil below the surface on diving birds, marine mammals, and sea turtles are unknown. Under ideal conditions, each gallon of dispersant applied offshore prevents about 20 gallons of oil from coming onto the beaches and into the marshes of the Gulf Coast.

The Gulf coast is home to coastal wetlands and marshes that are biologically productive and ecologically important to nesting waterfowl, sea turtles, fisheries, and essential fish habitat. The Gulf of Mexico region's ecological communities are essential to sustaining local economies, recreational experiences, and overall quality of life. The extensive marshes themselves provide coastal communities with protection from severe storms, such as Hurricane Katrina. These habitats are highly sensitive to oiling. Once oil does impact marshes, there are limited cleanup options, and potential for significant long-term impacts. As oil has moved ashore from the Louisiana coast to the Florida panhandle from the BP Deepwater Horizon spill, we have seen firsthand the impacts this oil has on these habitats, and to birds, turtles and other wildlife. Although it may not be readily apparent, use of dispersants offshore and in deep water, is reducing the amount of oil reaching the shoreline, reducing the amount of shoreline cleanup that will be required, and helping to reduce recovery time of injured nearshore resources. Without the use of dispersants, the shoreline impacts along the Gulf coast from the Deepwater Horizon spill would be greater.

RESEARCH ON THE EFECTIVENESS AND EFFECTS OF DISPERSANTS AND DISPERSED OIL

Research on the effectiveness and effects of dispersants and dispersed oil have been underway for more than three decades but important gaps still exist. Much of what we have learned from both research and real world experience is presented in detail in the 2005 National Research Council (NRC) book "Oil Spill Dispersants: Efficacy and Effects." The NRC identified gaps in our knowledge. These gaps were narrowed by research and development activities carried out through projects conducted by the Coastal Response Research Center (CRRC), and state and federal agencies, and academia. The CRRC was a successful joint partnership established in 2004 between the University of New Hampshire and NOAA's Office of Response and Restoration.

One area of focus has been on determining the toxicity and long-term effects of dispersants and dispersed oil on sensitive marine life. It is now quite clear that effectively-dispersed oil declines rapidly in concentration due to ocean mixing, degrades faster than untreated surface or shoreline oil, and that the toxicity of dispersants is considerably less than the toxicity of the oil that is dispersed. The acute (four day) toxicity of dispersants and dispersed oil for the most sensitive species and life stages (e.g., coral and coral eggs) occurs at concentrations in the low part per million (ppm) range. Thus, when we see data below the current monitoring detection limit of 1 ppm, it is likely that the dispersed oil is not toxic to all but the most sensitive organisms and life stages. However, we note that very little is known about the species found in the deep ocean near the Deepwater Horizon Release site and the susceptibility of these species to dispersed oil toxicity at cold temperatures and high pressures.

On June 28, 2010, the EPA released the first two of its newly-updated studies on the toxicities of dispersants on silverside fish and small crustacean species. The primary purpose of these studies was to determine the toxicity differences among different dispersant products. Most, including the dispersant now in use at the Deepwater Horizon spill, were not statistically different from each other. In addition, these species were tested for endocrine disruption potential and none was found except possibly for one product which is not being used. While these are favorable results, we note the two species tested are not considered particularly sensitive and early life history stages of these species were not considered. Shortly, the EPA will release additional reports on the toxicities of product-dispersed Deepwater Horizon oil.

The effects of the dispersed oil on marine life depend on concentration and duration of exposure of organisms to the dispersed oil. At the sea surface, early life stages (eggs and larvae) of fish and shellfish are much more sensitive than juveniles or adults to dispersants and dispersed oil. This increased sensitivity coupled with the fact that these organisms reside just below the surface of the ocean (as do plankton, zooplankton) where concentrations of the dispersed oil are initially greatest means that these organisms are most likely to be impacted. There are no data on the toxicity of dispersed oil to deep-sea biota at any life stage, so we have to extrapolate based on existing knowledge. However, in both regions (surface and deepwater), modeling and monitoring is confirming that dispersed oil concentrations decline rapidly with distance from the well head as the “clouds” or “plumes” mix with sea water and move with the currents away from the treatment areas.

While numerous studies have been conducted on the fate and transport of oil dispersed on the surface, the fate and transport of oil dispersed at depth is less understood. While the application of dispersants into a subsurface plume has never been studied, we expect the result to be similar to that of surface dispersant application, and thus result in even smaller droplets of oil in the plume. These very small droplets (100 microns) will rise extremely slowly while being mixed by background turbulence, so that they stay at depth, moving with the currents, until biodegraded, consumed by naturally occurring micro-organisms, or adhere to sinking sediment. Preliminary modeling suggests average rise could increase from a few hours to several days with sub-surface dispersant application. We also expect some fraction to sink because of adherence to sinking sediments.

Another major activity, involving marine resource trustees, has been a series of nearly 20 Consensus Ecological Risk Assessment (C-ERA) Workshops which were held all around the U.S. and adjacent international coastlines. These workshops, many lasting one week or more and sponsored by the U.S. Coast Guard, EPA and Department of the Interior, focused the attention of trustees of alternative response scenarios of large spills, including no response, on-water mechanical removal, in situ burning, dispersant use and shoreline clean up. Trustees evaluated the impacts and benefits of each realistic response option to their trust resources (marshes, shorelines, mammals, birds, fish, etc.) and then had to work on reaching consensus regarding the least damaging mix of response options for their specific area. The results of these workshops have provided valuable information for revising response plans in a number of states and countries.

ACTIVITIES TO ASSESS PRESENCE OF SUBSURFACE OIL FROM DEEPWATER HORIZON SPILL

Since the beginning of May, NOAA has been conducting and coordinating sampling of the sub-surface region around the Deepwater Horizon well-head and beyond to characterize the presence of subsurface oil. The sub-surface search involves the use of sonar, UV instruments called fluorometers, which can detect the presence of oil and other biological compounds, and collection of water samples from discrete depths using a series of bottles that can be closed around a discrete water sample.

NOAA, federal partners, academics, and others in the research community have mobilized to research and quantify the location and concentration of subsurface oil from the spill. NOAA Ships *Gordon Gunter* and *Thomas Jefferson* have both conducted missions to collect water samples from areas near the wellhead as well as further from the wellhead and in the coastal zone. Water samples from many of these missions are still being analyzed and additional missions are in progress or being planned to continue the comprehensive effort to define the presence of oil below the surface and understand its impacts.

Water samples taken by researchers on the *R/V Pelican* and the *R/V Weatherbird II* have also been analyzed for the presence of subsurface oil. These samples from the R/V Weatherbird II confirmed low concentrations of surface oil from the Deepwater Horizon spill 40 nautical miles northeast of the wellhead. Additionally, hydrocarbons were found in samples 45 nautical miles northeast of the wellhead-at the surface, at 50 meters, and at 400 meters-however, the concentrations were too low to confirm the source.

In accordance with EPA requirements for the use of subsurface dispersants, BP contracted ships, *R/V Brooks McCall* and the *Ocean Veritas*, have been collecting water samples in the area close to the wellhead. NOAA, EPA, and the White House Office of Science and Technology Policy (OSTP) released a summary report about the subsea monitoring in the vicinity of the Deepwater Horizon wellhead conducted from the *R/V Brooks McCall* from May 8 – 25, 2010. The report also confirms the existence of a previously discovered cloud of diffuse oil at depths of 3,300 to 4,600 feet near the wellhead. Preliminary findings indicate that total petroleum hydrocarbon (TPH) concentrations at these depths are in concentrations of about 1-2 parts per million (ppm). Analysis shows this cloud is most concentrated near the source of the leak and decreases with

distance from the wellhead. Beyond six miles from the wellhead, concentrations of this cloud drop to levels that are not detectable. Decreased droplet size is consistent with chemically-dispersed oil. Dissolved oxygen levels in the water column are largely what are expected compared with historical data.

The Unified Command has established an inter-agency Joint Analysis Group (JAG) to aggregate and analyze all the relevant data from the many subsurface oil missions in order to have a comprehensive picture of the situation. This group is made up of federal scientists from NOAA, EPA and OSTP.

CONCLUSION

As the response to this oil spill continues, the Unified Command will continually reevaluate our response strategies, actions, and planning. NOAA will continue to provide scientific support to the Unified Command and continue our coordination with our federal and state co-trustees on the NRDA. I would like to assure you that we will not relent in our efforts to protect the livelihoods of Gulf Coast residents and mitigate the environmental impacts of this spill. In conjunction with the other federal agencies, we will continue to monitor the use of dispersants and as new information is generated we will appropriately advise the Unified Command. Thank you for allowing me to testify on NOAA's response efforts. I am happy to answer any questions you may have.

WRITTEN STATEMENT OF
DR. LARRY ROBINSON

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

HEARING ON
THE USE OF DISPERSANT FOR THE BP DEEPWATER HORIZON OIL SPILL

BEFORE THE
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE,
AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

July 15, 2010

Thank you, Chairman Mikulski and Members of the Committee, for the opportunity to testify on the Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) role in the Deepwater Horizon BP oil spill response and the use of dispersants. My name is Dr. Larry Robinson and I am an Assistant Secretary of Commerce for Oceans and Atmosphere. I appreciate the opportunity to discuss the critical roles NOAA serves during oil spills and the importance of our contributions to protect and restore the natural resources, communities, and economies affected by this tragic event.

NOAA's mission is to understand and predict changes in the Earth's environment. NOAA also conserves and manages coastal and marine resources to meet our Nation's economic, social, and environmental needs. As a natural resource trustee, NOAA is one of the federal agencies responsible for protecting, assessing, and restoring the public's coastal natural resources when they are harmed by oil spills. As such, the entire agency is deeply concerned about the immediate and long-term environmental, economic, and social impacts to the Gulf Coast and the Nation from this spill. NOAA is fully mobilized and working tirelessly to reduce impacts on the Gulf Coast and will continue to do so until the spill is controlled, oil is cleaned up, natural resource injuries are assessed, and restoration is complete.

My testimony today will discuss NOAA's role in the Deepwater Horizon response and natural resource damage assessment process associated with the Deepwater Horizon oil spill, for which BP is a responsible party; NOAA's role in use of dispersants as a countermeasure to mitigate the impacts of the spill; and opportunities to strengthen the federal response to future events through research and development.

NOAA'S ROLES DURING OIL SPILLS

NOAA has three critical roles mandated by the Oil Pollution Act of 1990 and the National Contingency Plan (NCP):

1. During the emergency response, NOAA conducts research and monitoring and communicates scientific information to the Federal On-Scene Coordinator (FOSC). The Scientific Support Team is designated as a special team in the NCP and provides a broad array of scientific services to the response.
2. As a natural resource trustee, NOAA conducts a Natural Resource Damage Assessment (NRDA) jointly with co-trustees to assess and restore natural resources injured by the oil spill. NRDA also assesses the lost uses of those resources, such as recreational fishing, and swimming, with the goal of implementing restoration projects to address these losses.
3. Finally, NOAA represents the Department of Commerce in spill response preparedness and decision-making activities through the National Response Team and the Regional Response Teams.

Response

The U.S. Coast Guard (USCG) is the FOSC and has the primary responsibility for managing coastal oil spill response and clean-up activities in the coastal zone. During an oil spill, NOAA's Scientific Support Coordinators deliver technical and scientific support to the USCG. NOAA's Scientific Support Coordinators are located around the country in USCG Districts, ready to respond around the clock to any emergencies involving the release of oil or hazardous substances into the oceans or atmosphere. Currently, NOAA has deployed all of its Scientific Support Coordinators from throughout the country to work on the Deepwater Horizon oil spill.

With over thirty years of experience and using state-of-the-art technology, NOAA continues to serve the Nation by providing its expertise and a suite of products and services critical for making science-based decisions. Examples include trajectory forecasts on the movement and behavior of spilled oil, overflight observations, spot weather forecasts, emergency coastal survey and charting capabilities, aerial and satellite imagery, and real-time coastal ocean observation data. Federal, state, and local entities look to NOAA for assistance, experience, local perspective, and scientific knowledge. NOAA's Office of Response and Restoration was called upon for scientific support 200 times in 2009.

Natural Resource Damage Assessment

Stewardship of the Nation's natural resources is shared among several federal agencies, states, and tribal trustees. NOAA, acting on behalf of the Secretary of Commerce, is the lead federal trustee for many of the Nation's coastal and marine resources, and is authorized by the Oil Pollution Act of 1990 (OPA) to recover damages on behalf of the public for injuries to trust resources resulting from an oil spill. Regulations promulgated by NOAA under the Oil Pollution Act encourage compensation in the form of restoration of the injured resources, and appropriate compensation is determined through the NRDA process. Since the enactment of OPA, NOAA, together with other federal, state, and tribal co-trustees, has recovered approximately $500 million for restoration of natural resources injured by releases of oil or hazardous substances, as well as injuries to national marine sanctuary resources, including vessel groundings.

National and Regional Response Teams

The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP's purpose is to develop a national response capability and promote

overall coordination among the hierarchy of responders and contingency plans. NOAA represents the Department of Commerce on the National Response Team and Regional Response Teams to develop policies on dispersant use, best clean-up practices and communications, and to ensure access to science-related resources, data, and expertise during responses to oil spills.

NOAA'S ROLE IN THE DEEPWATER HORIZON RESPONSE

NOAA's scientific experts have been assisting with the response from the first day of the Deepwater Horizon BP oil spill, both on-scene and through our headquarters and regional offices. NOAA's support includes daily trajectories of the spilled oil, weather data to support short and long range forecasts, and hourly localized 'spot' forecasts to determine the use of weather dependent mitigation techniques such as oil burns and chemical dispersant applications. NOAA uses satellite imagery and real-time observational data on the tides and currents to predict and verify oil spill location and movement. To ensure the safety of fishermen and consumer seafood safety, NOAA scientists are in the spill area taking water and seafood samples, and NOAA has put fisheries closures in place to maintain consumer confidence in the safety of consuming seafood from the Gulf of Mexico region. In addition, NOAA experts are providing expertise and assistance regarding sea turtles, marine mammals, and other protected resources such as corals.

At the onset of this oil spill, NOAA quickly mobilized staff from its Damage Assessment Remediation and Restoration Program to begin coordinating with federal and state co-trustees and the responsible parties to collect a variety of data that are critical to help inform the NRDA. NOAA is coordinating the NRDA effort with the Department of the Interior (another federal co-trustee), as well as co-trustees in five states and representatives for at least one responsible party, BP. NOAA and the co-trustees are in the initial phase of this process and are currently gathering data on resources such as fish, shellfish, birds, and turtles, and mammals; their supporting habitats such as wetlands, beaches, and corals; and human uses of affected resources, such as fishing and recreational uses across the Gulf of Mexico. The trustees will then quantify the total losses and develop restoration projects that compensate the public for their losses.

THE USE OF DISPERSANTS

The Deepwater Horizon spill is a stark reminder that large oil spills still occur, and that we must rebuild and maintain our response capacity. When an oil spill occurs, there are no good outcomes. Once oil has spilled, responders use a variety of oil spill countermeasures to reduce the adverse effects of spilled oil on the environment. The goal of the Unified Command is to minimize the environmental damage and speed recovery of injured resources. The overall response strategy to accomplish this goal is to maximize recovery and removal of the oil being released while minimizing any additional damage that might be caused by the response itself. This philosophy involves making difficult decisions, often seeking the best way forward among imperfect options.

Under section 311 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) is required to prepare and maintain a schedule of dispersants and other mitigating devices and substances that may be used in carrying out the NCP. The NCP requires Regional Response Teams (RRT), in which NOAA participates, and Area Committees to plan for the use or non-use

of dispersants in advance of spills, to ensure that the tradeoff decisions between water column and surface/shoreline impacts are deliberated. As the FOSC for this spill response, the U.S. Coast Guard is responsible for approving the use of the specific dispersant used from the NCP Product Schedule. Because of the unprecedented nature of the dispersant operations, the monitoring and constraints on application volumes and methodologies are being closely managed. In particular, EPA has specified effectiveness and impact monitoring plans, application parameters, and action thresholds. Any changes to specific Deepwater Horizon dispersant plans require the concurrence of EPA and other RRT decision agencies, including NOAA, under the NCP.

NOAA's Scientific Support Team is designated as a special team in the NCP and provides a broad array of scientific services to the response, including recommendations to the FOSC on the appropriate use of dispersants. NOAA is also a member of the Special Monitoring of Applied Response Technologies (SMART) program, an interagency, cooperatively designed program to monitor the efficacy of dispersant and in-situ burning operations. SMART relies on small, highly mobile teams that collect real-time data using portable, rugged, and easy-to-use instruments during dispersant and in situ burning operations. Data are channeled to the Unified Command to help address critical questions. NOAA also uses SMART data to inform 24, 48 and 72 hour oil fate and trajectory models as dispersants can augment the behavior of the spilled oil.

The Gulf of Mexico shorelines, and Louisiana's in particular, possess extensive marsh habitats that are critical for wildlife and fisheries and shoreline protection. NOAA's environmental sensitivity index maps rank shoreline vulnerability to oil spills, and marshes are considered the most sensitive. Louisiana's marshes are already in a weakened condition and large areas are lost every year. These marshes and biota are extremely sensitive to oil, very difficult to clean up, and highly vulnerable to collateral impacts from response efforts.

For the Deepwater Horizon spill, the Unified Command's response posture has been to fight the spill offshore and reduce the amount of oil that comes ashore, using a variety of countermeasures including subsurface recovery, booming, skimming, burning, and dispersants. No single response method is 100 percent effective, and each has its own "window of opportunity" defined by the state of the oil and weather and sea state conditions, thereby establishing a need to consider the use of all available methods. It is important to note that, given the size and complexity of the Deepwater Horizon spill, no combination of response actions can fully contain the oil or completely mitigate the impacts until the well is brought under control. But given the enormous volume and geographic extent of the spill, the response to date has been somewhat successful in limiting shoreline impacts.

Chemical dispersants can be an effective tool in the response strategy, but like all methods, involve trade-offs in terms of effectiveness and potential for collateral impacts. Although mechanical recovery using skimmers is the preferred method of offshore oil spill response because it removes the oil from the environment, it is generally ineffective unless seas are fairly calm. The use of dispersants to mitigate offshore oil spills is a proven and accepted technology to reduce the impacts to shorelines and, under certain conditions, can be more effective than mechanical response. This is largely due to the fact that spray aircraft can encounter much more of the floating oil, and more quickly, than can skimmers Dispersants have been used effectively

to respond to spills both in the U.S. and internationally. In the U.S., notably in the Gulf of Mexico, dispersants have been used during the past 15 years against much smaller spills off Louisiana and Texas. The largest use of dispersants in North America (2.7 million gallons) was in the Gulf of Mexico during the 1979-80 Ixtoc I blowout in Campeche Bay, Mexico.

The NCP establishes a framework for the use of dispersants in an oil spill response. The NCP states that RRT and Area Committees will address, as part of their planning activities, the desirability of using dispersants and oil spill control agents listed on the NCP's National Product Schedule. The NCP goes on to state that Area Contingency Plans (ACP) will include applicable pre-authorization plans and address the specific contexts in which such products should and should not be used. If the RRT representatives for EPA, the Department of Commerce, and Department of the Interior natural resource trustees, and the states with jurisdiction over the regional waters for which the preauthorization plan applies, approve in advance the use of certain dispersant products under specified circumstances as described in the preauthorization plan, the FOSC may authorize the use of the products without obtaining additional concurrences. In Region VI, which includes the Gulf of Mexico, dispersant use is pre-authorized in offshore water, beyond the 3-mile limit. The preauthorization of alternative countermeasures in the response plans allows for quick implementation of the pre-approved countermeasures during a response, when timely action is critical to mitigate environmental impacts.

For all dispersant operations, the FOSC must activate the SMART monitoring team to monitor the effectiveness of the dispersant. Dispersant use for the Deepwater Horizon oil spill was, and continues to be, performed in accordance with ACP guidelines and with RRT approval. NOAA's Scientific Support Coordinators, supported by NOAA's team of scientists at its Emergency Response Division and in consultation with trustees, is advising the FOSC on when and where dispersants should be used to determine the most effective and appropriate use of dispersants. The authorization given to BP to use the dispersant on oil present on the surface of the water included specific conditions to ensure the protection of the environment and the health of residents in affected areas.

Dispersants are chemicals that may be applied directly to the spilled oil in order to remove it from the water surface by dispersing it into the upper layer of the water column. Dispersants are commonly applied through specialized equipment mounted on an airplane, helicopter or ship. The dispersant must be applied as a mist of fine droplets and under a specific range of wind and sea state conditions. Once applied at the surface, dispersants help break up the oil into tiny micron-sized droplets (size of the cross section of a hair) which mix into the upper layer of the ocean. Because of the high encounter rate of aircraft, they allow for the rapid treatment of large areas. Dispersed oil does not sink; rather it forms a "plume" or "cloud" of oil droplets just below the water surface. The dispersed oil mixes vertically and horizontally into the water column and is diluted. Once formed, bacteria and other microscopic organisms then act to degrade the oil within the droplets more quickly than it the oil had not been dispersed. It should be noted that oil spilled from the Deepwater Horizon incident is also naturally dispersing into the water column due to the physical agitation of the wind, waves, and vessel operations.

The Deepwater Horizon spill has also for the first time in the U.S. implemented the use of subsurface dispersants at the wellhead. This is being applied through the use of Remotely

Operated Vehicles (ROV). The decision to use subsurface applications was made by the FOSC with concurrence by RRT Region VI after several test applications to determine the efficiency, and development and implementation of a monitoring protocol. Limitations have been placed on the amount of subsurface dispersants that can be applied each day.

Spill response often involves a series of environmental trade-offs. The overall goal is to use the response tools and techniques that will minimize the overall environmental damage from the oil. The use of dispersants is an environmental trade-off between impacts within the water column, on the sea surface (birds, mammals, and turtles in slicks) and on the shore. Dispersants do not remove the oil from the environment. When a decision is made to use dispersants, the decision maker is reducing the amount of oil on the surface where it may affect birds, mammals and turtles, when they are at or near the surface, and ultimately that oil that may come ashore, in exchange for increasing the amount of oil in the upper layer of the water column 40 miles off shore. The effects of dispersants and dispersed oil below the surface on diving birds, marine mammals, and sea turtles are unknown. Under ideal conditions, each gallon of dispersant applied offshore prevents about 20 gallons of oil from coming onto the beaches and into the marshes of the Gulf Coast.

The Gulf coast is home to coastal wetlands and marshes that are biologically productive and ecologically important to nesting waterfowl, sea turtles, fisheries, and essential fish habitat. The Gulf of Mexico region's ecological communities are essential to sustaining local economies, recreational experiences, and overall quality of life. The extensive marshes themselves provide coastal communities with protection from severe storms, such as Hurricane Katrina. These habitats are highly sensitive to oiling. Once oil does impact marshes, there are limited cleanup options, and potential for significant long-term impacts. As oil has moved ashore from the Louisiana coast to the Florida panhandle from the BP Deepwater Horizon spill, we have seen firsthand the impacts this oil has on these habitats, and to birds, turtles and other wildlife. Although it may not be readily apparent, use of dispersants offshore and in deep water, is reducing the amount of oil reaching the shoreline, reducing the amount of shoreline cleanup that will be required, and helping to reduce recovery time of injured nearshore resources. Without the use of dispersants, the shoreline impacts along the Gulf coast from the Deepwater Horizon spill would be greater.

RESEARCH ON THE EFECTIVENESS AND EFFECTS OF DISPERSANTS AND DISPERSED OIL

Research on the effectiveness and effects of dispersants and dispersed oil have been underway for more than three decades but important gaps still exist. Much of what we have learned from both research and real world experience is presented in detail in the 2005 National Research Council (NRC) book "Oil Spill Dispersants: Efficacy and Effects." The NRC identified gaps in our knowledge. These gaps were narrowed by research and development activities carried out through projects conducted by the Coastal Response Research Center (CRRC), and state and federal agencies, and academia. The CRRC was a successful joint partnership established in 2004 between the University of New Hampshire and NOAA's Office of Response and Restoration.

One area of focus has been on determining the toxicity and long-term effects of dispersants and dispersed oil on sensitive marine life. It is now quite clear that effectively-dispersed oil declines rapidly in concentration due to ocean mixing, degrades faster than untreated surface or shoreline oil, and that the toxicity of dispersants is considerably less than the toxicity of the oil that is dispersed. The acute (four day) toxicity of dispersants and dispersed oil for the most sensitive species and life stages (e.g., coral and coral eggs) occurs at concentrations in the low part per million (ppm) range. Thus, when we see data below the current monitoring detection limit of 1 ppm, it is likely that the dispersed oil is not toxic to all but the most sensitive organisms and life stages. However, we note that very little is known about the species found in the deep ocean near the Deepwater Horizon Release site and the susceptibility of these species to dispersed oil toxicity at cold temperatures and high pressures.

On June 28, 2010, the EPA released the first two of its newly-updated studies on the toxicities of dispersants on silverside fish and small crustacean species. The primary purpose of these studies was to determine the toxicity differences among different dispersant products. Most, including the dispersant now in use at the Deepwater Horizon spill, were not statistically different from each other. In addition, these species were tested for endocrine disruption potential and none was found except possibly for one product which is not being used. While these are favorable results, we note the two species tested are not considered particularly sensitive and early life history stages of these species were not considered. Shortly, the EPA will release additional reports on the toxicities of product-dispersed Deepwater Horizon oil.

The effects of the dispersed oil on marine life depend on concentration and duration of exposure of organisms to the dispersed oil. At the sea surface, early life stages (eggs and larvae) of fish and shellfish are much more sensitive than juveniles or adults to dispersants and dispersed oil. This increased sensitivity coupled with the fact that these organisms reside just below the surface of the ocean (as do plankton, zooplankton) where concentrations of the dispersed oil are initially greatest means that these organisms are most likely to be impacted. There are no data on the toxicity of dispersed oil to deep-sea biota at any life stage, so we have to extrapolate based on existing knowledge. However, in both regions (surface and deepwater), modeling and monitoring is confirming that dispersed oil concentrations decline rapidly with distance from the well head as the "clouds" or "plumes" mix with sea water and move with the currents away from the treatment areas.

While numerous studies have been conducted on the fate and transport of oil dispersed on the surface, the fate and transport of oil dispersed at depth is less understood. While the application of dispersants into a subsurface plume has never been studied, we expect the result to be similar to that of surface dispersant application, and thus result in even smaller droplets of oil in the plume. These very small droplets (100 microns) will rise extremely slowly while being mixed by background turbulence, so that they stay at depth, moving with the currents, until biodegraded, consumed by naturally occurring micro-organisms, or adhere to sinking sediment. Preliminary modeling suggests average rise could increase from a few hours to several days with sub-surface dispersant application. We also expect some fraction to sink because of adherence to sinking sediments.

Another major activity, involving marine resource trustees, has been a series of nearly 20 Consensus Ecological Risk Assessment (C-ERA) Workshops which were held all around the U.S. and adjacent international coastlines. These workshops, many lasting one week or more and sponsored by the U.S. Coast Guard, EPA and Department of the Interior, focused the attention of trustees of alternative response scenarios of large spills, including no response, on-water mechanical removal, in situ burning, dispersant use and shoreline clean up. Trustees evaluated the impacts and benefits of each realistic response option to their trust resources (marshes, shorelines, mammals, birds, fish, etc.) and then had to work on reaching consensus regarding the least damaging mix of response options for their specific area. The results of these workshops have provided valuable information for revising response plans in a number of states and countries.

ACTIVITIES TO ASSESS PRESENCE OF SUBSURFACE OIL FROM DEEPWATER HORIZON SPILL

Since the beginning of May, NOAA has been conducting and coordinating sampling of the sub-surface region around the Deepwater Horizon well-head and beyond to characterize the presence of subsurface oil. The sub-surface search involves the use of sonar, UV instruments called fluorometers, which can detect the presence of oil and other biological compounds, and collection of water samples from discrete depths using a series of bottles that can be closed around a discrete water sample.

NOAA, federal partners, academics, and others in the research community have mobilized to research and quantify the location and concentration of subsurface oil from the spill. NOAA Ships *Gordon Gunter* and *Thomas Jefferson* have both conducted missions to collect water samples from areas near the wellhead as well as further from the wellhead and in the coastal zone. Water samples from many of these missions are still being analyzed and additional missions are in progress or being planned to continue the comprehensive effort to define the presence of oil below the surface and understand its impacts.

Water samples taken by researchers on the *R/V Pelican* and the *R/V Weatherbird II* have also been analyzed for the presence of subsurface oil. These samples from the R/V Weatherbird II confirmed low concentrations of surface oil from the Deepwater Horizon spill 40 nautical miles northeast of the wellhead. Additionally, hydrocarbons were found in samples 45 nautical miles northeast of the wellhead-at the surface, at 50 meters, and at 400 meters-however, the concentrations were too low to confirm the source.

In accordance with EPA requirements for the use of subsurface dispersants, BP contracted ships, *R/V Brooks McCall* and the *Ocean Veritas*, have been collecting water samples in the area close to the wellhead. NOAA, EPA, and the White House Office of Science and Technology Policy (OSTP) released a summary report about the subsea monitoring in the vicinity of the Deepwater Horizon wellhead conducted from the *R/V Brooks McCall* from May 8 – 25, 2010. The report also confirms the existence of a previously discovered cloud of diffuse oil at depths of 3,300 to 4,600 feet near the wellhead. Preliminary findings indicate that total petroleum hydrocarbon (TPH) concentrations at these depths are in concentrations of about 1-2 parts per million (ppm). Analysis shows this cloud is most concentrated near the source of the leak and decreases with

distance from the wellhead. Beyond six miles from the wellhead, concentrations of this cloud drop to levels that are not detectable. Decreased droplet size is consistent with chemically-dispersed oil. Dissolved oxygen levels in the water column are largely what are expected compared with historical data.

The Unified Command has established an inter-agency Joint Analysis Group (JAG) to aggregate and analyze all the relevant data from the many subsurface oil missions in order to have a comprehensive picture of the situation. This group is made up of federal scientists from NOAA, EPA and OSTP.

CONCLUSION

As the response to this oil spill continues, the Unified Command will continually reevaluate our response strategies, actions, and planning. NOAA will continue to provide scientific support to the Unified Command and continue our coordination with our federal and state co-trustees on the NRDA. I would like to assure you that we will not relent in our efforts to protect the livelihoods of Gulf Coast residents and mitigate the environmental impacts of this spill. In conjunction with the other federal agencies, we will continue to monitor the use of dispersants and as new information is generated we will appropriately advise the Unified Command. Thank you for allowing me to testify on NOAA's response efforts. I am happy to answer any questions you may have.

From: [redacted]
To: [redacted]
cc: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Re: Sub-
Sea Dispersant daily POLREP Update (SAT 29, MAY, 2010 UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Saturday, May 29, 2010 6:42:33 AM
Attachments: MS Canyon 252-Polrep 29 May 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Faithfully yours
[redacted]

"Frequently, my thoughts get bored and walk
down to my mouth. Often, this is a bad thing."

[redacted] EPA Region 6 (6SF-PE)
1445 Ross Avenue, Dallas, TX 75202
[redacted] fax

From: [redacted]
To: HQS-PF-fldr-NIC-HQ-Email Archive;
Subject: Re: MC-252 Sub-
Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010
Date: Saturday, July 31, 2010 7:23:09 AM

I agree.
Sent by EPA Wireless E-Mail Services

----- Original Message -----
From: "Perry, Raymond CAPT" [Raymond.J.Perry@uscg.mil]
Sent: 07/31/2010 10:10 AM AST
To: [redacted] "Lloyd, Anthony CAPT" <Anthony.S.Lloyd@uscg.mil>; [redacted] "D08-DG-District-IMTWatch" <D8IMTWatch@uscg.mil>; <James.E.Hanzalick@uscg.mil>; [redacted] "Landry, Mary RADM" <Mary.E.Landry@uscg.mil>; "HQS-PF-fldr-NIC HQ Situation Unit" <NIC-HQ-Situation-Unit@uscg.mil>; [redacted] "Perry, Raymond CAPT" <Raymond.J.Perry@uscg.mil>; [redacted] gov>; "Hooper, Thomas CAPT" <Thomas.D.Hooper@uscg.mil>; [redacted]
Subject: FW: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010

All:

EPA reps and I at the UAC were thinking, if everyone else agrees, that we suspend these reports and re-implement their use only if we consider using dispersants again at this response.

What do you think?

Captain Ray Perry, USCG
Deepwater Horizon Spill Response
Strategic Planning Unit. Leader
*** HURRICANE PLANNING ***
New Orleans, LA
(774) 392-4331

-----Original Message-----
From: [redacted]
gov]
Sent: Saturday, July 31, 2010 8:55 AM
To: Perry, Raymond CAPT
Subject: Fw: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010

[redacted]
Anthony.S.Lloyd@uscg.mil,
[redacted]
D8IMTWatch@uscg.mil, J
ames.E.Hanzalik@uscg.mil,
[redacted]
Mary.E.Landry@uscg.mil,
NIC-HQ-Situation-Unit@uscg.mil,
[redacted]Raymond.J.Perry@uscg.
mil, [redacted]

[redacted]
Remedial Project Manager (RPM)
Remedial Branch LA, NM, OK Team
US Environmental Protection Agency Region 6
1445 Ross Ave. (6SF-RL)
Dallas, Texas 75202
Offic[redacted]
Fax: [redacted]

To report an Environmental Violation, visit EPA's website at http://www.epa.gov/compliance/complaints/index.html <http://www.epa.gov/compliance/complaints/index.html>
----- Forwarded by [redacted]/USEPA/US on 07/31/2010 08:51 AM -----

From: [redacted]6/USEPA/US

To: [redacted] R6/USEPA/US@EPA
Cc: [redacted] 'USEPA/US@EPA, [redacted] Anthony.S.
Lloyd@uscg.mil, [redacted] D8IMTWatch@uscg.mil, [redacted]
[redacted] Mary.F.Landry@uscg.mil [redacted] NIC-HQ-
Situation-Unit@uscg.mil, [redacted]
Raymond.J.Perry@uscg.mil, [redacted]
mil, [redacted]
Date: 07/30/2010 06:49 AM
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE:
THURSDAY JULY 29, 2010

[attachment "MS Canyon 252-Polrep 29 July 2010.doc" deleted by [redacted]
[redacted] R6/USEPA/US]

[redacted]
Remedial Project Manager (RPM)
Remedial Branch LA, NM, OK Team
US Environmental Protection Agency Region 6
1445 Ross Ave. (6SF-RL)
Dallas, Texas 75202
Office [redacted]
Fax: [redacted]

To report an Environmental Violation, visit EPA's website at http://www.epa.gov/compliance/complaints/index.html <http://www.epa.gov/compliance/complaints/index.html>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted]D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted] gov";
Subject: Sub-
Sea Dispersant daily POLREP Update 0900L (FRIDAY, 04JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Friday, June 04, 2010 8:16:51 AM
Attachments: MS Canyon 252-Polrep 04 June 2010 Update .doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected thru each reporting period of 2200L - 2200L.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted] office
[redacted] cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-Sea Dispersant Daily POLREP Update 0900L (Saturday 05JUNE 2010-UPDATE) MC-252 INCIDENT
Date: Saturday, June 05, 2010 8:11:31 AM
Attachments: MS Canyon 252-Polrep 05 June 2010 Update.doc

FYI and SA- Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start and Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and

total gallons dispersant injected thru each reporting period 2200L – 2200L, as well as cumulative gallons to date.

2) Capture any O/S and departure stats of monitoring vessels in support of the required monitoring protocols.

- Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
- Sub-Sea Dispersant Injection continues
- On 6/4/10 Injection rate 9 – 14 gallons per minute
- Injection disrupted 2 times for SIMOPS
- (0 hours and 55 minutes not injected)
- Volume: 13,931 gallons this period
- (TOTAL Cumulative: 270,668 gallons)
-

>>>

- The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon

- The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE On Station to resume sub-sea sampling.

V/r

[redacted]

RRT VI Coordinator

Eighth Coast Guard District (drm)

500 Poydras Street, Suite 1330

New Orleans, LA 70130

[redacted] office

[redacted] cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; Mason. [redacted]
Subject: Sub-Sea Dispersant Daily POLREP Update 0900L (Sunday 06 JUNE 2010-UPDATE) MC-252 INCIDENT
Date: Sunday, June 06, 2010 7:25:15 AM
Attachments: MS Canyon 252-Polrep 06 June 2010 Update.doc

FYI and SA- Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start and Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and

total gallons dispersant injected thru each reporting period 2200L – 2200L, as well as cumulative gallons to date.

2) Capture any O/S and departure stats of monitoring vessels in support of the required monitoring protocols.

- Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:

- Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
Volume: 13,513 gallons (Total Cumulative 284,193 gallons)

- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.

V/r

[redacted]

RRT VI Coordinator

Eighth Coast Guard District (drm)

500 Poydras Street, Suite 1330

New Orleans, LA 70130

[redacted]ffice

[redacted]ell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-
Sea Dispersant daily POLREP Update 0900L (THURSDAY, 03 JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Thursday, June 03, 2010 6:14:40 AM
Attachments: MS Canyon 252-Polrep 03 June 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]-office
[redacted]-cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hartzdik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-
Sea Dispersant daily POLREP Update 0900L (TUESDAY, 01 JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Tuesday, June 01, 2010 7:34:00 AM
Attachments: MS Canyon 252-Polrep 01 June 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

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1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

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V/r
[redacted]
RRT VI Coordinator
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500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]-office
-cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-
Sea Dispersant daily POLREP Update 0900L (WEDNESDAY, 02 JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Wednesday, June 02, 2010 8:41:19 AM
Attachments: MS Canyon 252-Polrep 02 June 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]-office
[redacted]-cell

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
27 May 2010	N/A	N/A	N/A	N/A	200			Test spray conducted for determining wave height energy affect.
28 May 2010	15,000	N/A	15,000	1450	10,259	4,741	68.40%	Amount sprayed was reduced due to presence of marine mammals in spray area (3 nm set back requirements)
29 May 2010	19,000	N/A	15,000	1130	0	15,000	0%	No authorization for spray; potential vessel spray incident was addressed; determined to be inaccurate report
30 May 2010	19,000	N/A	19,000	0815	15,131	3,869	79.64%	No comments available.
31 May 2010	19,000	N/A	19,000	0816	11,676	7,324	61.45%	Spray operations on May 31 were terminated early due to a report of platform personnel becoming ill. The platform was located approximately 70 nm from the dispersant application taking place on this day.
1 June 2010	21,000	N/A	0	-----	0	0	N/A	BP IC advised NO authorization for spraying today
2 June 2010	21,000	N/A	0	-----	0	0	N/A	BP IC did not provide authorization for spray
3 June 2010	21,000	N/A	2,000	1315	1,900	100	95.00%	BP IC advised amount to be sprayed
4 June 2010	22,000	N/A	0	-----	0	0	N/A	BP IC did not give authorization for spray; sorties would have been limited due to weather in the area
5 June 2010	40,000	N/A	125	-----	125	0	100.00%	NIOSH testing of the M/V IP was conducted this day; no other spray operations were authorized by BP IC.

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
6 June 2010	2,000	N/A	2,000	1014	0	2,000	0.00%	Weather prevented the mission (Stennis IAR) from taking place. Alternate targets were identified out of Houma – unable to complete
7 June 2010	2,000	N/A	2,000 2,000	1302 1614	3,998	2	99.95%	UC approved 2,000 g and then followed up with approval for another 2,000 gallons
8 June 2010	2,000 32,000 IC Increase for substantial slicks	N/A	32,000	1156	5,505	26,495	17.20%	Due to on scene weather limitations (low ceiling) and increasing wind on scene, in-situ burning conflicts, whales/dolphins, etc., the dispersant application process was severely limited. Spotter reports directed on scene sprayers to return to base with a full payload due to unfavorable spray reports. Later in the day, additional spray missions were completed.
9 June 2010	32,000	N/A	0	-----	0	0	N/A	BP IC did not provide any authorization for spray
10 June 2010	32,000	N/A	21,000	1302	4,506	16,494	21.46%	RADM Watson authorized 21,000 g
11 June 2010	36,200	N/A	15,700	0835	14,305	1,395	91.11%	RADM Watson authorized 15,700 g
12 June 2010	38,160	20,000	7,000	1320	6,996	4	99.94%	RADM Watson authorized 7,000 g
13 June 2010	36,000	N/A	36,000	1040	35,212	788	97.82%	RADM Watson authorized 36,000 g
14 June 2010	38,880	21,000	17,800	1305	10,706	7,094	60.15%	Limited by late approval and 1 hour pilot standby
15 June 2010	23,000	23,000	15,500	1255	2,608	12,892	16,83%	Limited by late approval, weather and the presence of fishing vessel skimming operations encroaching on the targeted surface oil slick.

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
16 June 2010	27,700	19,000	19,000	1118	13,380	5,620	70.4%	Limited by late approval, weather and the presence of fishing vessel skimming operations encroaching on the targeted surface oil slick.
17 June 2010	25,800	19,000	18,700	1239	12,123	6,577	64.8%	Late approval reduced application time, localized thunderstorms temporarily closed Stennis Airport; mammals were sighted in several slicks; and oil drifted into a platform set back area.
18 June 2010	21,000	17,400	19,200	1059	15,564	3,636	81.0%	Commenced start of spraying at 1100 am after approval.
19 June 2010	16,400		12,300	1036	2,604	9,696	21.2%	Slicks in RRT 4 areas were not sprayed until it was confirmed approval was authorized to apply dispersants in RRT 4 waters. This along with weather reduced the total amount of dispersants able to be applied.
20 June 2010	15,500	16,280	15,500	0645* 0957	15,403	97	99.4%	*Initiated new procedure for dispersant application; received 5,000 gallon early morning approval followed by a 10,500 gallon additional volume approval later that morning with spotter verification. No weather delays today.
21 June 2010	22,600	10,400	10,400	0644 1135	10,355	45	99.6%	Almost complete spraying of approved amounts
22 June 2010	17,000	10,487	10,487	0734 1113	2008	8,479	19.1%	Numerous onshore and offshore thunderstorms prevented aerial spray and spotting operations for most of

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
								the day

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 10 June, 2010
Update: 0900 11 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
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Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 7222 gallons COREXIT 9500 pumped this time period.

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 10 June, 2010
Update: 0900 11 June 2010

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

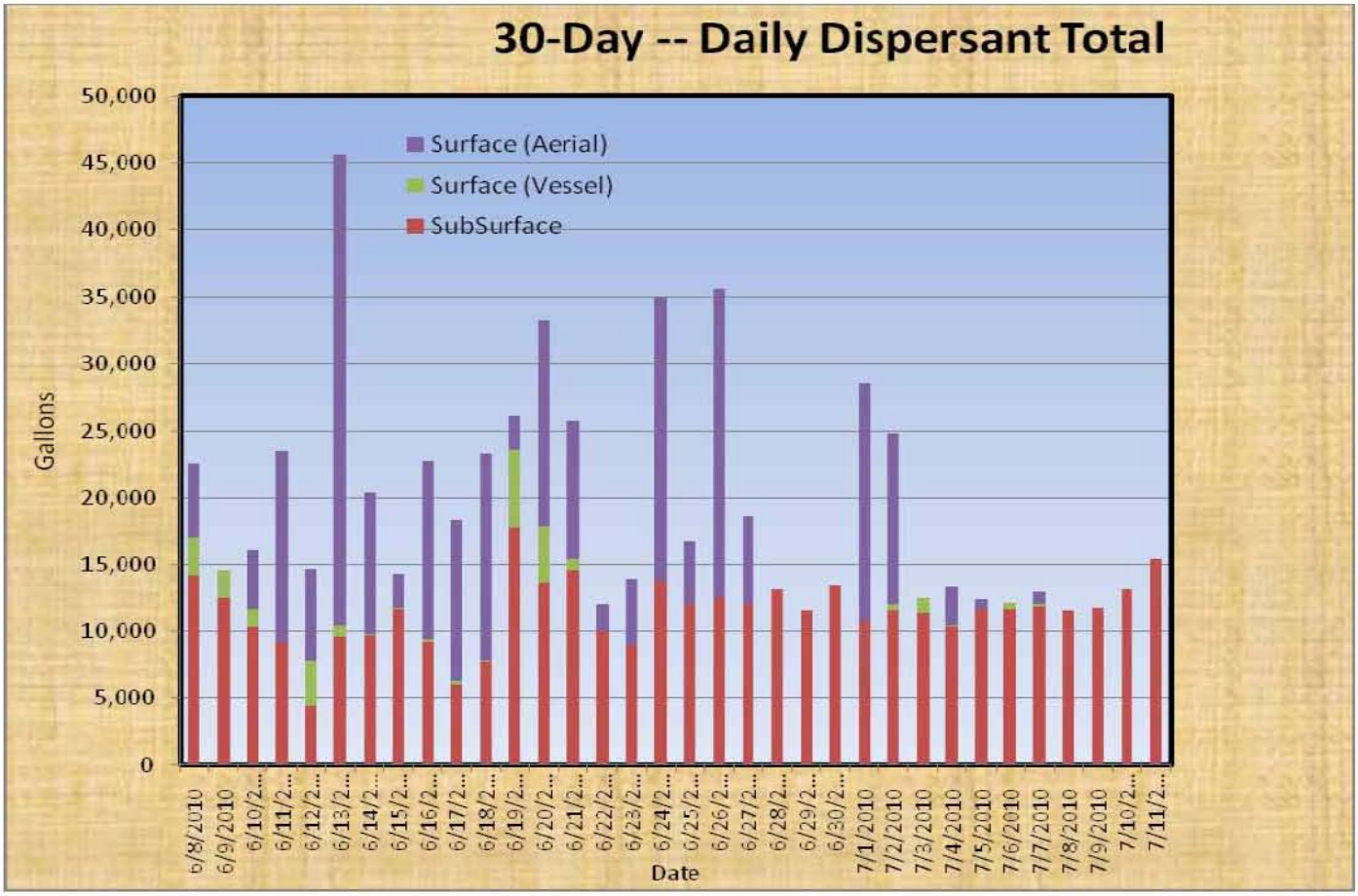
Date: 07/11/2010

Reporting Period: 15 MAY – 11 JULY, 2010

Update: 0900 12 July 2010

1. Current Activities

- Sunday 11 July update: period from 0000 hrsL on 07/11/10 to 2400 hrsL on 07/11/10:
- Injection rate average: approximately 12 gpm **(estimate by calculation is 10.7 gallons/minute).**
- Flow disrupted for: several short disruptions during the period due to capping operations.
- Period Volume: 15,420 gallons (Total Cumulative: 721,100 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.



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- 7222 gallons COREXIT 9500 pumped this time period.

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
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  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
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6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

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- Veritas on station for sampling, as weather permits

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 11 June, 2010
Update: 0900 12 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
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Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 7222 gallons COREXIT 9500 pumped this time period.

>>>

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 11 June, 2010
Update: 0900 12 June 2010

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

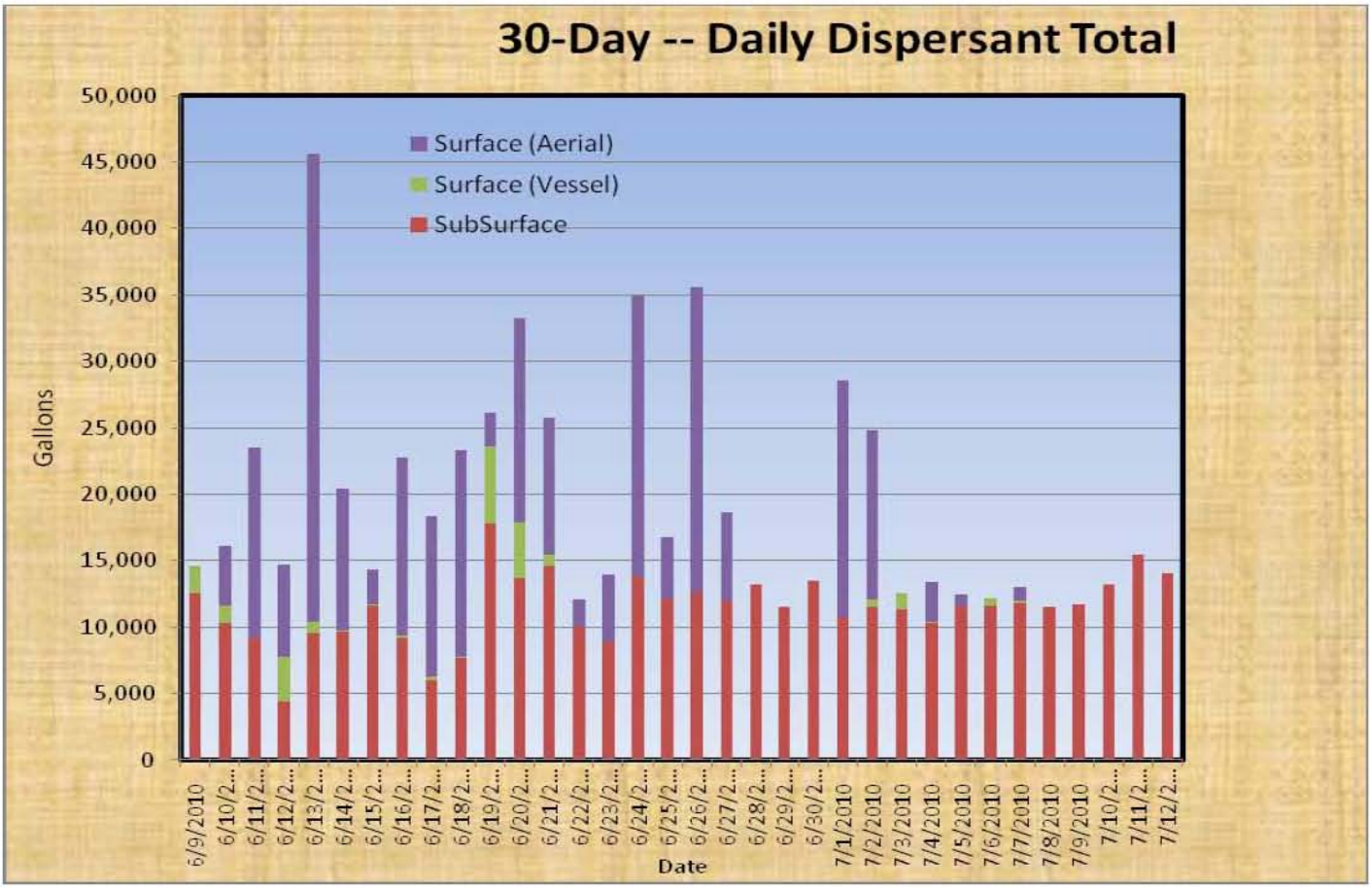
Date: 07/12/2010

Reporting Period: 15 MAY – 12 JULY, 2010

Update: 0900 13 July 2010

1. Current Activities

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.



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- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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Status of RV BROOKS McCALL:
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The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- On station collecting samples; depart from station on 05/29
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U.S. COAST GUARD / SITUATION REPORT
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Unified Area Command (Robert, LA)

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Initial (Update)

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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 12 June, 2010
Update: 0900 13 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

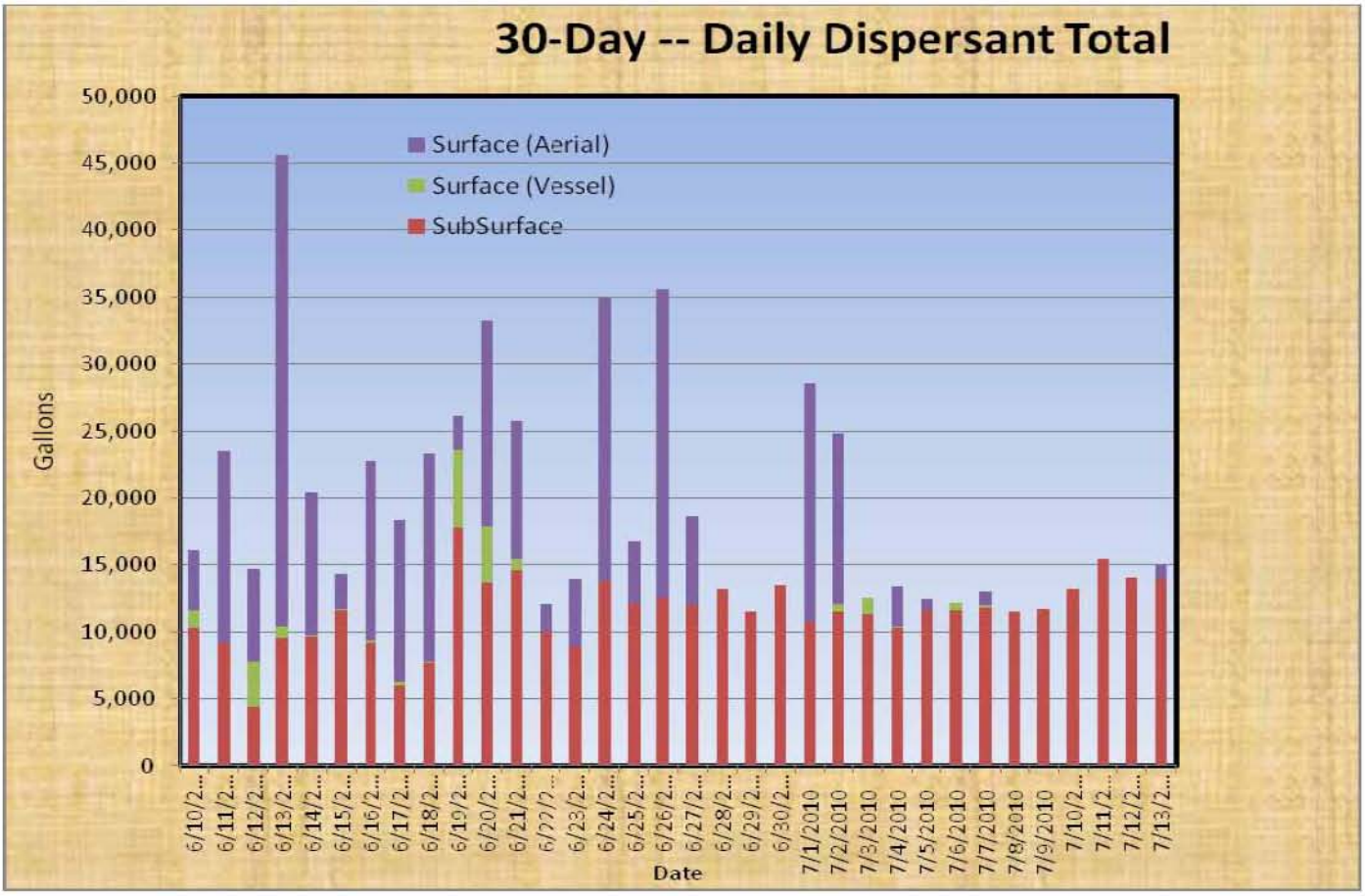
Date: 07/13/2010

Reporting Period: 15 MAY – 13 JULY, 2010

Update: 0900 14 July 2010

1. Current Activities

- Tuesday 13 July update: period from 0000 hrsL on 07/13/10 to 2400 hrsL on 07/13/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.72 gallons/minute).**
- Flow disrupted for: no disruptions reported.
- Period Volume: 13,997 gallons (Total Cumulative: 749,135 gallons).
- International Peace conducted surface dispersant monitoring.
- Brooks McCall conducted subsurface dispersant monitoring.



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>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 13 June, 2010
Update: 0900 14 June 2010

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As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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To: DIST

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UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
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- 7222 gallons COREXIT 9500 pumped this time period.

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The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
>>>

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

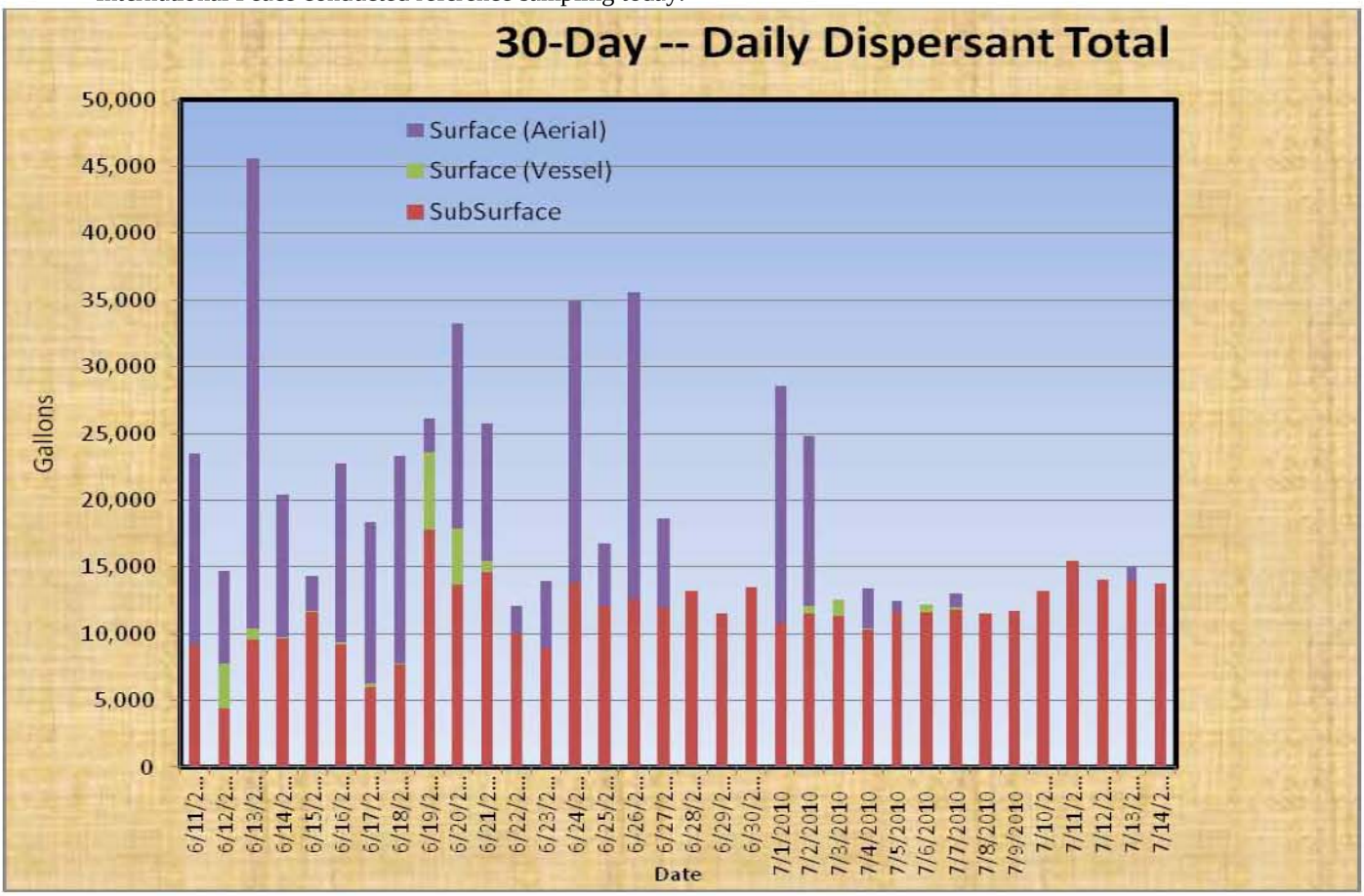
Date: 07/14/2010

Reporting Period: 15 MAY – 14 JULY, 2010

Update: 0900 15 July 2010

1. Current Activities

- Wednesday 14 July update: period from 0000 hrsL on 07/14/10 to 2400 hrsL on 07/14/10:
- Injection rate average: average rate not reported **(estimate by calculation is 9.54 gallons/minute).**
- Flow disrupted for: one disruption for 1.5 hours reported.
- Period Volume: 13,746 gallons (Total Cumulative: 762,881 gallons).
- Brooks McCall conducted subsurface dispersant monitoring today. Stations sampled were far removed from the source due to restrictions imposed during pressure integrity testing.
- International Peace conducted reference sampling today.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Towed Flourometer at 1 meter
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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

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- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 14 June, 2010
Update: 0900 15 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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Process for monitoring pump rate
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

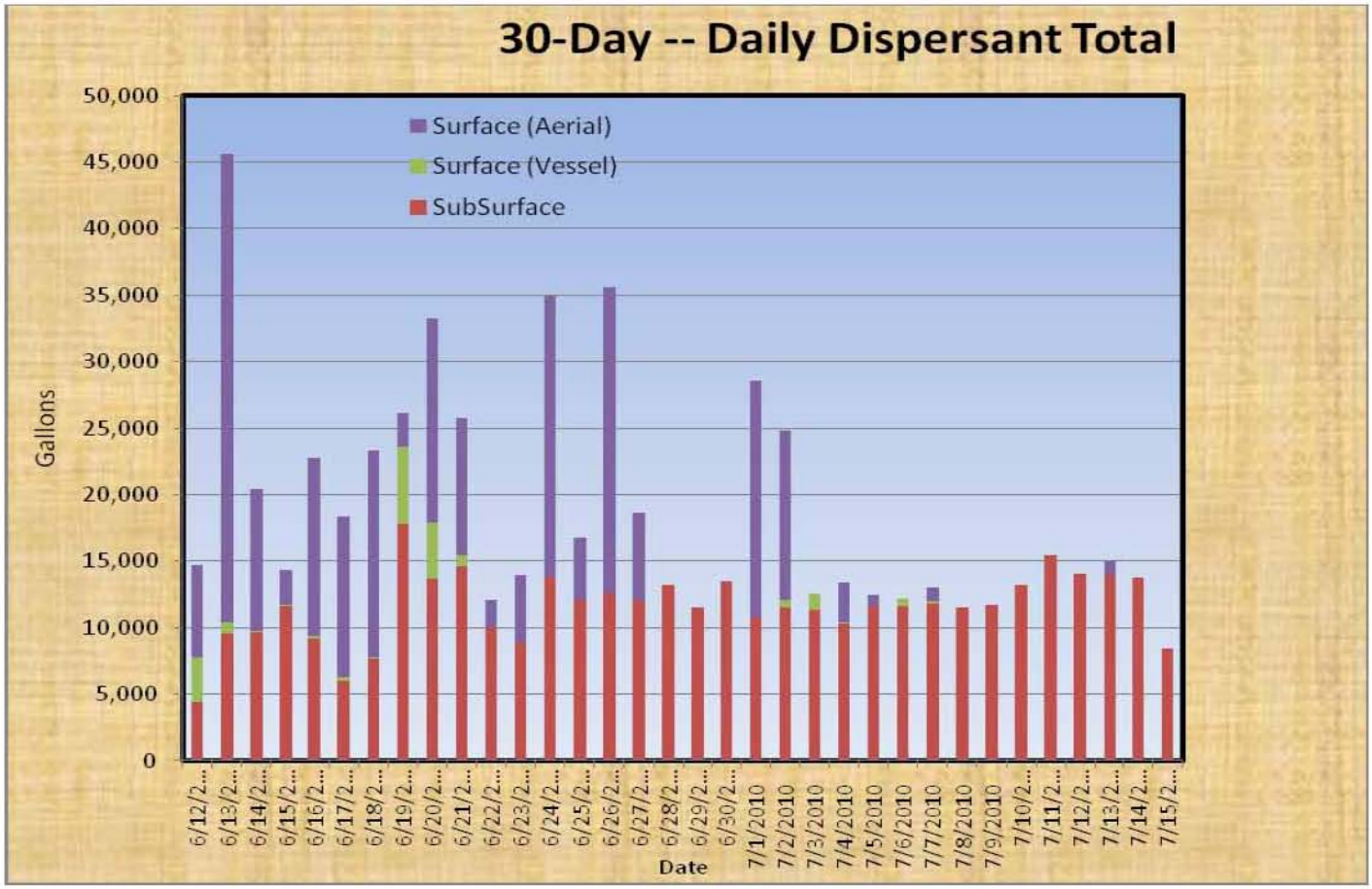
Date: 07/15/2010

Reporting Period: 15 MAY – 15 JULY, 2010

Update: 0900 16 July 2010

1. Current Activities

- Thursday 15 July update: period from 0000 hrsL on 07/15/10 to 2400 hrsL on 07/15/10:
- Injection rate average: average rate not reported.
- Flow disrupted for: subsea dispersant use stopped at approximately 1420 on July 15, 2010.
- Period Volume: 8,391 gallons (Total Cumulative: 771,272 gallons).
- Brooks McCall conducted subsurface dispersant monitoring today
- International Peace conducted reference sampling today.



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>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 15 June, 2010
Update: 0900 16 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

>>>

The Ocean-Veritas is expected O/S to resume sampling at approx 0900L on 02 JUNE.
>>>

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

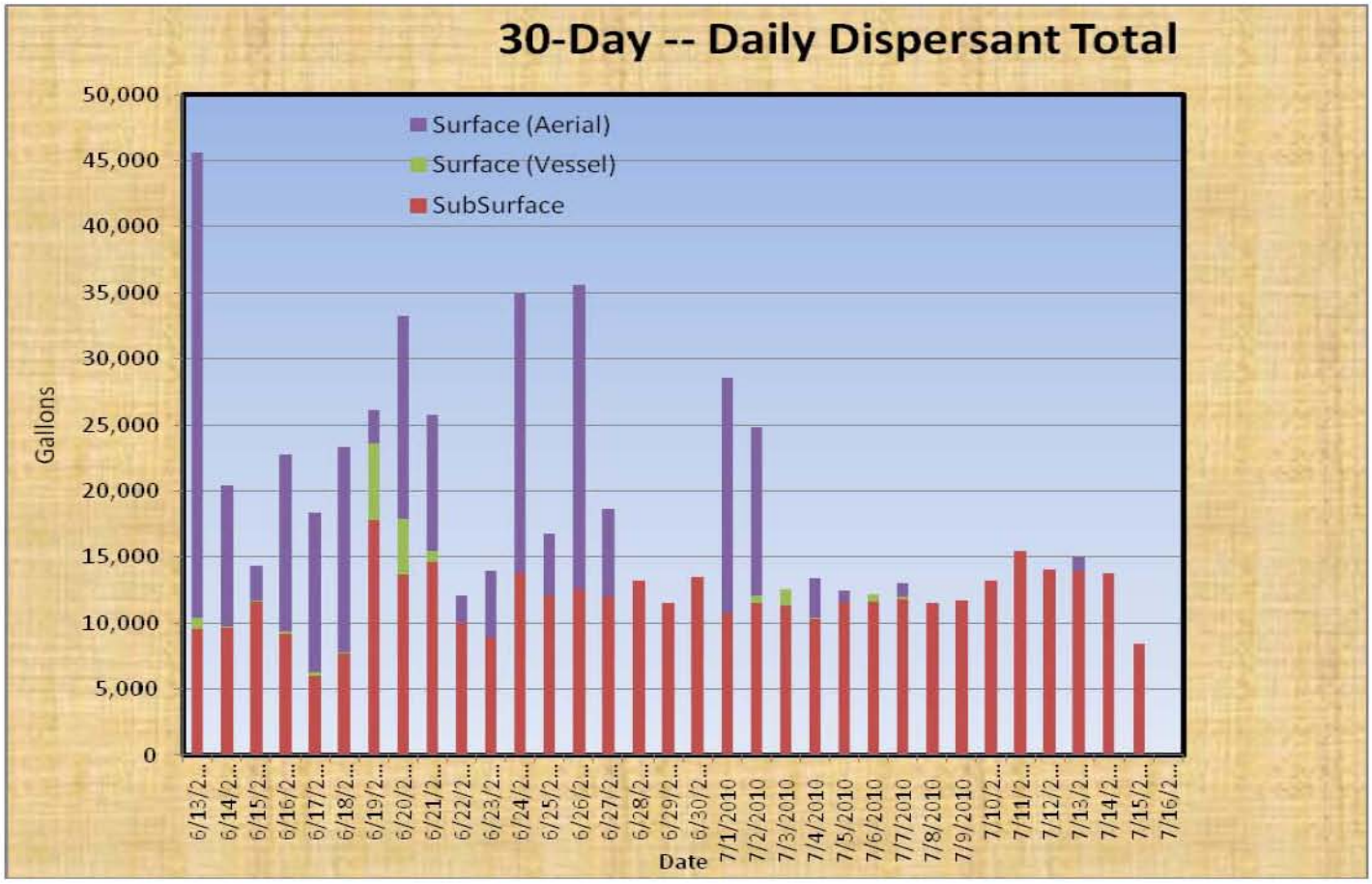
Date: 07/16/2010

Reporting Period: 15 MAY – 16 JULY, 2010

Update: 0900 17 July 2010

1. Current Activities

- Friday 16 July update: period from 0000 hrsL on 07/16/10 to 2400 hrsL on 07/16/10:
- Flow disrupted for: No subsea dispersant use.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons)..
- Ocean Veritas continued its mission to characterize the subsurface plume. Sampling began approximately 3 km NE of the wellhead.
- International Peace conducted reference sampling, collecting background information for SCAT testing.
- Brooks McCall was in port Friday afternoon, and was scheduled to deploy Friday evening.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
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Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
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- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

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>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 16 June, 2010
Update: 0900 17 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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>>>

McCall is scheduled to transit from Port Fourchon on pm of 10 June, for an ETA on station sampling of early am 11 June.
>>>

>>>

Thursday 17 June update: period from 2200hrsL on 6/15/10 to 2200hrsL on 6/16/10:
Injection rate average not provided. Number and time period of injection disruptions also not provided this reporting interval. Period Volume: 9152 gallons (Total Cumulative 423,074 gallons). The Brooks McCall is on station starting am 17 June for required sampling. The Ocean Veratas departed station pm of 16 June.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

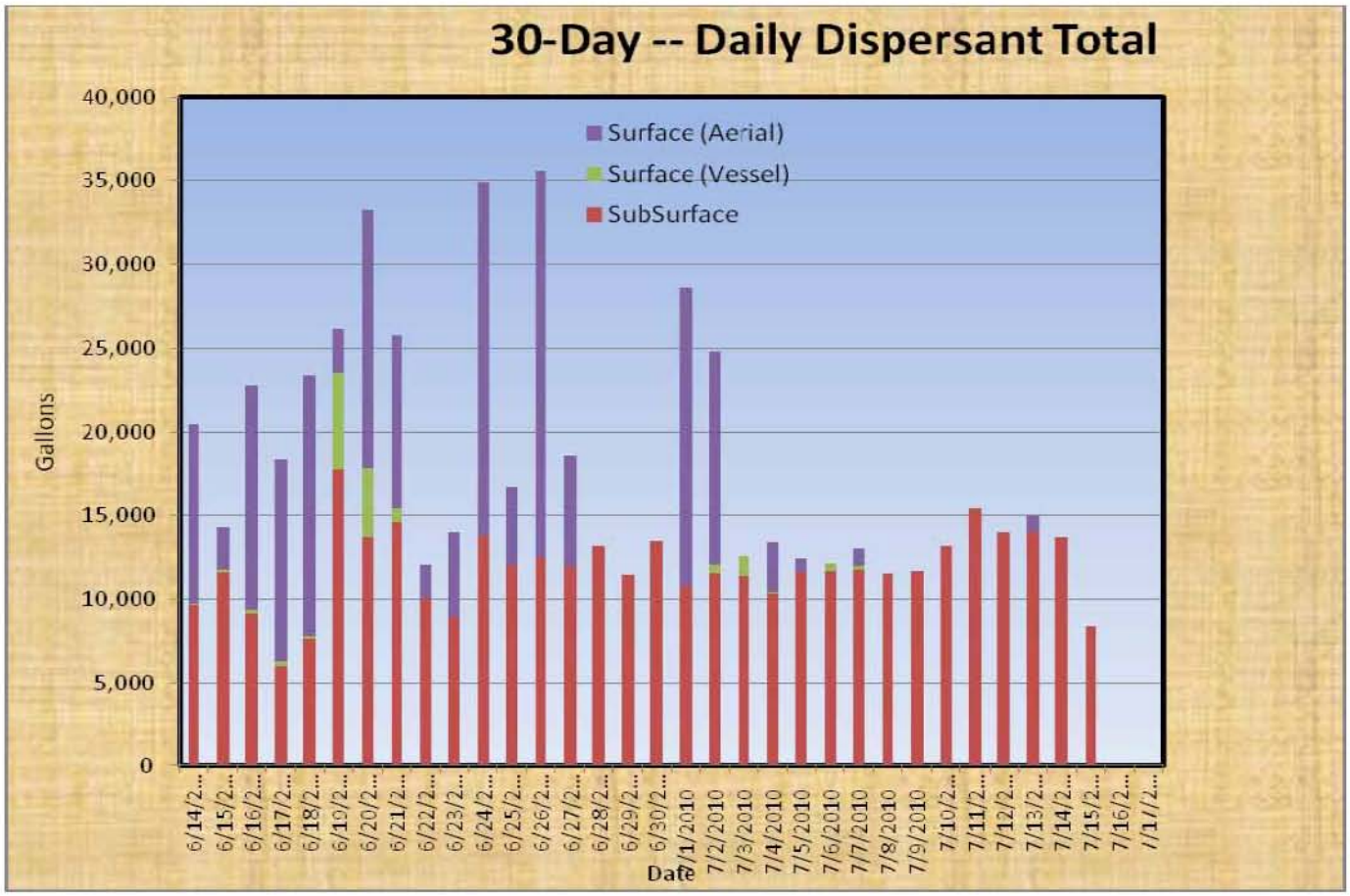
Date: 07/17/2010

Reporting Period: 15 MAY – 17 JULY, 2010

Update: 0900 18 July 2010

1. Current Activities

- Saturday 17 July update: period from 0000 hrsL on 07/16/10 to 2400 hrsL on 07/17/10:
- No subsea dispersant use.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons)..
- Ocean Veritas is in port.
- International Peace conducted background sampling.
- Brooks McCall monitored the subsurface plume. 4 casts were completed. Samples were no closer than 14 km due to seismic testing near source.



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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

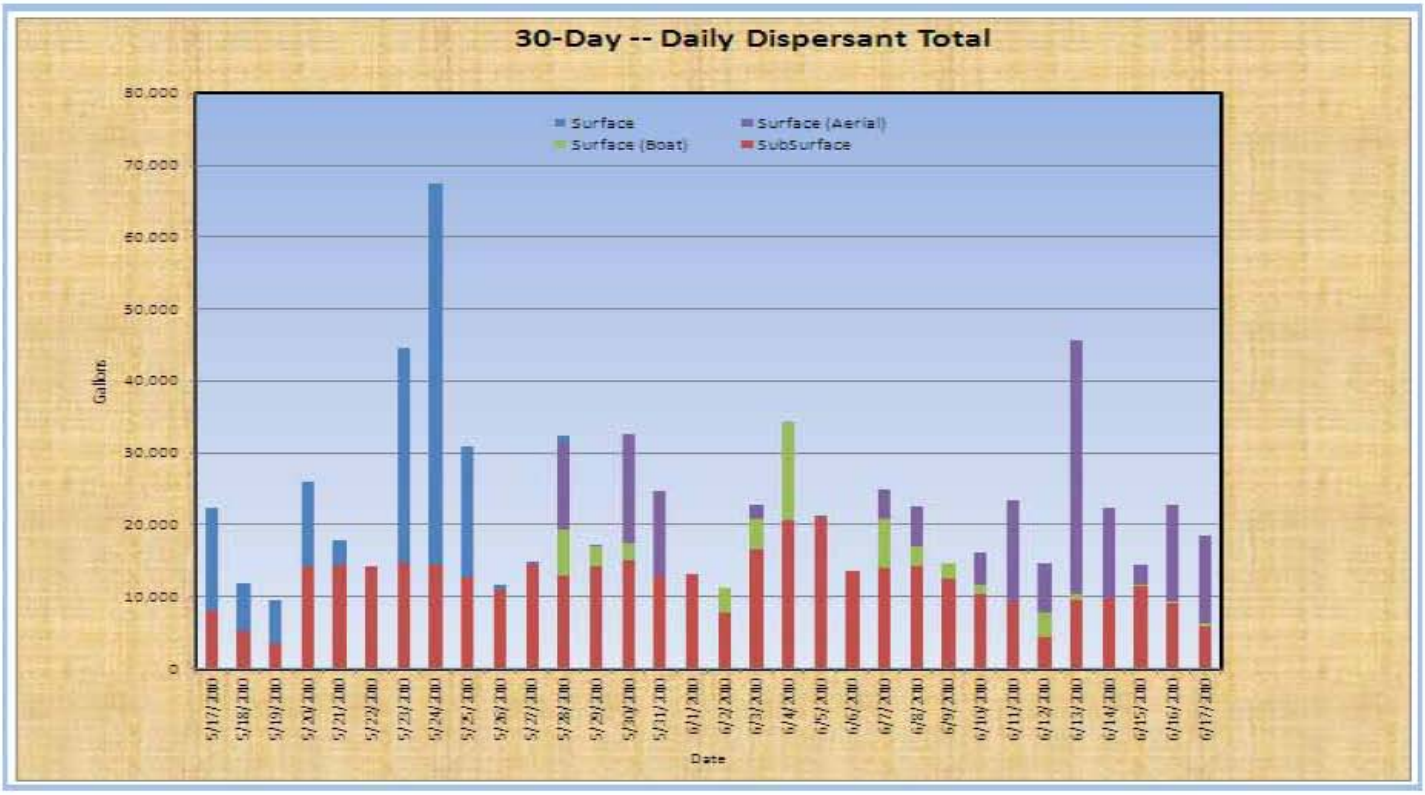
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/18/2010

Reporting Period: 16 MAY - 17 June, 2010
Update: 0900 18 June 2010

1. Current Activities

- Friday 18 June update: period from 2200hrsL on 6/16/10 to 2200hrsL on 6/17/10:
- Injection rate average not provided
- Flow disrupted for 1:06 hrs/min to change flow meter
- Period Volume: 5,962 gallons (Total Cumulative 429,036 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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>>>

- Start: 2200 5/25
- Stop: 2200 5/26
- Rate: 10 gpm
- Volume: 11,110 gallons (Total cumulative 155,436 gallons)
- Two disruptions for 21 minutes total.

>>>

Rate: 10 gpm
Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
>>>

NOTES: The cumulative value was adjusted in today's report update (Wed 09 JUNE) to reflect flow meter calibration issues that occurred between 6/2 and 6/5.
>>>

The following table documents some recalculated values by BP engineers due to flow meter calibration issues as well as a reported safety excursion that was employed 6/3/10 – 6/5/10, where the volume was increased during that period.

2200L – 2200L Period Dates	Previous Period Total Reported (i.e. numbers reported prior to calibration)	Recalculated Period Total due to flow Meter Calibration	Recalculated Cumulative for Sub-Surface Dispersant Application
5/26/10 – 5/27/10	14,400	14,347	170,440
5/27/10 – 5/28/10	14,040	12,840	183,280
5/28/10 – 5/29/10	14,185	14,185	197,465
5/29/10 – 5/30/10	14,974	14,974	212,439
5/30/10 – 5/31/10	12,948	12,948	225,387
5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

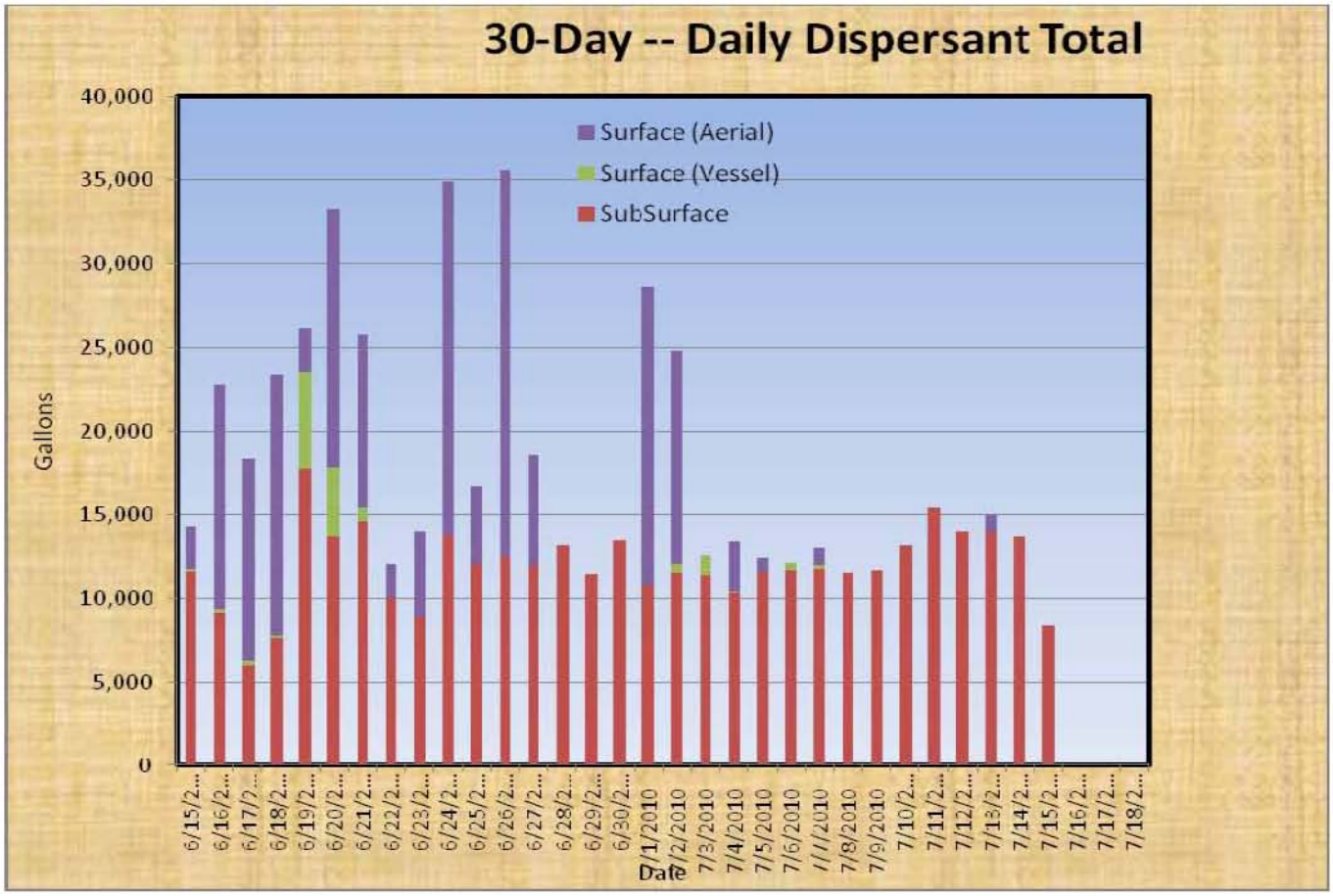
Date: 07/18/2010

Reporting Period: 15 MAY – 18 JULY, 2010

Update: 0900 19 July 2010

1. Current Activities

- Sunday 19 July update: period from 0000 hrsL on 07/18/10 to 2400 hrsL on 07/18/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Ocean Veritas arrived in port Saturday morning, so no samples were collected. Will deploy again Sunday at 1700..
- International Peace arrived in port at 1400 Saturday, so no samples were collected. Will deploy again on Sunday at 0100 hours.
- Brooks McCall monitored the subsurface plume. Samples were no closer than 14 km due to seismic testing near source.



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The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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Status of RV BROOKS McCALL:
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The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/1/10 – 6/2/10	7,465	7,758	246,267
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6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
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- Veritas on station for sampling, as weather permits

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- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

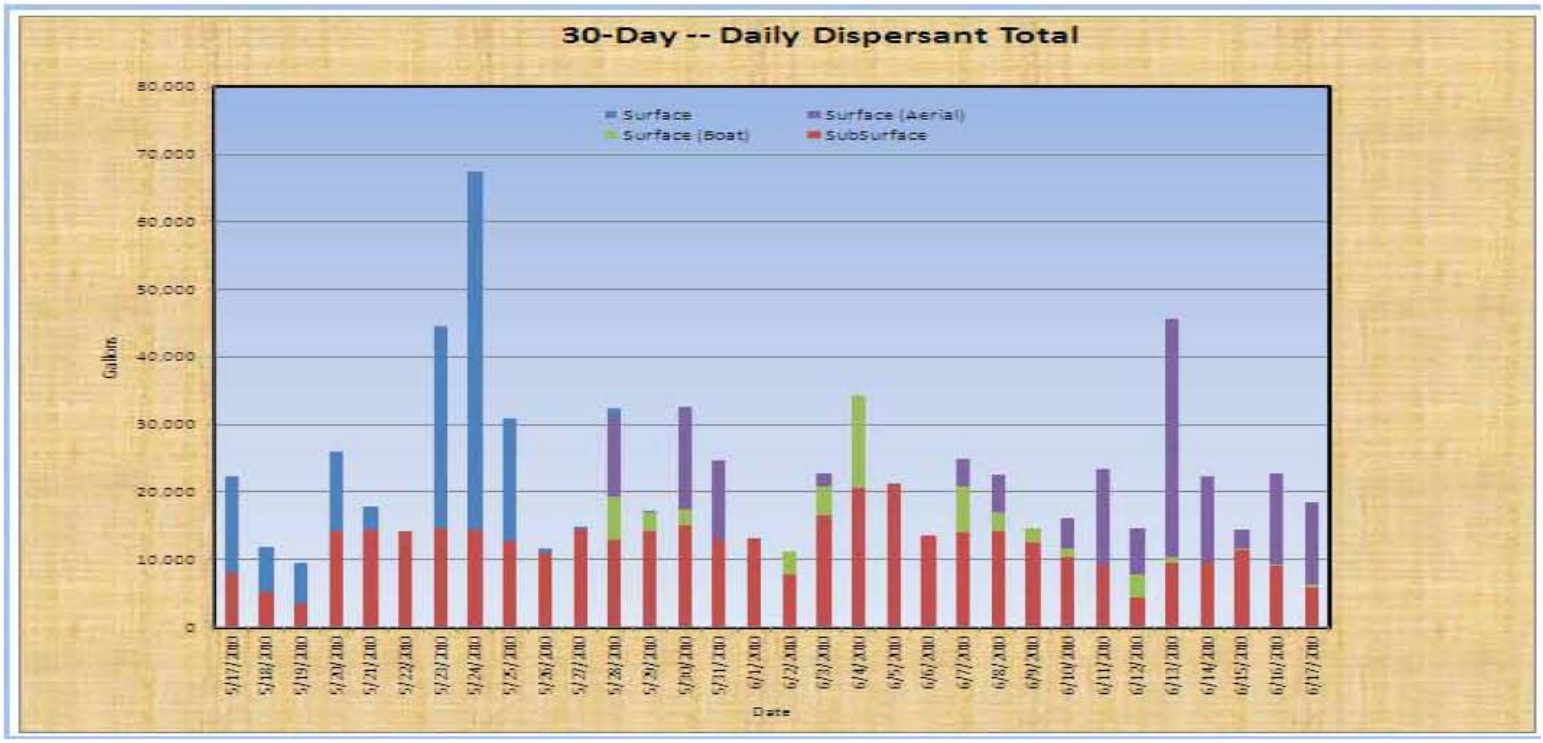
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/19/2010

Reporting Period: 17 MAY - 18 June, 2010
Update: 0900 19 June 2010

1. Current Activities

- Saturday 19 June update: period from 2200hrsL on 6/17/10 to 2200hrsL on 6/18/10:
- Injection rate average not provided **(estimate by calculation is 5.78 gallons/minute)**
- Flow disrupted for 2:20 hrs/min
- Period Volume: 7,642 gallons (Total Cumulative 436,600 gallons).
- The Brooks McCall is on station starting am 17 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
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>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

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- 14,130 gallons of COREXIT pumped in this time period.
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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

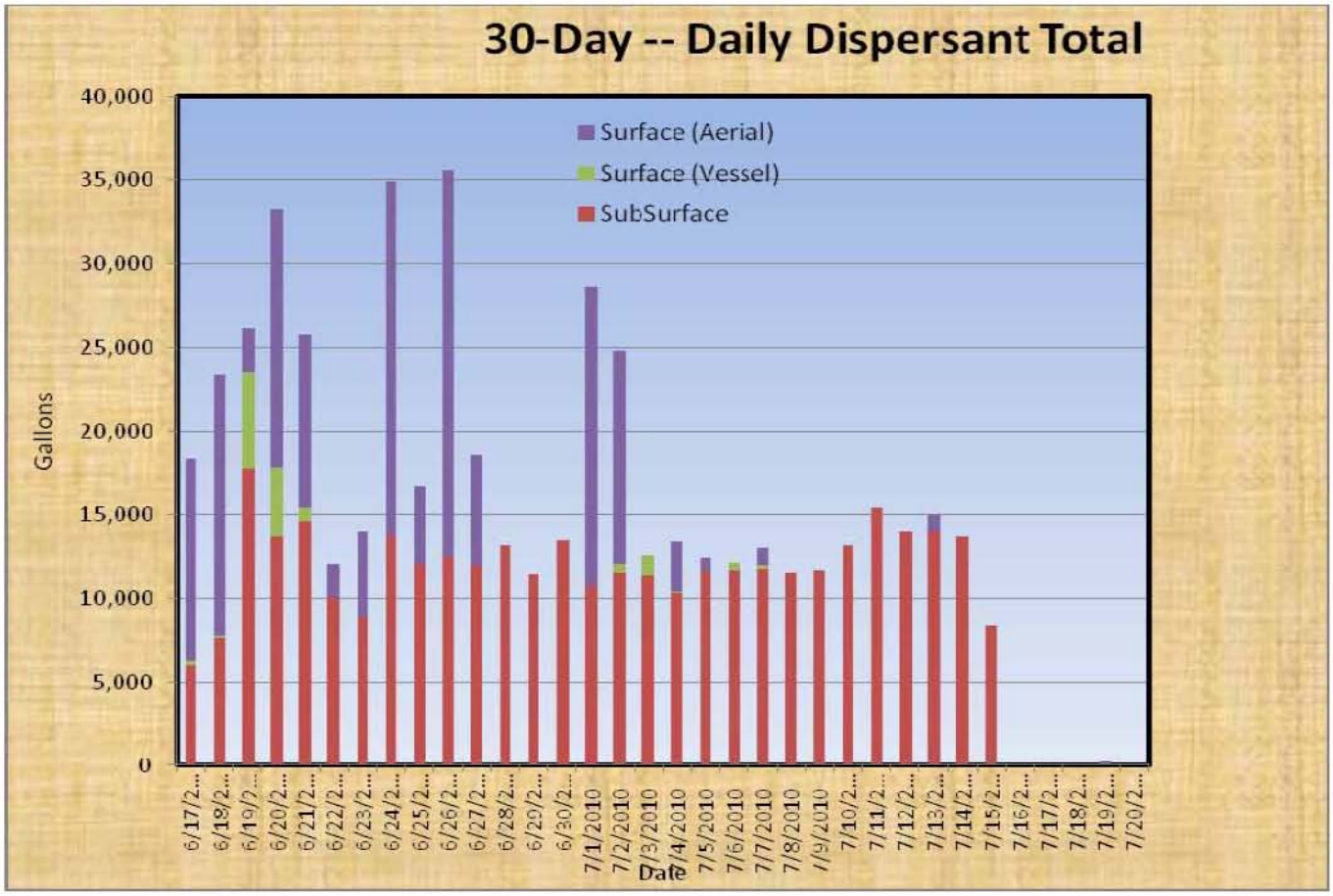
Date: 07/20/2010

Reporting Period: 15 MAY – 20 JULY, 2010

Update: 0900 21 July 2010

1. Current Activities

- Tuesday 21 July update: period from 0000 hrsL on 07/18/10 to 2400 hrsL on 07/20/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Brooks McCall is in port. No samples were collected.
- Ocean Veritas is collecting samples.
- International Peace remains in port until 7/22 unless the DWH cap is removed.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/11/10 – 6/12/10	4,371	4,371	382,872

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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

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- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

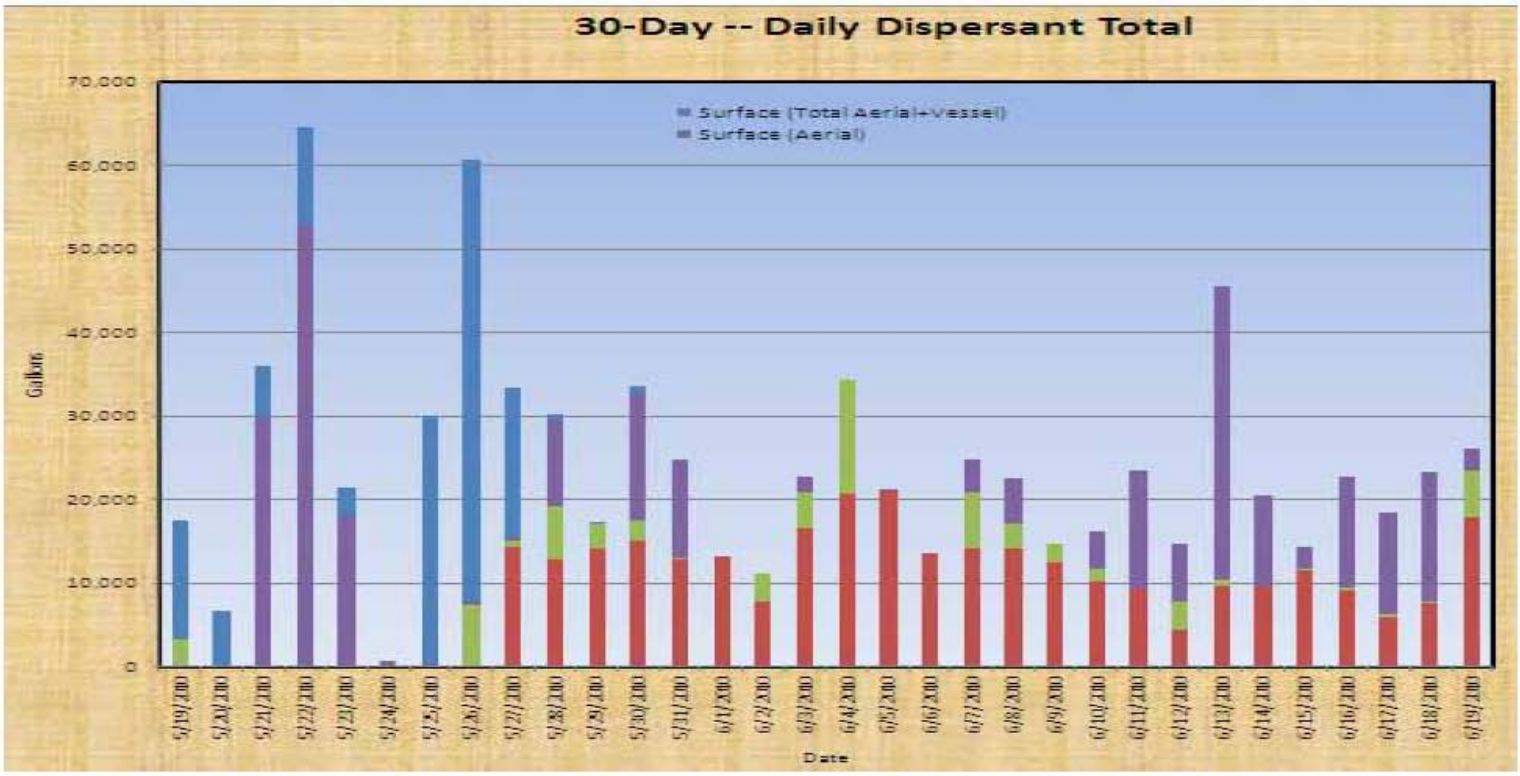
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/20/2010

Reporting Period: 18 MAY - 19 June, 2010
Update: 0900 20 June 2010

1. Current Activities

- Saturday 19 June update: period from 2200hrsL on 6/18/10 to 2200hrsL on 6/19/10:
- Injection rate average not provided **(estimate by calculation is 12.6 gallons/minute)**
- Flow disrupted for :33 hrs/min
- Period Volume: 17,780 gallons (Total Cumulative 454,440 gallons). Cumulative was adjusted up 60 gals.
- The Brooks McCall left station on 19 June, arrive at port 20 June. The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Aerial Visual Observation – Weather Permitting

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Rate of Dispersant Injection
Process for monitoring pump rate
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Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
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The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- No disruptions
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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

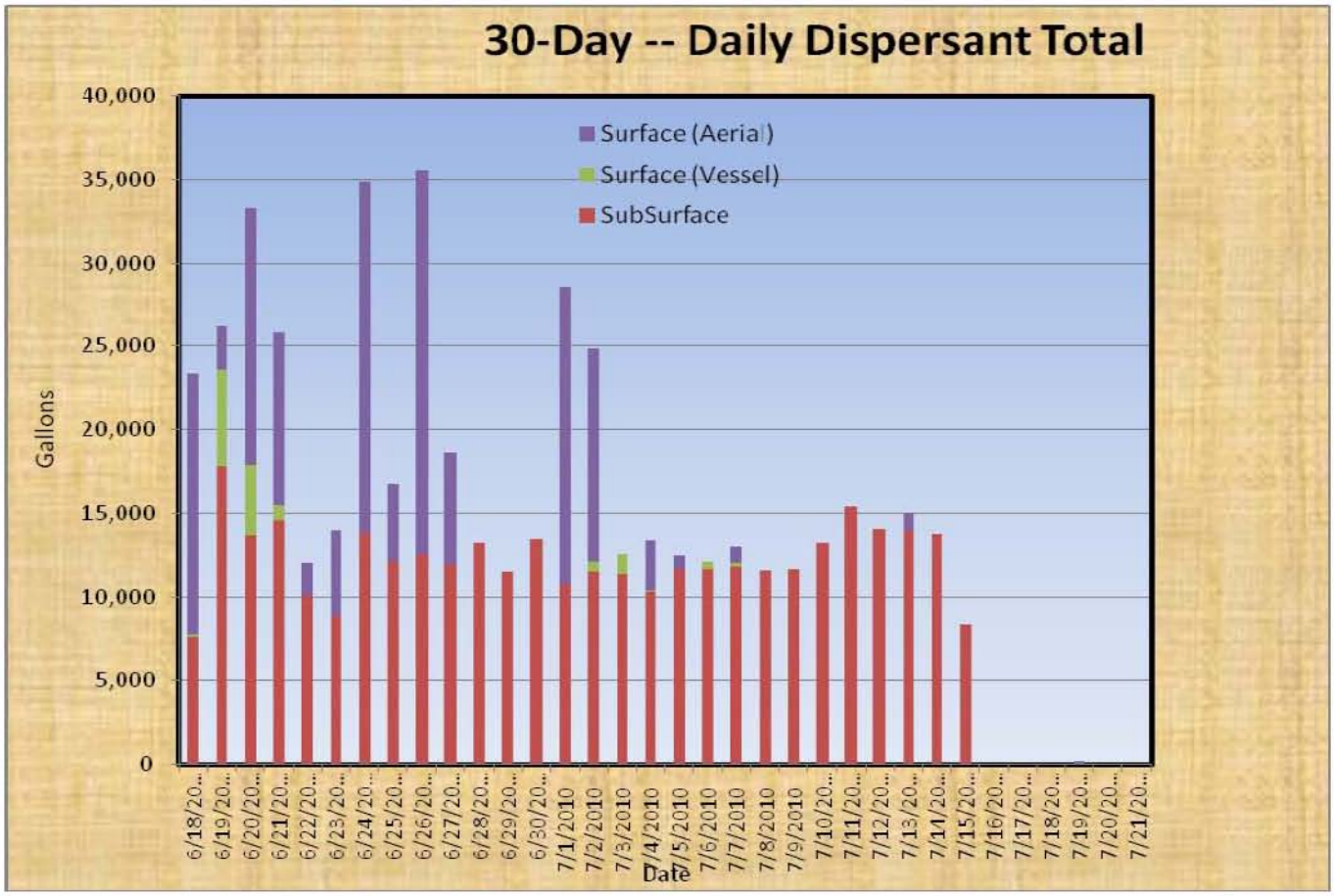
Date: 07/21/2010

Reporting Period: 15 MAY – 21 JULY, 2010

Update: 0900 22 July 2010

1. Current Activities

- Wednesday 21 July update: period from 0000 hrsL on 07/18/10 to 2400 hrsL on 07/21/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Ocean Veritas is collecting subsurface samples offshore. Sampling is focused 15 km and beyond from the wellhead.
- The International Peace is scheduled to depart at 0100 hours on 7/23.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Type of Dispersant to be used
Rate of Dispersant Injection
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Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

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1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

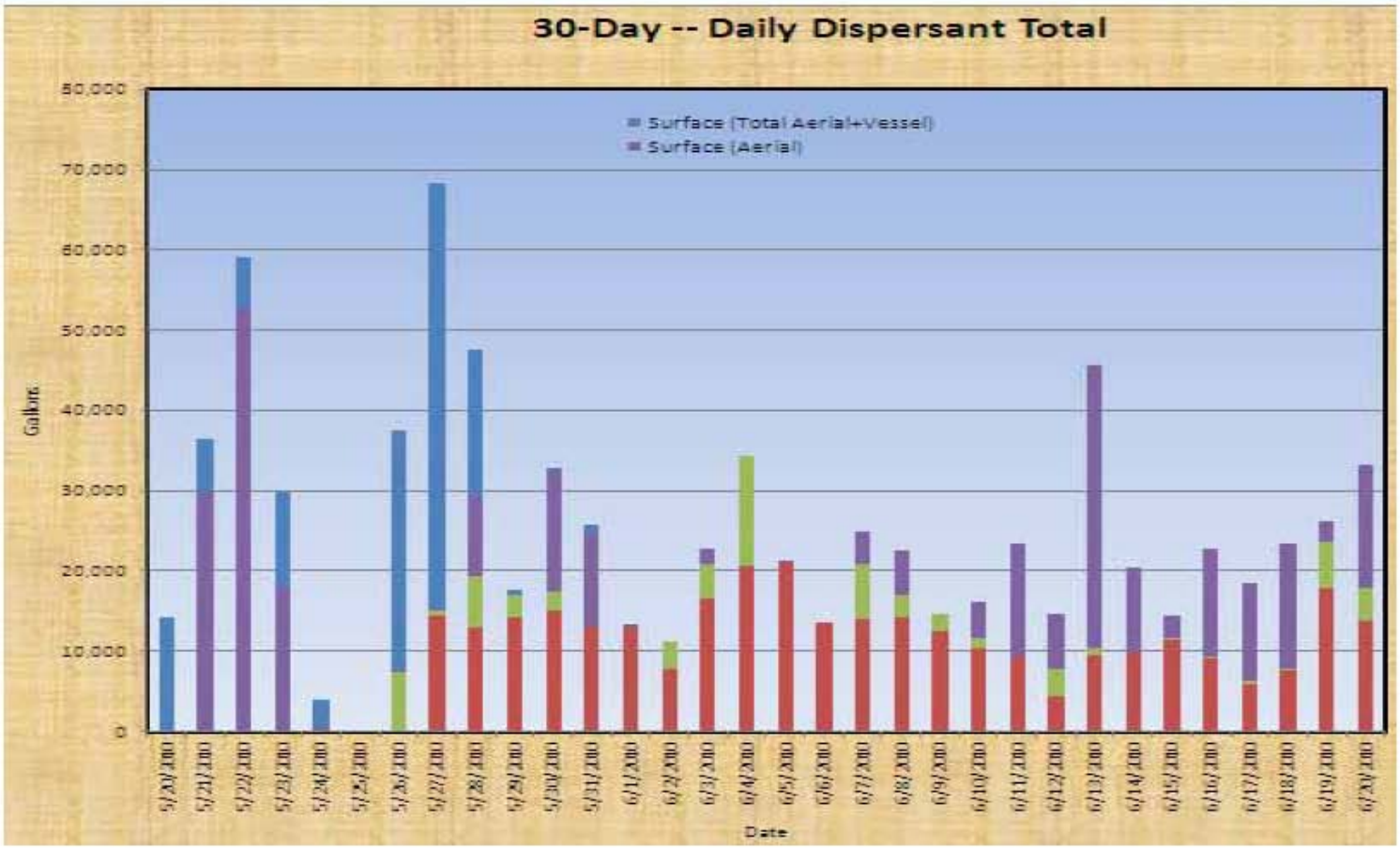
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/21/2010

Reporting Period: 19 MAY - 20 June, 2010
Update: 0900 21 June 2010

1. Current Activities

- Sunday 20 June update: period from 2200hrsL on 6/19/10 to 2200hrsL on 6/20/10:
- Injection rate average not provided **(estimate by calculation is 9.5 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 13,695 gallons (Total Cumulative 468,135 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



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The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
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- Injection is still on-going at time of this POLREP Update

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FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
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- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
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  Status of RV Brooks McCall:
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  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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6/6/10 – 6/7/10	14,105	14,105	332,301
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6/11/10 – 6/12/10	4,371	4,371	382,872

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

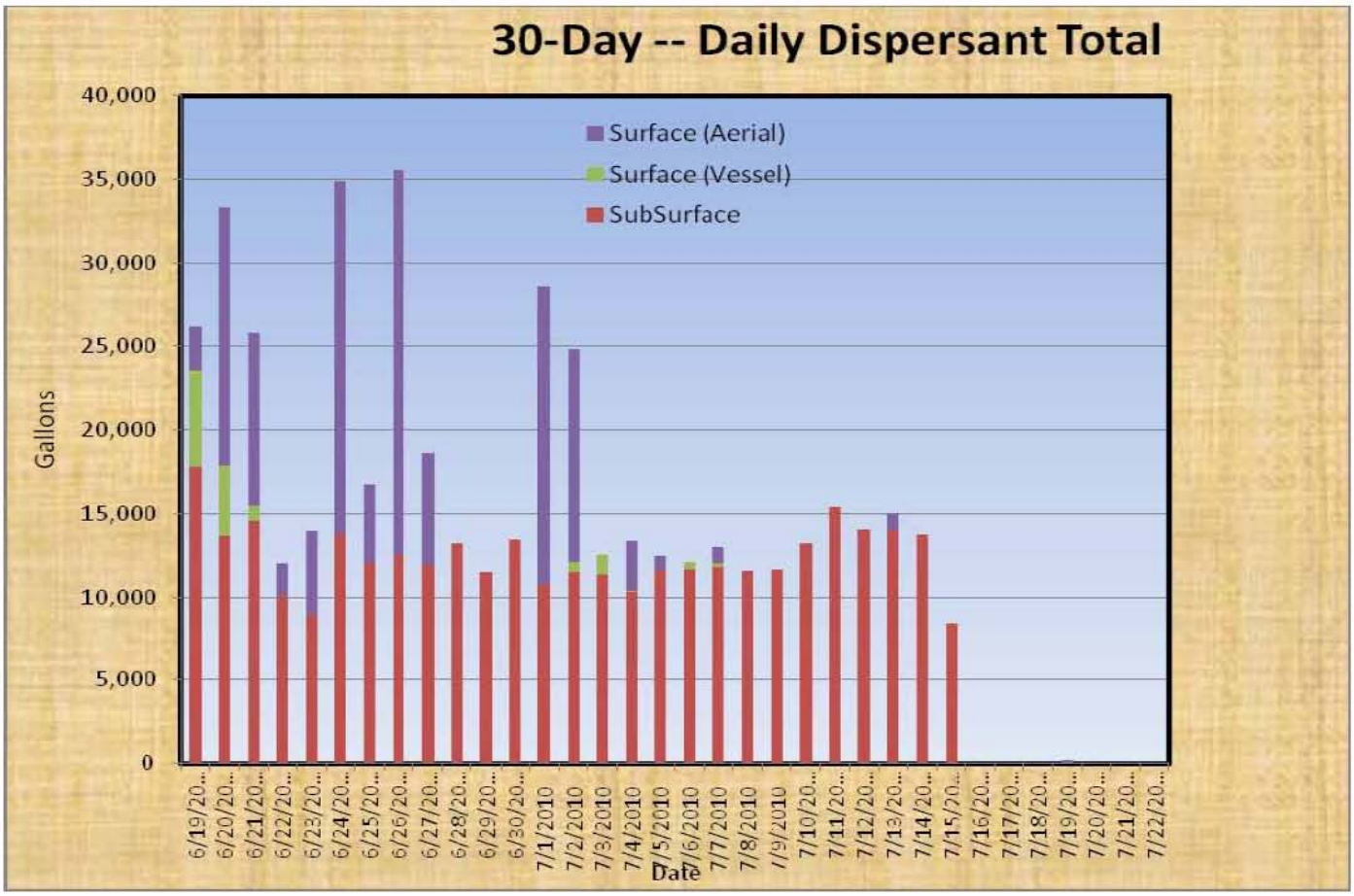
Date: 07/22/2010

Reporting Period: 15 MAY – 22 JULY, 2010

Update: 0900 23 July 2010

1. Current Activities

- Thursday 22 July update: period from 0000 hrsL on 07/22/10 to 2400 hrsL on 07/22/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- Ocean Veritas was collecting subsurface samples offshore. It was returning to port last night.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
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Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
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- 7222 gallons COREXIT 9500 pumped this time period.

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- On station collecting samples; depart from station on 05/29
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- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
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  Status of RV Brooks McCall:
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  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
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  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

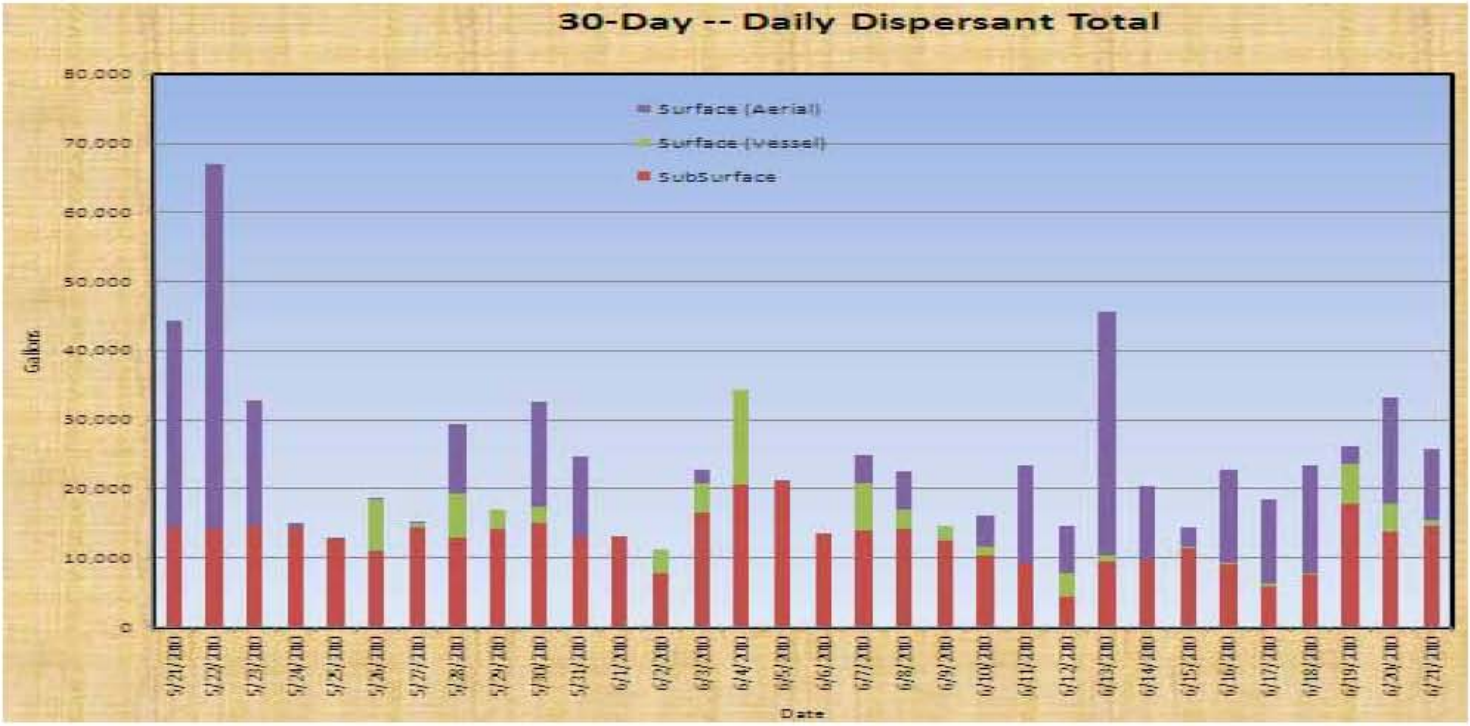
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/22/2010

Reporting Period: 20 MAY - 21 June, 2010
Update: 0900 22 June 2010

1. Current Activities

- Monday 21 June update: period from 2200hrsL on 6/20/10 to 2200hrsL on 6/21/10:
- Injection rate average not provided **(estimate by calculation is 10.1 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



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- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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- On station collecting samples; depart from station on 05/29
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- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
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- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
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  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

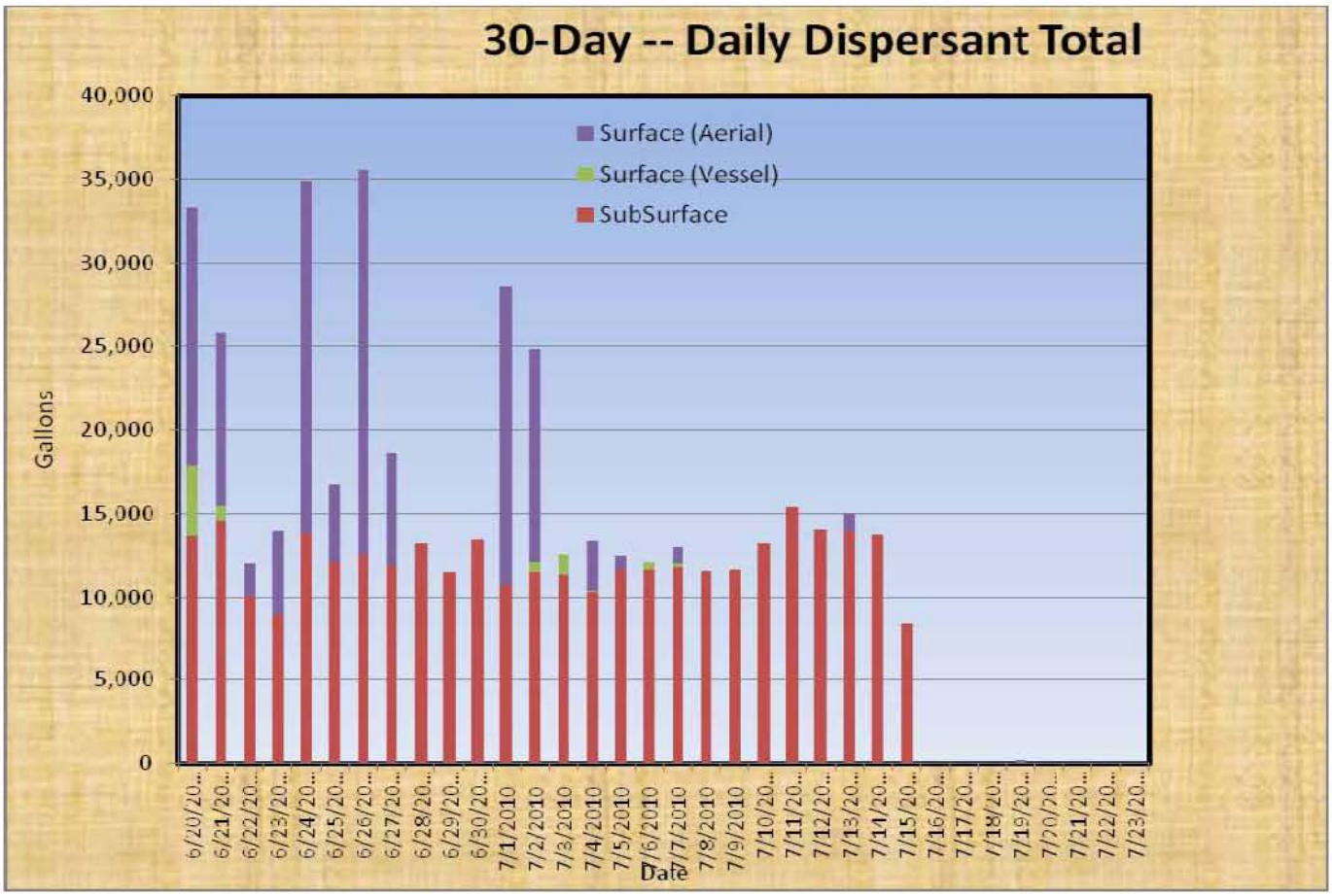
Date: 07/23/2010

Reporting Period: 15 MAY – 23 JULY, 2010

Update: 0900 24 July 2010

1. Current Activities

- Friday 23 July update: period from 0000 hrsL on 07/23/10 to 2400 hrsL on 07/23/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- All monitoring vessels are in port.



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CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
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Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

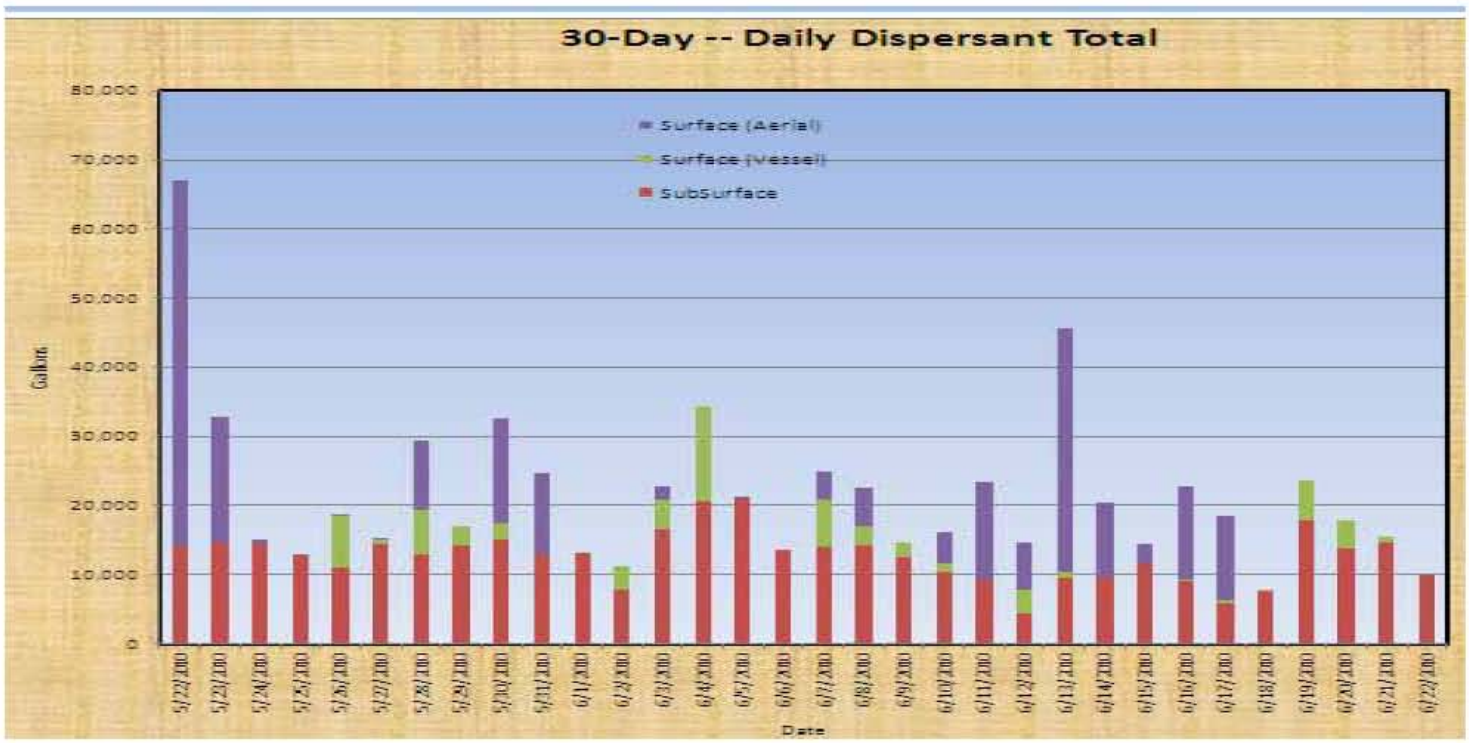
From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/23/2010

Reporting Period: 15 MAY - 22 June, 2010
Update: 0900 23 June 2010

1. Current Activities

- Tuesday 22 June update: period from 2200hrsL on 6/21/10 to 2200hrsL on 6/22/10:
- Injection rate average not provided **(estimate by calculation is 7.0 gallons/minute)**
- Flow disrupted for: none
- Period Volume: 10,046 gallons (Total Cumulative 492,764 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Process for monitoring pump rate
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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-23 May, 2010
Update: 0900 23 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

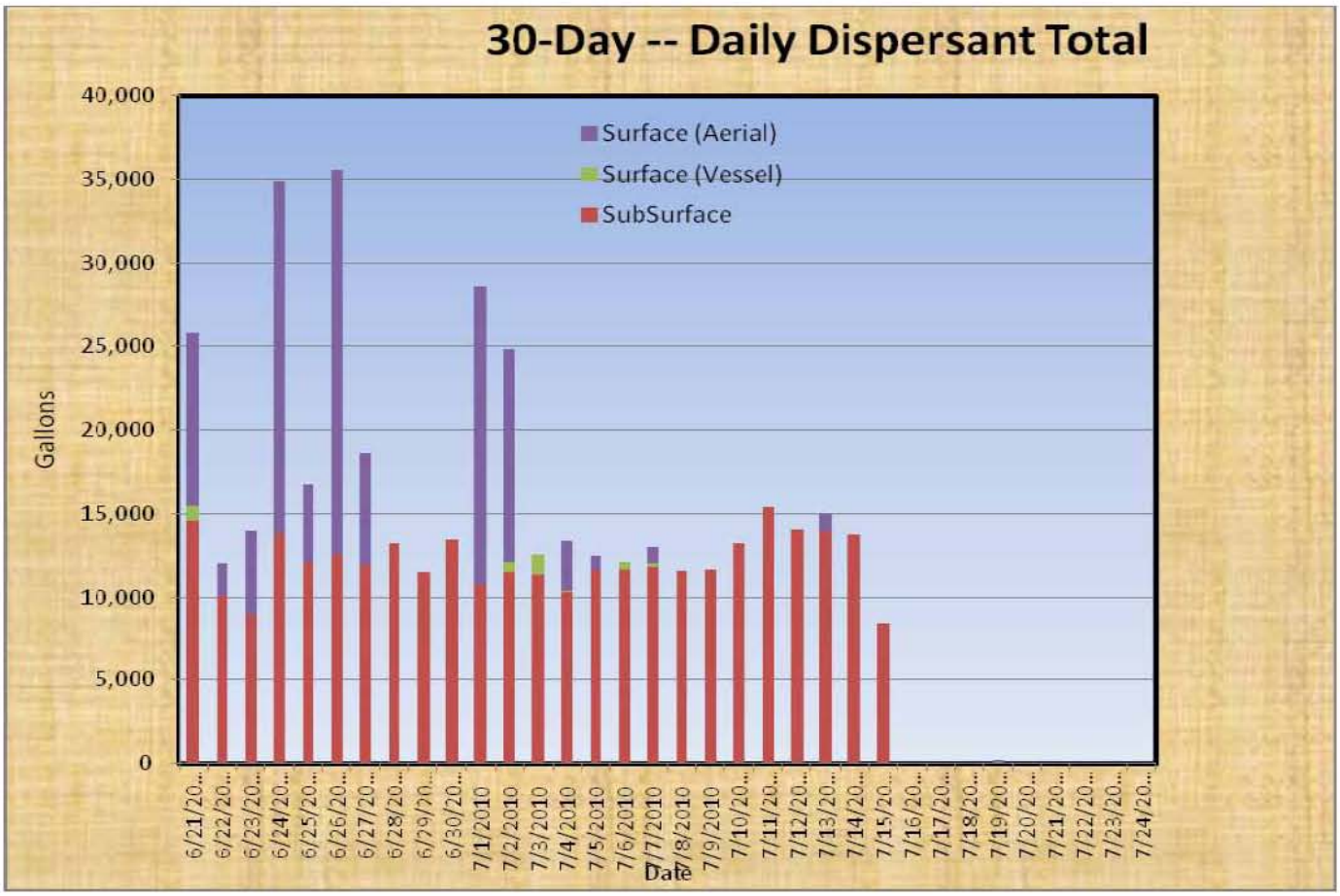
Date: 07/24/2010

Reporting Period: 15 MAY – 24 JULY, 2010

Update: 0900 25 July 2010

1. Current Activities

- Saturday 24 July update: period from 0000 hrsL on 07/24/10 to 2400 hrsL on 07/24/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- All monitoring ships are in port.



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Procedures for FOSC to start and stop injection

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

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- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

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- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

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- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-24 May, 2010
Update: 0900 24 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

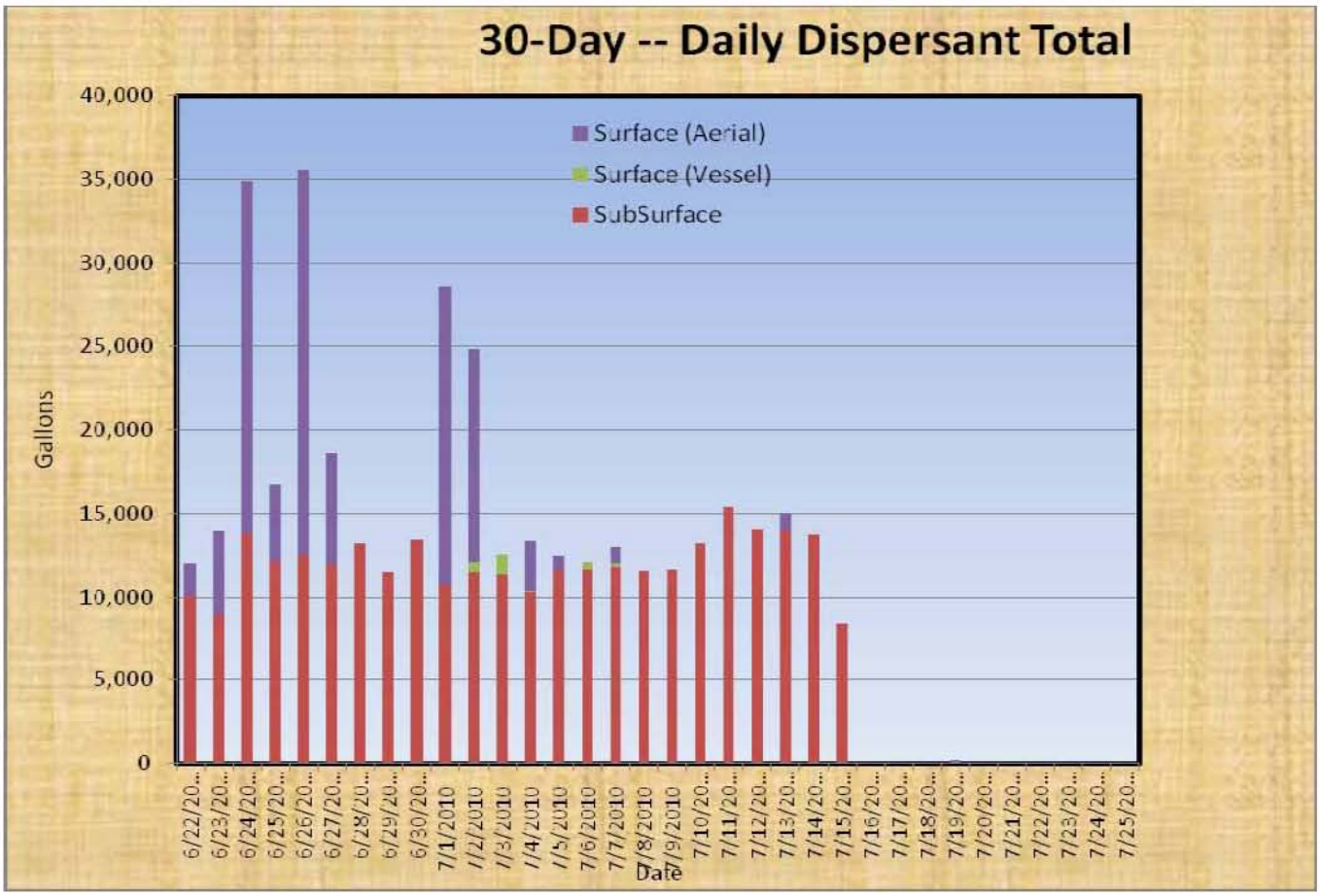
Date: 07/25/2010

Reporting Period: 15 MAY – 25 JULY, 2010

Update: 0900 26 July 2010

1. Current Activities

- Sunday 25 July update: period from 0000 hrsL on 07/25/10 to 2400 hrsL on 07/25/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- All monitoring ships are in port.



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- On station collecting samples; depart from station on 05/29
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Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

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To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-25 May, 2010
Update: 0700 25 May 2010

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-26 May, 2010
Update: 0700 26 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
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Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

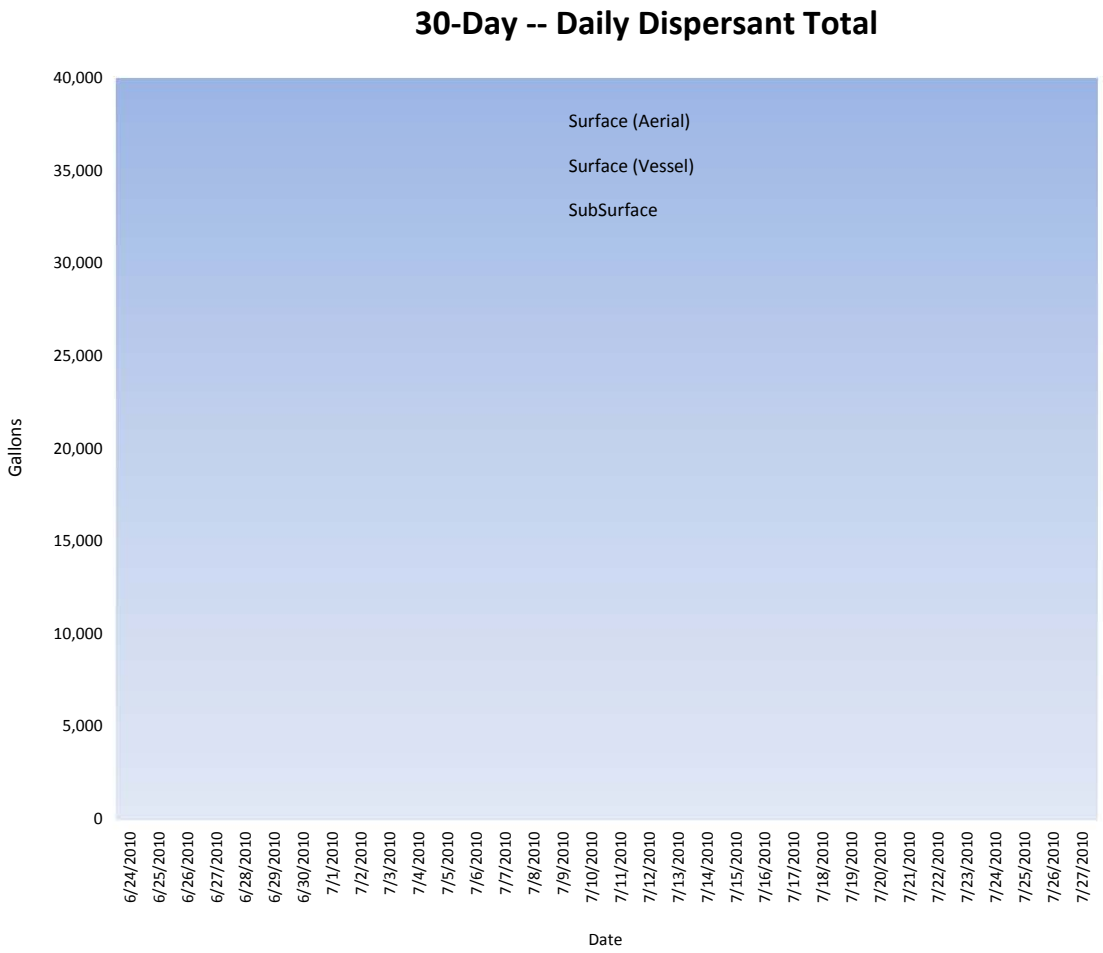
Date: 07/27/2010

Reporting Period: 15 MAY – 27 JULY, 2010

Update: 0900 28 July 2010

1. Current Activities

- TUEDAY 27 July update: period from 0000 hrsL on 07/27/10 to 2400 hrsL on 07/27/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- The Ocean Veritas conducted subsea monitoring on July 26, International Peace left port at midnight July 27.



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>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

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- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-27 May, 2010
Update: 0900 27 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

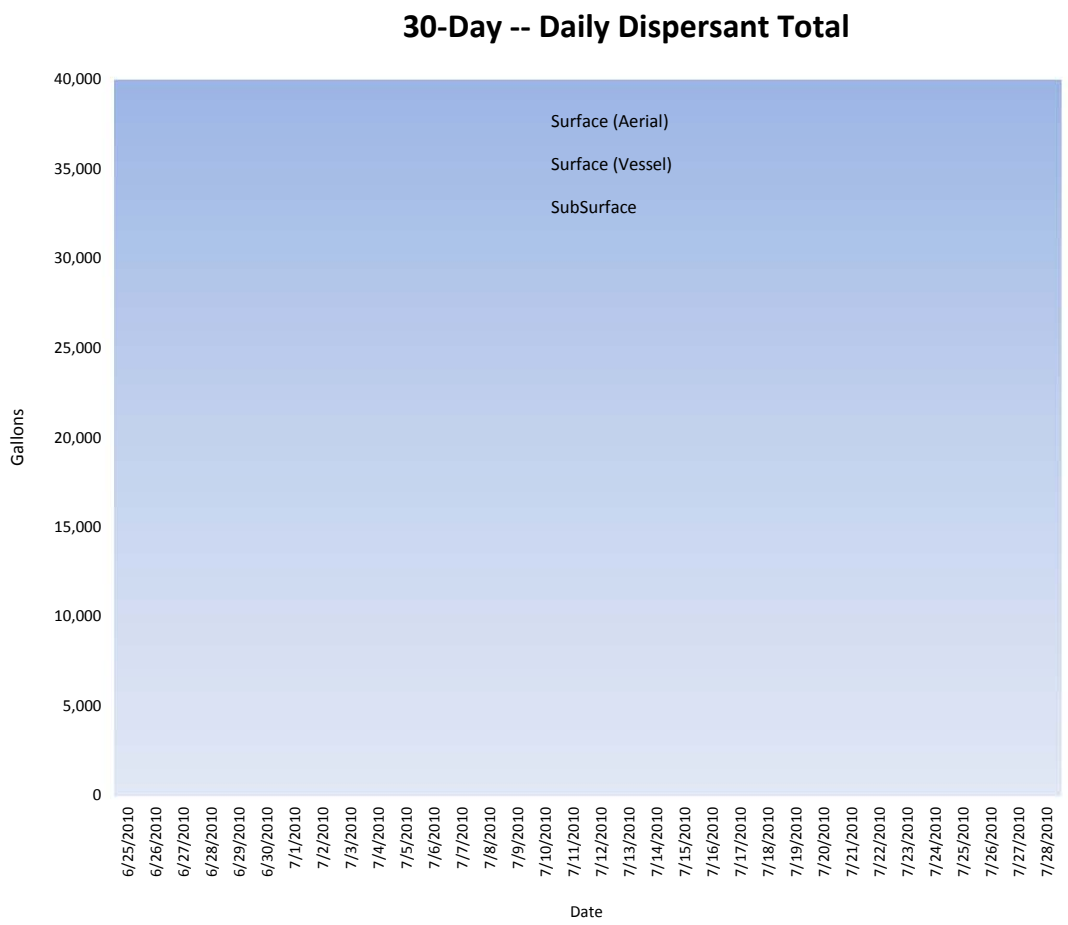
Date: 07/28/2010

Reporting Period: 15 MAY – 28 JULY, 2010

Update: 0900 29 July 2010

1. Current Activities

- WEDNESDAY 28 July update: period from 0000 hrsL on 07/28/10 to 2400 hrsL on 07/28/10:
- Flow disrupted for: No subsea dispersant used.
- Period Volume: 0 gallons (Total Cumulative: 771,272 gallons).
- International Peace conducted control sampling with dispersant on July 28, 2010
- Ocean Veritas conducted subsurface monitoring July 28, 2010



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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
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2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

- Monday 12 July update: period from 0000 hrsL on 07/12/10 to 2400 hrsL on 07/12/10.
- Injection rate average: average rate not reported **(estimate by calculation is 9.75 gallons/minute).**
- Flow disrupted for: there was a three hour reported dispersant injection interruption during stack installation activity.
- Period Volume: 14,038 gallons (Total Cumulative: 735,138 gallons).
- Brooks McCall conducted subsurface dispersant monitoring.

>>>

- International Peace will not deploy again until 7/22 unless the DWH cap is removed and there is fresh oil to sample.
- Brooks McCall monitored the subsurface plume.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15-28 May, 2010
Update: 0900 28 May 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Towed Flourometer at 1 meter
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Cast Flourometer – surface to sea floor
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UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

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To: DIST

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Update: 0900 29 May 2010

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WRITTEN STATEMENT OF
DR. LARRY ROBINSON

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

HEARING ON
THE USE OF DISPERSANT FOR THE BP DEEPWATER HORIZON OIL SPILL

BEFORE THE
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE,
AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

July 15, 2010

Thank you, Chairman Mikulski and Members of the Committee, for the opportunity to testify on the Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) role in the Deepwater Horizon BP oil spill response and the use of dispersants. My name is Dr. Larry Robinson and I am an Assistant Secretary of Commerce for Oceans and Atmosphere. I appreciate the opportunity to discuss the critical roles NOAA serves during oil spills and the importance of our contributions to protect and restore the natural resources, communities, and economies affected by this tragic event.

NOAA's mission is to understand and predict changes in the Earth's environment. NOAA also conserves and manages coastal and marine resources to meet our Nation's economic, social, and environmental needs. As a natural resource trustee, NOAA is one of the federal agencies responsible for protecting, assessing, and restoring the public's coastal natural resources when they are harmed by oil spills. As such, the entire agency is deeply concerned about the immediate and long-term environmental, economic, and social impacts to the Gulf Coast and the Nation from this spill. NOAA is fully mobilized and working tirelessly to reduce impacts on the Gulf Coast and will continue to do so until the spill is controlled, oil is cleaned up, natural resource injuries are assessed, and restoration is complete.

My testimony today will discuss NOAA's role in the Deepwater Horizon response and natural resource damage assessment process associated with the Deepwater Horizon oil spill, for which BP is a responsible party; NOAA's role in use of dispersants as a countermeasure to mitigate the impacts of the spill; and opportunities to strengthen the federal response to future events through research and development.

NOAA'S ROLES DURING OIL SPILLS

NOAA has three critical roles mandated by the Oil Pollution Act of 1990 and the National Contingency Plan (NCP):

1. During the emergency response, NOAA conducts research and monitoring and communicates scientific information to the Federal On-Scene Coordinator (FOSC). The Scientific Support Team is designated as a special team in the NCP and provides a broad array of scientific services to the response.
2. As a natural resource trustee, NOAA conducts a Natural Resource Damage Assessment (NRDA) jointly with co-trustees to assess and restore natural resources injured by the oil spill. NRDA also assesses the lost uses of those resources, such as recreational fishing, and swimming, with the goal of implementing restoration projects to address these losses.
3. Finally, NOAA represents the Department of Commerce in spill response preparedness and decision-making activities through the National Response Team and the Regional Response Teams.

Response

The U.S. Coast Guard (USCG) is the FOSC and has the primary responsibility for managing coastal oil spill response and clean-up activities in the coastal zone. During an oil spill, NOAA's Scientific Support Coordinators deliver technical and scientific support to the USCG. NOAA's Scientific Support Coordinators are located around the country in USCG Districts, ready to respond around the clock to any emergencies involving the release of oil or hazardous substances into the oceans or atmosphere. Currently, NOAA has deployed all of its Scientific Support Coordinators from throughout the country to work on the Deepwater Horizon oil spill.

With over thirty years of experience and using state-of-the-art technology, NOAA continues to serve the Nation by providing its expertise and a suite of products and services critical for making science-based decisions. Examples include trajectory forecasts on the movement and behavior of spilled oil, overflight observations, spot weather forecasts, emergency coastal survey and charting capabilities, aerial and satellite imagery, and real-time coastal ocean observation data. Federal, state, and local entities look to NOAA for assistance, experience, local perspective, and scientific knowledge. NOAA's Office of Response and Restoration was called upon for scientific support 200 times in 2009.

Natural Resource Damage Assessment

Stewardship of the Nation's natural resources is shared among several federal agencies, states, and tribal trustees. NOAA, acting on behalf of the Secretary of Commerce, is the lead federal trustee for many of the Nation's coastal and marine resources, and is authorized by the Oil Pollution Act of 1990 (OPA) to recover damages on behalf of the public for injuries to trust resources resulting from an oil spill. Regulations promulgated by NOAA under the Oil Pollution Act encourage compensation in the form of restoration of the injured resources, and appropriate compensation is determined through the NRDA process. Since the enactment of OPA, NOAA, together with other federal, state, and tribal co-trustees, has recovered approximately $500 million for restoration of natural resources injured by releases of oil or hazardous substances, as well as injuries to national marine sanctuary resources, including vessel groundings.

National and Regional Response Teams

The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP's purpose is to develop a national response capability and promote

overall coordination among the hierarchy of responders and contingency plans. NOAA represents the Department of Commerce on the National Response Team and Regional Response Teams to develop policies on dispersant use, best clean-up practices and communications, and to ensure access to science-related resources, data, and expertise during responses to oil spills.

NOAA'S ROLE IN THE DEEPWATER HORIZON RESPONSE

NOAA's scientific experts have been assisting with the response from the first day of the Deepwater Horizon BP oil spill, both on-scene and through our headquarters and regional offices. NOAA's support includes daily trajectories of the spilled oil, weather data to support short and long range forecasts, and hourly localized 'spot' forecasts to determine the use of weather dependent mitigation techniques such as oil burns and chemical dispersant applications. NOAA uses satellite imagery and real-time observational data on the tides and currents to predict and verify oil spill location and movement. To ensure the safety of fishermen and consumer seafood safety, NOAA scientists are in the spill area taking water and seafood samples, and NOAA has put fisheries closures in place to maintain consumer confidence in the safety of consuming seafood from the Gulf of Mexico region. In addition, NOAA experts are providing expertise and assistance regarding sea turtles, marine mammals, and other protected resources such as corals.

At the onset of this oil spill, NOAA quickly mobilized staff from its Damage Assessment Remediation and Restoration Program to begin coordinating with federal and state co-trustees and the responsible parties to collect a variety of data that are critical to help inform the NRDA. NOAA is coordinating the NRDA effort with the Department of the Interior (another federal co-trustee), as well as co-trustees in five states and representatives for at least one responsible party, BP. NOAA and the co-trustees are in the initial phase of this process and are currently gathering data on resources such as fish, shellfish, birds, and turtles, and mammals; their supporting habitats such as wetlands, beaches, and corals; and human uses of affected resources, such as fishing and recreational uses across the Gulf of Mexico. The trustees will then quantify the total losses and develop restoration projects that compensate the public for their losses.

THE USE OF DISPERSANTS

The Deepwater Horizon spill is a stark reminder that large oil spills still occur, and that we must rebuild and maintain our response capacity. When an oil spill occurs, there are no good outcomes. Once oil has spilled, responders use a variety of oil spill countermeasures to reduce the adverse effects of spilled oil on the environment. The goal of the Unified Command is to minimize the environmental damage and speed recovery of injured resources. The overall response strategy to accomplish this goal is to maximize recovery and removal of the oil being released while minimizing any additional damage that might be caused by the response itself. This philosophy involves making difficult decisions, often seeking the best way forward among imperfect options.

Under section 311 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) is required to prepare and maintain a schedule of dispersants and other mitigating devices and substances that may be used in carrying out the NCP. The NCP requires Regional Response Teams (RRT), in which NOAA participates, and Area Committees to plan for the use or non-use

of dispersants in advance of spills, to ensure that the tradeoff decisions between water column and surface/shoreline impacts are deliberated. As the FOSC for this spill response, the U.S. Coast Guard is responsible for approving the use of the specific dispersant used from the NCP Product Schedule. Because of the unprecedented nature of the dispersant operations, the monitoring and constraints on application volumes and methodologies are being closely managed. In particular, EPA has specified effectiveness and impact monitoring plans, application parameters, and action thresholds. Any changes to specific Deepwater Horizon dispersant plans require the concurrence of EPA and other RRT decision agencies, including NOAA, under the NCP.

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The Gulf of Mexico shorelines, and Louisiana's in particular, possess extensive marsh habitats that are critical for wildlife and fisheries and shoreline protection. NOAA's environmental sensitivity index maps rank shoreline vulnerability to oil spills, and marshes are considered the most sensitive. Louisiana's marshes are already in a weakened condition and large areas are lost every year. These marshes and biota are extremely sensitive to oil, very difficult to clean up, and highly vulnerable to collateral impacts from response efforts.

For the Deepwater Horizon spill, the Unified Command's response posture has been to fight the spill offshore and reduce the amount of oil that comes ashore, using a variety of countermeasures including subsurface recovery, booming, skimming, burning, and dispersants. No single response method is 100 percent effective, and each has its own "window of opportunity" defined by the state of the oil and weather and sea state conditions, thereby establishing a need to consider the use of all available methods. It is important to note that, given the size and complexity of the Deepwater Horizon spill, no combination of response actions can fully contain the oil or completely mitigate the impacts until the well is brought under control. But given the enormous volume and geographic extent of the spill, the response to date has been somewhat successful in limiting shoreline impacts.

Chemical dispersants can be an effective tool in the response strategy, but like all methods, involve trade-offs in terms of effectiveness and potential for collateral impacts. Although mechanical recovery using skimmers is the preferred method of offshore oil spill response because it removes the oil from the environment, it is generally ineffective unless seas are fairly calm. The use of dispersants to mitigate offshore oil spills is a proven and accepted technology to reduce the impacts to shorelines and, under certain conditions, can be more effective than mechanical response. This is largely due to the fact that spray aircraft can encounter much more of the floating oil, and more quickly, than can skimmers Dispersants have been used effectively

to respond to spills both in the U.S. and internationally. In the U.S., notably in the Gulf of Mexico, dispersants have been used during the past 15 years against much smaller spills off Louisiana and Texas. The largest use of dispersants in North America (2.7 million gallons) was in the Gulf of Mexico during the 1979-80 Ixtoc I blowout in Campeche Bay, Mexico.

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For all dispersant operations, the FOSC must activate the SMART monitoring team to monitor the effectiveness of the dispersant. Dispersant use for the Deepwater Horizon oil spill was, and continues to be, performed in accordance with ACP guidelines and with RRT approval. NOAA's Scientific Support Coordinators, supported by NOAA's team of scientists at its Emergency Response Division and in consultation with trustees, is advising the FOSC on when and where dispersants should be used to determine the most effective and appropriate use of dispersants. The authorization given to BP to use the dispersant on oil present on the surface of the water included specific conditions to ensure the protection of the environment and the health of residents in affected areas.

Dispersants are chemicals that may be applied directly to the spilled oil in order to remove it from the water surface by dispersing it into the upper layer of the water column. Dispersants are commonly applied through specialized equipment mounted on an airplane, helicopter or ship. The dispersant must be applied as a mist of fine droplets and under a specific range of wind and sea state conditions. Once applied at the surface, dispersants help break up the oil into tiny micron-sized droplets (size of the cross section of a hair) which mix into the upper layer of the ocean. Because of the high encounter rate of aircraft, they allow for the rapid treatment of large areas. Dispersed oil does not sink; rather it forms a "plume" or "cloud" of oil droplets just below the water surface. The dispersed oil mixes vertically and horizontally into the water column and is diluted. Once formed, bacteria and other microscopic organisms then act to degrade the oil within the droplets more quickly than it the oil had not been dispersed. It should be noted that oil spilled from the Deepwater Horizon incident is also naturally dispersing into the water column due to the physical agitation of the wind, waves, and vessel operations.

The Deepwater Horizon spill has also for the first time in the U.S. implemented the use of subsurface dispersants at the wellhead. This is being applied through the use of Remotely

Operated Vehicles (ROV). The decision to use subsurface applications was made by the FOSC with concurrence by RRT Region VI after several test applications to determine the efficiency, and development and implementation of a monitoring protocol. Limitations have been placed on the amount of subsurface dispersants that can be applied each day.

Spill response often involves a series of environmental trade-offs. The overall goal is to use the response tools and techniques that will minimize the overall environmental damage from the oil. The use of dispersants is an environmental trade-off between impacts within the water column, on the sea surface (birds, mammals, and turtles in slicks) and on the shore. Dispersants do not remove the oil from the environment. When a decision is made to use dispersants, the decision maker is reducing the amount of oil on the surface where it may affect birds, mammals and turtles, when they are at or near the surface, and ultimately that oil that may come ashore, in exchange for increasing the amount of oil in the upper layer of the water column 40 miles off shore. The effects of dispersants and dispersed oil below the surface on diving birds, marine mammals, and sea turtles are unknown. Under ideal conditions, each gallon of dispersant applied offshore prevents about 20 gallons of oil from coming onto the beaches and into the marshes of the Gulf Coast.

The Gulf coast is home to coastal wetlands and marshes that are biologically productive and ecologically important to nesting waterfowl, sea turtles, fisheries, and essential fish habitat. The Gulf of Mexico region's ecological communities are essential to sustaining local economies, recreational experiences, and overall quality of life. The extensive marshes themselves provide coastal communities with protection from severe storms, such as Hurricane Katrina. These habitats are highly sensitive to oiling. Once oil does impact marshes, there are limited cleanup options, and potential for significant long-term impacts. As oil has moved ashore from the Louisiana coast to the Florida panhandle from the BP Deepwater Horizon spill, we have seen firsthand the impacts this oil has on these habitats, and to birds, turtles and other wildlife. Although it may not be readily apparent, use of dispersants offshore and in deep water, is reducing the amount of oil reaching the shoreline, reducing the amount of shoreline cleanup that will be required, and helping to reduce recovery time of injured nearshore resources. Without the use of dispersants, the shoreline impacts along the Gulf coast from the Deepwater Horizon spill would be greater.

RESEARCH ON THE EFECTIVENESS AND EFFECTS OF DISPERSANTS AND DISPERSED OIL

Research on the effectiveness and effects of dispersants and dispersed oil have been underway for more than three decades but important gaps still exist. Much of what we have learned from both research and real world experience is presented in detail in the 2005 National Research Council (NRC) book "Oil Spill Dispersants: Efficacy and Effects." The NRC identified gaps in our knowledge. These gaps were narrowed by research and development activities carried out through projects conducted by the Coastal Response Research Center (CRRC), and state and federal agencies, and academia. The CRRC was a successful joint partnership established in 2004 between the University of New Hampshire and NOAA's Office of Response and Restoration.

One area of focus has been on determining the toxicity and long-term effects of dispersants and dispersed oil on sensitive marine life. It is now quite clear that effectively-dispersed oil declines rapidly in concentration due to ocean mixing, degrades faster than untreated surface or shoreline oil, and that the toxicity of dispersants is considerably less than the toxicity of the oil that is dispersed. The acute (four day) toxicity of dispersants and dispersed oil for the most sensitive species and life stages (e.g., coral and coral eggs) occurs at concentrations in the low part per million (ppm) range. Thus, when we see data below the current monitoring detection limit of 1 ppm, it is likely that the dispersed oil is not toxic to all but the most sensitive organisms and life stages. However, we note that very little is known about the species found in the deep ocean near the Deepwater Horizon Release site and the susceptibility of these species to dispersed oil toxicity at cold temperatures and high pressures.

On June 28, 2010, the EPA released the first two of its newly-updated studies on the toxicities of dispersants on silverside fish and small crustacean species. The primary purpose of these studies was to determine the toxicity differences among different dispersant products. Most, including the dispersant now in use at the Deepwater Horizon spill, were not statistically different from each other. In addition, these species were tested for endocrine disruption potential and none was found except possibly for one product which is not being used. While these are favorable results, we note the two species tested are not considered particularly sensitive and early life history stages of these species were not considered. Shortly, the EPA will release additional reports on the toxicities of product-dispersed Deepwater Horizon oil.

The effects of the dispersed oil on marine life depend on concentration and duration of exposure of organisms to the dispersed oil. At the sea surface, early life stages (eggs and larvae) of fish and shellfish are much more sensitive than juveniles or adults to dispersants and dispersed oil. This increased sensitivity coupled with the fact that these organisms reside just below the surface of the ocean (as do plankton, zooplankton) where concentrations of the dispersed oil are initially greatest means that these organisms are most likely to be impacted. There are no data on the toxicity of dispersed oil to deep-sea biota at any life stage, so we have to extrapolate based on existing knowledge. However, in both regions (surface and deepwater), modeling and monitoring is confirming that dispersed oil concentrations decline rapidly with distance from the well head as the “clouds” or “plumes” mix with sea water and move with the currents away from the treatment areas.

While numerous studies have been conducted on the fate and transport of oil dispersed on the surface, the fate and transport of oil dispersed at depth is less understood. While the application of dispersants into a subsurface plume has never been studied, we expect the result to be similar to that of surface dispersant application, and thus result in even smaller droplets of oil in the plume. These very small droplets (100 microns) will rise extremely slowly while being mixed by background turbulence, so that they stay at depth, moving with the currents, until biodegraded, consumed by naturally occurring micro-organisms, or adhere to sinking sediment. Preliminary modeling suggests average rise could increase from a few hours to several days with sub-surface dispersant application. We also expect some fraction to sink because of adherence to sinking sediments.

Another major activity, involving marine resource trustees, has been a series of nearly 20 Consensus Ecological Risk Assessment (C-ERA) Workshops which were held all around the U.S. and adjacent international coastlines. These workshops, many lasting one week or more and sponsored by the U.S. Coast Guard, EPA and Department of the Interior, focused the attention of trustees of alternative response scenarios of large spills, including no response, on-water mechanical removal, in situ burning, dispersant use and shoreline clean up. Trustees evaluated the impacts and benefits of each realistic response option to their trust resources (marshes, shorelines, mammals, birds, fish, etc.) and then had to work on reaching consensus regarding the least damaging mix of response options for their specific area. The results of these workshops have provided valuable information for revising response plans in a number of states and countries.

ACTIVITIES TO ASSESS PRESENCE OF SUBSURFACE OIL FROM DEEPWATER HORIZON SPILL

Since the beginning of May, NOAA has been conducting and coordinating sampling of the sub-surface region around the Deepwater Horizon well-head and beyond to characterize the presence of subsurface oil. The sub-surface search involves the use of sonar, UV instruments called fluorometers, which can detect the presence of oil and other biological compounds, and collection of water samples from discrete depths using a series of bottles that can be closed around a discrete water sample.

NOAA, federal partners, academics, and others in the research community have mobilized to research and quantify the location and concentration of subsurface oil from the spill. NOAA Ships *Gordon Gunter* and *Thomas Jefferson* have both conducted missions to collect water samples from areas near the wellhead as well as further from the wellhead and in the coastal zone. Water samples from many of these missions are still being analyzed and additional missions are in progress or being planned to continue the comprehensive effort to define the presence of oil below the surface and understand its impacts.

Water samples taken by researchers on the *R/V Pelican* and the *R/V Weatherbird II* have also been analyzed for the presence of subsurface oil. These samples from the R/V Weatherbird II confirmed low concentrations of surface oil from the Deepwater Horizon spill 40 nautical miles northeast of the wellhead. Additionally, hydrocarbons were found in samples 45 nautical miles northeast of the wellhead-at the surface, at 50 meters, and at 400 meters-however, the concentrations were too low to confirm the source.

In accordance with EPA requirements for the use of subsurface dispersants, BP contracted ships, *R/V Brooks McCall* and the *Ocean Veritas*, have been collecting water samples in the area close to the wellhead. NOAA, EPA, and the White House Office of Science and Technology Policy (OSTP) released a summary report about the subsea monitoring in the vicinity of the Deepwater Horizon wellhead conducted from the *R/V Brooks McCall* from May 8 – 25, 2010. The report also confirms the existence of a previously discovered cloud of diffuse oil at depths of 3,300 to 4,600 feet near the wellhead. Preliminary findings indicate that total petroleum hydrocarbon (TPH) concentrations at these depths are in concentrations of about 1-2 parts per million (ppm). Analysis shows this cloud is most concentrated near the source of the leak and decreases with

distance from the wellhead. Beyond six miles from the wellhead, concentrations of this cloud drop to levels that are not detectable. Decreased droplet size is consistent with chemically-dispersed oil. Dissolved oxygen levels in the water column are largely what are expected compared with historical data.

The Unified Command has established an inter-agency Joint Analysis Group (JAG) to aggregate and analyze all the relevant data from the many subsurface oil missions in order to have a comprehensive picture of the situation. This group is made up of federal scientists from NOAA, EPA and OSTP.

CONCLUSION

As the response to this oil spill continues, the Unified Command will continually reevaluate our response strategies, actions, and planning. NOAA will continue to provide scientific support to the Unified Command and continue our coordination with our federal and state co-trustees on the NRDA. I would like to assure you that we will not relent in our efforts to protect the livelihoods of Gulf Coast residents and mitigate the environmental impacts of this spill. In conjunction with the other federal agencies, we will continue to monitor the use of dispersants and as new information is generated we will appropriately advise the Unified Command. Thank you for allowing me to testify on NOAA's response efforts. I am happy to answer any questions you may have.

WRITTEN STATEMENT OF
DR. LARRY ROBINSON

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

HEARING ON
THE USE OF DISPERSANT FOR THE BP DEEPWATER HORIZON OIL SPILL

BEFORE THE
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE,
AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

July 15, 2010

Thank you, Chairman Mikulski and Members of the Committee, for the opportunity to testify on the Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) role in the Deepwater Horizon BP oil spill response and the use of dispersants. My name is Dr. Larry Robinson and I am an Assistant Secretary of Commerce for Oceans and Atmosphere. I appreciate the opportunity to discuss the critical roles NOAA serves during oil spills and the importance of our contributions to protect and restore the natural resources, communities, and economies affected by this tragic event.

NOAA's mission is to understand and predict changes in the Earth's environment. NOAA also conserves and manages coastal and marine resources to meet our Nation's economic, social, and environmental needs. As a natural resource trustee, NOAA is one of the federal agencies responsible for protecting, assessing, and restoring the public's coastal natural resources when they are harmed by oil spills. As such, the entire agency is deeply concerned about the immediate and long-term environmental, economic, and social impacts to the Gulf Coast and the Nation from this spill. NOAA is fully mobilized and working tirelessly to reduce impacts on the Gulf Coast and will continue to do so until the spill is controlled, oil is cleaned up, natural resource injuries are assessed, and restoration is complete.

My testimony today will discuss NOAA's role in the Deepwater Horizon response and natural resource damage assessment process associated with the Deepwater Horizon oil spill, for which BP is a responsible party; NOAA's role in use of dispersants as a countermeasure to mitigate the impacts of the spill; and opportunities to strengthen the federal response to future events through research and development.

NOAA'S ROLES DURING OIL SPILLS

NOAA has three critical roles mandated by the Oil Pollution Act of 1990 and the National Contingency Plan (NCP):

1. During the emergency response, NOAA conducts research and monitoring and communicates scientific information to the Federal On-Scene Coordinator (FOSC). The Scientific Support Team is designated as a special team in the NCP and provides a broad array of scientific services to the response.
2. As a natural resource trustee, NOAA conducts a Natural Resource Damage Assessment (NRDA) jointly with co-trustees to assess and restore natural resources injured by the oil spill. NRDA also assesses the lost uses of those resources, such as recreational fishing, and swimming, with the goal of implementing restoration projects to address these losses.
3. Finally, NOAA represents the Department of Commerce in spill response preparedness and decision-making activities through the National Response Team and the Regional Response Teams.

Response

The U.S. Coast Guard (USCG) is the FOSC and has the primary responsibility for managing coastal oil spill response and clean-up activities in the coastal zone. During an oil spill, NOAA's Scientific Support Coordinators deliver technical and scientific support to the USCG. NOAA's Scientific Support Coordinators are located around the country in USCG Districts, ready to respond around the clock to any emergencies involving the release of oil or hazardous substances into the oceans or atmosphere. Currently, NOAA has deployed all of its Scientific Support Coordinators from throughout the country to work on the Deepwater Horizon oil spill.

With over thirty years of experience and using state-of-the-art technology, NOAA continues to serve the Nation by providing its expertise and a suite of products and services critical for making science-based decisions. Examples include trajectory forecasts on the movement and behavior of spilled oil, overflight observations, spot weather forecasts, emergency coastal survey and charting capabilities, aerial and satellite imagery, and real-time coastal ocean observation data. Federal, state, and local entities look to NOAA for assistance, experience, local perspective, and scientific knowledge. NOAA's Office of Response and Restoration was called upon for scientific support 200 times in 2009.

Natural Resource Damage Assessment

Stewardship of the Nation's natural resources is shared among several federal agencies, states, and tribal trustees. NOAA, acting on behalf of the Secretary of Commerce, is the lead federal trustee for many of the Nation's coastal and marine resources, and is authorized by the Oil Pollution Act of 1990 (OPA) to recover damages on behalf of the public for injuries to trust resources resulting from an oil spill. Regulations promulgated by NOAA under the Oil Pollution Act encourage compensation in the form of restoration of the injured resources, and appropriate compensation is determined through the NRDA process. Since the enactment of OPA, NOAA, together with other federal, state, and tribal co-trustees, has recovered approximately $500 million for restoration of natural resources injured by releases of oil or hazardous substances, as well as injuries to national marine sanctuary resources, including vessel groundings.

National and Regional Response Teams

The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP's purpose is to develop a national response capability and promote

overall coordination among the hierarchy of responders and contingency plans. NOAA represents the Department of Commerce on the National Response Team and Regional Response Teams to develop policies on dispersant use, best clean-up practices and communications, and to ensure access to science-related resources, data, and expertise during responses to oil spills.

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The Deepwater Horizon spill has also for the first time in the U.S. implemented the use of subsurface dispersants at the wellhead. This is being applied through the use of Remotely

Operated Vehicles (ROV). The decision to use subsurface applications was made by the FOSC with concurrence by RRT Region VI after several test applications to determine the efficiency, and development and implementation of a monitoring protocol. Limitations have been placed on the amount of subsurface dispersants that can be applied each day.

Spill response often involves a series of environmental trade-offs. The overall goal is to use the response tools and techniques that will minimize the overall environmental damage from the oil. The use of dispersants is an environmental trade-off between impacts within the water column, on the sea surface (birds, mammals, and turtles in slicks) and on the shore. Dispersants do not remove the oil from the environment. When a decision is made to use dispersants, the decision maker is reducing the amount of oil on the surface where it may affect birds, mammals and turtles, when they are at or near the surface, and ultimately that oil that may come ashore, in exchange for increasing the amount of oil in the upper layer of the water column 40 miles off shore. The effects of dispersants and dispersed oil below the surface on diving birds, marine mammals, and sea turtles are unknown. Under ideal conditions, each gallon of dispersant applied offshore prevents about 20 gallons of oil from coming onto the beaches and into the marshes of the Gulf Coast.

The Gulf coast is home to coastal wetlands and marshes that are biologically productive and ecologically important to nesting waterfowl, sea turtles, fisheries, and essential fish habitat. The Gulf of Mexico region's ecological communities are essential to sustaining local economies, recreational experiences, and overall quality of life. The extensive marshes themselves provide coastal communities with protection from severe storms, such as Hurricane Katrina. These habitats are highly sensitive to oiling. Once oil does impact marshes, there are limited cleanup options, and potential for significant long-term impacts. As oil has moved ashore from the Louisiana coast to the Florida panhandle from the BP Deepwater Horizon spill, we have seen firsthand the impacts this oil has on these habitats, and to birds, turtles and other wildlife. Although it may not be readily apparent, use of dispersants offshore and in deep water, is reducing the amount of oil reaching the shoreline, reducing the amount of shoreline cleanup that will be required, and helping to reduce recovery time of injured nearshore resources. Without the use of dispersants, the shoreline impacts along the Gulf coast from the Deepwater Horizon spill would be greater.

RESEARCH ON THE EFECTIVENESS AND EFFECTS OF DISPERSANTS AND DISPERSED OIL

Research on the effectiveness and effects of dispersants and dispersed oil have been underway for more than three decades but important gaps still exist. Much of what we have learned from both research and real world experience is presented in detail in the 2005 National Research Council (NRC) book "Oil Spill Dispersants: Efficacy and Effects." The NRC identified gaps in our knowledge. These gaps were narrowed by research and development activities carried out through projects conducted by the Coastal Response Research Center (CRRC), and state and federal agencies, and academia. The CRRC was a successful joint partnership established in 2004 between the University of New Hampshire and NOAA's Office of Response and Restoration.

One area of focus has been on determining the toxicity and long-term effects of dispersants and dispersed oil on sensitive marine life. It is now quite clear that effectively-dispersed oil declines rapidly in concentration due to ocean mixing, degrades faster than untreated surface or shoreline oil, and that the toxicity of dispersants is considerably less than the toxicity of the oil that is dispersed. The acute (four day) toxicity of dispersants and dispersed oil for the most sensitive species and life stages (e.g., coral and coral eggs) occurs at concentrations in the low part per million (ppm) range. Thus, when we see data below the current monitoring detection limit of 1 ppm, it is likely that the dispersed oil is not toxic to all but the most sensitive organisms and life stages. However, we note that very little is known about the species found in the deep ocean near the Deepwater Horizon Release site and the susceptibility of these species to dispersed oil toxicity at cold temperatures and high pressures.

On June 28, 2010, the EPA released the first two of its newly-updated studies on the toxicities of dispersants on silverside fish and small crustacean species. The primary purpose of these studies was to determine the toxicity differences among different dispersant products. Most, including the dispersant now in use at the Deepwater Horizon spill, were not statistically different from each other. In addition, these species were tested for endocrine disruption potential and none was found except possibly for one product which is not being used. While these are favorable results, we note the two species tested are not considered particularly sensitive and early life history stages of these species were not considered. Shortly, the EPA will release additional reports on the toxicities of product-dispersed Deepwater Horizon oil.

The effects of the dispersed oil on marine life depend on concentration and duration of exposure of organisms to the dispersed oil. At the sea surface, early life stages (eggs and larvae) of fish and shellfish are much more sensitive than juveniles or adults to dispersants and dispersed oil. This increased sensitivity coupled with the fact that these organisms reside just below the surface of the ocean (as do plankton, zooplankton) where concentrations of the dispersed oil are initially greatest means that these organisms are most likely to be impacted. There are no data on the toxicity of dispersed oil to deep-sea biota at any life stage, so we have to extrapolate based on existing knowledge. However, in both regions (surface and deepwater), modeling and monitoring is confirming that dispersed oil concentrations decline rapidly with distance from the well head as the “clouds” or “plumes” mix with sea water and move with the currents away from the treatment areas.

While numerous studies have been conducted on the fate and transport of oil dispersed on the surface, the fate and transport of oil dispersed at depth is less understood. While the application of dispersants into a subsurface plume has never been studied, we expect the result to be similar to that of surface dispersant application, and thus result in even smaller droplets of oil in the plume. These very small droplets (100 microns) will rise extremely slowly while being mixed by background turbulence, so that they stay at depth, moving with the currents, until biodegraded, consumed by naturally occurring micro-organisms, or adhere to sinking sediment. Preliminary modeling suggests average rise could increase from a few hours to several days with sub-surface dispersant application. We also expect some fraction to sink because of adherence to sinking sediments.

Another major activity, involving marine resource trustees, has been a series of nearly 20 Consensus Ecological Risk Assessment (C-ERA) Workshops which were held all around the U.S. and adjacent international coastlines. These workshops, many lasting one week or more and sponsored by the U.S. Coast Guard, EPA and Department of the Interior, focused the attention of trustees of alternative response scenarios of large spills, including no response, on-water mechanical removal, in situ burning, dispersant use and shoreline clean up. Trustees evaluated the impacts and benefits of each realistic response option to their trust resources (marshes, shorelines, mammals, birds, fish, etc.) and then had to work on reaching consensus regarding the least damaging mix of response options for their specific area. The results of these workshops have provided valuable information for revising response plans in a number of states and countries.

ACTIVITIES TO ASSESS PRESENCE OF SUBSURFACE OIL FROM DEEPWATER HORIZON SPILL

Since the beginning of May, NOAA has been conducting and coordinating sampling of the sub-surface region around the Deepwater Horizon well-head and beyond to characterize the presence of subsurface oil. The sub-surface search involves the use of sonar, UV instruments called fluorometers, which can detect the presence of oil and other biological compounds, and collection of water samples from discrete depths using a series of bottles that can be closed around a discrete water sample.

NOAA, federal partners, academics, and others in the research community have mobilized to research and quantify the location and concentration of subsurface oil from the spill. NOAA Ships *Gordon Gunter* and *Thomas Jefferson* have both conducted missions to collect water samples from areas near the wellhead as well as further from the wellhead and in the coastal zone. Water samples from many of these missions are still being analyzed and additional missions are in progress or being planned to continue the comprehensive effort to define the presence of oil below the surface and understand its impacts.

Water samples taken by researchers on the *R/V Pelican* and the *R/V Weatherbird II* have also been analyzed for the presence of subsurface oil. These samples from the R/V Weatherbird II confirmed low concentrations of surface oil from the Deepwater Horizon spill 40 nautical miles northeast of the wellhead. Additionally, hydrocarbons were found in samples 45 nautical miles northeast of the wellhead-at the surface, at 50 meters, and at 400 meters-however, the concentrations were too low to confirm the source.

In accordance with EPA requirements for the use of subsurface dispersants, BP contracted ships, *R/V Brooks McCall* and the *Ocean Veritas*, have been collecting water samples in the area close to the wellhead. NOAA, EPA, and the White House Office of Science and Technology Policy (OSTP) released a summary report about the subsea monitoring in the vicinity of the Deepwater Horizon wellhead conducted from the *R/V Brooks McCall* from May 8 – 25, 2010. The report also confirms the existence of a previously discovered cloud of diffuse oil at depths of 3,300 to 4,600 feet near the wellhead. Preliminary findings indicate that total petroleum hydrocarbon (TPH) concentrations at these depths are in concentrations of about 1-2 parts per million (ppm). Analysis shows this cloud is most concentrated near the source of the leak and decreases with

distance from the wellhead. Beyond six miles from the wellhead, concentrations of this cloud drop to levels that are not detectable. Decreased droplet size is consistent with chemically-dispersed oil. Dissolved oxygen levels in the water column are largely what are expected compared with historical data.

The Unified Command has established an inter-agency Joint Analysis Group (JAG) to aggregate and analyze all the relevant data from the many subsurface oil missions in order to have a comprehensive picture of the situation. This group is made up of federal scientists from NOAA, EPA and OSTP.

CONCLUSION

As the response to this oil spill continues, the Unified Command will continually reevaluate our response strategies, actions, and planning. NOAA will continue to provide scientific support to the Unified Command and continue our coordination with our federal and state co-trustees on the NRDA. I would like to assure you that we will not relent in our efforts to protect the livelihoods of Gulf Coast residents and mitigate the environmental impacts of this spill. In conjunction with the other federal agencies, we will continue to monitor the use of dispersants and as new information is generated we will appropriately advise the Unified Command. Thank you for allowing me to testify on NOAA's response efforts. I am happy to answer any questions you may have.

May 20, 2010

Dr. Tony Hayward
Group Chief Executive
BP
1 St. James's Square
London SW1Y 4PD
United Kingdom

Dear Dr. Hayward:

As you know, the Deepwater Horizon oil spill is a massive and potentially unprecedented environmental disaster that has already impacted the lives and livelihoods of countless people in the Gulf Coast region. In responding to this oil spill, it is critical that all actions be conducted in a transparent manner, with all data and information related to the spill readily available to the United States Government and the American people.

In his May 17, 2010 testimony before the Senate Committee on Homeland Security and Governmental Affairs, Mr. Lamar McKay, Chairman and President of BP America, claimed that BP was making every effort to keep the public and government officials informed. Those efforts, to date, have fallen short in both their scope and effectiveness. In order to meet BP's responsibilities and to fulfill this obligation, BP must make publicly available any data and other information related to the Deepwater Horizon oil spill that you have collected, or that will be collected in the future.

The U.S. Department of Homeland Security ("DHS"), through the United States Coast Guard ("USCG"), is tasked with, among other things, ensuring effective removal of the oil in a manner that prevents, minimizes, or mitigates threats to the public health or welfare of the United States or the environment. The U.S. Environmental Protection Agency ("EPA"), serving as a support agency in the Deepwater Horizon oil spill response, is also tasked with ensuring the protection of human health and the environment through the application of numerous environmental statutes and regulations.

Consistent with these responsibilities, DHS and EPA have expressed repeatedly and believe it is imperative that BP promptly provide to the United States Government and the public all data and information regarding the Deepwater Horizon oil spill. This includes, but is not

From: [redacted]
To: [redacted]
cc: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Re: Sub-
Sea Dispersant daily POLREP Update (SAT 29, MAY, 2010 UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Saturday, May 29, 2010 6:42:33 AM
Attachments: MS Canyon 252-Polrep 29 May 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Faithfully yours
[redacted]

"Frequently, my thoughts get bored and walk
down to my mouth. Often, this is a bad thing."

[redacted] EPA Region 6 (6SF-PE)
1445 Ross Avenue, Dallas, TX 75202
[redacted] fax

From: [redacted]
To: HQS-PF-fldr-NIC-HQ-Email Archive;
Subject: Re: MC-252 Sub-
Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010
Date: Saturday, July 31, 2010 7:23:09 AM

I agree.
Sent by EPA Wireless E-Mail Services

----- Original Message -----
From: "Perry, Raymond CAPT" [Raymond.J.Perry@uscg.mil]
Sent: 07/31/2010 10:10 AM AST
To: [redacted] "Lloyd, Anthony CAPT" <Anthony.S.Lloyd@uscg.mil>; [redacted] "D08-DG-District-IMTWatch" <D8IMTWatch@uscg.mil>; <James.E.Hanzalick@uscg.mil>; [redacted] "Landry, Mary RADM" <Mary.E.Landry@uscg.mil>; "HQS-PF-fldr-NIC HQ Situation Unit" <NIC-HQ-Situation-Unit@uscg.mil>; [redacted] "Perry, Raymond CAPT" <Raymond.J.Perry@uscg.mil>; [redacted] gov>; "Hooper, Thomas CAPT" <Thomas.D.Hooper@uscg.mil>; [redacted]
Subject: FW: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010

All:

EPA reps and I at the UAC were thinking, if everyone else agrees, that we suspend these reports and re-implement their use only if we consider using dispersants again at this response.

What do you think?

Captain Ray Perry, USCG
Deepwater Horizon Spill Response
Strategic Planning Unit. Leader
*** HURRICANE PLANNING ***
New Orleans, LA
(774) 392-4331

-----Original Message-----
From: [redacted]
gov]
Sent: Saturday, July 31, 2010 8:55 AM
To: Perry, Raymond CAPT
Subject: Fw: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010

[redacted]
Anthony.S.Lloyd@uscg.mil,
[redacted]
D8IMTWatch@uscg.mil, J
ames.E.Hanzalik@uscg.mil,
[redacted]
Mary.E.Landry@uscg.mil,
NIC-HQ-Situation-Unit@uscg.mil,
[redacted]Raymond.J.Perry@uscg.
mil, [redacted]

[redacted]
Remedial Project Manager (RPM)
Remedial Branch LA, NM, OK Team
US Environmental Protection Agency Region 6
1445 Ross Ave. (6SF-RL)
Dallas, Texas 75202
Offic[redacted]
Fax: [redacted]

To report an Environmental Violation, visit EPA's website at http://www.epa.gov/compliance/complaints/index.html <http://www.epa.gov/compliance/complaints/index.html>
----- Forwarded by [redacted]'USEPA/US on 07/31/2010 08:51 AM -----

From: [redacted]R6/USEPA/US

To: [redacted] R6/USEPA/US@EPA
Cc: [redacted] 'USEPA/US@EPA, [redacted] Anthony.S.
Lloyd@uscg.mil, [redacted]
[redacted] D8IMTWatch@uscg.mil, [redacted]
[redacted]
[redacted] Mary.F.Landry@uscg.mil, [redacted] NIC-HQ-
Situation-Unit@uscg.mil, [redacted]
Raymond.J.Perry@uscg.mil, [redacted]
mil, [redacted]
[redacted]
Date: 07/30/2010 06:49 AM
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: THURSDAY JULY 29, 2010

[attachment "MS Canyon 252-Polrep 29 July 2010.doc" deleted by [redacted]
[redacted] R6/USEPA/US]

[redacted]
Remedial Project Manager (RPM)
Remedial Branch LA, NM, OK Team
US Environmental Protection Agency Region 6
1445 Ross Ave. (6SF-RL)
Dallas, Texas 75202
Office [redacted]
Fax: [redacted]

To report an Environmental Violation, visit EPA's website at http://www.epa.gov/compliance/complaints/index.html <http://www.epa.gov/compliance/complaints/index.html>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted]08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted] gov";
Subject: Sub-
Sea Dispersant daily POLREP Update 0900L (FRIDAY, 04JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Friday, June 04, 2010 8:16:51 AM
Attachments: MS Canyon 252-Polrep 04 June 2010 Update .doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected thru each reporting period of 2200L - 2200L.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r

[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted] office
[redacted] cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted]D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-Sea Dispersant Daily POLREP Update 0900L (Saturday 05JUNE 2010-UPDATE) MC-252 INCIDENT
Date: Saturday, June 05, 2010 8:11:31 AM
Attachments: MS Canyon 252-Polrep 05 June 2010 Update.doc

FYI and SA- Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start and Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and

total gallons dispersant injected thru each reporting period 2200L – 2200L, as well as cumulative gallons to date.

2) Capture any O/S and departure stats of monitoring vessels in support of the required monitoring protocols.

- Reporting Period: 2200L 03 JUNE – 2200L 04 JUNE 2010:
- Sub-Sea Dispersant Injection continues
- On 6/4/10 Injection rate 9 – 14 gallons per minute
- Injection disrupted 2 times for SIMOPS
- (0 hours and 55 minutes not injected)
- Volume: 13,931 gallons this period
- (TOTAL Cumulative: 270,668 gallons)
-

>>>

- The Ocean Veratas departed station pm of 04 JUNE 2010 for Port Fourchon

- The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early am Saturday 05 JUNE On Station to resume sub-sea sampling.

V/r

[redacted]

RRT VI Coordinator

Eighth Coast Guard District (drm)

500 Poydras Street, Suite 1330

New Orleans, LA 70130

[redacted] office

[redacted] cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; Mason. [redacted]
Subject: Sub-Sea Dispersant Daily POLREP Update 0900L (Sunday 06 JUNE 2010-UPDATE) MC-252 INCIDENT
Date: Sunday, June 06, 2010 7:25:15 AM
Attachments: MS Canyon 252-Polrep 06 June 2010 Update.doc

FYI and SA- Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start and Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and

total gallons dispersant injected thru each reporting period 2200L – 2200L, as well as cumulative gallons to date.

2) Capture any O/S and departure stats of monitoring vessels in support of the required monitoring protocols.

- Reporting Period: 2200L 04 JUNE – 2200L 05 JUNE 2010:

- Injection rate: 6 to 16 gal/min. Injection disrupted 2 times for SIMOPS (1 hour and 12 mins not injected)
Volume: 13,513 gallons (Total Cumulative 284,193 gallons)

- The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.

V/r

[redacted]

RRT VI Coordinator

Eighth Coast Guard District (drm)

500 Poydras Street, Suite 1330

New Orleans, LA 70130

[redacted]ffice

[redacted]ell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-
Sea Dispersant daily POLREP Update 0900L (THURSDAY, 03 JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Thursday, June 03, 2010 6:14:40 AM
Attachments: MS Canyon 252-Polrep 03 June 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]-office
[redacted]-cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Ranzalik, James CAPT; Lafferty, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-Sea Dispersant daily POLREP Update 0900L (TUESDAY, 01 JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Tuesday, June 01, 2010 7:34:00 AM
Attachments: MS Canyon 252-Polrep 01 June 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]-office
[redacted]-cell

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Sub-Sea Dispersant daily POLREP Update 0900L (WEDNESDAY, 02 JUNE - UPDATE) MISSISSIPPI CANYON 252 INCIDENT
Date: Wednesday, June 02, 2010 8:41:19 AM
Attachments: MS Canyon 252-Polrep 02 June 2010 Update.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is now to Update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and cumulative gallons dispersant injected at end of each major stop point.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]-office
-cell

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
27 May 2010	N/A	N/A	N/A	N/A	200			Test spray conducted for determining wave height energy affect.
28 May 2010	15,000	N/A	15,000	1450	10,259	4,741	68.40%	Amount sprayed was reduced due to presence of marine mammals in spray area (3 nm set back requirements)
29 May 2010	19,000	N/A	15,000	1130	0	15,000	0%	No authorization for spray; potential vessel spray incident was addressed; determined to be inaccurate report
30 May 2010	19,000	N/A	19,000	0815	15,131	3,869	79.64%	No comments available.
31 May 2010	19,000	N/A	19,000	0816	11,676	7,324	61.45%	Spray operations on May 31 were terminated early due to a report of platform personnel becoming ill. The platform was located approximately 70 nm from the dispersant application taking place on this day.
1 June 2010	21,000	N/A	0	-----	0	0	N/A	BP IC advised NO authorization for spraying today
2 June 2010	21,000	N/A	0	-----	0	0	N/A	BP IC did not provide authorization for spray
3 June 2010	21,000	N/A	2,000	1315	1,900	100	95.00%	BP IC advised amount to be sprayed
4 June 2010	22,000	N/A	0	-----	0	0	N/A	BP IC did not give authorization for spray; sorties would have been limited due to weather in the area
5 June 2010	40,000	N/A	125	-----	125	0	100.00%	NIOSH testing of the M/V IP was conducted this day; no other spray operations were authorized by BP IC.

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
6 June 2010	2,000	N/A	2,000	1014	0	2,000	0.00%	Weather prevented the mission (Stennis IAR) from taking place. Alternate targets were identified out of Houma – unable to complete
7 June 2010	2,000	N/A	2,000 2,000	1302 1614	3,998	2	99.95%	UC approved 2,000 g and then followed up with approval for another 2,000 gallons
8 June 2010	2,000 32,000 IC Increase for substantial slicks	N/A	32,000	1156	5,505	26,495	17.20%	Due to on scene weather limitations (low ceiling) and increasing wind on scene, in-situ burning conflicts, whales/dolphins, etc., the dispersant application process was severely limited. Spotter reports directed on scene sprayers to return to base with a full payload due to unfavorable spray reports. Later in the day, additional spray missions were completed.
9 June 2010	32,000	N/A	0	-----	0	0	N/A	BP IC did not provide any authorization for spray
10 June 2010	32,000	N/A	21,000	1302	4,506	16,494	21.46%	RADM Watson authorized 21,000 g
11 June 2010	36,200	N/A	15,700	0835	14,305	1,395	91.11%	RADM Watson authorized 15,700 g
12 June 2010	38,160	20,000	7,000	1320	6,996	4	99.94%	RADM Watson authorized 7,000 g
13 June 2010	36,000	N/A	36,000	1040	35,212	788	97.82%	RADM Watson authorized 36,000 g
14 June 2010	38,880	21,000	17,800	1305	10,706	7,094	60.15%	Limited by late approval and 1 hour pilot standby
15 June 2010	23,000	23,000	15,500	1255	2,608	12,892	16,83%	Limited by late approval, weather and the presence of fishing vessel skimming operations encroaching on the targeted surface oil slick.

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
16 June 2010	27,700	19,000	19,000	1118	13,380	5,620	70.4%	Limited by late approval, weather and the presence of fishing vessel skimming operations encroaching on the targeted surface oil slick.
17 June 2010	25,800	19,000	18,700	1239	12,123	6,577	64.8%	Late approval reduced application time, localized thunderstorms temporarily closed Stennis Airport; mammals were sighted in several slicks; and oil drifted into a platform set back area.
18 June 2010	21,000	17,400	19,200	1059	15,564	3,636	81.0%	Commenced start of spraying at 1100 am after approval.
19 June 2010	16,400		12,300	1036	2,604	9,696	21.2%	Slicks in RRT 4 areas were not sprayed until it was confirmed approval was authorized to apply dispersants in RRT 4 waters. This along with weather reduced the total amount of dispersants able to be applied.
20 June 2010	15,500	16,280	15,500	0645* 0957	15,403	97	99.4%	*Initiated new procedure for dispersant application; received 5,000 gallon early morning approval followed by a 10,500 gallon additional volume approval later that morning with spotter verification. No weather delays today.
21 June 2010	22,600	10,400	10,400	0644 1135	10,355	45	99.6%	Almost complete spraying of approved amounts
22 June 2010	17,000	10,487	10,487	0734 1113	2008	8,479	19.1%	Numerous onshore and offshore thunderstorms prevented aerial spray and spotting operations for most of

Date	Amount Requested Night	Amount Requested Morning	Amount Approved	Time approved	Amount Sprayed	Diff-erence	% spray of aprvd	Reason for Difference
								the day

SPU

bp

GoM Drilling, Completions and Interventions - MC252

Guidance on Subsea Dispersant Application
Ops Note #3

RPIC APPROVAL: JEFF HOHLE (Print Name above) (Sign Above) Date 6/8/10 Time: 16:55

Reviewed CGIC (USCG) APPROVAL: John Fitzgerald (Print Name above) (Sign Above) 6/8/10 1654

James Watson (Print Name above) (Sign Above) Date 6/8/10 Time: 2125

1	06/06/2010	Approved - Issued for GoM Use	Jon Rogers	
Rev	Date	Document Status	Custodian/Owner	Authority

Document Control Number	Organization ID	Sector ID	Discipline ID	Document Class	Sequence Number	Document Revision
	2200	T2	DO	PR	4188	1

AMENDMENT RECORD

06/06/2010	~~0~~ 1		

Do-PR-488

Title of Document:	TITLE HERE	**Document Number:**	2200-T2-~~AAAA-NNNN~~
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Security Classification:	Project Confidential	**Page:**	Page 2 of 6
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1 Background and Assumptions:

Subsea dispersant (EC9500A) injection is critical in managing the safety of containment operations. Over time a correlation has been observed between the usage of oil dispersant and the rise in volatile organic compounds (VOC) and hydrocarbon vapor amounts at the surface in the area of the source. Hydrocarbon vapor amounts have not exceeded the lower explosive limit (LEL) to date but have been as high as 8-10%. Within 3-6 hours of discontinuation of subsea dispersant, the VOC concentrations at the surface have increased to >200 ppm and hydrocarbon vapors also increase. VOC and LEL issues have been resolved within a few hours when dispersant has been re-established in these instances allowing safe operations to continue in the area of the source.

Federal government authorities estimated the MC252 oil leak rate to be 12,000 - 19,000 bbls/day. For the purposes of dispersant injection, we will assume 19,000 bbls/day. This oil volume is assumed as the basis for dispersant rates and the table below can be used to calculate the EC9500A injection rates required to effectively disperse the residual oil volumes.

Table 1: Dispersant Application Range

16,0000 bpd+	**4 GPM**
12,000 - 16,000 bpd	**7 GPM**
< 12,000 bpd	**10 GPM**
1. High VOCs at reported at surface OR 2. Following suspension of subsea dispersant for > 1 hr	**15 GPM***

***If sustained injection above 10GPM is required to maintain VOC emissions at operable levels, BP will, if required, formally request an exemption from the Federal On-Scene Commander to increase application of EC9500A from the 15,000 gallons per day agreed in the Directive, to the estimated volume required.**

2. Recommended Forward Plan

Proactive steps will be taken to optimize the dispersant volumes and minimize where possible. The following forward plan is recommended:

1. The Skandi Neptune is currently on location about 1200' West of the source applying EC9500A dispersant subsea at the BOP at a target 10 gpm via ROV
2. Maintain dispersant injection rate as required until the time the Skandi is required to relocate to a new position to allow installation of the CDP suction pile
3. Replace current flow meter with new, calibrated 1" turbine flow meter with totalizer.
4. Move Skandi from current location to new location at ~1200' to the NW of source at which time dispersant will be disrupted for approximately 4-5 hrs
5. When Skandi is in the new position, restart dispersant at 10 gpm or higher if required, to control any rising VOCs and re-establish baseline
6. Once surface VOC emissions are sustained at operable levels and Enterprise flow rates are stable, slowly decrease dispersant injection in accordance with the table on page 1 and continue to monitor VOCs and LEL at surface.
7. Once Q4000 is brought online, assess oil rates at Enterprise and Q4000 and make determination on whether further reduction in dispersant can be made based on estimated reduced oil volumes to sea.
8. The estimated volume of crude processed at the surface must be both stable and sustained above 16,000BPD before any optimization in dispersant below 5GPM is attempted.

Document Authorization Form

This form to be used for authorizing new, revised and obsolete documents, please indicate clearly which category applies

Special Instructions	**MC252 Incident**

Document Details

DO-PR-4188

Document Number	2200-T2-~~AA-AA-NNNN~~	Revision	~~0~~ 1
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Reason for Issue (check as applicable)	New Document	Revised Document	Obsolete Document
	X		

Document Sign Off

	Print Name	Signature	Date
Custodian/Owner			
Reviewer(s) (if applicable)	[redacted]		6/8/10
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Authorizer (Houston)			
Authorizer (Houston)			
Document Control Use			

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Retention Code:	ADM3000	Next Review Date (if applicable):	MM/DD/YYYY
Security Classification:	Project Confidential	Page:	Page 6 of 6

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U.S. Department of Homeland Security
United States Coast Guard

Federal On-Scene Coordinator
Unified Area Command

Unified Area Command
Shell Oil Training Center
23260 Shell Lane
Robert, LA 70455

16480
June 8, 2010

Doug Suttles
Chief Operating Officer
Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, Texas 77079

I am in receipt of the document entitled GoM Drilling, Completions, and Interventions – MC252: Guidance on Subsea Dispersant Application OPS Note #3 which addresses your plan for use of subsea dispersants. As you know, under the third addendum to the Dispersant Monitoring and Assessment Directive, use of subsea dispersant in volumes greater than 15,000 gallons per day requires my or the current Federal On-Scene Coordinator's approval. It is my understanding that your plan seeks to maximize the efficacy of subsea dispersant and allow for reductions in their use as the oil flow is reduced. With this in mind, your plan is approved effective immediately, subject to the following conditions unless otherwise directed:

1. Continue to conduct required monitoring and provide daily updates as to the results of the operation.

2. This approval shall continue through June 30, 2010.

3. Submit a new plan for subsea dispersant use not later than three days prior to the expiration of this approval.

My Incident Commanders have suggested that the current dispersant use limitations present significant and growing operational challenges to the management of this emergency response. Please provide me, within 48 hours, with any additional information that you have regarding this concern including your assessment of dispersant toxicity, availability of mechanical recovery equipment (e.g., offshore and near shore skimmers) to keep pace with the current and potential release, and total insitu-burn capacity. Once I receive this information, I intend to consult with the Regional Response Team and my Incident Commanders to develop an effective operational plan for use of surface and sub-surface dispersant while minimizing any environmental impact.

If you have any questions concerning the content of this letter please contact CAPT Ray Perry or my Scientific Support Coordinator (SSC), Mr. Steve Lehmann located at the UAC in Robert, LA.

Sincerely,

JAMES A. WATSON
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

[redacted] LT

From: [redacted] CDR
Sent: Friday, July 09, 2010 10:25 AM
To: [redacted] Gould, Austin CAPT; [redacted] LCDR; [redacted] CDR; HQS-DG-lst-CG-823; [redacted] MEC; [redacted] CDR; [redacted] CDR; [redacted] Stroh, Lincoln CAPT; Wiedenhoeft, Paul CAPT; [redacted] CDR; [redacted] CDR; Cook, Kevin RADM; [redacted] Schultz, Karl RDML; [redacted] CDR; [redacted] CDR; [redacted] Christensen, Eric CAPT; Gould, Austin CAPT; [redacted]; Neffenger, Peter RDML; Wiedenhoeft, Paul CAPT; [redacted] CDR; [redacted] LCDR; [redacted] CDR; [redacted] HQS-DG-LST-NIC-HQ-INTERAGENCY-SOLUTIONS-GROUP; HQS-DG-LST-NIC-HQ-Legal [redacted] FLCDR; [redacted] LCDR; [redacted] CDR; [redacted] LT; [redacted] CDR; [redacted] CDR; [redacted] CDR; [redacted] LTJG; [redacted] LT; [redacted] CDR; [redacted] CIV; [redacted] YN1; [redacted] LCDR; [redacted] LT; [redacted] LT; [redacted] ENS; [redacted] LCDR; McKinley, Andrew CAPT; [redacted] CDR; [redacted] CDR; [redacted] CDR; [redacted] LCDR; Perry, Raymond CAPT; [redacted] LT; [redacted] LT; [redacted] CDR; HQS-DG-LST-NIC-HQ-Situation-Unit; HQS-DG-LST-NIC-HQ-Command; [redacted]
Subject: FOR COMMENT (By 12 JUL, 0900): NOAA Testimony on Dispersants for DWHZ
Attachments: NOAA (Robinson) Dispersant testimony Senate Approps DOCupdated2.doc

Sirs, Ma'am, Colleagues,

On behalf of OMB ..

Forwarded, respectfully requesting any TECHNICAL comments on the attached Department of Commerce (NOAA) Testimony (Robinson) on Use of Dispersants for DWHZ Oil Spill.

Testimony is for an oversight hearing on 15 Jul before the Senate Appropriations Committee, Subcommittee on Commerce, Justice, Science, and related Agencies.

*** NOTE: CG, EPA, et.al mentioned throughout ***

V/r

CDR [redacted]
Intergov't & Legislative Affairs
NIC-DC
[redacted]

limited to, any and all sampling and/or monitoring plans, records, video, reports collected by BP, its contractors, subcontractors, agents or employees, any such reports that have come into BP's possession through other means, and any reports of internal investigations. Attachment 1 to this letter provides direction on the manner in which the information should be made available and public, but at a minimum, all information should be posted on a publicly accessible website. BP must update this data and information daily. Although DHS and EPA are not aware of any data or information that you would have that is Confidential Business Information (CBI), any claim of CBI will be handled in accordance with applicable law.

The public and the United States Government are entitled to nothing less than complete transparency in this matter. Thank you for your anticipated cooperation.

Yours very truly,

Janet Napolitano
Secretary of Homeland Security

Lisa P. Jackson
Administrator
Environmental Protection Agency

Enclosure

cc: Lamar McKay
Chairman and President
BP America

ATTACHMENT 1
PUBLICLY AVAILABLE SAMPLING/MONITORING AND OTHER INFORMATION DEEPWATER HORIZON OIL SPILL RESPONSE

I. PURPOSE

This Attachment sets forth the procedure to provide and publish the information requested in the letter to which it is attached.[1] This Attachment requests BP to post on a publicly available means via the internet the sampling and monitoring and other information described in the letter and below within the time frames specified herein.

1. Within 24 hours of receipt of the letter, provide to the United States Coast Guard ("USCG") On-Scene Coordinator ("OSC"), Rear Admiral Landry, Mary.E.Landry@uscg.mil, and the Environmental Protection Agency ("EPA"), Dana Tulis, Tulis.Dana@epa.gov, the website address (Uniform Resource Locator ["URL"] address) on the internet from which BP shall post the sampling, monitoring, and other information. The website and all information posted to it should be freely and easily available to the public.

2. Within 24 hours of receipt of the letter, post on the website referenced in Paragraph 1 of this Attachment all sampling plans, scopes of work, Quality Assurance Project Plans and/or all Quality Assurance Sampling Plans concerning, relating and referring to any and all sampling and monitoring resulting from the Deepwater Horizon oil spill incident and response in the Gulf of Mexico off the coast of Louisiana.

3. Within 48 hours of receipt of the letter, post on the website referenced in Paragraph 1 of this Attachment, all environmental (chemical, biological, and physical data), analytical data from samples of oil, dispersant, oil/water mixture, weathered oil, dispersed oil, and any other samples concerning, relating and referring to the Deepwater Horizon oil spill incident and response in the Gulf of Mexico off the coast of Louisiana. This data should be delivered in a tabular, delimited-text format, as described below, and should include, at a minimum, the following fields:

---

[1] Please note that this includes the information gathered under Directive 1: Dispersant Monitoring and Assessment Directive and Addendum 1 and 2, dated May 10th, May 17th, and May 19th respectively, and signed by USCG Rear Admiral Mary E. Landry and Samuel Coleman, Director, Superfund Division, EPA Region 6. Providing this information in no way supersedes the requirements provided in Directive 1. You must still comply with any and all requirements of Directive 1.

Monitoring Data

Field Name	Description	Data Type	Character Limit
Latitude	Latitude, in decimal degrees, at which a measurement was made.	Numeric	n/a
Longitude	Longitude, in decimal degrees, at which a measurement was made.	Numeric	n/a
Coord_Sys_Desc	The coordinate system that was used to determine the values for latitude and longitude. Examples: NAD 83, WGS 84.	Text	70
Instrument_Type	The type of instrument that was used to obtain the measurement. Examples: AreaRae, MultiRae, DataRam 4, EBAM, pDR.	Text	50
Mon_Date	Date when a measurement was made in the format MM/DD/YYYY.	DateTime	n/a
Mon_Time	Time when a measurement was made in the format HH:MM.	DateTime	n/a
Mon_Parameter	Name of the parameter that was measured. Examples: CO, LEL, PM 10, Total particulates.	Text	30
Mon_Measurement	The value that was measured.	Numeric	n/a
Mon_Meas_Units	The units associated with the value that was measured. Examples: %, mg/m3, ppm, ug/m3.	Text	40

Sample Results

Field Name	Description	Data Type	Character Limit
Latitude	Latitude, in decimal degrees, at which a sample was collected.	Numeric	n/a
Longitude	Longitude, in decimal degrees, at which a sample was collected.	Numeric	n/a
Coord_Sys_Desc	The coordinate system that was used to determine the values for latitude and longitude. Examples: NAD 83, WGS 84.	Text	70
Sample ID	Unique identifier for the sample that was collected.	Text	25
Sample Matrix	The medium that was sampled. Examples: Soil; Water; Air.	Text	20
Date_Collected	The date that the sample was collected in the format MM/DD/YYYY.	DateTime	n/a
Analytical_Method	The analysis that was performed by the laboratory.	Text	100
Analyte	The analyte or parameter that was measured by the lab.	Text	60
Cas_no	The official Chemical Abstract Number (CAS) for the analyte or parameter that was measured by the lab.	Text	50
Result	The result (number) that was measured by the lab.	Numeric	0
Result_Units	Result Unit of measurement (Required PK)	Text	20
Detected	Indicator whether the analyte was detected in the sample or not. Examples: "Y" for detected analytes or "N" for non_detects.	Text	20
MDL	The Method Detection Limit for the analysis.	Numeric	0
MDL_Units	The units of measure associated with the method detection limit.	Text	20
Lab Qualifier	The qualifier reported by the lab. Examples: J;U;ND;<;>.	Text	20
Result Qualifier	The qualifier reported by a validation process. Examples: J;U;ND;<;>.	Text	20

4. Within 48 hours of receipt of the letter, provide web services containing operational geospatial data concerning, relating and referring to the Deepwater Horizon oil spill incident and response in the Gulf of Mexico off the coast of Louisiana including, but not limited to, location of booms, sample and monitoring locations, oil extents, oil plume trajectories, surface dispersant flight tract applications, and sub-surface dispersant application locations.

5. Within 24 hours of receipt of any and all sampling and monitoring results BP obtains after receipt of the letter, post such information in accordance with Paragraph 3 of this Attachment, as such sampling and monitoring data is obtained on a daily basis.

U.S. Department of Homeland Security
United States Coast Guard

Federal On-Scene Coordinator

Unified Area Command
1250 Poydras Street
New Orleans, LA 70113

16451
3 Aug 2010

MEMORANDUM

From: P. F. ZUKUNFT, RADM

Reply to Attn of: CAPT McCleary

To: File

Subj: DISPERSANT APPROVAL MEMO

1. This document memorializes my verbal authorization to ICP Houma to employ up to 5,000 gallons of dispersant within its AOR on July 13th, 2010. This verbal authorization was given at 12:25 P.M. on July 13th, 2010.

#

Dispersant Background and Frequently Asked Questions

Effective June 19, 2010

I. Role of Dispersants in the Spill Response

- Some of the oil that is being released the well site can be contained and recovered with booms and skimmers, or burned, when the weather is good and sea is calm. But it is difficult to capture all of the oil with these methods. Dispersants are used to break up the remaining surface oil before it can drift onto shore.

- Dispersants are a mixture of materials that break the oil into small particles that disperse through the water column, making it easier for the material to be diluted and to biodegrade. BP has received approval by the Coast Guard and EPA to apply dispersants on the water surface, and underwater at the well site nearly 50 miles offshore.

- Dispersants principally are used to prevent oil sheen from reaching the shore; generally they are not applied within 3 miles of shore.

- By removing oil from the water surface, dispersants reduces the risk of harm to seabirds and other species and the shoreline from the impacts of oil sheens atop the water. By diluting and dispersing oil far from shore, they reduce the risk that oil will wash onto sensitive shoreline habitats.

- This does not mean that the oil will have no impact on the environment -- some areas will be impacted. BP is working in cooperation with the Coast Guard, EPA, NOAA and other natural resource trustees to conduct extensive sampling of a wide variety of resources on and off shore, to monitor the potential effects of the spill and dispersants in the air, water and on land. Those data will be used to identify areas that are affected by the spill and need to be cleaned up and restored. It will be used to identify any natural resources -- such as fish, whales, sea turtles, or species -- that need to be restored (replaced). BP will be in a position to move forward proactively with cleanup and restoration, once the emergency response has been completed.

- We also hope to learn more about dispersants from this experience. Our initial tests show that when we apply dispersants underwater at the well site, we can use much smaller amounts of dispersant than we would need at the surface, and achieve the similar results. They also show that we can use dispersants underwater in good or bad weather, day or night, when other methods of containment can't be used. That kind of information might be helpful to other companies in the future.

FAQs

1. **What are dispersants?**

   Dispersants are mixtures of solvents, surfactants and other additives that break up the surface tension of an oil slick or sheen and make oil more soluble in water. Dispersants do not remove oil from the water, but break up the oil slick into small droplets. These droplets disperse into the water column (or depths), where they may then break down further in the environment.

2. **How do they help in the event of an oil spill?**

   Dispersants are used to minimize the environmental impact of an oil spill. By breaking up the oil sheen, dispersants are an approved method of response to an oil spill or release; they are regarded as one of the best ways to protect certain wildlife and to keep an oil sheen from reaching shore. Dispersant usage has been shown to reduce overall environmental impacts at the sea surface and shore in certain spills. (1993 Braer spill off Scotland, 1996 Sea Empress spill off Wales).

3. **What eventually happens to the dispersant after it is applied and combines with oil?**

   Generally, when dispersants are deployed on the surface of spilled oil, the oil is broken up into tiny droplets that immediately sink below the surface where they continue to disperse. Under the current conditions, as BP presently understands them, the dispersant and associated oil become substantially diluted shortly after application. Most of the mixture will degrade within days to weeks given mixing conditions of wave and wind actions. Harmful effects, if any, from the dispersant would be expected to be localized to the areas close to application. Oil and dispersant taken up by fish generally would be expected to be metabolized within a matter of days to months. BP will be monitoring the behavior and degradation of the dispersant chemicals and oil. While the half-life of the dispersant is approximately in the days-to-weeks range, it is recognized that some elements in crude oil degrade more slowly, and degradation and other processes affecting half-life may be slower at depth.

4. **Who makes the decision to use dispersants?**

   The federal government oversees the use of dispersants. Dispersant use has to be authorized by the Federal On-scene Coordinator. Dispersants can only be used in specified areas. The National Contingency Plan contains a list of pre-approved dispersants and their approved applications.

5. **What are the trade-offs that have to be considered?**

A decision to use dispersant involves balancing the risks to certain animals and plants at the water surface and in shoreline habitats against the potential risk to other organisms in the water column and seafloor. To minimize the risk to organisms, the National Contingency Plan restricts surface dispersant use to areas at least 3 miles offshore and where the water is greater than 30 feet deep. Approval would need to be obtained to apply a dispersant less than 3 miles of shore. BP is conducting unprecedented levels of monitoring to evaluate the potential effects on organisms in the deeper water column from subsurface dispersant use and to enable government decision-makers to make more informed judgments about balancing the risks of subsea dispersant application, surface application, and the risks of having undispersed surface oil slicks.

6. What regulations have to be followed?

The use of dispersants should be consistent with the National Contingency Plan, which is the federal government's blueprint for responding to both oil spills and hazardous substance releases.

7. What monitoring is required?

There is a formal monitoring plan, known as the Special Response Operational Monitoring Plan, which is conducted by the US Coast Guard's Gulf Strike Team. A variety of monitoring is conducted, including the effectiveness of the dispersants and the dispersant and oil in the water column.

8. Are dispersants toxic?

The toxicity of dispersed oil is principally due to some components of the oil itself. A number of laboratory studies on a range of test species have confirmed that where there is acute toxicity, it generally is not in the dispersant but in some naturally occurring components of oil. When dispersants are properly applied, the overall risk to wildlife from the chemicals in the dispersants is substantially less than the risks from the oil. At the standard application rates directed by the Federal On-scene Coordinator, and under the mixing conditions of the ocean, dispersants are not expected to cause significant harm to most marine organisms in most circumstances.

Methods are in place to determine if chemicals from oil and dispersants are present in seafood and if consumption of the seafood might pose risks to humans. The States and NOAA close fisheries if there are concerns about chemicals in seafood, and the FDA is monitoring seafood to determine when harvests may resume.

9. What impacts are these toxic chemicals having on the Gulf?

BP has a large team of environmental experts who are working closely with, and in cooperation with the US EPA, the Coast Guard, the State of Louisiana, and other agencies that are part of the response effort. We are sampling areas where we have observed dispersants or oil, and we are using that data to monitor potential effects to the environment. This data will be used to identify areas that need cleanup, and areas where we may need to restore natural resources, such as shoreline habitat, commercial and recreational fishing, birds, turtles, or marine mammals, to name a few. Extensive data is being collected so we can fully understand the impact of this incident on the environment, and establish the foundation for restoration work to begin quickly.

10. What are the long-term health effects on marine life and humans of using such large amounts of dispersants?

- <u>Potential effects on marine life</u>

  When evaluating the potential effects on marine life from dispersant use, it is important to weigh those potential effects in comparison to the benefits from dispersant use. As EPA has said, "we know dispersants are generally less toxic than the oils they breakdown," but the use of dispersants is an "environmental trade-off." When dispersants are properly applied, the overall risk to wildlife from the chemicals in the dispersants is substantially less than the risks from the oil. When dispersants are properly applied, the overall risk to wildlife from the chemicals in the dispersants is substantially less than the risks from the oil. At the standard application rates directed by the Federal On-scene Coordinator, and under the mixing conditions of the ocean, dispersants are not expected to cause significant harm to most marine organisms in most circumstances. The use of dispersants helps reduce the amount of surface oil that might reach marshes and other sensitive shoreline habitats, and helps reduce the amount of oil that sea birds and other wildlife may encounter floating on the water surface.

  BP and the governmental response agencies continue to conduct unprecedented sampling to evaluate the potential impacts from dispersant use in the subsurface. To date, that sampling has not shown significant short-term or acute toxicity to the species tested. BP will continue to work with NOAA and other agencies to collect more data and to evaluate potential impacts of the dispersed oil on a wider range of aquatic life.

  The EPA, NOAA, USCG, and the University of New Hampshire (UNH) Coastal Response Research Center recently convened a panel of more than 50 scientific experts to evaluate Dispersant Use and Ecosystem Impacts of Dispersed Oil in the Gulf of Mexico. These experts also concluded that: "…use of dispersants and the effects of dispersing oil into the water column has generally been less environmentally harmful than allowing the oil to

migrate on the surface into the sensitive wetlands and near shore coastal habitats."

- Potential effects on humans – Potential effects on humans theoretically could occur through inhalation of dispersants at or near the site where they are applied, or through consumption of seafood that is tainted with oil and dispersants. For both of these potential exposure pathways, measures are being taken to ensure that human health impacts are minimized.

  Workers applying dispersants at sea, and those working with them and near them, have the personal protective equipment recommended by the dispersant maker. In addition, air monitors on these boats are used to measure and maintain exposure levels within safe occupational exposure limits.

  Aerial application of dispersants has been limited to day light hours, with the goal of keeping any surface spray 2 or more nautical miles away from any boats in the vessels of opportunity program. To date, air monitoring on those vessels has not detected dispersant components in the air, or has shown exposures are within safe occupational exposure limits.

  The EPA, NOAA, USCG, and UNH scientific panel report that the use of dispersants appears to reduce the concentrations of volatile organic compounds (VOC) released from oil into the air, and this reduces the potential for VOC inhalation by all persons who work with the weathered oil.

  EPA also conducts extensive air monitoring along the shoreline, to protect members of the public. To date, EPA has not detected any dispersant components in the air, meaning there is no inhalation risk for people on the coastline. EPA also has not detected any increase in volatile chemicals associated with the oil spill along with coastline.

  With regard to seafood safety, methods are in place to determine if chemicals from oil and dispersants are present in seafood, and if consumption of the seafood might pose risks to humans. The States and NOAA close fisheries when there are concerns about oil or chemicals in seafood, and the FDA is monitoring seafood to determine when harvests may resume. Taste, odor and chemical risk thresholds are applied to determine whether seafood is safe to catch, market and eat.

12. Dispersants push the oil in the environment rather than removing it from the environment. This doesn't seem like a strategy that helps the environment.

Dispersants do transfer oil from the surface into the water column. Care is used to do this under conditions that allow rapid dispersion of the oil to low concentrations

that are unlikely to cause significant harm to marine life. When used properly, dispersants reduce the risk of environmental harm. Harm is more likely when surface oil is not captured in any boom, skimmer or other mechanical capture system, and is not otherwise dispersed. Surface oil poses known risks to birds, marine mammals, and the shoreline environment.

13. Aren't dispersants used to hide oil pollution and remove it from view? It seems like any oil that is not cleaned up will cause unseen harm.

The intent of dispersant use is not to hide the oil. The goal is to minimize the damage that would be caused by floating oil that cannot be captured in booms, skimmers or controlled burns, and that is not otherwise dispersed. Dispersed oil also degrades more readily than undispersed oil.

14. Doesn't the addition of dispersants just add toxic chemicals to an already polluted environment, poisoning marine life?

Dispersants or some of their ingredients may be toxic to certain aquatic species when tested in isolation. However, when they are used on an oil spill, they are applied to the water surfaces in small amounts over large areas, generally at a rate of 5 gallons per surface acre, in waters that range from approximately 10 meters deep near the Chandelier Islands to greater than 4,000 ft deep in proximity to the wellhead source. The dispersant quickly mixes with the water, and the resulting dispersant/oil particles are rapidly diluted and dispersed to low concentrations that fall below the acute toxicity threshold. Toxicity tests using samples of water taken around the well site at various depths, from near surface to very deep, do not show toxicity to the species tested. Additional tests will be performed with other species that may be more sensitive to oil or dispersants, to evaluate the potential risk to those species.

15. I've read that dispersants are unreliable because they don't always work. Why aren't you focusing on mechanical recovery?

Mechanical containment and recovery is being used at this site, but it is only effective in relatively calm seas and good weather, and it works best during daylight. Dispersants are an essential part of the response in other weather conditions, and dispersants can also be injected subsea at night. It is important to carefully assess the effectiveness of each method, and to use each where it is most effective and needed.

16. Isn't it true that the dispersant that you've been using was banned in the UK?

We are aware that two of the dispersant products that have been approved for use in the Gulf response -- COREXIT 9527 and COREXIT 9500 -- are not approved for use in the UK rocky shore tidal zone, due to concerns about the potential toxicity of

dispersants to limpets that are directly sprayed or exposed to the chemicals. UK regulators continue to allow the use of existing stockpiles of these COREXIT products away from rocky shorelines, with approval. The areas where BP is applying dispersants in the Gulf are not on or near the shoreline, and they have a different habitat, and US EPA and Coast Guard have approved both products for use in this area in this response.

BP is continuing to evaluate other approved dispersants for possible use at this site. EPA has asked BP to determine if there are other dispersants that are as effective as COREXIT, less toxic, and available in sufficient quantities for use. As BP completes its evaluation, it will update this document with further information about alternatives.

17. Do the dispersants bio-accumulate?

These substances have low potential to bioaccumulate. Although the Material Data Safety Sheets for one dispersant being used states that certain of its components have a potential to "bioaccumulate," the known components of this dispersant are not expected to have a significant bioaccumulation risk, particularly given the rate at which dispersants are being applied in the Gulf (approx. 5 gallons/surface acre).

18. Are there less toxic or harmful dispersants available?

Corexit has been used because it was possible to obtain a large enough supply to meet the anticipated need for dispersant in the days immediately after the spill. BP identified 7 other possible alternatives. Some of these contain a nonylphenol polyethylene glycol ether, or compounds that are expected to degrade to nonylphenol (NP) once the dispersants are applied to the spill.

Considering the volume of dispersant that may be used in this incident, it is worth noting that NP is a potential endocrine disrupter identified by the U.S. EPA's Endocrine Disruption Screening Program, and the EPA has developed final marine acute and chronic water quality criteria developed for NP. NP also has been reviewed under the U.S. EPA's Great Lakes Binational Strategy, is on the OSPAR list of hazardous constituents for discharge into the sea, and is a priority hazardous pollutant under EU Water Directive. Although EPA has not routinely screened dispersants for NP content or risks, it may wish to do consider those risks here, based on the volume of dispersant that is needed.

Whether BP uses any of these identified possible alternatives, or any other alternative dispersant depends on whether the On Scene Coordinator and Regional Response Teams approve the alternative, and whether it is possible to get a reliable supply of the material that is large enough to meet all anticipated needs.

July 19, 2010

To: Charles Polk, Captain, USCG
Federal On-Scene Coordinator Representative (FOSCR)

Subject: Dispersant Approval Request for July 19, 2010

RE: a) Memo from Rear Admiral Watson to Captain Laferriere Dated July 11, 2010
b) E-Mail dated July 15, 2010 from Captain Laferriere (USCG), to Ron Crossland

Gentlemen,

In compliance with the referenced memo titled, *Delegation of Aerial Dispersant Application Approval Authority to FOSCR, ICP Houma*, and referenced e-mail, I am requesting approval for application of up to 375 gallons of Corexit 9500A for July 19, 2010 in order to apply to the observed oil slick(s). For compliance with the requirements stated within the aforementioned memo and e-mail, I provide the information in Attachment 1.

The Houma, Aerial Dispersant Group respectfully requests approval to apply up to 375 gallons of dispersant on the designated target(s) of dispersible oil on July 19, 2010. Target contains 60% dispersible oil and is approximately 70 acres in size. Target is in Zone AM, skimmers are not currently in close proximity to the observed slick. Our intent is to light load the BT-67 out of Houma for this spray operation.

For the current weather and sea states, aerial dispersants will be highly effective.

Sincerely,

[redacted]
Assistant Aerial Dispersant Group Supervisor

Request approval to apply aerial dispersant to the target identified within this request.

Time of request: 1137.

Concurrence will be finalized at UAC Level: Approved By Roy A Nash, RDML, USCG
Deputy FOSC

CC: Admiral Allen
Admiral Nash
Admiral Korn
CAPT Roberge
CAPT Lodge
CAPT PJ Maguire
[redacted]

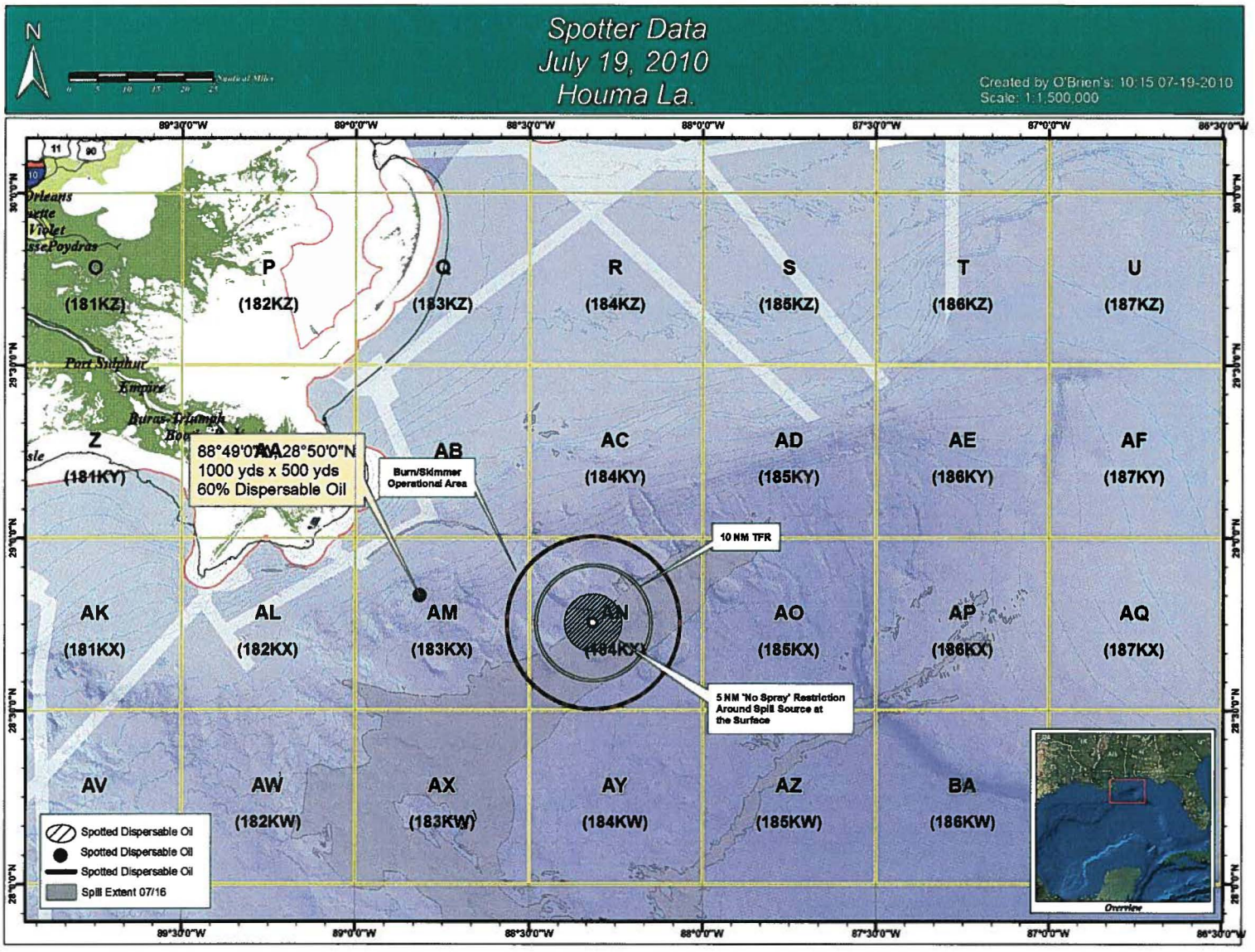
EPA Verbal Concurrence

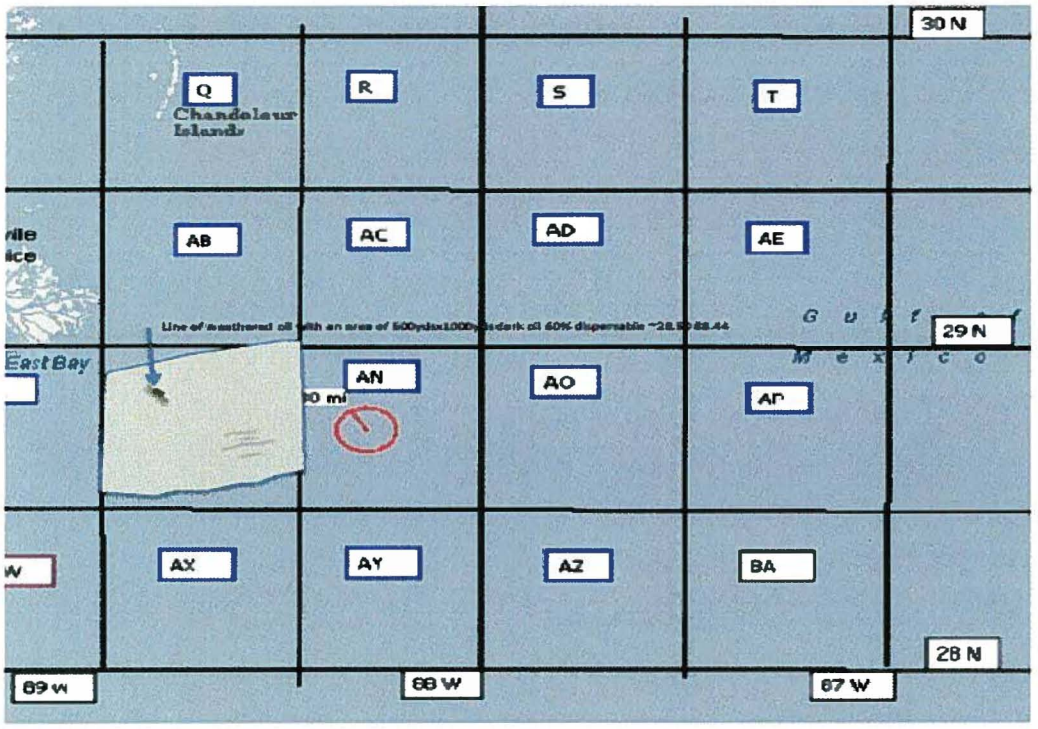
ATTACHMENT 1

Requirement-a. Operational Justification

a.1) Visible chart demonstrating target slick outside offshore skimmer recovery and in-situ burn operations zone. Dimensions of spray box and percent of oil to be dispersed shall also be provided.

Information provided in compliance with this requirement as follows;





Date: __7 19 10___

Time: _0640-0900___
(start/end)

Flight #: ___1_____

Zones Observed: __AM AL___

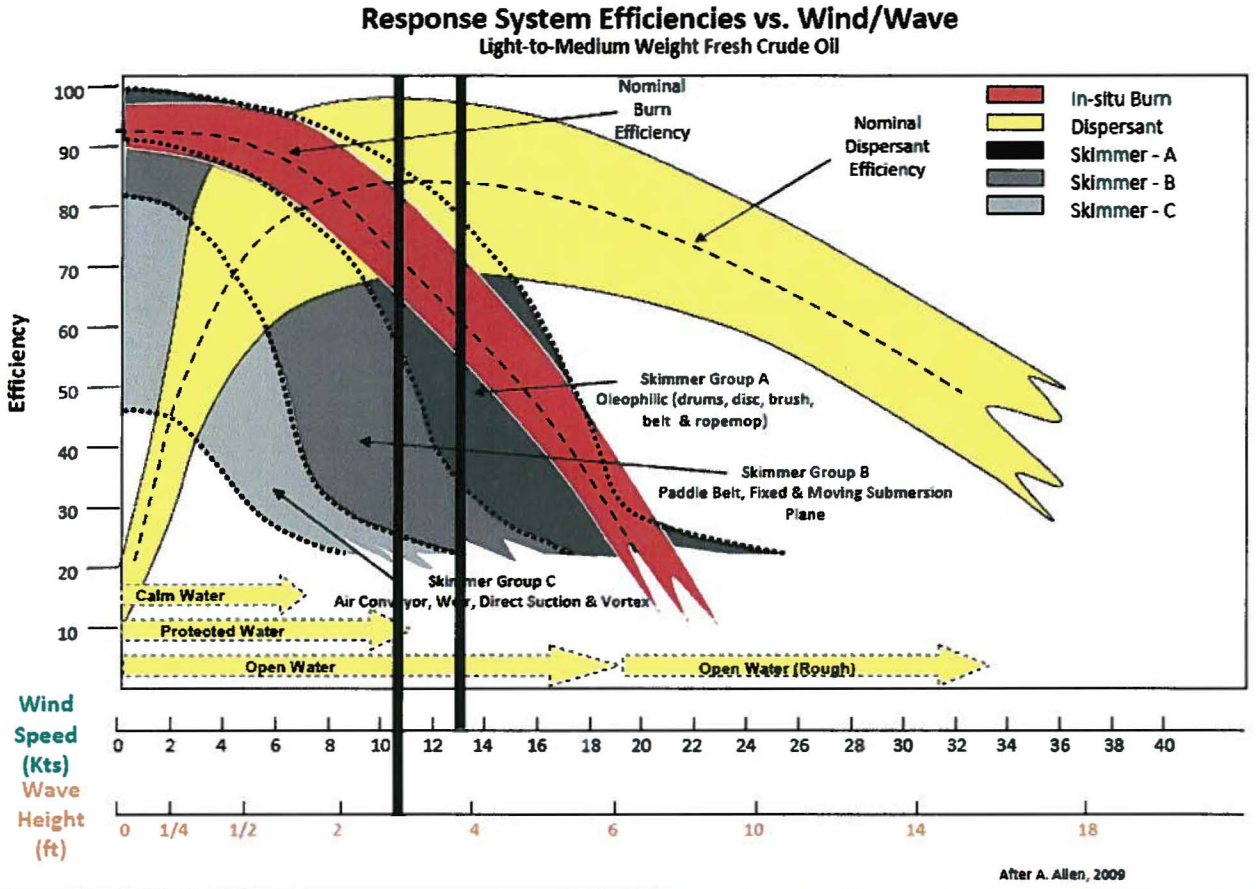
Requirements

a.2) Visual justification and written explanation of why offshore skimmers and in-situ burn resources are unable to intercept and recover target prior to landfall. This justification may also include those slicks that have moved past skimmers and in-situ burn operations.

a.3) If skimming operations and/or in-situ burn operations are not being performed, provide written justification for reasons (i.e., outside weather parameters, resupply and refit). Explain whether the current weather and forecasted weather are favorable to support dispersant spray missions, spotter, and SMART flights.

Information provided in compliance with these requirements as follows;

The current weather (winds @ 13 knots) and sea state (waves up to 3') is not conducive to efficient skimming but current conditions does greatly favor aerial dispersants, however, as the following graphic clearly illustrate skimmers, particularly Weir skimmers, operating in the open water source area are ineffective and indicating the potential of **skimming capabilities being insufficient to remove oil from the environment, thus the need to supplement with alternate response technologies, e.g., aerial dispersants.**



Skimming Assets	Group I	Group II	Group III	Group IV	TOTALS
Operational	9	18	9	12	48
Standby	0	0	0	0	0
Enroute	1	0	0	1	2
Maintenance	1	1	2	4	8
TOTALS	11	19	11	17	58

Available offshore skimming resources are shown in the previous table. It should be noted that **14% (8 vessels) of the fleet are not operational due to maintenance**. The operating fleet is largely composed of vessels utilizing Weir skimming units. Weir skimming units are inefficient in open water areas particularly with certain wind and sea states. The previous graphic shows that **approximately 85% of the skimming fleet is less than 20% effective at this weather conditions with the remaining 15% of the fleet operating at reduced effectiveness.** This low level of mechanical recovery effectiveness in these weather conditions will lead to dispersible quantities of oil escaping further away from the source due to the inability of skimmers to contain the oil within a restricted geographic area. In-situ burn activities in these weather conditions is feasible and skimming activities are largely inefficient for Weir skimmers. Once the oil moves out of the confined area around the source, skimming resources will find it difficult to recapture and recover the oil at ever increasing distances and larger geographic areas.

The forecast weather is suitable for aerial dispersant flight operations with 20% chance of precipitation, 1500-4000 feet-unlimited ceilings and 7-15 nm visibility.

Requirement

a.4) Visual photographic imagery showing spotted target and area to be dispersed.

Information provided in compliance with this requirement, e.g., photos of the observation.

The spotter plane reported poor light conditions and the photo may not depict the oil sufficiently

Requirement

a.5) List of other environmental considerations such as vulnerabilities such as bird nesting, fledglings, mating, plant, rare species, that provide tradeoff justifications.
a.6) List of economic extenuating circumstances, such as prevention of fishery closures and marine transportation system impacts.

Information provided in compliance with this requirement.

Resources at Risk in the Offshore at the MC252

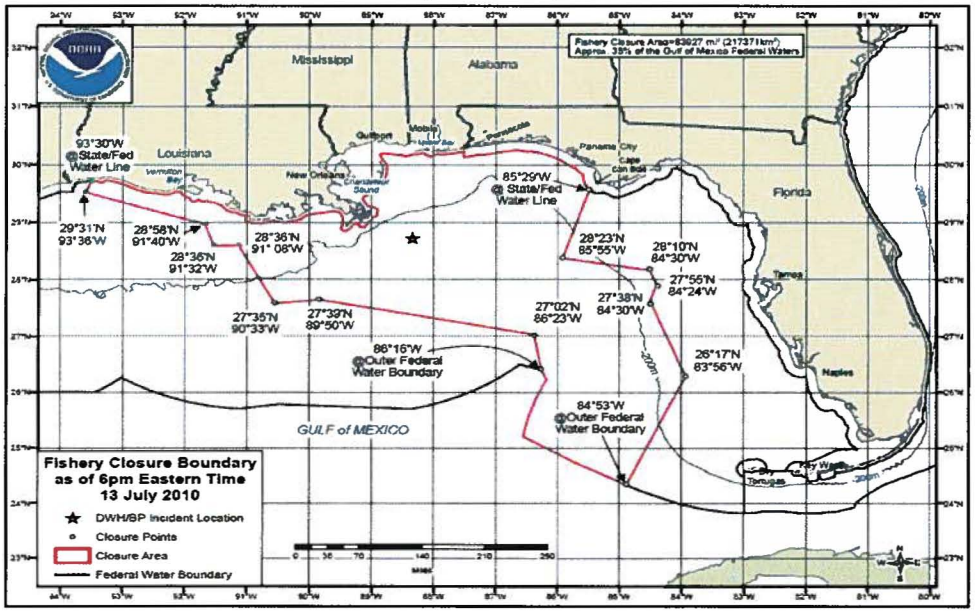
- Fish & Invertebrates – The fish in the area would primarily be pelagic open-water species such as tuna, jacks, and sailfish. There is an extensive recreational fishing for marlin and recreational and commercial fishing for yellow fin and blue fin tuna throughout the area. This area is also considered a nursery area for crevalle jack.
- Shellfish – This area is outside the normal range of spiny lobster, crabs and shrimp fisheries

- Birds – pelagic birds such as shearwaters and frigate birds may be in the area, but have likely removed themselves from the area. The birds may become oiled when foraging in the area. Direct oiling of birds reduced the buoyancy, water repellency, and insulation provided by the feathers and may result in death by drowning of hypothermia. Preening of oiled feathers may also result in ingestion of oil resulting in irritation, sickness and death.
- Mammals – whales (fin, and sperm, both federally and state endangered) and dolphins are commonly found throughout the area. Oil may irritate the skin, eyes, and nostrils of the cetaceans. Unless exposed to oil for prolonged periods, mortality is not expected.
- Reptiles – Loggerhead sea turtles (state/federally threatened) and Kemp's Ridley sea turtles (state /federally endangered) are found throughout the area in all life stages and water depths; other species are also known to be in the area (leatherback, green). The young of year of the various species are especially susceptible to oiling, often leading to mortality when exposed. In addition, weathered crude oil (in tar ball form or trapped in Sargasso weed) is known to be consumed by the turtles who mistake it for a food source, typically resulting in toxic effects, intestinal blockages, and often resulting in death.

The ICS 232 – Resources at Risk should be consulted to completely define the shoreline and near shore resources at risk (including wildlife, socioeconomic, and historic resources) and should be consulted to determine the potential extent of impacts from oil reaching these environments. Every effort should be taken to prevent this oil from reaching and impacting the extensive sensitive resources in these environments.

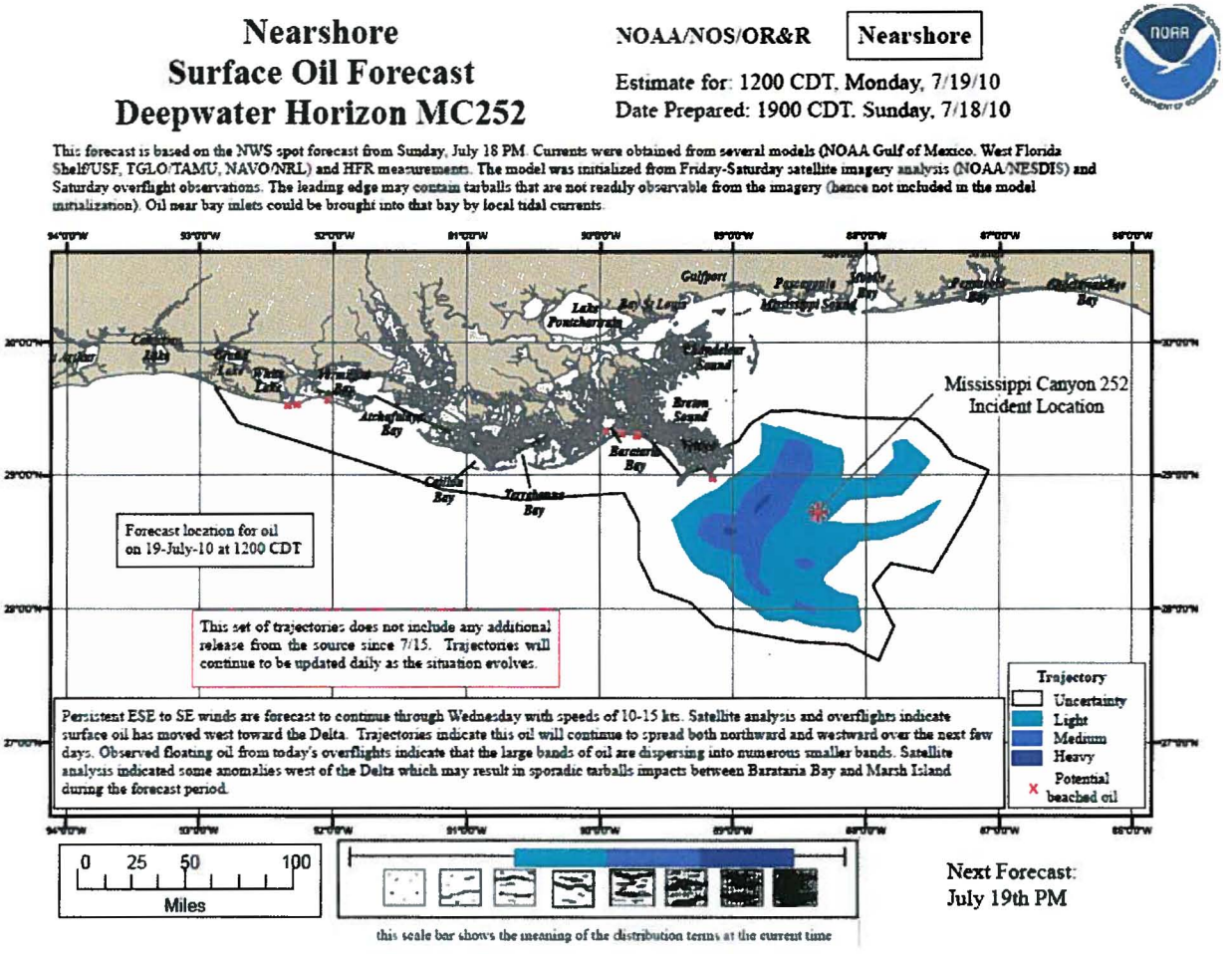
The longer oil remains on the surface without removal or dispersal, the negative impact of closures to the fishery will continue. Louisiana's $2.5-billion commercial fishing industry, provides much of the country's domestic shrimp and oysters.

The most recent fishery closure area provided by NOAA is shown below.

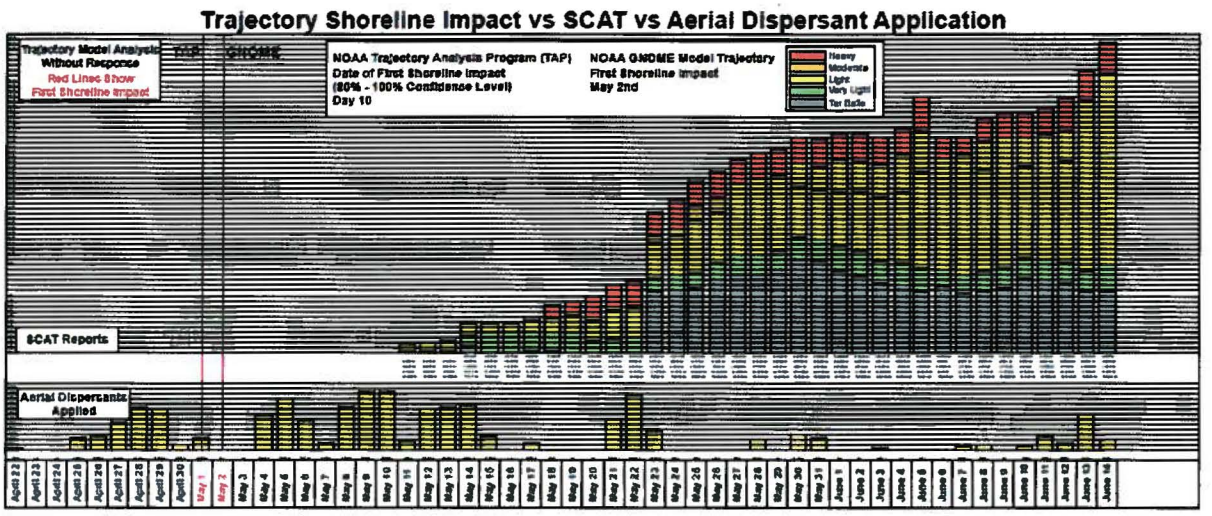


The threat to maritime commerce remains to the Louisiana Offshore Oil Platform (LOOP). LOOP handles 13 percent of the nation's foreign oil, about 1.2 million barrels a day, and connects by pipeline to 50 percent of the U.S. refining capability. The potential threat remains for marine commerce transiting the Mississippi River.

The NOAA Surface Oil Forecast shows extensive areas of heavy and medium oil that may adversely impact the shoreline, including sensitive resources (See the NOAA Near Shore Trajectory Map). The NOAA Surface Oil Forecast for July 18th shows extensive areas of heavy and medium oil that are or may adversely impact the shoreline, including sensitive wetlands.



The data shown on the bar graph below indicates a correlation between shoreline impact and dispersant volume usage. Although this is raw data that requires future peer review and evaluation, it is shown here to illustrate that if oil escapes the source area and the skimming and in-situ burn operations around the source, and aerial dispersants are not utilized, in all likelihood, shoreline impact with subsequent negative impact to the aforementioned Resources at Risk, will occur. Shoreline impact is forecast at Barataria Bay.



a. **Requirements: Ensure entire process is documented and a report completed for all dispersant applications. Spotters aboard reconnaissance flights are able to identify oil slicks estimated to require a specific number of gallons of dispersants. State that spotters will, within 6 hours of the dispersant spray operations, identify high value targeted slicks and prepare a report specifying the location and dispersant volumes needed for each application.**

Information provided in compliance with this requirement: Spotters have been trained by the NOAA SSC Ed Levine to differentiate various conditions of oil, e.g., dispersible, emulsified, heavy metallic slicks, etc. Replacement spotter personnel, prior to being designated a spotter, make 4 training flights with experienced trained spotters. Many of the experienced spotters have been trained by the NOAA SSC. The spotters evaluate the oil and estimate percent coverage, length and width of the slick. The oil condition, size and coverage are provided to the Aerial Dispersant Group in the Houma ICP that reviews the evaluation and calculates the quantity of dispersants from the information provided by the spotter. An appropriately sized aircraft and payload are ordered for the mission. Spotter reports are typically filed and submitted immediately after the recon flight completes and is used in evaluation of spray missions.

The Aerial Dispersant Group, Houma ICP, coordinates closely with the USCG SMART 1 team on our spray missions and will advise the SMART Team Leader in advance of any spray missions being conducted so they can arrange observation flights. The USCG SMART 1 team posts mission observation reports and photos on the EPA website for review.

Deepwater Horizon - BP Oil Spill Response

Dispersant Use FACT SHEET

- Dispersants are being used in four ways on this incident: (1) subsea at the source to prevent or reduce oil on the surface of the Gulf of Mexico; (2) boat spray on oil on the water near the source to reduce vapors in the air from the fresh oil; (3) aerial spray of surface slicks which cannot be recovered by mechanical recovery or controlled burns; and (4) boat spray application for scientific studies.
- Dispersants were first pre-approved (standing approval) for use on marine oil spills three miles from shore and in waters deeper than 30 feet in the Gulf of Mexico in 1995 by the EPA, USCG, adjacent states, NOAA and DOI. This pre-approval has been renewed three times.
- The biological impacts of dispersants applied both under and on water are being monitored using standardized tests that evaluate the potential acute (short-term) toxicity of the dispersed oil in the water. Acute toxicity tests are methods for determining the impact of a chemical or an effluent on living organisms and measuring the degree of response using commonly tested species. Organisms which will be tested include, among others, rotifers - sensitive small invertebrates that occur in the Gulf of Mexico and that are important to the food chain.
- To date, the toxicity data do not indicate any significant acute effects on aquatic life. Moreover, decreased size of the oil droplets (indicated by monitoring data) is a good indication that, so far, the dispersants are effective, i.e., reducing the amount of oil on the surface of the Gulf of Mexico.
- Water monitoring is being performed following both subsea and aerial dispersant application in order to provide the best scientific information possible. Some of the monitoring parameters include: (1) identification of dispersed oil; (2) oil droplet size; (3) dissolved oxygen (DO); (4) physical characteristics such as conductivity, temperature and depth (CTD); and (5) toxicity information.
- EPA and other government scientists are independently verifying the data on alternative dispersants presented by BP. BP is conducting its own tests to determine the least toxic, most effective dispersant available in the volumes necessary for a crisis of this magnitude and to evaluate whether the dispersants currently being used (Corexit) remain the most appropriate, as supported by the science for this situation.
- NIOSH, EPA, OSHA and BP are involved in monitoring the air around worksites and the public. EPA is conducting real time air monitoring along the coast. EPA's air monitoring conducted through June 10, 2010, has found that air quality levels for ozone and particulates are normal on the Gulf coastline for this time of year. EPA has observed odor-causing pollutants associated with petroleum products along the coastline at low levels. Some of these chemicals may cause short-lived effects like headache, eye, nose and throat irritation, or nausea. People may be able to smell some of these chemicals at levels well below those that would cause short-term health problems.
- Air monitoring for compounds associated with dispersants has been conducted on vessels spraying dispersants on the water surface, on certain VOOs (vessels of opportunity), and during reloading of aircraft used in aerial dispersant application. Preliminary results from those air monitoring activities do not indicate levels of dispersant compounds that would cause adverse health effects.
- Extensive air monitoring continues to be conducted on all vessels at the source of the incident and on representative vessels across the response area. Air monitoring data are available publicly daily http://www.airnow.gov/ and http://gulfcoast.airnowtech.org/.

Frequently Asked Questions

Given reports of dispersant toxicity, why would you even allow any application to continue?
Dispersants are less harmful than the oil leaking from the source and biodegrade in a shorter time span. This is an important step to reduce the potential for damage from oil reaching fragile wetlands and coastal areas. EPA continues to allow BP to use undersea dispersant at a maximum rate that is based on the amount of oil captured in the containment system and riser.

What are the tradeoff considerations being weighed regarding the impact to fish and wildlife when making decisions about the subsea use of dispersants?
Dispersants are generally less toxic than oil. When considering the use of a dispersant in the deep ocean, the federal government weighs the effectiveness of the dispersant in breaking down the oil at such depths, the benefits of preventing the oil from rising to the surface and eventually hitting the shore where it may cause significant damage to birds, wetlands and aquatic life, and the long term impacts of the dispersant mixed with oil in deeper waters. We have a monitoring and sampling plan in place to track the movement of the oil.

What effects could the use of dispersants have on marine life?
It's important to understand that the use of dispersants is an environmental trade-off. We know that surface use of dispersants decreases the environmental risks to shorelines and organisms at the surface and that, when applied at the surface, dispersants break down over several days. This is the first time that dispersants have been applied to a subsea well located nearly one mile below the water surface, and EPA and the Coast Guard are requiring BP to implement a robust sampling and monitoring plan to determine whether this use has a different impact on the environment. In cooperation with the Coast Guard, EPA, NOAA and other agencies, we are looking for potential differences in the rate of dispersion, movement of dispersed oil in the water column, and degradation of dispersed oil.

The federal response is intended to ensure that these operations are consistently monitored for any short or long term adverse effects that may outweigh the benefit of using dispersants.

Apart from marine life, has the Unified Command been able to make an assessment on the effects of the dispersant on the environment?
The harm or toxicity of dispersed oil in the environment is generally associated with the oil rather than with the dispersant alone. However, use of dispersants breaks up a slick of oil on the surface into smaller droplets that can go beneath the surface. When applied before spills reach the coastline, dispersants will potentially decrease exposure for surface-dwelling organisms (such as sea birds) and intertidal species (such as mangroves and salt marshes), while increasing exposure to aquatic life found deeper in the water. The States and NOAA will close fisheries where there are concerns about chemicals in seafood, and the FDA is monitoring seafood to determine when harvests may resume.

How will the government ensure the protection of the environment when dispersants are used?
The authorization given to BP to use dispersants on oil stemming from the Deepwater Horizon incident included specific conditions to ensure the protection of the environment and the health of residents in the affected areas. BP continues to work with the Coast Guard, EPA, NOAA and others in the Unified Command to monitor the environment for effects of dispersant use. In addition, EPA is collecting air and water quality data daily.

How do dispersants work on the water's surface?
Oil spill dispersants are chemicals applied directly to the spilled oil in order to break it into small droplets that fall below the surface. Dispersants are usually applied to the oil slick with specialized equipment mounted on an airplane, helicopter or ship. Once applied, dispersants help break up oil into tiny micron-sized droplets which mix into the upper layer of the ocean. When dispersants are applied to oil floating on the water surface, the dispersed oil may form a "plume" or "cloud" of oil droplets just below the water surface. However, the dispersed oil mixes vertically and horizontally into the water column and is rapidly diluted. Bacteria and other microscopic organisms are then able to act more quickly than they otherwise would to degrade the oil within the droplets.

Oil on calm water surfaces is often cohesive and natural degradation processes are slow. In heavy seas, however, the oil gets naturally dispersed into the surface waters. It should be noted that oil released from the BP Oil Spill is also naturally dispersing into the water column due to the physical agitation of the wind, waves, and vessel operations.

Is the underwater chemical dispersant that Unified Command and the Regional Response Team (RRT), including US EPA, approved contributing to underwater oil plumes?

Petroleum hydrocarbons from the spill will be present in dispersed form below the surface of the water. NOAA continues to work closely with EPA and the federal response team to monitor for the presence of oil and the use of surface and sub-surface dispersants. Analyses reported to date on samples taken in the actual areas of impact show very low levels of hydrocarbons, which suggests that the dispersants and other means have been successful in dispersing the oil and reducing the impacts from the release.

Have dispersants ever been used this much before?
While dispersants have been used in previous oil spills, this is the largest application of dispersants at an oil spill response in the United States. Since the spill occurred, Unified Command and the Regional Response Team have closely monitored potential impacts of the dispersant including air quality monitoring by both planes and through mobile and fixed locations. Air sampling is geared toward looking for significant increases in airborne (volatile) chemicals. Thus far, preliminary air monitoring results have not shown risks to human health from dispersants.

BP also is conducting unprecedented levels of monitoring to evaluate the potential risk to organisms in the deeper water column from subsurface dispersant use.

Where have the dispersants been sprayed?

Aircraft pilots have been trained to recognize oil which looks dispersible from the air and target their spray runs for those areas. Vessels near the source spray dispersants in areas where elevated concentrations of vapors from fresh oil are detected. Vessels conducting scientific studies generally rely on trained aircraft spotter pilots to direct them to areas of dispersible oil. The rules for spraying include:

- Dispersants use is permitted in areas at least 3 miles away from the closest shore and in waters deeper than 30 feet. The closest to shore airplanes have actually sprayed dispersants is about 7 miles from shore. Vessel spray is on a much smaller scale and has been used for specific purposes.

- Stay outside the safety zone around the area where BP is working to control the source. This safety zone is 5 miles in diameter.

[redacted] LT

From: [redacted] LCDR
Sent: Friday, July 02, 2010 11:25 AM
To: [redacted] LCDR; [redacted] LCDR
Subject: FW: Use of Dispersants
Attachments: Dispersants Fact Sheet and QA.PDF; Dispersant Background and FAQs.pdf

"Some of the oil that is being released at the well site can be contained and recovered with booms and skimmers, or burned, when the weather is good and sea is calm. But it is difficult to capture all of the oil with these methods. Dispersants are used to break up the remaining surface oil before it can drift onto shore."

Dispersants are used to prevent oil sheen from reaching the shore; generally they are not applied within three miles of shore."

"A decision to use dispersant involves balancing the risks to certain animals and plants at the water surface and in shoreline habitats against the potential risk to other organisms in the water column and seafloor."

"Corexit has been used because it was possible to obtain a large enough supply to meet the anticipated need for dispersant in the days immediately after the spill. BP identified seven other possible alternative and whether BP uses any of these alternatives depends on whether the Federal on Scene Coordinator and Regional Response Teams approve the alternatives."

[redacted]
Lieutenant Commander, U.S. Coast Guard
Chief, Strategic Communications, National Incident Command Chief of Media Relations (CG-09222) 2100 2nd St. S.W., Stop 7362 Washington, DC 20593-7362
[redacted]
Supporting mission execution through excellence in communication www.USCGNews.com
www.uscg.mil

-----Original Message-----
From: [redacted] LT
Sent: Friday, July 02, 2010 1:36 PM
To: [redacted] CDR; [redacted] LCDR; [redacted]; [redacted] CDR; [redacted]
Subject: RE: Use of Dispersants

From BP.

-----Original Message-----
From: [redacted] CDR
Sent: Friday, July 02, 2010 11:59 AM
To: [redacted] LCDR; [redacted]; [redacted] CDR; [redacted]; [redacted] LT
Subject: RE: Use of Dispersants

[redacted]
Please track this down.
Thanks,

CDR [redacted]
Deepwater Horizon Response

External Affairs
Assistant EA Officer for Plans and Products [redacted]

-----Original Message-----
From: [redacted]LCDR
Sent: Friday, July 02, 2010 11:39 AM
To: [redacted] CDR; [redacted]CDR; [redacted]
Subject: Use of Dispersants
Importance: High

Legislative affairs folks are asking me for a few talkers about Why does BP continue to use dispersants in the GOM?

Can you grab a BP rep and get me a straight and prompt response?

Thanks

[redacted]
Lieutenant Commander, U.S. Coast Guard
Chief, Strategic Communications, National Incident Command Chief of Media Relations (CG-09222) 2100 2nd St. S.W., Stop 7362 Washington, DC 20593-7362
[redacted]
Supporting mission execution through excellence in communication www.USCGNews.com
www.uscg.mil

Date	Surface Dispersants (gallons)	Subsurface Dispersants (gallons)	total applied (gallons)	FOSC Surface Dispersants Approved (gallons)	FOSC Subsurface Dispersants Approved (gallons)	FOSC total max (gallons)	difference (gallons)	EPA Surface Dispersants Approved (gallons)	FOSC Subsurface Dispersants Approved (gallons)
26-May	0	0	0	?	?	0	0	?	15000
27-May	500	10	510	?	?	0	510	?	15000
28-May	18445	14040	32485	?	?	0	32485	?	15000
29-May	2900	14185	17085	?	?	0	17085	?	15000
30-May	17631	14974	32605	?	?	0	32605	?	15000
31-May	11686	12948	24634	?	?	0	24634	?	15000
01-Jun	0	13122	13122	6000	6000	12000	1122	?	15000
02-Jun	3375	7465	10840	6000	6000	12000	-1160	?	15000
03-Jun	6200	10241	16441	6000	2000	8000	8441	?	15000
04-Jun	13701	13931	27632	6000	23000	29000	-1368	?	15000
05-Jun	125	21143	21268	6000	2000	8000	13268	?	15000
06-Jun	0	13640	13640	6000	2000	8000	5640	?	15000
07-Jun	10744	14105	24849	6000	32000	38000	-13151	?	15000
08-Jun	8324	14207	22531	6000	32000	38000	-15469	?	15000
09-Jun	2100	12521	14621	6000		6000	8621	?	15000
10-Jun	1366	10279	11645	6000	21000	27000	-15355	?	15000
11-Jun	14305	9193	23498	6000	7000	13000	10498	?	15000
12-Jun	10356	4371	14727	6000	36000	42000	-27273	?	15000
13-Jun	36012	9596	45608	6000	17800	23800	21808	?	15000
14-Jun	12703	9689	22392	6000	23000	29000	-6608	?	15000
15-Jun	2768	11578	14346	6000	27700	33700	-19354	?	15000
16-Jun	13593	9152	22745	6000	18700	24700	-1955	?	15000
17-Jun	12423	5962	18385	6000	19200	25200	-6815	?	15000
18-Jun	15711	7642	23353	6000	16400	22400	953	?	15000
19-Jun	8380	17780	26160	6000	15500	21500	4660	?	15000
20-Jun	19576	13695	33271	6000		6000	27271	?	15000
21-Jun	11217	14583	25800	6000		6000	19800	?	15000
22-Jun	2008	10046	12054	6000	10000	16000	-3946	?	15000
23-Jun	5099	8886	13985	6000		6000	7985	?	15000
24-Jun	21088	13808	34896	6000	14400	20400	14496	?	15000
25-Jun	4633	12085	16718	6000	43000	49000	-32282	?	15000
26-Jun	23022	12535	35557	6000		6000	29557	?	15000
27-Jun	6626	11982	18608	6000	10880	16880	1728	?	15000
28-Jun	0	13195	13195	6000		6000	7195	?	15000
29-Jun	0	11484	11484	6000	750	6750	4734	?	15000
30-Jun	0	13474	13474	6000		6000	7474	?	15000
01-Jul	17852	10758	28610	6000	10000	16000	12610	?	15000
02-Jul	17852	10758	28610	6000				?	15000
03-Jul	1227	11363	12590	6000				?	15000
04-Jul	3079	10323	13402	6000				?	15000
05-Jul	803	11649	12452	6000				?	15000
06-Jul	387	11654	12041	6000				?	15000
07-Jul	1245	11779	13024	6000				?	15000
08-Jul	0	11553	11553	6000				?	15000
09-Jul	0	11673	11673	6000				?	15000
10-Jul	0	13210	13210	6000				?	15000
Total	307900	466110	774010						

From: [redacted]
To: [redacted] Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Date: Saturday, June 05, 2010 8:30:58 AM

All
Here is the 0900L Saturday 05 June update in. E-mail text below in event individual members of PERS DIST groups did not x-fer during my test e-mail yesterday.

SAT 0900L Update 05 JUNE
Sub Sea Disperant Stats:
Reporting period: 2200L 03 JUNE - 2200L 04 JUNE 2010
Sub Sea Dispersant continues
On 6/4/10 Injection rate 9-14 gallons per minute.
Injection disrupted 2 times for SIMOPS.
(0 hours and 55 minutes not injected)Volume: 13,931 gallons this period.
TOTAL Cumulative: 270,668 gallons)
The Ocean Veratas departed station pm of 04 June for Port Fourchon.
The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early SAT 05 June On-Station to resume sampling.
Vr
[redacted]
RRT VI Coordinator
[redacted]-cell

Sent with Good (www.good.com)

-----Original Message-----
From: [redacted]
Sent: Friday, June 04, 2010 07:49 PM Eastern Standard Time
To: Lloyd, Anthony CAPT; [redacted] gov'; D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Test E-mail (No Response Necessary)

Test E-mail (No Response Necessary)

Date	Surface Dispersants (gallons)	Subsurface Dispersants (gallons)	total applied (gallons)	FOSC Dispersants Surface Approved (gallons)	FOSC Subsurface Dispersants Approved (gallons)	FOSC total max (gallons)	difference (gallons)	EPA Surface Dispersants Approved (gallons)	EPA Subsurface Dispersants Approved (gallons)	comments
26-May	0	0	0	0	0	0	0	per FOSC approval	15000	
27-May	229	10	239	229	0	229	10	per FOSC approval	15000	approved by FOSC - RADM Mary Landry
28-May	6400	14040	20440	6400	0	6400	14040	per FOSC approval	15000	approved by FOSC - RADM Mary Landry VOC high near source of control vessel
29-May	2900	14185	17085	0	15000	15000	2085	per FOSC approval	15000	approved by FOSC - RADMMary Landry - 15,000 gallons for a period not to exceed 12 hours. Located a large (2x0.5 miles) dispersible oil slick 90 Southeast of Houma.
30-May	17631	14974	32605	19000	0	19000	13605	per FOSC approval	15000	
31-May	11686	12948	24634	19000	0	19000	5634	per FOSC approval	15000	
01-Jun	0	13122	13122	6000	6000	12000	1122	per FOSC approval	15000	
02-Jun	3375	7616	10991	6000	15000	21000	-10009	per FOSC approval	15000	approved by FOSC - RADM Watson
03-Jun	6200	17753	23953	8000	17753	25753	-1800	per FOSC approval	15000	approved by FOSC - RADM Watson
04-Jun	13701	20655	34356	6000	23000	29000	5356	per FOSC approval	15000	approved by FOSC - RADM Watson
05-Jun	125	19666	19791	6000	19666	25666	-5875	per FOSC approval	15000	approved by FOSC - RADM Watson
06-Jun	0	13640	13640	2000	2000	4000	9640	per FOSC approval	15000	
07-Jun	10744	14105	24849	32000	15000	47000	-22151	per FOSC approval	15000	approved by FOSC - RADM Watson
08-Jun	8324	14207	22531	6000	32000	38000	-15469	per FOSC approval	15000	
09-Jun	2100	12521	14621	6000		6000	8621	per FOSC approval	15000	
10-Jun	1366	10279	11645	21000	0	21000	-9355	per FOSC approval	15000	
11-Jun	14305	9193	23498	15700	0	15700	7798	per FOSC approval	15000	
12-Jun	10356	4371	14727	7000	0	7000	7727	per FOSC approval	15000	
13-Jun	36012	9596	45608	36000	0	36000	9608	per FOSC approval	15000	
14-Jun	12703	9689	22392	17800	0	17800	4592	per FOSC approval	15000	
15-Jun	2768	11578	14346	23000	0	23000	-8654	per FOSC approval	15000	
16-Jun	13593	9152	22745	27700	0	27700	-4955	per FOSC approval	15000	
17-Jun	12423	5962	18385	18700	0	18700	-315	per FOSC approval	15000	
18-Jun	15711	7642	23353	19200	0	19200	4153	per FOSC approval	15000	
19-Jun	8380	17780	26160	6000	15500	21500	4660	per FOSC approval	15000	approved by FOSC - RADM Watson high VOCs on containment vessels.
20-Jun	19576	13695	33271	15500		15500	17771	per FOSC approval	15000	
21-Jun	11217	14583	25800	10400		10400	15400	per FOSC approval	15000	
22-Jun	2008	10046	12054	10487	10000	20487	-8433	per FOSC approval	15000	
23-Jun	5099	8886	13985	6000		6000	7985	per FOSC approval	15000	
24-Jun	21088	13808	34896	6000	14400	20400	14496	per FOSC approval	15000	
25-Jun	4633	12085	16718	6000	43000	49000	-32282	per FOSC approval	15000	
26-Jun	23022	12535	35557	6000		6000	29557	per FOSC approval	15000	
27-Jun	6626	11982	18608	6000	10880	16880	1728	per FOSC approval	15000	
28-Jun	0	13195	13195	6000		6000	7195	per FOSC approval	15000	
29-Jun	0	11484	11484	6000	750	6750	4734	per FOSC approval	15000	
30-Jun	0	13474	13474	6000		6000	7474	per FOSC approval	15000	
01-Jul	17852	10758	28610	6000	10000	16000	12610	per FOSC approval	15000	
02-Jul	17852	10758	28610	6000				per FOSC approval	15000	
03-Jul	1227	11363	12590	6000				per FOSC approval	15000	

04-Jul	3079	10323	13402	6000				per FOSC approval	15000
05-Jul	803	11649	12452	6000				per FOSC approval	15000
06-Jul	387	11654	12041	6000				per FOSC approval	15000
07-Jul	1245	11779	13024	6000				per FOSC approval	15000
08-Jul	0	11553	11553	6000				per FOSC approval	15000
09-Jul	0	11673	11673	6000				per FOSC approval	15000
10-Jul	0	13210	13210	6000				per FOSC approval	15000
Total	307900	479020	786920						

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] gov"; D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Monday 07 JUNE 2010
Date: Monday, June 07, 2010 7:59:13 AM
Attachments: MS Canyon 252-Polrep 07 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]:e

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Monday 08 JUNE 2010
Date: Tuesday, June 08, 2010 8:13:43 AM
Attachments: MS Canyon 252-Polrep 08 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Monday 14 JUNE 2010
Date: Monday, June 14, 2010 8:18:37 AM
Attachments: MS Canyon 252-Polrep 14 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:

>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Saturday 12 JUNE 2010
Date: Saturday, June 12, 2010 8:36:54 AM
Attachments: MS Canyon 252-Polrep 12 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
- >>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] 008-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Sunday 13 JUNE 2010
Date: Sunday, June 13, 2010 8:57:11 AM
Attachments: MS Canyon 252-Polrep 13 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:

>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted]; D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Wednesday 09 JUNE 2010
Date: Wednesday, June 09, 2010 7:44:37 AM
Attachments: MS Canyon 252-Polrep 09 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
>>>

From: [redacted]
To: Lloyd, Anthony CAPT; Charlie Henry-NOAA; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE:Thursday 10 JUNE 2010
Date: Thursday, June 10, 2010 7:24:36 AM
Attachments: MS Canyon 252-Polrep 10 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:

- >>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Friday 11 JUNE 2010
Date: Friday, June 11, 2010 12:55:28 PM
Attachments: MS Canyon 252-Polrep 11 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
-
>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject:	**POLREP # 1** **Initial (Update)** **Mississippi Canyon 252 Sub-Sea Dispersant Injection Status** **Latitude: 28.755286** **Longitude: -88.386402**
To:	DIST
From:	AREA COMMAND, ROBERT, LOUISIANA
Date:	5/17/2010
Reporting Period:	15 MAY - 31 May, 2010
Update:	0900 01 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

- Safety procedures for vessels monitoring aircraft spray operational areas require a 2-mile separation zone from where the aircraft spray.

- Dispersant operations are not permitted in areas where marine mammals and sea turtles are observed.

Could the responders on vessels and the public be sprayed with dispersants?

Dispersants sprayed from aircraft have been applied far from shore (in a zone about 7 – 30 miles from the closest land and 2 miles from platforms and boats) and it is not possible for the spray to reach the general public on shore. This is because:

- The dispersant droplet size sprayed from the airplanes and the height of the aircraft above the water surface (typically 75 to 100 feet above the water) are designed to maximize the application of the dispersant to the target oil in an area typically 85 to 150 feet in width. Given the dispersant application procedures, dispersant spray exposure is not expected to be a concern on response vessels, which are at least two nautical miles away from the application area, or on shore, which is at least seven miles away.

- Safety briefings, including dispersant Material Safety Data Sheets (MSDSs), and personal protective equipment (PPE) are a requirement for and tailored to every dispersant application operation. The safety briefing includes each pilot's checklists for daily operations.

- Spotter aircraft are sent out in advance to identify suitable patches or slicks of oil for aerial treatment with dispersants, including those slicks that meet the 2-mile safety distance from vessels working in the area.

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 01 June, 2010
Update: 0900 02 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

>>>

- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- **Rate: 10 gpm**
- **Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)**
- **Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.**
- **>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 02 June, 2010
Update: 0900 03 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- **Rate: 10 gpm**
- **Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)**
- **Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.**
- **>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 03 June, 2010
Update: 0900 04 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

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Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
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- 7222 gallons COREXIT 9500 pumped this time period.

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 04 June, 2010
Update: 0900 05 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
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Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- **Rate: 10 gpm**
- **Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)**
- **Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.**
- >>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 05 June, 2010
Update: 0900 06 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
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UV- Fluorescence testing of Dispersant – Parameter Requirements

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

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- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- **Rate: 10 gpm**
- **Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)**
- **Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.**
- >>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 06 June, 2010
Update: 0900 07 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 06 June, 2010
Update: 0900 07 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

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Aerial Visual Observation – Weather Permitting

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 07 June, 2010
Update: 0900 08 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

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Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

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Date: 5/17/2010

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Initial (Update)

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Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

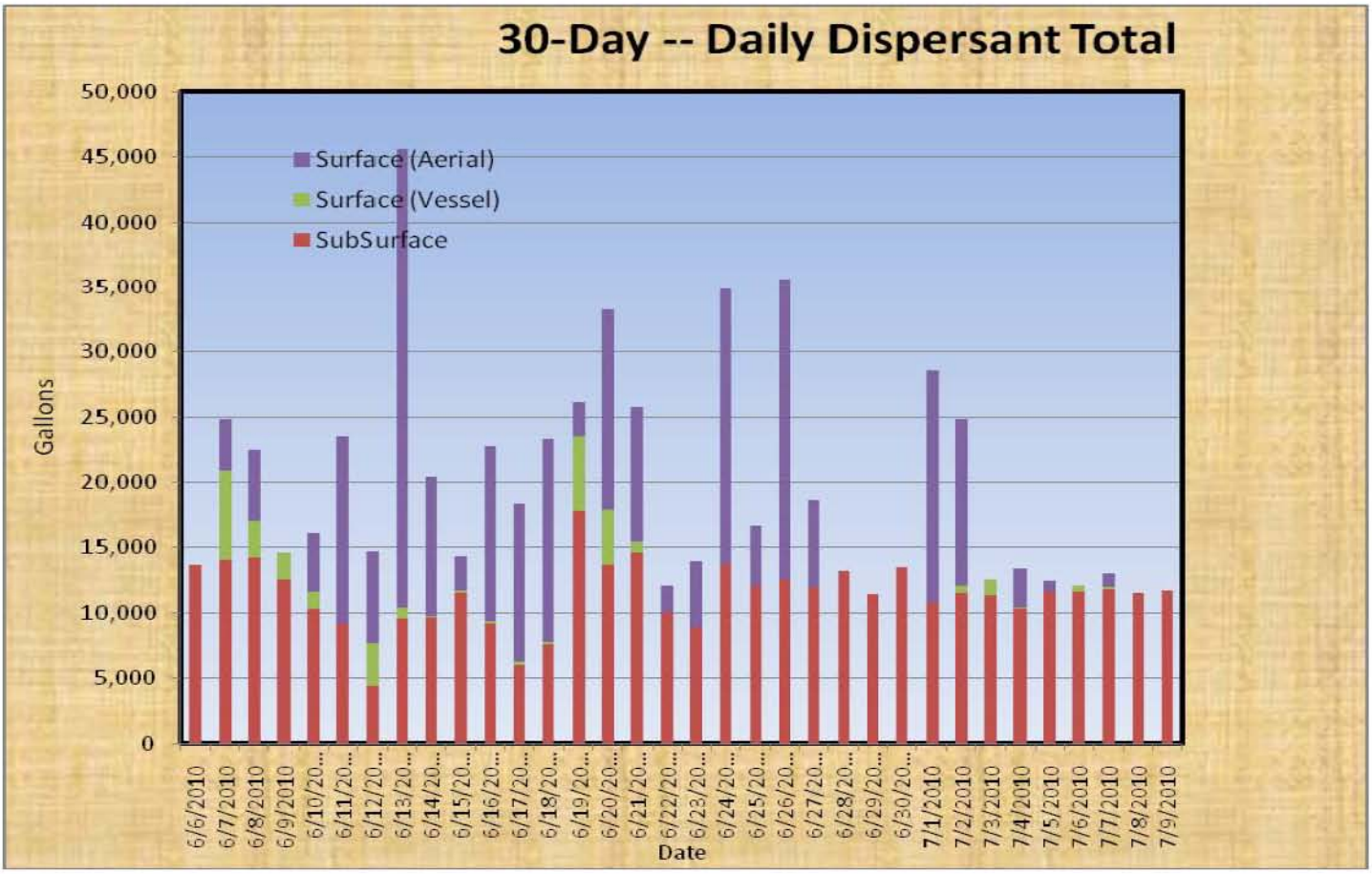
From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

Date: 07/09/2010

Reporting Period: 15 MAY – 09 JULY, 2010
Update: 0900 10 July 2010

1. Current Activities

- Friday 09 July update: period from 2200hrsL on 07/08/10 to 2200hrsL on 07/09/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,673 gallons (Total Cumulative: 692,470 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
>>>

5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

May 20, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Samuel Coleman, P.E.
Director, Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Re: May 19, 2010 Addendum 2 to Dispersant Monitoring and Assessment Directive ("Addendum 2")

Dear Admiral Landry and Mr. Coleman:

This letter is the response to the directive in Addendum 2 for BP Exploration & Production Inc. ("BP") to identify within 24 hours of issuance of Addendum 2 one or more approved dispersant products from the National Contingency Plan Product Schedule that are "available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopis, as indicated on the NCP Product Schedule".

BP's response below considers the criteria set forth in the directive in the following order (1) dispersants with a toxicity value greater than or equal to 32.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopis, as indicated on the NCP Product Schedule, (2) the availability based on existing stockpiles, the estimated time to begin aerial and subsurface application, and time for manufacturing, shipping and warehousing, and (3) as effective as Corexit EC9500A at dispersing the oil plume. As discussed below, given the above criteria, BP continues to believe that Corexit EC9500A is the best alternative.

(1) Toxicity Value.

Only five products on the NCP Product Schedule meet the criteria in the May 19th directive. These are: Sea Brat #4, Nokomis 3-F4 and Nokomis 3-AA, Mare Clean 200, and Neos AB3000.

EPA has used acute toxicity criteria to evaluate dispersants that will be applied to oil floating on the water surface. When evaluating the same materials for subsea use, additional criteria may be relevant. We have attached a summary of the criteria that BP is using to evaluate dispersant options, and comparison tables that evaluate each dispersant by such criteria, based on information currently available to us.

One relevant criterion, given the amount of dispersant that is required at this site and the proposed application near the ocean floor, is the potential long term effect and persistence of the chemicals in each dispersant.

In this regard, Sea Brat #4 contains a small amount of a chemical that may degrade to a nonylphenol (NP). The class of NP chemicals have been identified by various government agencies as potential endocrine disruptors, and as chemicals that may persist in the environment for a period of years. The manufacturer has not had the opportunity to evaluate this product for those potential effects, and BP has not had the opportunity to conduct independent tests to evaluate this issue either. BP learned of this issue after it applied for permission to use Sea Brat #4 at the incident site.

With this additional information in hand, we believe it would be prudent to evaluate the potential NP issue more carefully before EPA or the FOSC require Sea Brat to be used at the incident site, and in particular, before it is applied underwater near the ocean floor.

It would also be prudent to obtain the chemical formulas for the other dispersants that meet the acute toxicity criteria in the May 19th directive, and evaluate them for their potential to degrade to NP, or any other chemical that has been identified as a potential endocrine disruptor. BP has not been able to obtain this information in the 24 hour time frame provided in the directive.

COREXIT does not contain chemicals that degrade to NP. The manufacturer indicates that COREXIT reaches its maximum biodegradability within 28 days of application, and that it does not persist in the environment. These qualities make COREXIT a better choice for subsea application, based on the information currently available. COREXIT appears to have fewer long term effects than the other dispersants evaluated.

(2) Availability.

BP has an inventory of 246,380 gallons of COREXIT that are available for immediate use, and the manufacturer is able to produce an additional 68,000 gallons/day, which is sufficient to meet all anticipated dispersant needs at this site.

BP also has an inventory of 100,000 gallons of Sea Brat #4 available for immediate use. The manufacturer is able to produce an additional [ ] gallons/day, which would be sufficient to meet all anticipated surface application needs, but may not be sufficient to meet both surface and subsurface application needs combined.

BP does not have a stockpile of the other dispersants that meet the criteria in the May 19th Directive, and the manufacturers tell us that they cannot produce the requested volume for 10 to 14 days or more.

Attached to this letter is a table that describes the availability and production capability for each dispersant option (See "Dispersant Supply Profile.')

(3) Effectiveness.

COREXIT was 55% to 63% effective in dispersing samples of South Louisiana Crude Oil. Sea Brat #4 was 61% effective in dispersing samples of the same material. The products are expected to have similar levels of effectiveness in the field.

Attached to this letter is a table that shows the expected effectiveness ratings for the four other dispersants that meet the acute toxicity criteria in Addendum 2. The Nokomis products are slightly more effective (64-65%), while Mare Clean and Neos AB3000 are reported to be substantially more effective at dispersing oil (84% and 90%).

(4) Conclusion.

In the midst of an oil spill response, one of the most important criteria is whether the dispersant in question can be obtained in sufficient volumes to meet immediate needs. Dispersants must be applied to the spill shortly after release to be effective. As oil weathers in the environment, it becomes increasingly difficult to disperse with any of the listed products.

COREXIT was the only dispersant that was available immediately, in sufficiently large quantities, to be useful at the time of the spill. Subsequent efforts have identified Sea Brat #4 as a possible alternative that is equally effective at dispersing oil, but has fewer acute toxicity effects. In the short

time provided to us, BP and the manufacturer of Sea Brat #4 have not had the opportunity to evaluate other potentially significant criteria, including the risk that a small fraction of Sea Brat #4 may degrade to NP, and/or may persist in the environment.

None of the other dispersants that meet the acute toxicity and effectiveness criteria in Addendum 2 are available in sufficient quantities at this time. In addition, before supporting a decision to switch to those dispersants, it would be important to review the formula for each alternative, and evaluate it for additional risks, such as persistence in the environment. BP has not been able to do this in the time provided.

Based on the information that is available today, BP continues to believe that COREXIT was the best and most appropriate choice at the time when the incident occurred, and that COREXIT remains the best option for subsea application.

Before the Coast Guard and EPA issue further directives requiring a change in dispersant products or monitoring, we would appreciate the opportunity to meet with you to discuss the options and their efficacy and potential impacts, in view of the circumstances at the spill site, and the proposed methods of usage.

After you have the opportunity to review the attached information, please let me know the earliest time when you might be available to meet with our team to discuss these issues.

Sincerely,

Douglas J. Suttles

I. INTRODUCTION

This attachment contains detailed technical information in response to the directive addendum from the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA), directing BP to identify "one or more approved dispersant products from the National Contingency Plan Schedule that are available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value [greater][1] than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopsis." *See* Dispersant Monitoring and Assessment Directive - Addendum, dated May 19, 2010 ("May 19th Directive").

To respond to the short deadline contained in the May 19th Directive, the information that we can provide is necessarily limited to the information that was in hand or could be obtained on 24 hours notice.

II. BACKGROUND

By way of background, and to provide some context, we begin by briefly describing why COREXIT was selected and approved for use by the EPA and the USCG. COREXIT is on the list of dispersants that are pre-approved for surface application to oil. It is one of the most commonly used dispersants, and has been used before in the Gulf of Mexico. Most important is that it was possible to quickly obtain a large enough supply of COREXIT to meet the anticipated needs at this site, by purchasing it from the manufacturer and by borrowing it from other companies. No other dispersant was available in the required amounts at the time of the oil spill.

III. POTENTIAL ALTERNATIVE DISPERSANTS

BP has identified the following dispersant products as potential alternatives to the COREXIT products approved for use:

1. Dispersit SPC 1000;
2. JD 2000;
3. Mare Clean 200;
4. Neos AB3000; and
5. Nokomis 3-AA;
6. Nokomis 3-F4
7. SAF-RON Gold;

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[1] The directive says "less than or equal to," but BP presumes that the intended expression was "greater than or equal to," since lower toxicity values indicate higher toxicity.

8. Sea Brat #4;

The Mare Clean 200, Neos AB3000, Nokomis 3-AA, Nokomis 3-F4 and Sea Brat #4 all have LC50 values greater than or equal to either the *Menidia* or *Mysidopsis* criteria, as required by the May 19th Directive.

IV. EVALUATION CRITERIA

In the table in section __ below, BP provides nine categories of information to assist the USCG and EPA in choosing alternative dispersants for use in the Spill Response. These categories are the following:

A. NCP Product Schedule Listing

Pursuant to Subpart J of the National Oil and Hazardous Substances Pollution Contingency Plan, no dispersant may be used in the United States if it is not listed on the National Contingency Plan Product Schedule. Accordingly, the only dispersant products being considered for possible use in the spill response are among those currently listed on the NCP National Product Schedule.

B. Effectiveness in Laboratory Trials

Each dispersant must be tested for effectiveness before it is listed in the Product Schedule. In addition, pursuant to EPA and U.S. Coast Guard approval, samples of Dispersit SPC 1000, JD-2000, Nokomis 3-AA, SAF-RON Gold, and Sea Brat #4 were tested in the laboratory for their effectiveness in dispersing oil using both the swirling task method (EPA-approved method) and a modified EXDET (Exxon Dispersant Effectiveness Test).[2] The test oil used was a surrogate from the nearby Thunder Hawk rig since fresh crude oil from the MC 252 was unavailable at the time.

C. Effectiveness in Field Trials

Actual field trials can provide a more accurate assessment of the potential performance of dispersants than laboratory trials. Field trials on MC 252 oil in various stages of weathering have been completed for Nalco EC 9500A.

D. Acute Toxicity

Each dispersant must be tested for acute toxicity before it is listed in the Product Schedule. In addition, we have reviewed and will continue to review information available from

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[2] The EXDET test measures relative dispersant effectiveness, allows comparisons among small-scale laboratory tests, and assists with comparisons to field trials (Becker, K.W., L.G. Coker, and M.A. Walsh. 1991. "A method for evaluating oil spill dispersants, Exxon Dispersant Effectiveness Test (EXDET)" in Oceans '91 Proceedings, Oceanic Engineering Society of IEEE, New York, NY. pp. 1486-1490).

material data safety sheets (MSDS), toxicity information available from the National Product Schedule, information provided by manufacturers and information available in scientific literature.

E. Persistence, Bioaccumulation and Chronic Effects and Endocrine Disruption

BP is reviewing available information about the persistence, bioaccumulation, chronic effects, endocrine disruption and other impacts of each dispersant to determine which dispersants will have the fewest impacts overall, and not just the best performance on the tests for the Product Schedule. There may be only limited data on long-term impacts for many of the dispersants as formulated, however. In addition, there may be only limited information on the constituents of the dispersants, since the dispersants typically contain proprietary substances whose identities are not publicly available. For those dispersants where constituents and/or data are publicly available, BP will identify and catalogue long-term impacts. For those where constituents are not publicly available, BP will endeavor to obtain confidential information about the constituents so that we may identify long-term impacts and review them with the EPA in a confidential manner.

*** CONFIDENTIAL INFORMATION BELOW***

[

]

[redacted]

[redacted]

*** CONFIDENTIAL INFORMATION ABOVE***

F. Whether Potential Alternatives Have Been Prohibited Outside the United States

As part of our evaluation of the COREXIT products approved for use, BP has reviewed available information concerning their use outside the United States.[3] BP has conducted similar research for the 8 potential alternatives products. To date, we are not aware that any have been prohibited by any foreign regulators.

G. Behavior in the Environment

The behavior of dispersants in the environment may affect both its effectiveness and its long term impacts. One factor determining the behavior of dispersants after application is the tendency of a dispersant to rise or sink in the water column which, in turn, depends on whether the dispersants contain significant quantities of petroleum-based solvents that are less dense than water. Two other factors are the biodegradation of the dispersant and its tendency to bioaccumulate and bioconcentrate.

H. Quantities Currently Available and Reliability of Supply

An important consideration in identifying and selecting possible alternative dispersants is the commercial availability of those products in quantities sufficient to meet current and anticipated needs. Approximately 75,000 gallons of dispersant is used each day for surface

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[3] We have learned that COREXIT 9527 and COREXIT 9500 were removed from the list of approved dispersants in the UK. Our understanding is that these two products were removed due to a new test added by the UK regulators. The test, known as the "rocky shores test," is designed to evaluate the toxicity of the dispersants when sprayed in the tidal zone, and the mortality of limpets exposed to the dispersant. The test was added because of concerns that dispersants may cause more significant ecological impacts on rocky shores than they do on sandy or pebble beaches (primarily seaweed overgrowth due to increased mortality in the harvester species). The UK regulators continue to allow the use of existing stockpiles of these COREXIT products away from rocky shorelines, with approval. We have not been informed by the On Scene Coordinator that the "rocky shores test" is applicable to the conditions in the Gulf, as most tidal areas near the release are not rocky, and again US EPA and Coast Guard have approved both products for use in this response.

and subsea application. Going forward, an estimated 50,000 gallons per day will be needed for continued aerial spraying. It is also important to consider the extent to which a manufacturer can reliably produce and deliver sufficient quantities of quality-grade product to the field. Therefore, we have and will continue to evaluate any potential supply chain problems (e.g., interruptions in the manufacturer's ability to obtain raw materials needed to make the product), quality control issues (e.g., production of significant volumes off-specification product that is ineffective in dispersing oil and could not be used) and delivery problems (e.g., inability to arrange timely transport of the product to the field).

V. Available Data on the Potential Alternatives

In the following table, BP has compiled the available information relevant to the dispersants and criteria described above.

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
A. NCP Product Schedule		Yes	Yes	Yes	Yes	Yes	Yes	Yes
B. Effectiveness (EPA Swirl Test)	% Effective (Prudhoe Bay crude)	45.3	37.4	60.4	40	63.20	53.6	84.80
	% Effective (South Lousiana crude)	54.7	63.4	77.8	100	65.70	60.7	53.80
	% Effective (Average)	50.0	50.4	69.1	73	64.50	57.1	69.30
C. Effectiveness (Gulf Field Test)	Based on field test protocols developed by the Dispersant Operation Group				Not yet tested	Not yet tested	May 8 field test indicated oil dispersed with formation of droplets with a likely median diameter <50 microns	Not yet tested
D.1 Acute Toxicity Data (NCP Schedule)	*Mysidopsis bahia* (shrimp) *48hr LC50 (mg/L)*	32.23	24.14	90.50	16.6	20.16	14.0	63.00
	Menidia beryllina (inland silverside fish) *96hr LC50 (mg/L)*	25.20	14.57	407.00	3.5	34.2	30.0	29.43
D.2 Additional Acute Toxicity Data (from MSDS)	*Acartia tonsa* marine copepod) 48hr LC50 (mg/L)	34	--	--	--	--	--	--
	Artemia (shrimp) 48hr LC50 (mg/L)	20.7	--	--	--	--	--	--
	Psetta maxima (Turbot flatfish) 96hr LC50 (mg/l)	--	50	--	--	--	--	--

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
E. Persistence, Bioaccumulation and Chronic Effects and Endocrine Disruption: Constituents	Based on Information Provided by Manufacturer	Proprietary Mixture	Proprietary Mixture	Proprietary Mixture	Proprietary Mixture	Formulations may contain nonylphenol polyethylene ethoxylates (NPE), which biodegrade to nonylphenol, a potential endrocrine disruptor NPE use restricted in EU, under review in US.	Proprietary Mixture	Proprietary Mixture
G.1. Behavior in the Environment: Solvent	Based on Information Provided by Manufacturer	Petroleum based solvent with proplyene glycol	2-butoxyethanol and propylene glycol	Proprietary mixture, insufficient information	Water based containing emulsifiers, dispersants, and water dilutable coupling solvent	Water and propylene glycol	Water and propylene glycol	Proprietary mixture, insufficient information

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
G.2. Behavior in the Environment: Biodegradation	Based on Information Provided by Manufacturer	Manufacturer describes as biodegradable, majority of components expected to readily biodegrade	Manufacturer describes as biodegradable, majority of components expected to readily biodegrade	Proprietary mixture, insufficient information	Manufacturer describes as "completely biodegradable surfactants" - Proprietary Mixture Currently Insufficient Composition Information to Assess	Nonylphenol, degradation product of NPE, potentially resistant to biodegradation during subsurface application - Proprietary Mixture Currently Insufficient Composition Information to Assess	MSDS describes product as highly biodegradable	Proprietary mixture, insufficient information
G.3. Behavior in the Environment: Potential for Bioaccumulation	Based on Information Provided by Manufacturer	Manufacturer reports component substances have a potential to bioaccumulate	Manufacturer reports component substances have a low potential to bioconcentrate	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information
H. Quantities Currently Available and Reliability of Supply		BP to provide	BP to provide	BP to provide	Anticipates increasing to 20,000 gallons per day, and possibly later to 60,000 gallons per day	BP to provide	BP to provide	BP to provide

VI. Conclusions

As discussed above, there are many considerations that are relevant to selecting dispersants for use.

*** CONFIDENTIAL INFORMATION BELOW***

[redacted]

*** CONFIDENTIAL INFORMATION ABOVE***

FOUO

		Daily Dispersant Used (gallons)				Daily Approved (gallons)			Approved Minus Used (gallons) Negative number indicates amount used was less than the approved amount			
Date	ADO-Hourss SitRep	Subsea	Aerial	Vessel	Total:	Subsea	Aerial	Vessel	Subsea	Aerial	Vessel	
5/26	14400	11,529	299	7,453	19,281							Directive signed on 5/26 by USCG and EPA, on 5/28 by BP; daily subsea limit 15,000 gallons, surface requires FOSC approval. Top kill ops commenced.
5/27	14040	14,347	229	800	15,376	15,000	229	0	-653	0	800	Approval processes for new Directive being finalized; 229 aerial used for dispersant test, retroactively approved
5/28		13,670	12,045	6,400	32,115	15,000	15,000	6,400	-1,330	-2,955	0	Approval processes for new Directive being finalized; 6,400 vessel required to control VOCs and ensure safe operations near the source, retroactively approved. Top Hat Ops - high flow from well.
5/29	14974	14,588	0	2,900	17,488	15,000	15,000	6,000	-412	-15,000	-3,100	Top kill declared unsuccessful. Top Hat Ops commenced - high flow from well.
5/30	12958	13,073	15,131	2,500	30,704	15,000	19,000	6,000	-1,927	-3,869	-3,500	Top Hat Ops - high flow from well.
5/31	13122	13,936	11,676	10	25,622	15,000	19,000	6,000	-1,064	-7,324	-5,990	Top Hat Ops - high flow from well.
6/1	7865	12,201	0	0	12,201	15,000	0	6,000	-2,799	0	-6,000	Top Hat Ops - high flow from well.
6/2	10241	8,073	0	3,375	11,448	15,000	0	6,000	-6,927	0	-2,625	6/2 ongoing vessel approval allows more than 6,000 gallons when needed for VOC control per approved vapor suppression guidelines. Top Hat Ops - high flow from well.
6/3	13931	17,753	1,900	4,300	23,953	17,753	2,000	6,000	0	-100	-1,700	17,753 subsea retroactively approved, required for high VOC control during LMRP cap removal, actual amount greater than anticipated due to meter error. Top Hat Ops - high flow from well.
6/4	13513	20,655	0	13,701	34,356	23,000	0	13,701	-2,345	0	0	Several hours of no subsea dispersant use afternoon of 6/3 during LMRP cap removal led to high VOCs. 23,000 subsea approved for 6/4; vessel dispersant use consistent with approved plan. Top hat in place.
6/5	13640	20,306	125	0	20,431	19,666	125	6,000	640	0	-6,000	19,666 subsea retroactively approved; amount over 15,000 result of meter error; amount later revised from 19,666 estimate to 20,306
6/6	14105	13,937	0	0	13,937	15,000	2,000	6,000	-1,063	-2,000	-6,000	
6/7	14207	14,732	3,998	6,746	25,476	15,000	4,000	6,746	-268	-2	0	late on 6/6 high VOCs resulted after subsea reduced to 4 gpm per EPA step down; VOCs took 1.5 days to bring under control; vessel dispersant use consistent with approved plan
6/8	12523	13,763	5,505	2,819	22,087	15,000	32,000	6,000	-1,237	-26,495	-3,181	
6/9	10279	12,112	0	2,100	14,212	15,000	0	6,000	-2,888	0	-3,900	
6/10	9193	10,163	4,506	1,366	16,035	15,000	21,000	6,000	-4,837	-16,494	-4,634	
6/11	4371	8,447	14,305	0	22,752	15,000	15,700	6,000	-6,553	-1,395	-6,000	
6/12	4371	4,852	6,996	3,360	15,208	15,000	7,000	6,000	-10,148	-4	-2,640	
6/13		9,916	35,212	800	45,928	15,000	36,000	6,000	-5,084	-788	-5,200	
6/14	9596	9,800	10,706	35	20,541	15,000	17,800	6,000	-5,200	-7,094	-5,965	
6/15	9689	11,726	2,608	160	14,494	15,000	15,500	6,000	-3,274	-12,892	-5,840	Discoverer Enterprise Down due to lightning strike - high flow from cap.
6/16	11578	8,777	13,380	213	22,370	15,000	19,000	6,000	-6,223	-5,620	-5,787	
6/17	9152	5,783	12,123	300	18,186	15,000	18,700	6,000	-9,237	-6,577	-5,700	
6/18	5962	9,148	15,564	147	24,859	15,000	19,200	6,000	-5,852	-3,636	-5,853	
6/19	7642	16,911	2,604	5,906	25,421	21,600	12,300	6,000	-4,689	-9,696	-94	late on 6/18 high VOCs resulted after a shut down of Enterprise oil recovery during EPA step down (4 gpm); VOCs took 1.5 days to bring under control - high flow from cap.
6/20	13655	14,070	15,403	4,173	33,646	15,000	15,500	6,000	-930	-97	-1,827	
6/21	10583	14,233	10,355	862	25,450	15,000	10,400	6,000	-767	-45	-5,138	Discoverer Enterprise down for ~2 hrs due to pressure regulator failure
6/22	10046	9,793	2,008	0	11,801	15,000	10,487	6,000	-5,207	-8,479	-6,000	
6/23	8886	9,891	5,099	0	14,990	15,000	10,000	6,000	-5,109	-4,901	-6,000	
6/24	13808	12,871	21,088	0	33,959	15,000	22,400	6,000	-2,129	-1,312	-6,000	Discoverer Enterprise down for ~12 hrs due to accidental disconnect of cap
6/25	12085	12,540	4,633	0	17,173	15,000	14,400	6,000	-2,460	-9,767	-6,000	
6/26	12535	12,654	23,022	0	35,676	15,000	43,600	6,000	-2,346	-20,578	-6,000	Discoverer Enterprise down for ~2 hrs due to fire alarm detection
6/27	11982	11,558	6,623	3	18,184	15,000	10,880	6,000	-3,442	-4,257	-5,997	
6/28	13395	13,174	0	0	13,174	15,000	5,000	6,000	-1,826	-5,000	-6,000	Discoverer Enterprise down for ~1 hr for lightning
6/29		11,560	0	324	11,884	15,000	10,000	6,000	-3,440	-10,000	-5,676	Discoverer Enterprise down for ~1.5 hrs for lightning
6/30	13474	13,609	0	0	13,609	15,000	10,000	6,000	-1,391	-10,000	-6,000	
7/1	10758	10,558	17,852	0	28,410	15,000	20,100	6,000	-4,442	-2,248	-6,000	Discoverer Enterprise down for ~2 hrs for lightning
7/2	11509	11,065	12,737	1,473	25,275	15,000	20,000	6,000	-3,935	-7,263	-4,527	
7/3	11363	11,698	0	432	12,130	15,000	10,000	6,000	-3,302	-10,000	-5,568	
7/4	10323	10,429	3,000	79	13,508	15,000	3,840	6,000	-4,571	-840	-5,921	
7/5	11649	11,688	803	0	12,491	15,000	6,700	6,000	-3,312	-5,897	-6,000	
7/6	11654	11,655	0	473	12,128	15,000	10,000	6,000	-3,345	-10,000	-5,527	
7/7	11279	11,770	1,000	245	13,015	15,000	10,000	6,000	-3,230	-9,000	-5,755	

Notes
- Aerial and Surface data sourced from ICS 209s
- Subsea data sourced from 'Subsea Dispersant Injection Dispensed Running Total BP Log' housed on Houston IMT sharepoint
- Aerial requests are for specific identified dispersible targets as identified by over flights
- Aerial approved amount is frequently less than requested (not shown) amount
- Aerial dispersant used is typically less than approved amount, with most frequent causes being weather or late approvals limiting flight time or presence of people or animals in target zone

		Daily Dispersant Used (gallons)				Daily Approved (gallons)			Approved Minus Used (gallons) Negative number indicates amount used was less than the approved amount			
Date	ADD-Houma SitRep	Subsea	Aerial	Vessel	Total	Subsea	Aerial	Vessel	Subsea	Aerial	Vessel	
7/8	11553	11,512	0	0	11,512	15,000	10,000	3,000	-3,488	-10,000	-3,000	Vessel approval allows 3,000 during stable well cap operations, 6,000 during active well cap, as well as additional vessel dispersant if needed to control VOCs per approved vapor suppression guidelines
7/9	11671	10,748	0	0	10,748	15,000	10,000	3,000	-4,252	-10,000	-3,000	
7/10	12710	13,210	0	0	13,210	15,000	10,000	6,000	-1,790	-10,000	-6,000	Cap Removed - Stacking Cap - high flow from well.
7/11	15420	15,420	0	0	15,420	20,000	10,000	6,000	-4,580	-10,000	-6,000	20,000 subsea approved. Well Integrity Test and cap replacement plan approved by Adm Allen calls for 12gpm subsea when operationals permit to prevent high VOCs during reduced containment and critical operations. Cap Removed - Stacking Cap - high flow from well.
7/12	14038	14,038	0	0	14,038	17,280	10,000	6,000	-3,242	-10,000	-6,000	12gpm (17,280) subsea approved. Well Integrity Test and cap replacement plan approved by Adm Allen calls for 12gpm subsea when operations permit to prevent high VOCs during reduced containment and critical operations. Cap Removed - Stacking Cap - high flow from well.

May 20, 2010

Dispersant Monitoring and Assessment Directive – Addendum

This is an addendum (Addendum 2) to the Dispersant Monitoring and Assessment Directive issued on May 10, 2010, and Addendum 1 issued on May 14, 2010 by the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA) to BP. The requirements in this Addendum 2 apply to Parts 1 and 2 of the May 10, 2010 Directive and are in addition to the requirements of that Directive. BP shall commence Parts 1 and 2 requirements before subsurface application of dispersant is initiated and continues the Parts 1 and 2 requirements, Addendum 1, and this Addendum 2 until cancelled or modified by the USCG and EPA.

Alternative Dispersant additional Requirements:

1. Sampling of dispersant/oil and oil-only waters must be continued per the Directive, and in addition, baseline data of waters without direct application of dispersant or oil shall also be collected by BP. Monitoring of subsurface dispersant application by BP shall be performed from a vessel capable of performing all requirements of the May 10, 2010, Dispersant Monitoring and Assessment Directive and Addendum 1 on each day that dispersant is applied. As used in this Addendum 2, a "day" shall mean a calendar day.
2. Within 24 hours of the issuance of this Addendum 2, BP shall identify to the FOSC and the EPA RRT Co-chair for EPA's and the FOSC's approval, one or more approved dispersant products from the National Contingency Plan Product Schedule that are available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopsis, as indicated on the NCP Product Schedule (http://www.epa.gov/oem/content/ncp/tox_tables.htm). The less toxic dispersant product(s) shall be used by BP for surface application and subsurface application as directed by the FOSC. Within 72 hours after submitting the list of alternatives, and after receiving EPA approval, BP shall immediately use only the approved alternative dispersant. Should BP not be able to identify alternative dispersant products, BP shall provide the FOSC and EPA RRT CO-Chair a detailed description of the products investigated, the reason the products did not meet the standards described above. Availability shall be based on existing stockpiles of dispersants, the estimated time to begin and aerial and subsurface application, time for manufacturing, shipping, and warehousing.
3. The effectiveness of the dispersant in subsurface application shall be determined as specified in Directive 1 Part 1, and Part 2. Dispersant application can be applied subsurface if, and only if, daily monitoring is performed.
4. BP shall provide 48 hours advanced notice of departure and trip duration timelines of the monitoring vessel to the FOSC and the EPA RRT Co-chair.
5. Monitoring data on the use of the less toxic dispersant product(s) shall be reported by BP to the FOSC and the EPA RRT Co-chair on a daily basis. This reporting shall include a sample tracking table. Daily data reports shall thereafter be provided by BP to the FOSC and the EPA RRT Co-chair as soon as practicable on the day following use of the less toxic dispersant product(s) by BP, but in no event later than 24 hours after use.

May 26, 2010

Dispersant Monitoring and Assessment Directive - Addendum 3

Reduction in Use of Dispersants. BP shall implement measures to limit the total amount of surface and subsurface dispersant applied each day to the minimum amount possible. BP shall establish an overall goal of reducing dispersant application by 75% from the maximum daily amount used as follows:

a. Surface Application. BP shall eliminate the surface application of dispersants. In rare cases when there may have to be an exemption, BP must make a request in writing to the FOSC providing justification which will include the volume, weather conditions, mechanical or means for removal that were considered and the reason they were not used, and other relevant information to justify the use of surface application. The FOSC must approve the request and volume of dispersant prior to initiating surface application.

b. Subsurface Application. BP shall be limited to a maximum subsurface application of dispersant of not more than 15,000 gallons in a single calendar day.

Application of dispersant in amounts greater than specified in this Addendum 3 shall be in such amounts, on such day(s) and for such application (surface or subsurface) only as specifically approved in writing by the USCG Federal On-Scene Coordinator (FOSC).

material data safety sheets (MSDS), toxicity information available from the National Product Schedule, information provided by manufacturers and information available in scientific literature.

E. Persistence, Bioaccumulation and Chronic Effects and Endocrine Disruption

BP is reviewing available information about the persistence, bioaccumulation, chronic effects, endocrine disruption and other impacts of each dispersant to determine which dispersants will have the fewest impacts overall, and not just the best performance on the tests for the Product Schedule. There may be only limited data on long-term impacts for many of the dispersants as formulated, however. In addition, there may be only limited information on the constituents of the dispersants, since the dispersants typically contain proprietary substances whose identities are not publicly available. For those dispersants where constituents and/or data are publicly available, BP will identify and catalogue long-term impacts. For those where constituents are not publicly available, BP will endeavor to obtain confidential information about the constituents so that we may identify long-term impacts and review them with the EPA in a confidential manner.

*** CONFIDENTIAL INFORMATION BELOW***

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*** CONFIDENTIAL INFORMATION ABOVE***

F. Whether Potential Alternatives Have Been Prohibited Outside the United States

As part of our evaluation of the COREXIT products approved for use, BP has reviewed available information concerning their use outside the United States.[3] BP has conducted similar research for the 8 potential alternatives products. To date, we are not aware that any have been prohibited by any foreign regulators.

G. Behavior in the Environment

The behavior of dispersants in the environment may affect both its effectiveness and its long term impacts. One factor determining the behavior of dispersants after application is the tendency of a dispersant to rise or sink in the water column which, in turn, depends on whether the dispersants contain significant quantities of petroleum-based solvents that are less dense than water. Two other factors are the biodegradation of the dispersant and its tendency to bioaccumulate and bioconcentrate.

H. Quantities Currently Available and Reliability of Supply

An important consideration in identifying and selecting possible alternative dispersants is the commercial availability of those products in quantities sufficient to meet current and anticipated needs. Approximately 75,000 gallons of dispersant is used each day for surface

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[3] We have learned that COREXIT 9527 and COREXIT 9500 were removed from the list of approved dispersants in the UK. Our understanding is that these two products were removed due to a new test added by the UK regulators. The test, known as the "rocky shores test," is designed to evaluate the toxicity of the dispersants when sprayed in the tidal zone, and the mortality of limpets exposed to the dispersant. The test was added because of concerns that dispersants may cause more significant ecological impacts on rocky shores than they do on sandy or pebble beaches (primarily seaweed overgrowth due to increased mortality in the harvester species). The UK regulators continue to allow the use of existing stockpiles of these COREXIT products away from rocky shorelines, with approval. We have not been informed by the On Scene Coordinator that the "rocky shores test" is applicable to the conditions in the Gulf, as most tidal areas near the release are not rocky, and again US EPA and Coast Guard have approved both products for use in this response.

and subsea application. Going forward, an estimated 50,000 gallons per day will be needed for continued aerial spraying. It is also important to consider the extent to which a manufacturer can reliably produce and deliver sufficient quantities of quality-grade product to the field. Therefore, we have and will continue to evaluate any potential supply chain problems (e.g., interruptions in the manufacturer's ability to obtain raw materials needed to make the product), quality control issues (e.g., production of significant volumes off-specification product that is ineffective in dispersing oil and could not be used) and delivery problems (e.g., inability to arrange timely transport of the product to the field).

V. Available Data on the Potential Alternatives

In the following table, BP has compiled the available information relevant to the dispersants and criteria described above.

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
A. NCP Product Schedule		Yes	Yes	Yes	Yes	Yes	Yes	Yes
B. Effectiveness (EPA Swirl Test)	% Effective (Prudhoe Bay crude)	45.3	37.4	60.4	40	63.20	53.6	84.80
	% Effective (South Lousiana crude)	54.7	63.4	77.8	100	65.70	60.7	53.80
	% Effective (Average)	50.0	50.4	69.1	73	64.50	57.1	69.30
C. Effectiveness (Gulf Field Test)	Based on field test protocols developed by the Dispersant Operation Group				Not yet tested	Not yet tested	May 8 field test indicated oil dispersed with formation of droplets with a likely median diameter <50 microns	Not yet tested
D.1 Acute Toxicity Data (NCP Schedule)	*Mysidopsis bahia* (shrimp) *48hr LC50 (mg/L)*	32.23	24.14	90.50	16.6	20.16	14.0	63.00
	Menidia beryllina (inland silverside fish) *96hr LC50 (mg/L)*	25.20	14.57	407.00	3.5	34.2	30.0	29.43
D.2 Additional Acute Toxicity Data (from MSDS)	*Acartia tonsa* marine copepod) 48hr LC50 (mg/L)	34	--	--	--	--	--	--
	Artemia (shrimp) 48hr LC50 (mg/L)	20.7	--	--	--	--	--	--
	Psetta maxima (Turbot flatfish) 96hr LC50 (mg/l)	--	50	--	--	--	--	--

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
E. Persistence, Bioaccumulation and Chronic Effects and Endocrine Disruption: Constituents	Based on Information Provided by Manufacturer	Proprietary Mixture	Proprietary Mixture	Proprietary Mixture	Proprietary Mixture	Formulations may contain nonylphenol polyethylene ethoxylates (NPE), which biodegrade to nonylphenol, a potential endrocrine disruptor NPE use restricted in EU, under review in US.	Proprietary Mixture	Proprietary Mixture
G.1. Behavior in the Environment: Solvent	Based on Information Provided by Manufacturer	Petroleum based solvent with proplyene glycol	2-butoxyethanol and propylene glycol	Proprietary mixture, insufficient information	Water based containing emulsifiers, dispersants, and water dilutable coupling solvent	Water and propylene glycol	Water and propylene glycol	Proprietary mixture, insufficient information

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
G.2. Behavior in the Environment: Biodegradation	Based on Information Provided by Manufacturer	Manufacturer describes as biodegradable, majority of components expected to readily biodegrade	Manufacturer describes as biodegradable, majority of components expected to readily biodegrade	Proprietary mixture, insufficient information	Manufacturer describes as "completely biodegradable surfactants" - Proprietary Mixture Currently Insufficient Composition Information to Assess	Nonylphenol, degradation product of NPE, potentially resistant to biodegradation during subsurface application - Proprietary Mixture Currently Insufficient Composition Information to Assess	MSDS describes product as highly biodegradable	Proprietary mixture, insufficient information
G.3. Behavior in the Environment: Potential for Bioaccumulation	Based on Information Provided by Manufacturer	Manufacturer reports component substances have a potential to bioaccumulate	Manufacturer reports component substances have a low potential to bioconcentrate	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information
H. Quantities Currently Available and Reliability of Supply		BP to provide	BP to provide	BP to provide	Anticipates increasing to 20,000 gallons per day, and possibly later to 60,000 gallons per day	BP to provide	BP to provide	BP to provide

VI. Conclusions

As discussed above, there are many considerations that are relevant to selecting dispersants for use.

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5/27	14040	14,347	229	800	15,376	15,000	229	0	-653	0	800	Approval processes for new Directive being finalized. 229 aerial used for dispersant test, retroactively approved
5/28		13,670	12,045	6,400	32,115	15,000	15,000	6,400	-1,330	-2,955	0	Approval processes for new Directive being finalized. 6,400 vessel required to control VOCs and ensure safe operations near the source, retroactively approved. Top Hat Ops - high flow from well.
5/29	14974	14,588	0	2,900	17,488	15,000	15,000	6,000	-412	-15,000	-3,100	Top kill declared unsuccessful. Top Hat Ops commenced - high flow from well.
5/30	12548	13,073	15,131	2,500	30,704	15,000	19,000	6,000	-1,927	-3,869	-3,500	Top Hat Ops - high flow from well.
5/31	13122	13,936	11,676	10	25,622	15,000	19,000	6,000	-1,064	-7,324	-5,990	Top Hat Ops - high flow from well.
6/1	7465	12,201	0	0	12,201	15,000	0	6,000	-2,799	0	-6,000	Top Hat Ops - high flow from well.
6/2	10241	8,073	0	3,375	11,448	15,000	0	6,000	-6,927	0	-2,625	6/2 ongoing vessel approval allows more than 6,000 gallons when needed for VOC control per approved vapor suppression guidelines. Top Hat Ops - high flow from well.
6/3	13931	17,753	1,900	4,300	23,953	17,753	2,000	6,000	0	-100	-1,700	17,753 subsea retroactively approved, required for high VOC control during LMRP cap removal, actual amount greater than anticipated due to meter error. Top Hat Ops - high flow from well.
6/4	13513	20,655	0	13,701	34,356	23,000	0	13,701	-2,345	0	0	Several hours of no subsea dispersant use afternoon of 6/3 during LMRP cap removal led to high VOCs. 23,000 subsea approved for 6/4; vessel dispersant use consistent with approved plan. Top hat in place.
6/5	13640	20,306	125	0	20,431	19,666	125	6,000	640	0	-6,000	19,666 subsea retroactively approved; amount over 15,000 result of meter error, amount later revised from 19,666 estimate to 20,306
6/6	14105	13,937	0	0	13,937	15,000	2,000	6,000	-1,063	-2,000	-6,000	
6/7	14207	14,732	3,998	6,746	25,476	15,000	4,000	6,746	-268	-2	0	late on 6/6 high VOCs resulted after subsea reduced to 4 gpm per EPA step down; VOCs took 1.5 days to bring under control; vessel dispersant use consistent with approved plan
6/8	12521	13,763	5,505	2,819	22,087	15,000	32,000	6,000	-1,237	-26,495	-3,181	
6/9	10278	12,112	0	2,100	14,212	15,000	0	6,000	-2,888	0	-3,900	
6/10	9193	10,183	4,506	1,366	16,055	15,000	21,000	6,000	-4,837	-16,494	-4,634	
6/11	4371	8,447	14,305	0	22,752	15,000	15,700	6,000	-6,553	-1,395	-6,000	
6/12	4371	4,852	6,996	3,360	15,208	15,000	7,000	6,000	-10,148	-4	-2,640	
6/13		9,916	35,212	800	45,928	15,000	36,000	6,000	-5,084	-788	-5,200	
6/14	9596	9,800	10,706	35	20,541	15,000	17,800	6,000	-5,200	-7,094	-5,965	
6/15	9689	11,726	2,608	160	14,494	15,000	15,500	6,000	-3,274	-12,892	-5,840	Discoverer Enterprise Down due to lightning strike - high flow from cap.
6/16	11578	8,777	13,380	213	22,370	15,000	19,000	6,000	-6,223	-5,620	-5,787	
6/17	9152	5,763	12,123	300	18,186	15,000	18,700	6,000	-9,237	-6,577	-5,700	
6/18	5962	9,148	15,564	147	24,859	15,000	19,200	6,000	-5,852	-3,636	-5,853	
6/19	7642	16,911	2,604	5,906	25,421	21,600	12,300	6,000	-4,689	-9,696	-94	late on 6/18 high VOCs resulted after a shut down of Enterprise oil recovery during EPA step down (4 gpm); VOCs took 1.5 days to bring under control - high flow from cap.
6/20	13695	14,070	15,403	4,173	33,646	15,000	15,500	6,000	-930	-97	-1,827	
6/21	14583	14,233	10,355	862	25,450	15,000	10,400	6,000	-767	-45	-5,138	Discoverer Enterprise down for ~2 hrs due to pressure regulator failure
6/22	10046	9,793	2,008	0	11,801	15,000	10,487	6,000	-5,207	-8,479	-6,000	
6/23	8886	9,891	5,099	0	14,990	15,000	10,000	6,000	-5,109	-4,901	-6,000	
6/24	13808	12,871	21,088	0	33,959	15,000	22,400	6,000	-2,129	-1,312	-6,000	Discoverer Enterprise down for ~12 hrs due to accidental disconnect of cap
6/25	12065	12,540	4,633	0	17,173	15,000	14,400	6,000	-2,460	-9,767	-6,000	
6/26	12535	12,654	23,022	0	35,676	15,000	43,600	6,000	-2,346	-20,578	-6,000	Discoverer Enterprise down for ~2 hrs due to fire alarm detection
6/27	11982	11,558	6,623	3	18,184	15,000	10,880	6,000	-3,442	-4,257	-5,997	
6/28	13195	13,174	0	0	13,174	15,000	5,000	6,000	-1,826	-5,000	-6,000	Discoverer Enterprise down for ~1 hr for lightning
6/29		11,560	0	324	11,884	15,000	10,000	6,000	-3,440	-10,000	-5,676	Discoverer Enterprise down for ~1.5 hrs for lightning
6/30	13474	13,609	0	0	13,609	15,000	10,000	6,000	-1,391	-10,000	-6,000	
7/1	30758	10,558	17,852	0	28,410	15,000	20,100	6,000	-4,442	-2,248	-6,000	Discoverer Enterprise down for ~2 hrs for lightning
7/2	11505	11,065	12,737	1,473	25,275	15,000	20,000	6,000	-3,935	-7,263	-4,527	
7/3	11363	11,698	0	432	12,130	15,000	10,000	6,000	-3,302	-10,000	-5,568	
7/4	10373	10,429	3,000	79	13,508	15,000	3,840	6,000	-4,571	-840	-5,921	
7/5	11649	11,688	803	0	12,491	15,000	6,700	6,000	-3,312	-5,897	-6,000	
7/6	11654	11,655	0	473	12,128	15,000	10,000	6,000	-3,345	-10,000	-5,527	
7/7	11779	11,770	1,000	245	13,015	15,000	10,000	6,000	-3,230	-9,000	-5,755	

Notes
- Aerial and Surface data sourced from ICS 209s
- Subsea data sourced from 'Subsea Dispersant Injection Dispensed Running Total BP Log' housed on Houston IMT sharepoint
- Aerial requests are for specific identified dispersible targets as identified by over flights
- Aerial approved amount is frequently less than requested (not shown) amount
- Aerial dispersant used is typically less than approved amount, with most frequent causes being weather or late approvals limiting flight time or presence of people or animals in target zone

		Daily Dispersant Used (gallons)				Daily Approved (gallons)			Approved Minus Used (gallons) Negative number indicates amount used was less than the approved amount			
Date	ADO-Houma SitRep	Subsea	Aerial	Vessel	Total	Subsea	Aerial	Vessel	Subsea	Aerial	Vessel	
7/8	11551	11,512	0	0	11,512	15,000	10,000	3,000	-3,488	-10,000	-3,000	Vessel approval allows 3,000 during stable well cap operations, 6,000 during active well cap, as well as additional vessel dispersant if needed to control VOCs per approved vapor suppression guidelines
7/9	11673	10,748	0	0	10,748	15,000	10,000	3,000	-4,252	-10,000	-3,000	
7/10	13210	13,210	0	0	13,210	15,000	10,000	6,000	-1,790	-10,000	-6,000	Cap Removed - Stacking Cap - high flow from well.
7/11	15420	15,420	0	0	15,420	20,000	10,000	6,000	-4,580	-10,000	-6,000	20,000 subsea approved: Well Integrity Test and cap replacement plan approved by Adm Allen calls for 12gpm subsea when operationals permit to prevent high VOCs during reduced containment and critical operations. Cap Removed - Stacking Cap - high flow from well.
7/12	14038	14,038	0	0	14,038	17,280	10,000	6,000	-3,242	-10,000	-6,000	12gpm (17,280) subsea approved: Well Integrity Test and cap replacement plan approved by Adm Allen calls for 12gpm subsea when operations permit to prevent high VOCs during reduced containment and critical operations. Cap Removed - Stacking Cap - high flow from well.

May 20, 2010

Dispersant Monitoring and Assessment Directive – Addendum

This is an addendum (Addendum 2) to the Dispersant Monitoring and Assessment Directive issued on May 10, 2010, and Addendum 1 issued on May 14, 2010 by the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA) to BP. The requirements in this Addendum 2 apply to Parts 1 and 2 of the May 10, 2010 Directive and are in addition to the requirements of that Directive. BP shall commence Parts 1 and 2 requirements before subsurface application of dispersant is initiated and continues the Parts 1 and 2 requirements, Addendum 1, and this Addendum 2 until cancelled or modified by the USCG and EPA.

Alternative Dispersant additional Requirements:

1. Sampling of dispersant/oil and oil-only waters must be continued per the Directive, and in addition, baseline data of waters without direct application of dispersant or oil shall also be collected by BP. Monitoring of subsurface dispersant application by BP shall be performed from a vessel capable of performing all requirements of the May 10, 2010, Dispersant Monitoring and Assessment Directive and Addendum 1 on each day that dispersant is applied. As used in this Addendum 2, a "day" shall mean a calendar day.
2. Within 24 hours of the issuance of this Addendum 2, BP shall identify to the FOSC and the EPA RRT Co-chair for EPA's and the FOSC's approval, one or more approved dispersant products from the National Contingency Plan Product Schedule that are available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopsis, as indicated on the NCP Product Schedule (http://www.epa.gov/oem/content/ncp/tox_tables.htm). The less toxic dispersant product(s) shall be used by BP for surface application and subsurface application as directed by the FOSC. Within 72 hours after submitting the list of alternatives, and after receiving EPA approval, BP shall immediately use only the approved alternative dispersant. Should BP not be able to identify alternative dispersant products, BP shall provide the FOSC and EPA RRT CO-Chair a detailed description of the products investigated, the reason the products did not meet the standards described above. Availability shall be based on existing stockpiles of dispersants, the estimated time to begin and aerial and subsurface application, time for manufacturing, shipping, and warehousing.
3. The effectiveness of the dispersant in subsurface application shall be determined as specified in Directive 1 Part 1, and Part 2. Dispersant application can be applied subsurface if, and only if, daily monitoring is performed.
4. BP shall provide 48 hours advanced notice of departure and trip duration timelines of the monitoring vessel to the FOSC and the EPA RRT Co-chair.
5. Monitoring data on the use of the less toxic dispersant product(s) shall be reported by BP to the FOSC and the EPA RRT Co-chair on a daily basis. This reporting shall include a sample tracking table. Daily data reports shall thereafter be provided by BP to the FOSC and the EPA RRT Co-chair as soon as practicable on the day following use of the less toxic dispersant product(s) by BP, but in no event later than 24 hours after use.

May 26, 2010

Dispersant Monitoring and Assessment Directive - Addendum 3

Reduction in Use of Dispersants. BP shall implement measures to limit the total amount of surface and subsurface dispersant applied each day to the minimum amount possible. BP shall establish an overall goal of reducing dispersant application by 75% from the maximum daily amount used as follows:

a. Surface Application. BP shall eliminate the surface application of dispersants. In rare cases when there may have to be an exemption, BP must make a request in writing to the FOSC providing justification which will include the volume, weather conditions, mechanical or means for removal that were considered and the reason they were not used, and other relevant information to justify the use of surface application. The FOSC must approve the request and volume of dispersant prior to initiating surface application.

b. Subsurface Application. BP shall be limited to a maximum subsurface application of dispersant of not more than 15,000 gallons in a single calendar day.

Application of dispersant in amounts greater than specified in this Addendum 3 shall be in such amounts, on such day(s) and for such application (surface or subsurface) only as specifically approved in writing by the USCG Federal On-Scene Coordinator (FOSC).

- Veritas on station for sampling, as weather permits

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 09 June, 2010
Update: 0900 10 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- **Rate: 10 gpm**
- **Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)**
- **Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.**
- >>>>

- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 09 June, 2010
Update: 0900 10 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

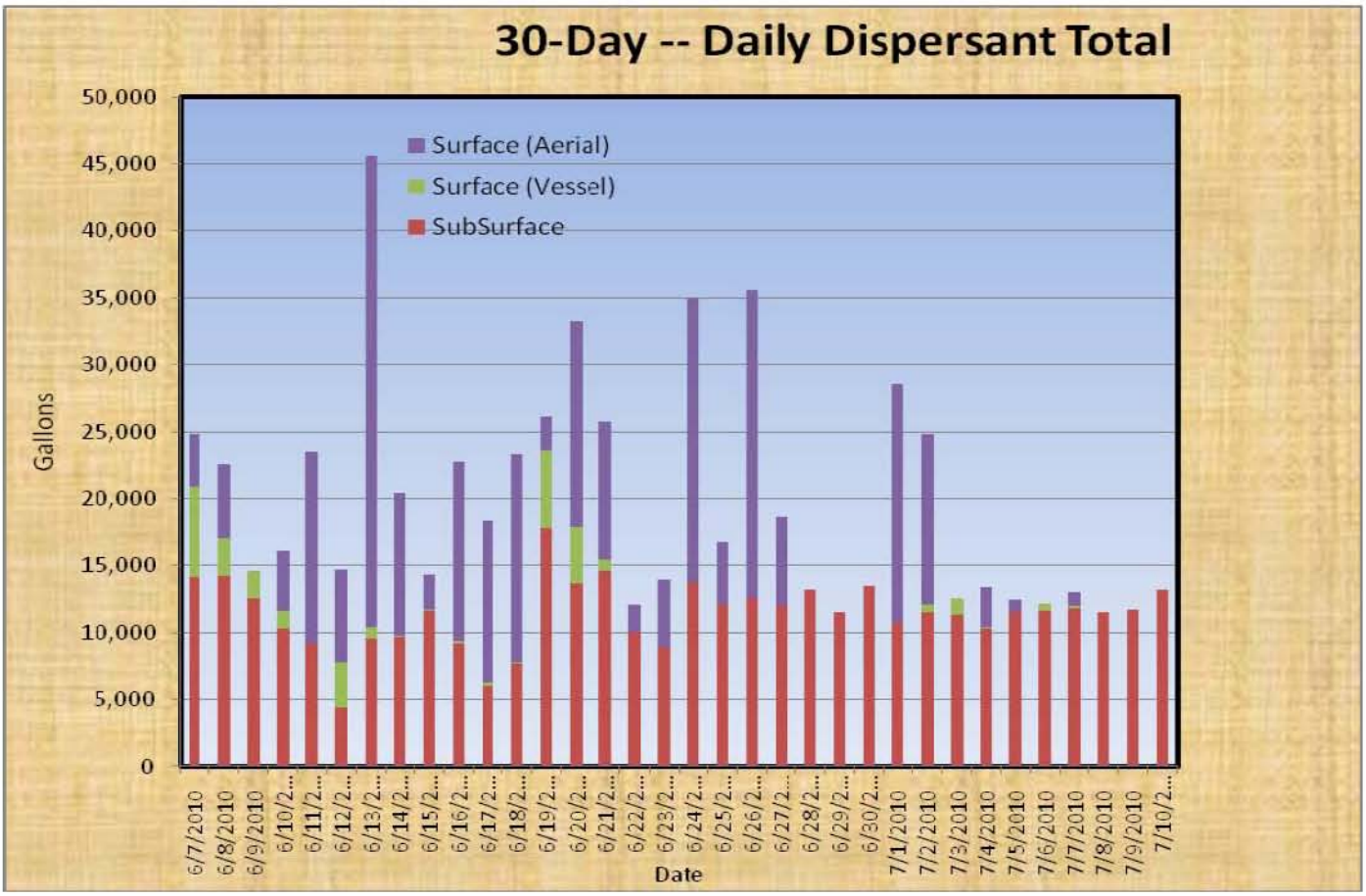
From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

Date: 07/10/2010

Reporting Period: 15 MAY – 10 JULY, 2010
Update: 0900 11 July 2010

1. Current Activities

- Saturday 10 July update: period from 2200 hrsL on 07/09/10 to **2400** hrsL on 07/11/10: Note **26-hour** reporting period.
- Injection rate average: varied from 10 - 12 gpm **(estimate by calculation is 9.2 gallons/minute).**
- Flow disrupted for: There were several disruptions during the period due to capping operations.
- Period Volume: 13,210 gallons (Total Cumulative: 705,680 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.



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- 7222 gallons COREXIT 9500 pumped this time period.

>>

- 1330L Central 16 MAY began pumping again at 10 gallon per minute.
- 0145L Central 17 MAY stopped pumping to reposition ship due to weather (Surface vessel is flaring and must remain upwind for surface ops) Then sub-surface dispersant injector wand needed to be re-positioned again to proceed.
- 12380 gallons COREXIT 9500 pumped this time period.

>>

- 1015L Central 17 MAY began pumping again. Duration of operational continuation is TBD.
- 0550L Central 18 MAY stopped pumping since the R/V BROOKS McCALL will be departing and temporarily preclude continuity of required sampling.
- 5250 gallons COREXIT pumped this time period.

>>

- 0700L Central 19 MAY (was the original expected time to resume sub-sea dispersant injection) as agreed upon by FOSC and EPA.
- 2113L Central 18 MAY (RADM Landry via coordinated discussion with Sam Coleman, as well as EPA (Ms. Dana Tulis, Acting Office Director: Office of Emergency Management) decision made to re-start the Sub-Sea Dispersant injections beginning at 2110L Tuesday 18 MAY. However, when the dispersant surface vessel attempted to move on site, VOC levels were too high, so the vessel had to back off the site and return later. When the vessel returned evening of Tuesday 18 MAY, there was a mechanical issue with the Sub-Sea injection hose system which precluded the ability to resume Sub-Sea dispersant injections. Repairs were implemented and completed whereby injection was re-started for a short time at 0055L Central on Wednesday 19, MAY, and then stopped at 0340 10 gpm with only a total of 163 gallons dispensed this time period. Further details are TBD.

>>

- 2200 Central 19 MAY continued subsurface dispersant application through 2200 Central 20 MAY
- One disruption of injection from 2145 – 2158
- 14,210 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel is currently expected to stay O/S thru Saturday in order to provide enough time to coordinate assignment and arrival of a relief vessel to support continued sampling and monitoring efforts.

>>

- 2200 Central 20 MAY continued subsurface dispersant application through 2200 Central 21 MAY
- No disruptions
- 14,440 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>

Status of RV BROOKS McCALL:
VSL was O/S during injection application to perform Sampling & Monitoring
The vessel departed station at dusk to return to port; expected to arrive early on 22 May; restock, unload samples; expected to depart port late 22 May; arrive back on station early 23 May.
FOSC signed BP Request Waiver, allowing continuation of dispersant application without monitoring vessel present from Friday evening to Sunday morning.

>>

- 2200 Central 21 MAY continued subsurface dispersant application through 2200 Central 22 MAY

- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

>>>

- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- At port; depart again on 05/29/10 to sampling station
  Status of RV Veritas:
- On station collecting samples; depart from station on 05/29
- >>
- 2200 Central 29 MAY continued subsurface dispersant application through 2200 Central 30 MAY
- No disruptions
- 14,974 gallons of COREXIT pumped in this time period. (212,991 gallons cumulative)
  >>
  Status of RV Brooks McCall:
- Left port evening 05/29; on station 05/30 to begin sampling
  Status of RV Veritas:
- Left station evening 05/29; at port 05/30
- >>
- 2200 Central 30 MAY continued subsurface dispersant application through 2200 Central 31 MAY
  Rate: 10 gpm
  Volume: 12,948 gallons (Total Cumulative- 225,408 gallons)
  Disruptions: No disruptions reported.
  >>>>>>>>>>>>>>>>>>>>

SPU

bp

GoM Drilling, Completions and Interventions - MC252

Guidance on Subsea Dispersant Application
Ops Note #3

RPIC APPROVAL: JEFF HOHLE (Print Name above) (Sign Above) Date 6/8/10 Time: 16:55

Reviewed CGIC (USCG) APPROVAL: John Fitzgerald (Print Name above) (Sign Above) 6/8/10 1654

James Watson (Print Name above) (Sign Above) Date 6/8/10 Time: 2125

1	06/08/2010	Approved - Issued for GoM Use	Jon Rogers	
Rev	Date	Document Status	Custodian/Owner	Authority

Document Control Number	Organization ID	Sector ID	Discipline ID	Document Class	Sequence Number	Document Revision
	2200	T2	DO	PR	4188	1

AMENDMENT RECORD

06/06/2010	~~P~~ 1		

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1 Background and Assumptions:

Subsea dispersant (EC9500A) injection is critical in managing the safety of containment operations. Over time a correlation has been observed between the usage of oil dispersant and the rise in volatile organic compounds (VOC) and hydrocarbon vapor amounts at the surface in the area of the source. Hydrocarbon vapor amounts have not exceeded the lower explosive limit (LEL) to date but have been as high as 8-10%. Within 3-6 hours of discontinuation of subsea dispersant, the VOC concentrations at the surface have increased to >200 ppm and hydrocarbon vapors also increase. VOC and LEL issues have been resolved within a few hours when dispersant has been re-established in these instances allowing safe operations to continue in the area of the source.

Federal government authorities estimated the MC252 oil leak rate to be 12,000 - 19,000 bbls/day. For the purposes of dispersant injection, we will assume 19,000 bbls/day. This oil volume is assumed as the basis for dispersant rates and the table below can be used to calculate the EC9500A injection rates required to effectively disperse the residual oil volumes.

Table 1: Dispersant Application Range

16,0000 bpd+	**4 GPM**
12,000 - 16,000 bpd	**7 GPM**
< 12,000 bpd	**10 GPM**
1. High VOCs at reported at surface OR 2. Following suspension of subsea dispersant for > 1 hr	**15 GPM***

***If sustained injection above 10GPM is required to maintain VOC emissions at operable levels, BP will, if required, formally request an exemption from the Federal On-Scene Commander to increase application of EC9500A from the 15,000 gallons per day agreed in the Directive, to the estimated volume required.**

2. Recommended Forward Plan

Proactive steps will be taken to optimize the dispersant volumes and minimize where possible. The following forward plan is recommended:

1. The Skandi Neptune is currently on location about 1200' West of the source applying EC9500A dispersant subsea at the BOP at a target 10 gpm via ROV
2. Maintain dispersant injection rate as required until the time the Skandi is required to relocate to a new position to allow installation of the CDP suction pile
3. Replace current flow meter with new, calibrated 1" turbine flow meter with totalizer.
4. Move Skandi from current location to new location at ~1200' to the NW of source at which time dispersant will be disrupted for approximately 4-5 hrs
5. When Skandi is in the new position, restart dispersant at 10 gpm or higher if required, to control any rising VOCs and re-establish baseline
6. Once surface VOC emissions are sustained at operable levels and Enterprise flow rates are stable, slowly decrease dispersant injection in accordance with the table on page 1 and continue to monitor VOCs and LEL at surface.
7. Once Q4000 is brought online, assess oil rates at Enterprise and Q4000 and make determination on whether further reduction in dispersant can be made based on estimated reduced oil volumes to sea.
8. The estimated volume of crude processed at the surface must be both stable and sustained above 16,000BPD before any optimization in dispersant below 5GPM is attempted.

Document Authorization Form

This form to be used for authorizing new, revised and obsolete documents, please indicate clearly which category applies

Special Instructions	**MC252 Incident**

Document Details

DO-PR-4188

Document Number	2200-T2-~~AA-AA-NNNN~~	Revision	~~0~~ 1
Document Title			
Next Review Date			
Reason for Issue (check as applicable)	New Document	Revised Document	Obsolete Document
	X		

Document Sign Off

	Print Name	Signature	Date
Custodian/Owner			
Reviewer(s) (if applicable)	[redacted]		6/8/10
Authorizer (Houston)			
Authorizer (Houston)			
Authorizer (Houston)			
Document Control Use			

2020-T2-DM-FM-000002	0	Document Authorization Form
Document Number	Rev	Title

DO-PR-4188

Title of Document:	TITLE HERE	Document Number:	2200-T2-AA-AA-NNNN
Authority:	Authority Name Here	Revision	~~0~~ 1
Custodian/Owner:	Custodian/Owner Name Here	Issue Date:	MM/DD/YYYY 06/06/2010
Retention Code:	ADM3000	Next Review Date (if applicable):	MM/DD/YYYY
Security Classification:	Project Confidential	Page:	Page 6 of 6

Warning:. Check DW Docs revision to ensure you are using the correct revision.

U.S. Department of Homeland Security
United States Coast Guard

Federal On-Scene Coordinator
Unified Area Command

Unified Area Command
Shell Oil Training Center
23260 Shell Lane
Robert, LA 70455

16480
June 8, 2010

Doug Suttles
Chief Operating Officer
Exploration & Production
BP America Inc.
501 WestLake Park Boulevard
Houston, Texas 77079

I am in receipt of the document entitled GoM Drilling, Completions, and Interventions – MC252: Guidance on Subsea Dispersant Application OPS Note #3 which addresses your plan for use of subsea dispersants. As you know, under the third addendum to the Dispersant Monitoring and Assessment Directive, use of subsea dispersant in volumes greater than 15,000 gallons per day requires my or the current Federal On-Scene Coordinator's approval. It is my understanding that your plan seeks to maximize the efficacy of subsea dispersant and allow for reductions in their use as the oil flow is reduced. With this in mind, your plan is approved effective immediately, subject to the following conditions unless otherwise directed:

1. Continue to conduct required monitoring and provide daily updates as to the results of the operation.

2. This approval shall continue through June 30, 2010.

3. Submit a new plan for subsea dispersant use not later than three days prior to the expiration of this approval.

My Incident Commanders have suggested that the current dispersant use limitations present significant and growing operational challenges to the management of this emergency response. Please provide me, within 48 hours, with any additional information that you have regarding this concern including your assessment of dispersant toxicity, availability of mechanical recovery equipment (e.g., offshore and near shore skimmers) to keep pace with the current and potential release, and total insitu-burn capacity. Once I receive this information, I intend to consult with the Regional Response Team and my Incident Commanders to develop an effective operational plan for use of surface and sub-surface dispersant while minimizing any environmental impact.

If you have any questions concerning the content of this letter please contact CAPT Ray Perry or my Scientific Support Coordinator (SSC), Mr. Steve Lehmann located at the UAC in Robert, LA.

Sincerely,

JAMES A. WATSON
Rear Admiral, U.S. Coast Guard
Federal On-Scene Coordinator

[redacted] LT

From: [redacted] CDR
Sent: Friday, July 09, 2010 10:25 AM
To: [redacted] Gould, Austin CAPT; [redacted] LCDR; [redacted] CDR; HQS-DG-lst-CG-823; [redacted] MEC; [redacted] CDR; [redacted] CDR; [redacted] Stroh, Lincoln CAPT; Wiedenhoeft, Paul CAPT; [redacted] CDR; [redacted] CDR; Cook, Kevin RADM; [redacted] Schultz, Karl RDML; [redacted] CDR; [redacted] CDR; [redacted] Christensen, Eric CAPT; Gould, Austin CAPT; [redacted]; Neffenger, Peter RDML; Wiedenhoeft, Paul CAPT; [redacted] CDR; [redacted] LCDR; [redacted] CDR; [redacted] HQS-DG-LST-NIC-HQ-INTERAGENCY-SOLUTIONS-GROUP; HQS-DG-LST-NIC-HQ-Legal [redacted] F LCDR; [redacted] LCDR; [redacted] CDR; [redacted] LT; [redacted] CDR; [redacted] CDR; [redacted] CDR; [redacted] LTJG; [redacted] LT; [redacted] CDR; [redacted] CIV; [redacted] YN1; [redacted] LCDR; [redacted] LT; [redacted] LT; [redacted] ENS; [redacted] LCDR; McKinley, Andrew CAPT; [redacted] CDR; [redacted] CDR; [redacted] CDR; [redacted] LCDR; Perry, Raymond CAPT; [redacted] LT; [redacted] LT; [redacted] CDR; HQS-DG-LST-NIC-HQ-Situation-Unit; HQS-DG-LST-NIC-HQ-Command; [redacted]
Subject: FOR COMMENT (By 12 JUL, 0900): NOAA Testimony on Dispersants for DWHZ
Attachments: NOAA (Robinson) Dispersant testimony Senate Approps DOCupdated2.doc

Sirs, Ma'am, Colleagues,

On behalf of OMB ..

Forwarded, respectfully requesting any TECHNICAL comments on the attached Department of Commerce (NOAA) Testimony (Robinson) on Use of Dispersants for DWHZ Oil Spill.

Testimony is for an oversight hearing on 15 Jul before the Senate Appropriations Committee, Subcommittee on Commerce, Justice, Science, and related Agencies.

*** NOTE: CG, EPA, et.al mentioned throughout ***

V/r

CDR [redacted]
Intergov't & Legislative Affairs
NIC-DC
[redacted]

May 20, 2010

Dr. Tony Hayward
Group Chief Executive
BP
1 St. James's Square
London SW1Y 4PD
United Kingdom

Dear Dr. Hayward:

As you know, the Deepwater Horizon oil spill is a massive and potentially unprecedented environmental disaster that has already impacted the lives and livelihoods of countless people in the Gulf Coast region. In responding to this oil spill, it is critical that all actions be conducted in a transparent manner, with all data and information related to the spill readily available to the United States Government and the American people.

In his May 17, 2010 testimony before the Senate Committee on Homeland Security and Governmental Affairs, Mr. Lamar McKay, Chairman and President of BP America, claimed that BP was making every effort to keep the public and government officials informed. Those efforts, to date, have fallen short in both their scope and effectiveness. In order to meet BP's responsibilities and to fulfill this obligation, BP must make publicly available any data and other information related to the Deepwater Horizon oil spill that you have collected, or that will be collected in the future.

The U.S. Department of Homeland Security ("DHS"), through the United States Coast Guard ("USCG"), is tasked with, among other things, ensuring effective removal of the oil in a manner that prevents, minimizes, or mitigates threats to the public health or welfare of the United States or the environment. The U.S. Environmental Protection Agency ("EPA"), serving as a support agency in the Deepwater Horizon oil spill response, is also tasked with ensuring the protection of human health and the environment through the application of numerous environmental statutes and regulations.

Consistent with these responsibilities, DHS and EPA have expressed repeatedly and believe it is imperative that BP promptly provide to the United States Government and the public all data and information regarding the Deepwater Horizon oil spill. This includes, but is not

limited to, any and all sampling and/or monitoring plans, records, video, reports collected by BP, its contractors, subcontractors, agents or employees, any such reports that have come into BP's possession through other means, and any reports of internal investigations. Attachment 1 to this letter provides direction on the manner in which the information should be made available and public, but at a minimum, all information should be posted on a publicly accessible website. BP must update this data and information daily. Although DHS and EPA are not aware of any data or information that you would have that is Confidential Business Information (CBI), any claim of CBI will be handled in accordance with applicable law.

The public and the United States Government are entitled to nothing less than complete transparency in this matter. Thank you for your anticipated cooperation.

Yours very truly,

Janet Napolitano
Secretary of Homeland Security

Lisa P. Jackson
Administrator
Environmental Protection Agency

Enclosure

cc: Lamar McKay
Chairman and President
BP America

ATTACHMENT 1
PUBLICLY AVAILABLE SAMPLING/MONITORING AND OTHER INFORMATION DEEPWATER HORIZON OIL SPILL RESPONSE

I. PURPOSE

This Attachment sets forth the procedure to provide and publish the information requested in the letter to which it is attached.[1] This Attachment requests BP to post on a publicly available means via the internet the sampling and monitoring and other information described in the letter and below within the time frames specified herein.

1. Within 24 hours of receipt of the letter, provide to the United States Coast Guard ("USCG") On-Scene Coordinator ("OSC"), Rear Admiral Landry, Mary.E.Landry@uscg.mil, and the Environmental Protection Agency ("EPA"), Dana Tulis, Tulis.Dana@epa.gov, the website address (Uniform Resource Locator ["URL"] address) on the internet from which BP shall post the sampling, monitoring, and other information. The website and all information posted to it should be freely and easily available to the public.

2. Within 24 hours of receipt of the letter, post on the website referenced in Paragraph 1 of this Attachment all sampling plans, scopes of work, Quality Assurance Project Plans and/or all Quality Assurance Sampling Plans concerning, relating and referring to any and all sampling and monitoring resulting from the Deepwater Horizon oil spill incident and response in the Gulf of Mexico off the coast of Louisiana.

3. Within 48 hours of receipt of the letter, post on the website referenced in Paragraph 1 of this Attachment, all environmental (chemical, biological, and physical data), analytical data from samples of oil, dispersant, oil/water mixture, weathered oil, dispersed oil, and any other samples concerning, relating and referring to the Deepwater Horizon oil spill incident and response in the Gulf of Mexico off the coast of Louisiana. This data should be delivered in a tabular, delimited-text format, as described below, and should include, at a minimum, the following fields:

---

[1] Please note that this includes the information gathered under Directive 1: Dispersant Monitoring and Assessment Directive and Addendum 1 and 2, dated May 10th, May 17th, and May 19th respectively, and signed by USCG Rear Admiral Mary E. Landry and Samuel Coleman, Director, Superfund Division, EPA Region 6. Providing this information in no way supersedes the requirements provided in Directive 1. You must still comply with any and all requirements of Directive 1.

Monitoring Data

Field Name	Description	Data Type	Character Limit
Latitude	Latitude, in decimal degrees, at which a measurement was made.	Numeric	n/a
Longitude	Longitude, in decimal degrees, at which a measurement was made.	Numeric	n/a
Coord_Sys_Desc	The coordinate system that was used to determine the values for latitude and longitude. Examples: NAD 83, WGS 84.	Text	70
Instrument_Type	The type of instrument that was used to obtain the measurement. Examples: AreaRae, MultiRae, DataRam 4, EBAM, pDR.	Text	50
Mon_Date	Date when a measurement was made in the format MM/DD/YYYY.	DateTime	n/a
Mon_Time	Time when a measurement was made in the format HH:MM.	DateTime	n/a
Mon_Parameter	Name of the parameter that was measured. Examples: CO, LEL, PM 10, Total particulates.	Text	30
Mon_Measurement	The value that was measured.	Numeric	n/a
Mon_Meas_Units	The units associated with the value that was measured. Examples: %, mg/m3, ppm, ug/m3.	Text	40

Sample Results

Field Name	Description	Data Type	Character Limit
Latitude	Latitude, in decimal degrees, at which a sample was collected.	Numeric	n/a
Longitude	Longitude, in decimal degrees, at which a sample was collected.	Numeric	n/a
Coord_Sys_Desc	The coordinate system that was used to determine the values for latitude and longitude. Examples: NAD 83, WGS 84.	Text	70
Sample ID	Unique identifier for the sample that was collected.	Text	25
Sample Matrix	The medium that was sampled. Examples: Soil; Water; Air.	Text	20
Date_Collected	The date that the sample was collected in the format MM/DD/YYYY.	DateTime	n/a
Analytical_Method	The analysis that was performed by the laboratory.	Text	100
Analyte	The analyte or parameter that was measured by the lab.	Text	60
Cas_no	The official Chemical Abstract Number (CAS) for the analyte or parameter that was measured by the lab.	Text	50
Result	The result (number) that was measured by the lab.	Numeric	0
Result_Units	Result Unit of measurement (Required PK)	Text	20
Detected	Indicator whether the analyte was detected in the sample or not. Examples: "Y" for detected analytes or "N" for non_detects.	Text	20
MDL	The Method Detection Limit for the analysis.	Numeric	0
MDL_Units	The units of measure associated with the method detection limit.	Text	20
Lab Qualifier	The qualifier reported by the lab. Examples: J;U;ND;<;>.	Text	20
Result Qualifier	The qualifier reported by a validation process. Examples: J;U;ND;<;>.	Text	20

4. Within 48 hours of receipt of the letter, provide web services containing operational geospatial data concerning, relating and referring to the Deepwater Horizon oil spill incident and response in the Gulf of Mexico off the coast of Louisiana including, but not limited to, location of booms, sample and monitoring locations, oil extents, oil plume trajectories, surface dispersant flight tract applications, and sub-surface dispersant application locations.

5. Within 24 hours of receipt of any and all sampling and monitoring results BP obtains after receipt of the letter, post such information in accordance with Paragraph 3 of this Attachment, as such sampling and monitoring data is obtained on a daily basis.

U.S. Department of Homeland Security
United States Coast Guard

Federal On-Scene Coordinator

Unified Area Command
1250 Poydras Street
New Orleans, LA 70113

16451
3 Aug 2010

MEMORANDUM

From: P. F. ZUKUNFT, RADM

Reply to Attn of: CAPT McCleary

To: File

Subj: DISPERSANT APPROVAL MEMO

1. This document memorializes my verbal authorization to ICP Houma to employ up to 5,000 gallons of dispersant within its AOR on July 13th, 2010. This verbal authorization was given at 12:25 P.M. on July 13th, 2010.

#

Dispersant Background and Frequently Asked Questions

Effective June 19, 2010

I. Role of Dispersants in the Spill Response

- Some of the oil that is being released the well site can be contained and recovered with booms and skimmers, or burned, when the weather is good and sea is calm. But it is difficult to capture all of the oil with these methods. Dispersants are used to break up the remaining surface oil before it can drift onto shore.

- Dispersants are a mixture of materials that break the oil into small particles that disperse through the water column, making it easier for the material to be diluted and to biodegrade. BP has received approval by the Coast Guard and EPA to apply dispersants on the water surface, and underwater at the well site nearly 50 miles offshore.

- Dispersants principally are used to prevent oil sheen from reaching the shore; generally they are not applied within 3 miles of shore.

- By removing oil from the water surface, dispersants reduces the risk of harm to seabirds and other species and the shoreline from the impacts of oil sheens atop the water. By diluting and dispersing oil far from shore, they reduce the risk that oil will wash onto sensitive shoreline habitats.

- This does not mean that the oil will have no impact on the environment -- some areas will be impacted. BP is working in cooperation with the Coast Guard, EPA, NOAA and other natural resource trustees to conduct extensive sampling of a wide variety of resources on and off shore, to monitor the potential effects of the spill and dispersants in the air, water and on land. Those data will be used to identify areas that are affected by the spill and need to be cleaned up and restored. It will be used to identify any natural resources -- such as fish, whales, sea turtles, or species -- that need to be restored (replaced). BP will be in a position to move forward proactively with cleanup and restoration, once the emergency response has been completed.

- We also hope to learn more about dispersants from this experience. Our initial tests show that when we apply dispersants underwater at the well site, we can use much smaller amounts of dispersant than we would need at the surface, and achieve the similar results. They also show that we can use dispersants underwater in good or bad weather, day or night, when other methods of containment can't be used. That kind of information might be helpful to other companies in the future.

FAQs

1. **What are dispersants?**

   Dispersants are mixtures of solvents, surfactants and other additives that break up the surface tension of an oil slick or sheen and make oil more soluble in water. Dispersants do not remove oil from the water, but break up the oil slick into small droplets. These droplets disperse into the water column (or depths), where they may then break down further in the environment.

2. **How do they help in the event of an oil spill?**

   Dispersants are used to minimize the environmental impact of an oil spill. By breaking up the oil sheen, dispersants are an approved method of response to an oil spill or release; they are regarded as one of the best ways to protect certain wildlife and to keep an oil sheen from reaching shore. Dispersant usage has been shown to reduce overall environmental impacts at the sea surface and shore in certain spills. (1993 Braer spill off Scotland, 1996 Sea Empress spill off Wales).

3. **What eventually happens to the dispersant after it is applied and combines with oil?**

   Generally, when dispersants are deployed on the surface of spilled oil, the oil is broken up into tiny droplets that immediately sink below the surface where they continue to disperse. Under the current conditions, as BP presently understands them, the dispersant and associated oil become substantially diluted shortly after application. Most of the mixture will degrade within days to weeks given mixing conditions of wave and wind actions. Harmful effects, if any, from the dispersant would be expected to be localized to the areas close to application. Oil and dispersant taken up by fish generally would be expected to be metabolized within a matter of days to months. BP will be monitoring the behavior and degradation of the dispersant chemicals and oil. While the half-life of the dispersant is approximately in the days-to-weeks range, it is recognized that some elements in crude oil degrade more slowly, and degradation and other processes affecting half-life may be slower at depth.

4. **Who makes the decision to use dispersants?**

   The federal government oversees the use of dispersants. Dispersant use has to be authorized by the Federal On-scene Coordinator. Dispersants can only be used in specified areas. The National Contingency Plan contains a list of pre-approved dispersants and their approved applications.

5. **What are the trade-offs that have to be considered?**

A decision to use dispersant involves balancing the risks to certain animals and plants at the water surface and in shoreline habitats against the potential risk to other organisms in the water column and seafloor. To minimize the risk to organisms, the National Contingency Plan restricts surface dispersant use to areas at least 3 miles offshore and where the water is greater than 30 feet deep. Approval would need to be obtained to apply a dispersant less than 3 miles of shore. BP is conducting unprecedented levels of monitoring to evaluate the potential effects on organisms in the deeper water column from subsurface dispersant use and to enable government decision-makers to make more informed judgments about balancing the risks of subsea dispersant application, surface application, and the risks of having undispersed surface oil slicks.

6. **What regulations have to be followed?**

The use of dispersants should be consistent with the National Contingency Plan, which is the federal government's blueprint for responding to both oil spills and hazardous substance releases.

7. **What monitoring is required?**

There is a formal monitoring plan, known as the Special Response Operational Monitoring Plan, which is conducted by the US Coast Guard's Gulf Strike Team. A variety of monitoring is conducted, including the effectiveness of the dispersants and the dispersant and oil in the water column.

8. **Are dispersants toxic?**

The toxicity of dispersed oil is principally due to some components of the oil itself. A number of laboratory studies on a range of test species have confirmed that where there is acute toxicity, it generally is not in the dispersant but in some naturally occurring components of oil. When dispersants are properly applied, the overall risk to wildlife from the chemicals in the dispersants is substantially less than the risks from the oil. At the standard application rates directed by the Federal On-scene Coordinator, and under the mixing conditions of the ocean, dispersants are not expected to cause significant harm to most marine organisms in most circumstances.

Methods are in place to determine if chemicals from oil and dispersants are present in seafood and if consumption of the seafood might pose risks to humans. The States and NOAA close fisheries if there are concerns about chemicals in seafood, and the FDA is monitoring seafood to determine when harvests may resume.

9. **What impacts are these toxic chemicals having on the Gulf?**

BP has a large team of environmental experts who are working closely with, and in cooperation with the US EPA, the Coast Guard, the State of Louisiana, and other agencies that are part of the response effort. We are sampling areas where we have observed dispersants or oil, and we are using that data to monitor potential effects to the environment. This data will be used to identify areas that need cleanup, and areas where we may need to restore natural resources, such as shoreline habitat, commercial and recreational fishing, birds, turtles, or marine mammals, to name a few. Extensive data is being collected so we can fully understand the impact of this incident on the environment, and establish the foundation for restoration work to begin quickly.

10. What are the long-term health effects on marine life and humans of using such large amounts of dispersants?

- Potential effects on marine life

  When evaluating the potential effects on marine life from dispersant use, it is important to weigh those potential effects in comparison to the benefits from dispersant use. As EPA has said, "we know dispersants are generally less toxic than the oils they breakdown," but the use of dispersants is an "environmental trade-off." When dispersants are properly applied, the overall risk to wildlife from the chemicals in the dispersants is substantially less than the risks from the oil. When dispersants are properly applied, the overall risk to wildlife from the chemicals in the dispersants is substantially less than the risks from the oil. At the standard application rates directed by the Federal On-scene Coordinator, and under the mixing conditions of the ocean, dispersants are not expected to cause significant harm to most marine organisms in most circumstances. The use of dispersants helps reduce the amount of surface oil that might reach marshes and other sensitive shoreline habitats, and helps reduce the amount of oil that sea birds and other wildlife may encounter floating on the water surface.

  BP and the governmental response agencies continue to conduct unprecedented sampling to evaluate the potential impacts from dispersant use in the subsurface. To date, that sampling has not shown significant short-term or acute toxicity to the species tested. BP will continue to work with NOAA and other agencies to collect more data and to evaluate potential impacts of the dispersed oil on a wider range of aquatic life.

  The EPA, NOAA, USCG, and the University of New Hampshire (UNH) Coastal Response Research Center recently convened a panel of more than 50 scientific experts to evaluate Dispersant Use and Ecosystem Impacts of Dispersed Oil in the Gulf of Mexico. These experts also concluded that: "…use of dispersants and the effects of dispersing oil into the water column has generally been less environmentally harmful than allowing the oil to

migrate on the surface into the sensitive wetlands and near shore coastal habitats."

- Potential effects on humans – Potential effects on humans theoretically could occur through inhalation of dispersants at or near the site where they are applied, or through consumption of seafood that is tainted with oil and dispersants. For both of these potential exposure pathways, measures are being taken to ensure that human health impacts are minimized.

  Workers applying dispersants at sea, and those working with them and near them, have the personal protective equipment recommended by the dispersant maker. In addition, air monitors on these boats are used to measure and maintain exposure levels within safe occupational exposure limits.

  Aerial application of dispersants has been limited to day light hours, with the goal of keeping any surface spray 2 or more nautical miles away from any boats in the vessels of opportunity program. To date, air monitoring on those vessels has not detected dispersant components in the air, or has shown exposures are within safe occupational exposure limits.

  The EPA, NOAA, USCG, and UNH scientific panel report that the use of dispersants appears to reduce the concentrations of volatile organic compounds (VOC) released from oil into the air, and this reduces the potential for VOC inhalation by all persons who work with the weathered oil.

  EPA also conducts extensive air monitoring along the shoreline, to protect members of the public. To date, EPA has not detected any dispersant components in the air, meaning there is no inhalation risk for people on the coastline. EPA also has not detected any increase in volatile chemicals associated with the oil spill along with coastline.

  With regard to seafood safety, methods are in place to determine if chemicals from oil and dispersants are present in seafood, and if consumption of the seafood might pose risks to humans. The States and NOAA close fisheries when there are concerns about oil or chemicals in seafood, and the FDA is monitoring seafood to determine when harvests may resume. Taste, odor and chemical risk thresholds are applied to determine whether seafood is safe to catch, market and eat.

12. Dispersants push the oil in the environment rather than removing it from the environment. This doesn't seem like a strategy that helps the environment.

Dispersants do transfer oil from the surface into the water column. Care is used to do this under conditions that allow rapid dispersion of the oil to low concentrations

that are unlikely to cause significant harm to marine life. When used properly, dispersants reduce the risk of environmental harm. Harm is more likely when surface oil is not captured in any boom, skimmer or other mechanical capture system, and is not otherwise dispersed. Surface oil poses known risks to birds, marine mammals, and the shoreline environment.

13. Aren't dispersants used to hide oil pollution and remove it from view? It seems like any oil that is not cleaned up will cause unseen harm.

The intent of dispersant use is not to hide the oil. The goal is to minimize the damage that would be caused by floating oil that cannot be captured in booms, skimmers or controlled burns, and that is not otherwise dispersed. Dispersed oil also degrades more readily than undispersed oil.

14. Doesn't the addition of dispersants just add toxic chemicals to an already polluted environment, poisoning marine life?

Dispersants or some of their ingredients may be toxic to certain aquatic species when tested in isolation. However, when they are used on an oil spill, they are applied to the water surfaces in small amounts over large areas, generally at a rate of 5 gallons per surface acre, in waters that range from approximately 10 meters deep near the Chandelier Islands to greater than 4,000 ft deep in proximity to the wellhead source. The dispersant quickly mixes with the water, and the resulting dispersant/oil particles are rapidly diluted and dispersed to low concentrations that fall below the acute toxicity threshold. Toxicity tests using samples of water taken around the well site at various depths, from near surface to very deep, do not show toxicity to the species tested. Additional tests will be performed with other species that may be more sensitive to oil or dispersants, to evaluate the potential risk to those species.

15. I've read that dispersants are unreliable because they don't always work. Why aren't you focusing on mechanical recovery?

Mechanical containment and recovery is being used at this site, but it is only effective in relatively calm seas and good weather, and it works best during daylight. Dispersants are an essential part of the response in other weather conditions, and dispersants can also be injected subsea at night. It is important to carefully assess the effectiveness of each method, and to use each where it is most effective and needed.

16. Isn't it true that the dispersant that you've been using was banned in the UK?

We are aware that two of the dispersant products that have been approved for use in the Gulf response -- COREXIT 9527 and COREXIT 9500 -- are not approved for use in the UK rocky shore tidal zone, due to concerns about the potential toxicity of

dispersants to limpets that are directly sprayed or exposed to the chemicals. UK regulators continue to allow the use of existing stockpiles of these COREXIT products away from rocky shorelines, with approval. The areas where BP is applying dispersants in the Gulf are not on or near the shoreline, and they have a different habitat, and US EPA and Coast Guard have approved both products for use in this area in this response.

BP is continuing to evaluate other approved dispersants for possible use at this site. EPA has asked BP to determine if there are other dispersants that are as effective as COREXIT, less toxic, and available in sufficient quantities for use. As BP completes its evaluation, it will update this document with further information about alternatives.

17. Do the dispersants bio-accumulate?

These substances have low potential to bioaccumulate. Although the Material Data Safety Sheets for one dispersant being used states that certain of its components have a potential to "bioaccumulate," the known components of this dispersant are not expected to have a significant bioaccumulation risk, particularly given the rate at which dispersants are being applied in the Gulf (approx. 5 gallons/surface acre).

18. Are there less toxic or harmful dispersants available?

Corexit has been used because it was possible to obtain a large enough supply to meet the anticipated need for dispersant in the days immediately after the spill. BP identified 7 other possible alternatives. Some of these contain a nonylphenol polyethylene glycol ether, or compounds that are expected to degrade to nonylphenol (NP) once the dispersants are applied to the spill.

Considering the volume of dispersant that may be used in this incident, it is worth noting that NP is a potential endocrine disrupter identified by the U.S. EPA's Endocrine Disruption Screening Program, and the EPA has developed final marine acute and chronic water quality criteria developed for NP. NP also has been reviewed under the U.S. EPA's Great Lakes Binational Strategy, is on the OSPAR list of hazardous constituents for discharge into the sea, and is a priority hazardous pollutant under EU Water Directive. Although EPA has not routinely screened dispersants for NP content or risks, it may wish to do consider those risks here, based on the volume of dispersant that is needed.

Whether BP uses any of these identified possible alternatives, or any other alternative dispersant depends on whether the On Scene Coordinator and Regional Response Teams approve the alternative, and whether it is possible to get a reliable supply of the material that is large enough to meet all anticipated needs.

July 19, 2010

To: Charles Polk, Captain, USCG
Federal On-Scene Coordinator Representative (FOSCR)

Subject: Dispersant Approval Request for July 19, 2010

RE: a) Memo from Rear Admiral Watson to Captain Laferriere Dated July 11, 2010
b) E-Mail dated July 15, 2010 from Captain Laferriere (USCG), to Ron Crossland

Gentlemen,

In compliance with the referenced memo titled, *Delegation of Aerial Dispersant Application Approval Authority to FOSCR, ICP Houma*, and referenced e-mail, I am requesting approval for application of up to 375 gallons of Corexit 9500A for July 19, 2010 in order to apply to the observed oil slick(s). For compliance with the requirements stated within the aforementioned memo and e-mail, I provide the information in Attachment 1.

The Houma, Aerial Dispersant Group respectfully requests approval to apply up to 375 gallons of dispersant on the designated target(s) of dispersible oil on July 19, 2010. Target contains 60% dispersible oil and is approximately 70 acres in size. Target is in Zone AM, skimmers are not currently in close proximity to the observed slick. Our intent is to light load the BT-67 out of Houma for this spray operation.

For the current weather and sea states, aerial dispersants will be highly effective.

Sincerely,

[redacted]
Assistant Aerial Dispersant Group Supervisor

Request approval to apply aerial dispersant to the target identified within this request.

Time of request: 1137.

Concurrence will be finalized at UAC Level: Approved By Roy A Nash, RDML, USCG
Deputy FOSC

CC: Admiral Allen
Admiral Nash
Admiral Korn
CAPT Roberge
CAPT Lodge
CAPT PJ Maguire
[redacted]

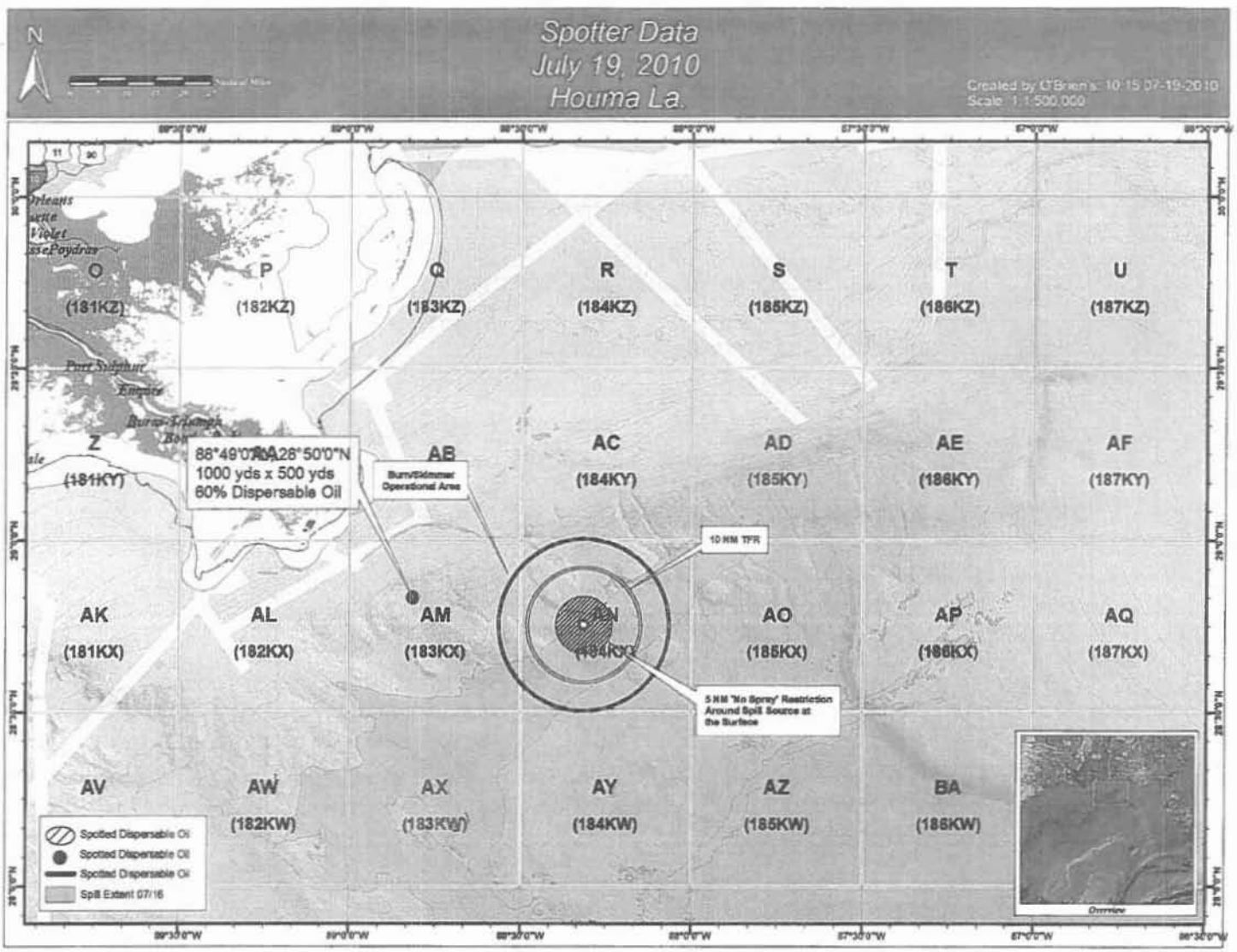
EPA Verbal Concurrence

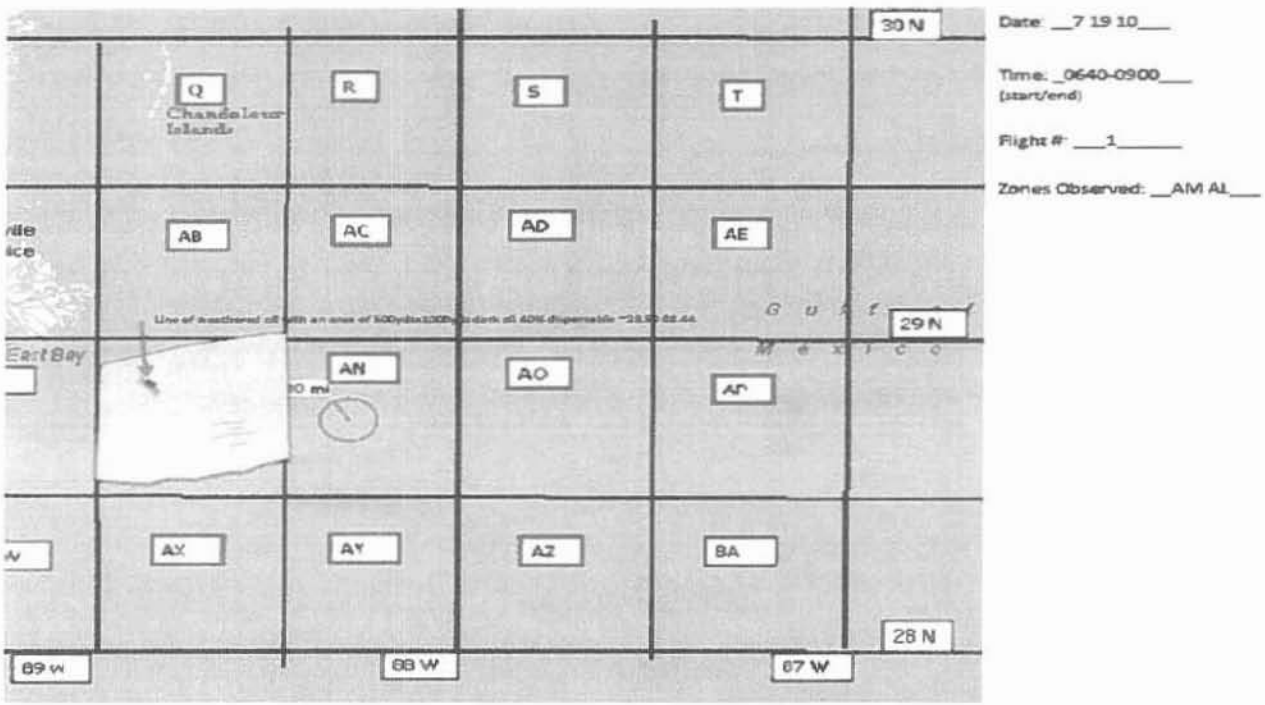
ATTACHMENT 1

Requirement-a. Operational Justification

a.1) Visible chart demonstrating target slick outside offshore skimmer recovery and in-situ burn operations zone. Dimensions of spray box and percent of oil to be dispersed shall also be provided.

Information provided in compliance with this requirement as follows;





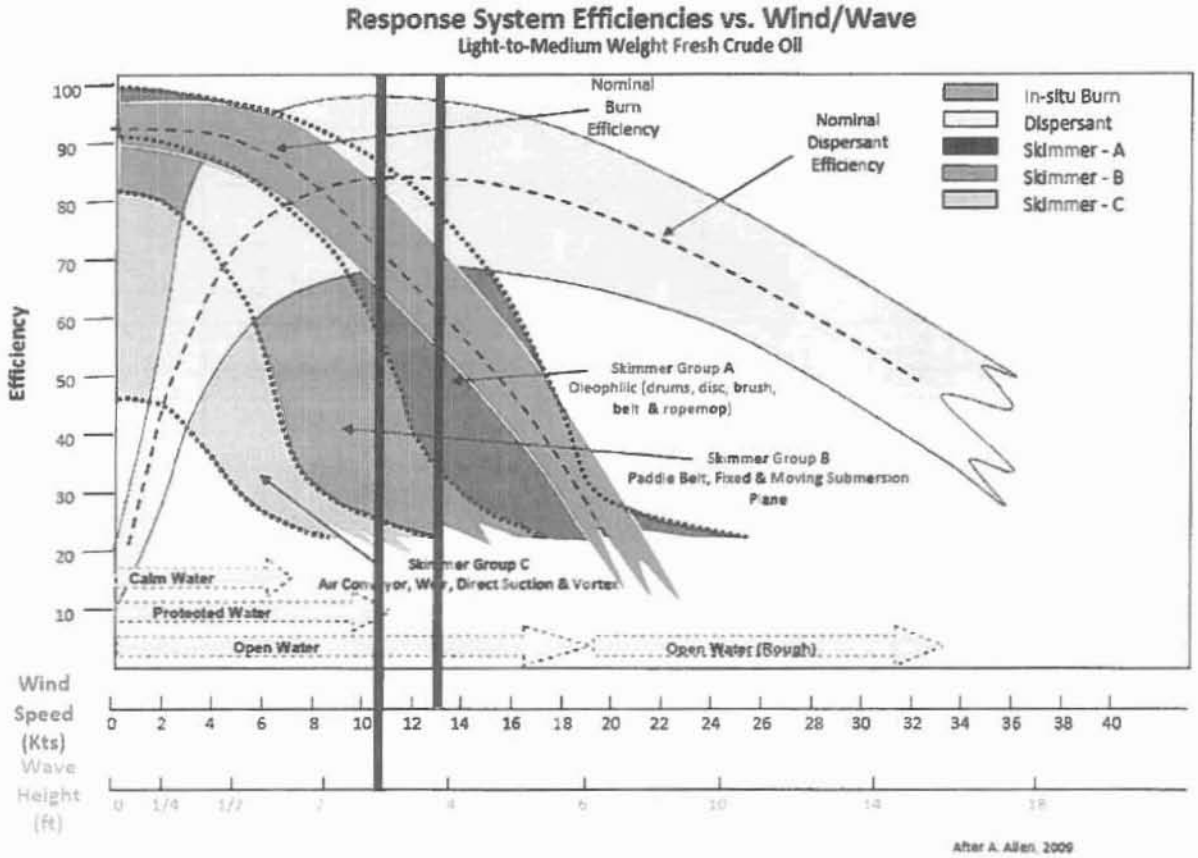
Requirements

a.2) Visual justification and written explanation of why offshore skimmers and in-situ burn resources are unable to intercept and recover target prior to landfall. This justification may also include those slicks that have moved past skimmers and in-situ burn operations.

a.3) If skimming operations and/or in-situ burn operations are not being performed, provide written justification for reasons (i.e., outside weather parameters, resupply and refit). Explain whether the current weather and forecasted weather are favorable to support dispersant spray missions, spotter, and SMART flights.

Information provided in compliance with these requirements as follows;

The current weather (winds @ 13 knots) and sea state (waves up to 3') is not conducive to efficient skimming but current conditions does greatly favor aerial dispersants, however, as the following graphic clearly illustrate skimmers, particularly Weir skimmers, operating in the open water source area are ineffective and indicating the potential of **skimming capabilities being insufficient to remove oil from the environment, thus the need to supplement with alternate response technologies, e.g., aerial dispersants.**



Skimming Assets	Group I	Group II	Group III	Group IV	TOTALS
Operational	9	18	9	12	48
Standby	0	0	0	0	0
Enroute	1	0	0	1	2
Maintenance	1	1	2	4	8
TOTALS	11	19	11	17	58

Available offshore skimming resources are shown in the previous table. It should be noted that **14% (8 vessels) of the fleet are not operational due to maintenance**. The operating fleet is largely composed of vessels utilizing Weir skimming units. Weir skimming units are inefficient in open water areas particularly with certain wind and sea states. The previous graphic shows that **approximately 85% of the skimming fleet is less than 20% effective at this weather conditions with the remaining 15% of the fleet operating at reduced effectiveness.** This low level of mechanical recovery effectiveness in these weather conditions will lead to dispersible quantities of oil escaping further away from the source due to the inability of skimmers to contain the oil within a restricted geographic area. In-situ burn activities in these weather conditions is feasible and skimming activities are largely inefficient for Weir skimmers. Once the oil moves out of the confined area around the source, skimming resources will find it difficult to recapture and recover the oil at ever increasing distances and larger geographic areas.

The forecast weather is suitable for aerial dispersant flight operations with 20% chance of precipitation, 1500-4000 feet-unlimited ceilings and 7-15 nm visibility.

Requirement

a.4) Visual photographic imagery showing spotted target and area to be dispersed.

Information provided in compliance with this requirement, e.g., photos of the observation.

The spotter plane reported poor light conditions and the photo may not depict the oil sufficiently

Requirement

a.5) List of other environmental considerations such as vulnerabilities such as bird nesting, fledglings, mating, plant, rare species, that provide tradeoff justifications.
a.6) List of economic extenuating circumstances, such as prevention of fishery closures and marine transportation system impacts.

Information provided in compliance with this requirement.

Resources at Risk in the Offshore at the MC252

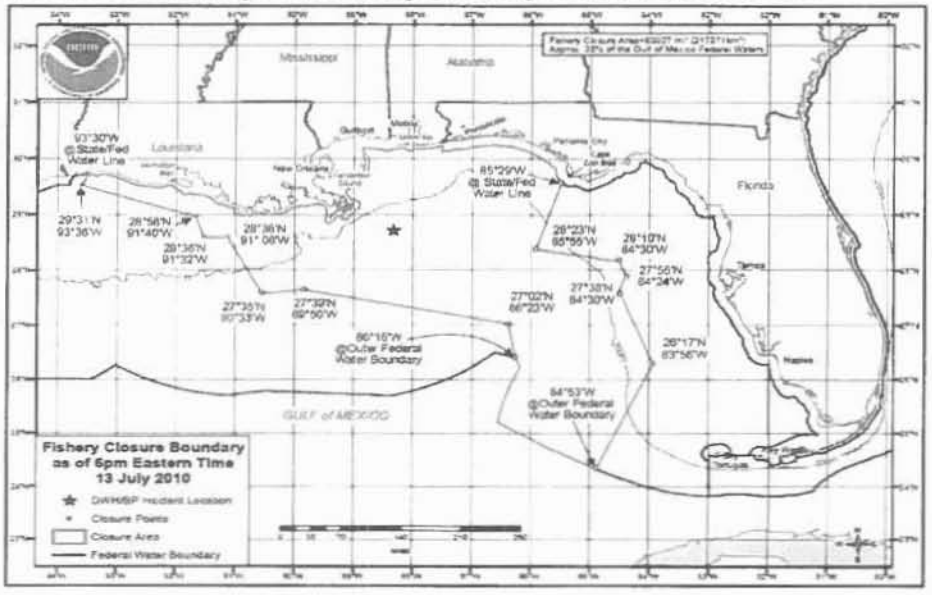
- Fish & Invertebrates – The fish in the area would primarily be pelagic open-water species such as tuna, jacks, and sailfish. There is an extensive recreational fishing for marlin and recreational and commercial fishing for yellow fin and blue fin tuna throughout the area. This area is also considered a nursery area for crevalle jack.
- Shellfish – This area is outside the normal range of spiny lobster, crabs and shrimp fisheries

- Birds – pelagic birds such as shearwaters and frigate birds may be in the area, but have likely removed themselves from the area. The birds may become oiled when foraging in the area. Direct oiling of birds reduced the buoyancy, water repellency, and insulation provided by the feathers and may result in death by drowning of hypothermia. Preening of oiled feathers may also result in ingestion of oil resulting in irritation, sickness and death.
- Mammals – whales (fin, and sperm, both federally and state endangered) and dolphins are commonly found throughout the area. Oil may irritate the skin, eyes, and nostrils of the cetaceans. Unless exposed to oil for prolonged periods, mortality is not expected.
- Reptiles – Loggerhead sea turtles (state/federally threatened) and Kemp's Ridley sea turtles (state /federally endangered) are found throughout the area in all life stages and water depths; other species are also known to be in the area (leatherback, green). The young of year of the various species are especially susceptible to oiling, often leading to mortality when exposed. In addition, weathered crude oil (in tar ball form or trapped in Sargasso weed) is known to be consumed by the turtles who mistake it for a food source, typically resulting in toxic effects, intestinal blockages, and often resulting in death.

The ICS 232 – Resources at Risk should be consulted to completely define the shoreline and near shore resources at risk (including wildlife, socioeconomic, and historic resources) and should be consulted to determine the potential extent of impacts from oil reaching these environments. Every effort should be taken to prevent this oil from reaching and impacting the extensive sensitive resources in these environments.

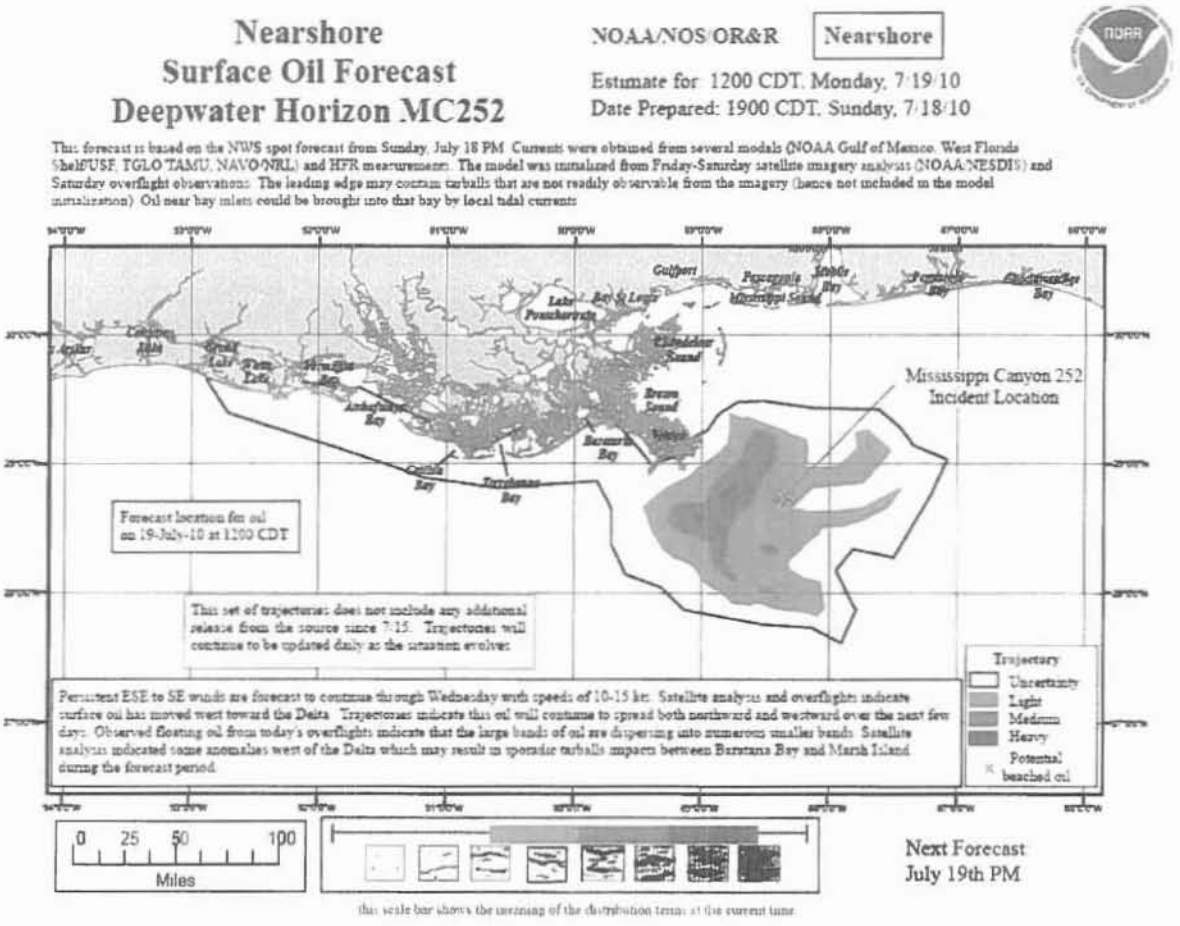
The longer oil remains on the surface without removal or dispersal, the negative impact of closures to the fishery will continue. Louisiana's $2.5-billion commercial fishing industry, provides much of the country's domestic shrimp and oysters.

The most recent fishery closure area provided by NOAA is shown below.

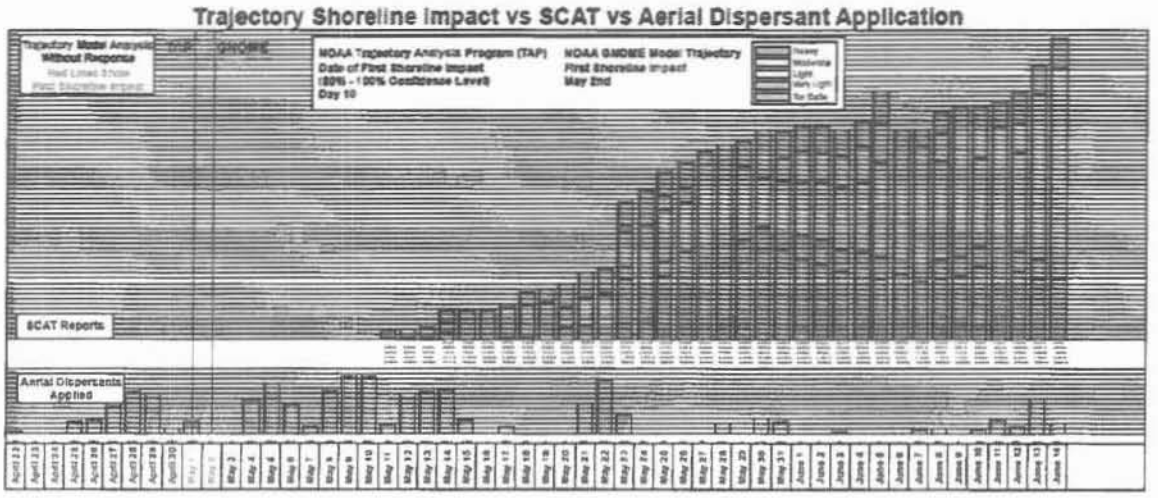


The threat to maritime commerce remains to the Louisiana Offshore Oil Platform (LOOP). LOOP handles 13 percent of the nation's foreign oil, about 1.2 million barrels a day, and connects by pipeline to 50 percent of the U.S. refining capability. The potential threat remains for marine commerce transiting the Mississippi River.

The NOAA Surface Oil Forecast shows extensive areas of heavy and medium oil that may adversely impact the shoreline, including sensitive resources (See the NOAA Near Shore Trajectory Map). The NOAA Surface Oil Forecast for July 18th shows extensive areas of heavy and medium oil that are or may adversely impact the shoreline, including sensitive wetlands.



The data shown on the bar graph below indicates a correlation between shoreline impact and dispersant volume usage. Although this is raw data that requires future peer review and evaluation, it is shown here to illustrate that if oil escapes the source area and the skimming and in-situ burn operations around the source, and aerial dispersants are not utilized, in all likelihood, shoreline impact with subsequent negative impact to the aforementioned Resources at Risk, will occur. Shoreline impact is forecast at Barataria Bay.



a. **Requirements: Ensure entire process is documented and a report completed for all dispersant applications. Spotters aboard reconnaissance flights are able to identify oil slicks estimated to require a specific number of gallons of dispersants. State that spotters will, within 6 hours of the dispersant spray operations, identify high value targeted slicks and prepare a report specifying the location and dispersant volumes needed for each application.**

Information provided in compliance with this requirement: Spotters have been trained by the NOAA SSC Ed Levine to differentiate various conditions of oil, e.g., dispersible, emulsified, heavy metallic slicks, etc. Replacement spotter personnel, prior to being designated a spotter, make 4 training flights with experienced trained spotters. Many of the experienced spotters have been trained by the NOAA SSC. The spotters evaluate the oil and estimate percent coverage, length and width of the slick. The oil condition, size and coverage are provided to the Aerial Dispersant Group in the Houma ICP that reviews the evaluation and calculates the quantity of dispersants from the information provided by the spotter. An appropriately sized aircraft and payload are ordered for the mission. Spotter reports are typically filed and submitted immediately after the recon flight completes and is used in evaluation of spray missions.

The Aerial Dispersant Group, Houma ICP, coordinates closely with the USCG SMART 1 team on our spray missions and will advise the SMART Team Leader in advance of any spray missions being conducted so they can arrange observation flights. The USCG SMART 1 team posts mission observation reports and photos on the EPA website for review.

Deepwater Horizon - BP Oil Spill Response

Dispersant Use FACT SHEET

- Dispersants are being used in four ways on this incident: (1) subsea at the source to prevent or reduce oil on the surface of the Gulf of Mexico; (2) boat spray on oil on the water near the source to reduce vapors in the air from the fresh oil; (3) aerial spray of surface slicks which cannot be recovered by mechanical recovery or controlled burns; and (4) boat spray application for scientific studies.
- Dispersants were first pre-approved (standing approval) for use on marine oil spills three miles from shore and in waters deeper than 30 feet in the Gulf of Mexico in 1995 by the EPA, USCG, adjacent states, NOAA and DOI. This pre-approval has been renewed three times.
- The biological impacts of dispersants applied both under and on water are being monitored using standardized tests that evaluate the potential acute (short-term) toxicity of the dispersed oil in the water. Acute toxicity tests are methods for determining the impact of a chemical or an effluent on living organisms and measuring the degree of response using commonly tested species. Organisms which will be tested include, among others, rotifers - sensitive small invertebrates that occur in the Gulf of Mexico and that are important to the food chain.
- To date, the toxicity data do not indicate any significant acute effects on aquatic life. Moreover, decreased size of the oil droplets (indicated by monitoring data) is a good indication that, so far, the dispersants are effective, i.e., reducing the amount of oil on the surface of the Gulf of Mexico.
- Water monitoring is being performed following both subsea and aerial dispersant application in order to provide the best scientific information possible. Some of the monitoring parameters include: (1) identification of dispersed oil; (2) oil droplet size; (3) dissolved oxygen (DO); (4) physical characteristics such as conductivity, temperature and depth (CTD); and (5) toxicity information.
- EPA and other government scientists are independently verifying the data on alternative dispersants presented by BP. BP is conducting its own tests to determine the least toxic, most effective dispersant available in the volumes necessary for a crisis of this magnitude and to evaluate whether the dispersants currently being used (Corexit) remain the most appropriate, as supported by the science for this situation.
- NIOSH, EPA, OSHA and BP are involved in monitoring the air around worksites and the public. EPA is conducting real time air monitoring along the coast. EPA's air monitoring conducted through June 10, 2010, has found that air quality levels for ozone and particulates are normal on the Gulf coastline for this time of year. EPA has observed odor-causing pollutants associated with petroleum products along the coastline at low levels. Some of these chemicals may cause short-lived effects like headache, eye, nose and throat irritation, or nausea. People may be able to smell some of these chemicals at levels well below those that would cause short-term health problems.
- Air monitoring for compounds associated with dispersants has been conducted on vessels spraying dispersants on the water surface, on certain VOOs (vessels of opportunity), and during reloading of aircraft used in aerial dispersant application. Preliminary results from those air monitoring activities do not indicate levels of dispersant compounds that would cause adverse health effects.
- Extensive air monitoring continues to be conducted on all vessels at the source of the incident and on representative vessels across the response area. Air monitoring data are available publicly daily http://www.airnow.gov/ and http://gulfcoast.airnowtech.org/.

Frequently Asked Questions

Given reports of dispersant toxicity, why would you even allow any application to continue?
Dispersants are less harmful than the oil leaking from the source and biodegrade in a shorter time span. This is an important step to reduce the potential for damage from oil reaching fragile wetlands and coastal areas. EPA continues to allow BP to use undersea dispersant at a maximum rate that is based on the amount of oil captured in the containment system and riser.

What are the tradeoff considerations being weighed regarding the impact to fish and wildlife when making decisions about the subsea use of dispersants?
Dispersants are generally less toxic than oil. When considering the use of a dispersant in the deep ocean, the federal government weighs the effectiveness of the dispersant in breaking down the oil at such depths, the benefits of preventing the oil from rising to the surface and eventually hitting the shore where it may cause significant damage to birds, wetlands and aquatic life, and the long term impacts of the dispersant mixed with oil in deeper waters. We have a monitoring and sampling plan in place to track the movement of the oil.

What effects could the use of dispersants have on marine life?
It's important to understand that the use of dispersants is an environmental trade-off. We know that surface use of dispersants decreases the environmental risks to shorelines and organisms at the surface and that, when applied at the surface, dispersants break down over several days. This is the first time that dispersants have been applied to a subsea well located nearly one mile below the water surface, and EPA and the Coast Guard are requiring BP to implement a robust sampling and monitoring plan to determine whether this use has a different impact on the environment. In cooperation with the Coast Guard, EPA, NOAA and other agencies, we are looking for potential differences in the rate of dispersion, movement of dispersed oil in the water column, and degradation of dispersed oil.

The federal response is intended to ensure that these operations are consistently monitored for any short or long term adverse effects that may outweigh the benefit of using dispersants.

Apart from marine life, has the Unified Command been able to make an assessment on the effects of the dispersant on the environment?
The harm or toxicity of dispersed oil in the environment is generally associated with the oil rather than with the dispersant alone. However, use of dispersants breaks up a slick of oil on the surface into smaller droplets that can go beneath the surface. When applied before spills reach the coastline, dispersants will potentially decrease exposure for surface-dwelling organisms (such as sea birds) and intertidal species (such as mangroves and salt marshes), while increasing exposure to aquatic life found deeper in the water. The States and NOAA will close fisheries where there are concerns about chemicals in seafood, and the FDA is monitoring seafood to determine when harvests may resume.

How will the government ensure the protection of the environment when dispersants are used?
The authorization given to BP to use dispersants on oil stemming from the Deepwater Horizon incident included specific conditions to ensure the protection of the environment and the health of residents in the affected areas. BP continues to work with the Coast Guard, EPA, NOAA and others in the Unified Command to monitor the environment for effects of dispersant use. In addition, EPA is collecting air and water quality data daily.

How do dispersants work on the water's surface?
Oil spill dispersants are chemicals applied directly to the spilled oil in order to break it into small droplets that fall below the surface. Dispersants are usually applied to the oil slick with specialized equipment mounted on an airplane, helicopter or ship. Once applied, dispersants help break up oil into tiny micron-sized droplets which mix into the upper layer of the ocean. When dispersants are applied to oil floating on the water surface, the dispersed oil may form a "plume" or "cloud" of oil droplets just below the water surface. However, the dispersed oil mixes vertically and horizontally into the water column and is rapidly diluted. Bacteria and other microscopic organisms are then able to act more quickly than they otherwise would to degrade the oil within the droplets.

Oil on calm water surfaces is often cohesive and natural degradation processes are slow. In heavy seas, however, the oil gets naturally dispersed into the surface waters. It should be noted that oil released from the BP Oil Spill is also naturally dispersing into the water column due to the physical agitation of the wind, waves, and vessel operations.

Is the underwater chemical dispersant that Unified Command and the Regional Response Team (RRT), including US EPA, approved contributing to underwater oil plumes?

Petroleum hydrocarbons from the spill will be present in dispersed form below the surface of the water. NOAA continues to work closely with EPA and the federal response team to monitor for the presence of oil and the use of surface and sub-surface dispersants. Analyses reported to date on samples taken in the actual areas of impact show very low levels of hydrocarbons, which suggests that the dispersants and other means have been successful in dispersing the oil and reducing the impacts from the release.

Have dispersants ever been used this much before?
While dispersants have been used in previous oil spills, this is the largest application of dispersants at an oil spill response in the United States. Since the spill occurred, Unified Command and the Regional Response Team have closely monitored potential impacts of the dispersant including air quality monitoring by both planes and through mobile and fixed locations. Air sampling is geared toward looking for significant increases in airborne (volatile) chemicals. Thus far, preliminary air monitoring results have not shown risks to human health from dispersants.

BP also is conducting unprecedented levels of monitoring to evaluate the potential risk to organisms in the deeper water column from subsurface dispersant use.

Where have the dispersants been sprayed?

Aircraft pilots have been trained to recognize oil which looks dispersible from the air and target their spray runs for those areas. Vessels near the source spray dispersants in areas where elevated concentrations of vapors from fresh oil are detected. Vessels conducting scientific studies generally rely on trained aircraft spotter pilots to direct them to areas of dispersible oil. The rules for spraying include:

- Dispersants use is permitted in areas at least 3 miles away from the closest shore and in waters deeper than 30 feet. The closest to shore airplanes have actually sprayed dispersants is about 7 miles from shore. Vessel spray is on a much smaller scale and has been used for specific purposes.

- Stay outside the safety zone around the area where BP is working to control the source. This safety zone is 5 miles in diameter.

- Safety procedures for vessels monitoring aircraft spray operational areas require a 2-mile separation zone from where the aircraft spray.

- Dispersant operations are not permitted in areas where marine mammals and sea turtles are observed.

Could the responders on vessels and the public be sprayed with dispersants?

Dispersants sprayed from aircraft have been applied far from shore (in a zone about 7 – 30 miles from the closest land and 2 miles from platforms and boats) and it is not possible for the spray to reach the general public on shore. This is because:

- The dispersant droplet size sprayed from the airplanes and the height of the aircraft above the water surface (typically 75 to 100 feet above the water) are designed to maximize the application of the dispersant to the target oil in an area typically 85 to 150 feet in width. Given the dispersant application procedures, dispersant spray exposure is not expected to be a concern on response vessels, which are at least two nautical miles away from the application area, or on shore, which is at least seven miles away.

- Safety briefings, including dispersant Material Safety Data Sheets (MSDSs), and personal protective equipment (PPE) are a requirement for and tailored to every dispersant application operation. The safety briefing includes each pilot's checklists for daily operations.

- Spotter aircraft are sent out in advance to identify suitable patches or slicks of oil for aerial treatment with dispersants, including those slicks that meet the 2-mile safety distance from vessels working in the area.

[redacted] LT

From: [redacted] LCDR
Sent: Friday, July 02, 2010 11:25 AM
To: [redacted] LCDR; [redacted] LCDR
Subject: FW: Use of Dispersants
Attachments: Dispersants Fact Sheet and QA.PDF; Dispersant Background and FAQs.pdf

"Some of the oil that is being released at the well site can be contained and recovered with booms and skimmers, or burned, when the weather is good and sea is calm. But it is difficult to capture all of the oil with these methods. Dispersants are used to break up the remaining surface oil before it can drift onto shore."

Dispersants are used to prevent oil sheen from reaching the shore; generally they are not applied within three miles of shore."

"A decision to use dispersant involves balancing the risks to certain animals and plants at the water surface and in shoreline habitats against the potential risk to other organisms in the water column and seafloor."

"Corexit has been used because it was possible to obtain a large enough supply to meet the anticipated need for dispersant in the days immediately after the spill. BP identified seven other possible alternative and whether BP uses any of these alternatives depends on whether the Federal on Scene Coordinator and Regional Response Teams approve the alternatives."

[redacted]
Lieutenant Commander, U.S. Coast Guard
Chief, Strategic Communications, National Incident Command Chief of Media Relations (CG-09222) 2100 2nd St. S.W., Stop 7362 Washington, DC 20593-7362
[redacted]
Supporting mission execution through excellence in communication www.USCGNews.com
www.uscg.mil

-----Original Message-----
From: [redacted] LT
Sent: Friday, July 02, 2010 1:36 PM
To: [redacted] CDR; [redacted] LCDR; [redacted]; [redacted] CDR; [redacted]
Subject: RE: Use of Dispersants

From BP.

-----Original Message-----
From: [redacted] CDR
Sent: Friday, July 02, 2010 11:59 AM
To: [redacted] LCDR; [redacted]; [redacted] CDR; [redacted]; [redacted] LT
Subject: RE: Use of Dispersants

[redacted]
Please track this down.
Thanks,

CDR [redacted]
Deepwater Horizon Response

External Affairs
Assistant EA Officer for Plans and Products [redacted]

-----Original Message-----
From: [redacted] LCDR
Sent: Friday, July 02, 2010 11:39 AM
To: [redacted] CDR; [redacted] CDR; [redacted]
Subject: Use of Dispersants
Importance: High

Legislative affairs folks are asking me for a few talkers about Why does BP continue to use dispersants in the GOM?

Can you grab a BP rep and get me a straight and prompt response?

Thanks

[redacted]
Lieutenant Commander, U.S. Coast Guard
Chief, Strategic Communications, National Incident Command Chief of Media Relations (CG-09222) 2100 2nd St. S.W., Stop 7362 Washington, DC 20593-7362
[redacted]
Supporting mission execution through excellence in communication www.USCGNews.com
www.uscg.mil

Date	Surface Dispersants (gallons)	Subsurface Dispersants (gallons)	total applied (gallons)	FOSC Surface Dispersants Approved (gallons)	FOSC Subsurface Dispersants Approved (gallons)	FOSC total max (gallons)	difference (gallons)	EPA Surface Dispersants Approved (gallons)	FOSC Subsurface Dispersants Approved (gallons)
26-May	0	0	0	?	?	0	0	?	15000
27-May	500	10	510	?	?	0	510	?	15000
28-May	18445	14040	32485	?	?	0	32485	?	15000
29-May	2900	14185	17085	?	?	0	17085	?	15000
30-May	17631	14974	32605	?	?	0	32605	?	15000
31-May	11686	12948	24634	?	?	0	24634	?	15000
01-Jun	0	13122	13122	6000	6000	12000	1122	?	15000
02-Jun	3375	7465	10840	6000	6000	12000	-1160	?	15000
03-Jun	6200	10241	16441	6000	2000	8000	8441	?	15000
04-Jun	13701	13931	27632	6000	23000	29000	-1368	?	15000
05-Jun	125	21143	21268	6000	2000	8000	13268	?	15000
06-Jun	0	13640	13640	6000	2000	8000	5640	?	15000
07-Jun	10744	14105	24849	6000	32000	38000	-13151	?	15000
08-Jun	8324	14207	22531	6000	32000	38000	-15469	?	15000
09-Jun	2100	12521	14621	6000		6000	8621	?	15000
10-Jun	1366	10279	11645	6000	21000	27000	-15355	?	15000
11-Jun	14305	9193	23498	6000	7000	13000	10498	?	15000
12-Jun	10356	4371	14727	6000	36000	42000	-27273	?	15000
13-Jun	36012	9596	45608	6000	17800	23800	21808	?	15000
14-Jun	12703	9689	22392	6000	23000	29000	-6608	?	15000
15-Jun	2768	11578	14346	6000	27700	33700	-19354	?	15000
16-Jun	13593	9152	22745	6000	18700	24700	-1955	?	15000
17-Jun	12423	5962	18385	6000	19200	25200	-6815	?	15000
18-Jun	15711	7642	23353	6000	16400	22400	953	?	15000
19-Jun	8380	17780	26160	6000	15500	21500	4660	?	15000
20-Jun	19576	13695	33271	6000		6000	27271	?	15000
21-Jun	11217	14583	25800	6000		6000	19800	?	15000
22-Jun	2008	10046	12054	6000	10000	16000	-3946	?	15000
23-Jun	5099	8886	13985	6000		6000	7985	?	15000
24-Jun	21088	13808	34896	6000	14400	20400	14496	?	15000
25-Jun	4633	12085	16718	6000	43000	49000	-32282	?	15000
26-Jun	23022	12535	35557	6000		6000	29557	?	15000
27-Jun	6626	11982	18608	6000	10880	16880	1728	?	15000
28-Jun	0	13195	13195	6000		6000	7195	?	15000
29-Jun	0	11484	11484	6000	750	6750	4734	?	15000
30-Jun	0	13474	13474	6000		6000	7474	?	15000
01-Jul	17852	10758	28610	6000	10000	16000	12610	?	15000
02-Jul	17852	10758	28610	6000				?	15000
03-Jul	1227	11363	12590	6000				?	15000
04-Jul	3079	10323	13402	6000				?	15000
05-Jul	803	11649	12452	6000				?	15000
06-Jul	387	11654	12041	6000				?	15000
07-Jul	1245	11779	13024	6000				?	15000
08-Jul	0	11553	11553	6000				?	15000
09-Jul	0	11673	11673	6000				?	15000
10-Jul	0	13210	13210	6000				?	15000
Total	307900	466110	774010						

From: [redacted]
To: [redacted] Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Date: Saturday, June 05, 2010 8:30:58 AM

All
Here is the 0900L Saturday 05 June update in. E-mail text below in event individual members of PERS DIST groups did not x-fer during my test e-mail yesterday.

SAT 0900L Update 05 JUNE
Sub Sea Disperant Stats:
Reporting period: 2200L 03 JUNE - 2200L 04 JUNE 2010
Sub Sea Dispersant continues
On 6/4/10 Injection rate 9-14 gallons per minute.
Injection disrupted 2 times for SIMOPS.
(0 hours and 55 minutes not injected)Volume: 13,931 gallons this period.
TOTAL Cumulative: 270,668 gallons)
The Ocean Veratas departed station pm of 04 June for Port Fourchon.
The Brooks McCall departed Port Fourchon pm of 04 June for an ETA of early SAT 05 June On-Station to resume sampling.
Vr
[redacted]
RRT VI Coordinator
[redacted]-cell

Sent with Good (www.good.com)

-----Original Message-----
From: [redacted]
Sent: Friday, June 04, 2010 07:49 PM Eastern Standard Time
To: Lloyd, Anthony CAPT; [redacted] gov'; D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: Test E-mail (No Response Necessary)

Test E-mail (No Response Necessary)

Date	Surface Dispersants (gallons)	Subsurface Dispersants (gallons)	total applied (gallons)	FOSC Dispersants Surface Approved (gallons)	FOSC Subsurface Dispersants Approved (gallons)	FOSC total max (gallons)	difference (gallons)	EPA Surface Dispersants Approved (gallons)	EPA Subsurface Dispersants Approved (gallons)	comments
26-May	0	0	0	0	0	0	0	per FOSC approval	15000	
27-May	229	10	239	229	0	229	10	per FOSC approval	15000	approved by FOSC - RADM Mary Landry
28-May	6400	14040	20440	6400	0	6400	14040	per FOSC approval	15000	approved by FOSC - RADM Mary Landry VOC high near source of control vessel
29-May	2900	14185	17085	0	15000	15000	2085	per FOSC approval	15000	approved by FOSC - RADMMary Landry - 15,000 gallons for a period not to exceed 12 hours. Located a large (2x0.5 miles) dispersible oil slick 90 Southeast of Houma.
30-May	17631	14974	32605	19000	0	19000	13605	per FOSC approval	15000	
31-May	11686	12948	24634	19000	0	19000	5634	per FOSC approval	15000	
01-Jun	0	13122	13122	6000	6000	12000	1122	per FOSC approval	15000	
02-Jun	3375	7616	10991	6000	15000	21000	-10009	per FOSC approval	15000	approved by FOSC - RADM Watson
03-Jun	6200	17753	23953	8000	17753	25753	-1800	per FOSC approval	15000	approved by FOSC - RADM Watson
04-Jun	13701	20655	34356	6000	23000	29000	5356	per FOSC approval	15000	approved by FOSC - RADM Watson
05-Jun	125	19666	19791	6000	19666	25666	-5875	per FOSC approval	15000	approved by FOSC - RADM Watson
06-Jun	0	13640	13640	2000	2000	4000	9640	per FOSC approval	15000	
07-Jun	10744	14105	24849	32000	15000	47000	-22151	per FOSC approval	15000	approved by FOSC - RADM Watson
08-Jun	8324	14207	22531	6000	32000	38000	-15469	per FOSC approval	15000	
09-Jun	2100	12521	14621	6000		6000	8621	per FOSC approval	15000	
10-Jun	1366	10279	11645	21000	0	21000	-9355	per FOSC approval	15000	
11-Jun	14305	9193	23498	15700	0	15700	7798	per FOSC approval	15000	
12-Jun	10356	4371	14727	7000	0	7000	7727	per FOSC approval	15000	
13-Jun	36012	9596	45608	36000	0	36000	9608	per FOSC approval	15000	
14-Jun	12703	9689	22392	17800	0	17800	4592	per FOSC approval	15000	
15-Jun	2768	11578	14346	23000	0	23000	-8654	per FOSC approval	15000	
16-Jun	13593	9152	22745	27700	0	27700	-4955	per FOSC approval	15000	
17-Jun	12423	5962	18385	18700	0	18700	-315	per FOSC approval	15000	
18-Jun	15711	7642	23353	19200	0	19200	4153	per FOSC approval	15000	
19-Jun	8380	17780	26160	6000	15500	21500	4660	per FOSC approval	15000	approved by FOSC - RADM Watson high VOCs on containment vessels.
20-Jun	19576	13695	33271	15500		15500	17771	per FOSC approval	15000	
21-Jun	11217	14583	25800	10400		10400	15400	per FOSC approval	15000	
22-Jun	2008	10046	12054	10487	10000	20487	-8433	per FOSC approval	15000	
23-Jun	5099	8886	13985	6000		6000	7985	per FOSC approval	15000	
24-Jun	21088	13808	34896	6000	14400	20400	14496	per FOSC approval	15000	
25-Jun	4633	12085	16718	6000	43000	49000	-32282	per FOSC approval	15000	
26-Jun	23022	12535	35557	6000		6000	29557	per FOSC approval	15000	
27-Jun	6626	11982	18608	6000	10880	16880	1728	per FOSC approval	15000	
28-Jun	0	13195	13195	6000		6000	7195	per FOSC approval	15000	
29-Jun	0	11484	11484	6000	750	6750	4734	per FOSC approval	15000	
30-Jun	0	13474	13474	6000		6000	7474	per FOSC approval	15000	
01-Jul	17852	10758	28610	6000	10000	16000	12610	per FOSC approval	15000	
02-Jul	17852	10758	28610	6000				per FOSC approval	15000	
03-Jul	1227	11363	12590	6000				per FOSC approval	15000	

04-Jul	3079	10323	13402	6000				per FOSC approval	15000
05-Jul	803	11649	12452	6000				per FOSC approval	15000
06-Jul	387	11654	12041	6000				per FOSC approval	15000
07-Jul	1245	11779	13024	6000				per FOSC approval	15000
08-Jul	0	11553	11553	6000				per FOSC approval	15000
09-Jul	0	11673	11673	6000				per FOSC approval	15000
10-Jul	0	13210	13210	6000				per FOSC approval	15000
Total	307900	479020	786920						

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] gov"; D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Monday 07 JUNE 2010
Date: Monday, June 07, 2010 7:59:13 AM
Attachments: MS Canyon 252-Polrep 07 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

V/r
[redacted]
RRT VI Coordinator
Eighth COAST Guard District (drm)
500 Poydras Street, Suite 1330
New Orleans, LA 70130
[redacted]:e

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Monday 08 JUNE 2010
Date: Tuesday, June 08, 2010 8:13:43 AM
Attachments: MS Canyon 252-Polrep 08 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Monday 14 JUNE 2010
Date: Monday, June 14, 2010 8:18:37 AM
Attachments: MS Canyon 252-Polrep 14 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:

>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Saturday 12 JUNE 2010
Date: Saturday, June 12, 2010 8:36:54 AM
Attachments: MS Canyon 252-Polrep 12 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
- >>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted])08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Sunday 13 JUNE 2010
Date: Sunday, June 13, 2010 8:57:11 AM
Attachments: MS Canyon 252-Polrep 13 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:

>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted]; D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Wednesday 09 JUNE 2010
Date: Wednesday, June 09, 2010 7:44:37 AM
Attachments: MS Canyon 252-Polrep 09 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
>>>

From: [redacted]
To: Lloyd, Anthony CAPT; Charlie Henry-NOAA; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE:Thursday 10 JUNE 2010
Date: Thursday, June 10, 2010 7:24:36 AM
Attachments: MS Canyon 252-Polrep 10 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
- >>>>

From: [redacted]
To: Lloyd, Anthony CAPT; [redacted] D08-DG-District-IMTWatch; Watson, James RADM; Hanzalik, James CAPT; Landry, Mary RADM; HQS-PF-fldr-NIC HQ Situation Unit; Little, Patrick CAPT; [redacted] Hooper, Thomas CAPT; [redacted]
Subject: MC-252 Sub-Sea Dispersant Daily (0900L) POLREP UPDATE: Friday 11 JUNE 2010
Date: Friday, June 11, 2010 12:55:28 PM
Attachments: MS Canyon 252-Polrep 11 June 2010.doc

FYI & SA - Updates are highlighted in YELLOW since yesterdays update.

Note: The continued purpose of this POLREP is to update on a daily basis the following:

1) Major Start & Stop chronologic events for the Sub-Sea Dispersant Injection since it entered the conditional operational phase, and gallons dispersant injected per reporting period, and cumulative gallons dispersant injected to date.

2) Capture any O/S and Departure stats of monitoring vessels in support of the required monitoring protocols.

Summary of today's update below:
-
>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject:	**POLREP # 1** **Initial (Update)** **Mississippi Canyon 252 Sub-Sea Dispersant Injection Status** **Latitude: 28.755286** **Longitude: -88.386402**
To:	DIST
From:	AREA COMMAND, ROBERT, LOUISIANA
Date:	5/17/2010
Reporting Period:	15 MAY - 31 May, 2010
Update:	0900 01 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
- BP shall use Turner Designs C3 Flourometer (e.g. SMART protocol) to distinguish between oil impacted surface waters and those not impacted by oil.
- BP shall use a CTD rosette package equipped with CDOM Flourometer and 2-way communication wire to ensure that EPA/NOAA scientists can view profile data as the rosette package is deployed to 1500 meters. In addition, the CDT rosette package must be capable of collecting discrete samples in water column using the live feed data system. The requirements must be met within 7 days for the RV Brooks McCall. All other vessels must immediately meet this requirement.
- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
- Discrete water samples shall be taken by BP at predetermined depths as specified or directed by EPA/NOAA scientists for UV fluorescences.
- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 01 June, 2010
Update: 0900 02 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
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Rototox toxicity testing

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PART 3.

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- BP shall deploy LISST from the vessel for continuous sampling of surface waters during transits, in order to provide particle size counts information which potentially distinguishes between dispersed and non-dispersed oil.
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- BP shall provide 48 hour advance notice for departure and trip duration timelines to the FOSC and the EPA RRT Co-Chair.
- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 02 June, 2010
Update: 0900 03 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 03 June, 2010
Update: 0900 04 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject:	**POLREP # 1** **Initial (Update)** **Mississippi Canyon 252 Sub-Sea Dispersant Injection Status** **Latitude: 28.755286** **Longitude: -88.386402**
To:	DIST
From:	AREA COMMAND, ROBERT, LOUISIANA
Date:	5/17/2010
Reporting Period:	15 MAY - 04 June, 2010
Update:	0900 05 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
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Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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- Rate: 10 gpm
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject:	**POLREP # 1** **Initial (Update)** **Mississippi Canyon 252 Sub-Sea Dispersant Injection Status** **Latitude: 28.755286** **Longitude: -88.386402**
To:	DIST
From:	AREA COMMAND, ROBERT, LOUISIANA
Date:	5/17/2010
Reporting Period:	15 MAY - 05 June, 2010
Update:	0900 06 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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PART 2.

Cast Flourometer – surface to sea floor
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UV- Fluorescence testing of Dispersant – Parameter Requirements

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 06 June, 2010
Update: 0900 07 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 06 June, 2010
Update: 0900 07 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
- BP Shall allow EPA/NOAA Scientists flexibility within the sampling plan to direct the collection of additional data based on field observations (at times and locations of their choice).
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 07 June, 2010
Update: 0900 08 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

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The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
LISST Particle Analysis at various intervals from surface to the sea floor
CTD – Conductivity, Temperature, and depth at various intervals from surface to sea floor
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation
Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

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- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.
- >>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 07 June, 2010
Update: 0900 08 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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PART 2.

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Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

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- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 08 June, 2010
Update: 0900 09 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 08 June, 2010
Update: 0900 09 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

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- Data reporting shall be conducted by BP on a daily basis. This reporting shall include a sample tracking table. Data reporting shall be provided by BP to the FOSC and the EPA RRT Co-Chair.

1.1.3 Evaluation Criteria to Determine Shut-Down of Subsurface Sea Dispersant Application

The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
2. If EPA's interpretation of the toxicity test reveals excessive exertion of a toxic response. To determine a measurable toxic response, BP must perform a rangefinder test since the collection of the sample will be directly from the toxic plume, and any sample from the plume will likely kill 100% of the test population. Therefore, the rangefinder must first be conducted to determine an order of magnitude dilution that gives a measurable response… EPA and NOAA will interpret the results of toxicity tests to inform determination of a shutdown decision.

1.1.4

Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

Major Start and Stop times for Sub-Sea Dispersant Injection (Operational Phase)

- 0215L Central 15 MAY began pumping at 10 gallon per minute.
- 1419L Central 15 MAY stopped pumping to adjust injection wand. (When it became d dislodged)
- 7222 gallons COREXIT 9500 pumped this time period.

>>>

>>>

>>>

- **2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application**
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

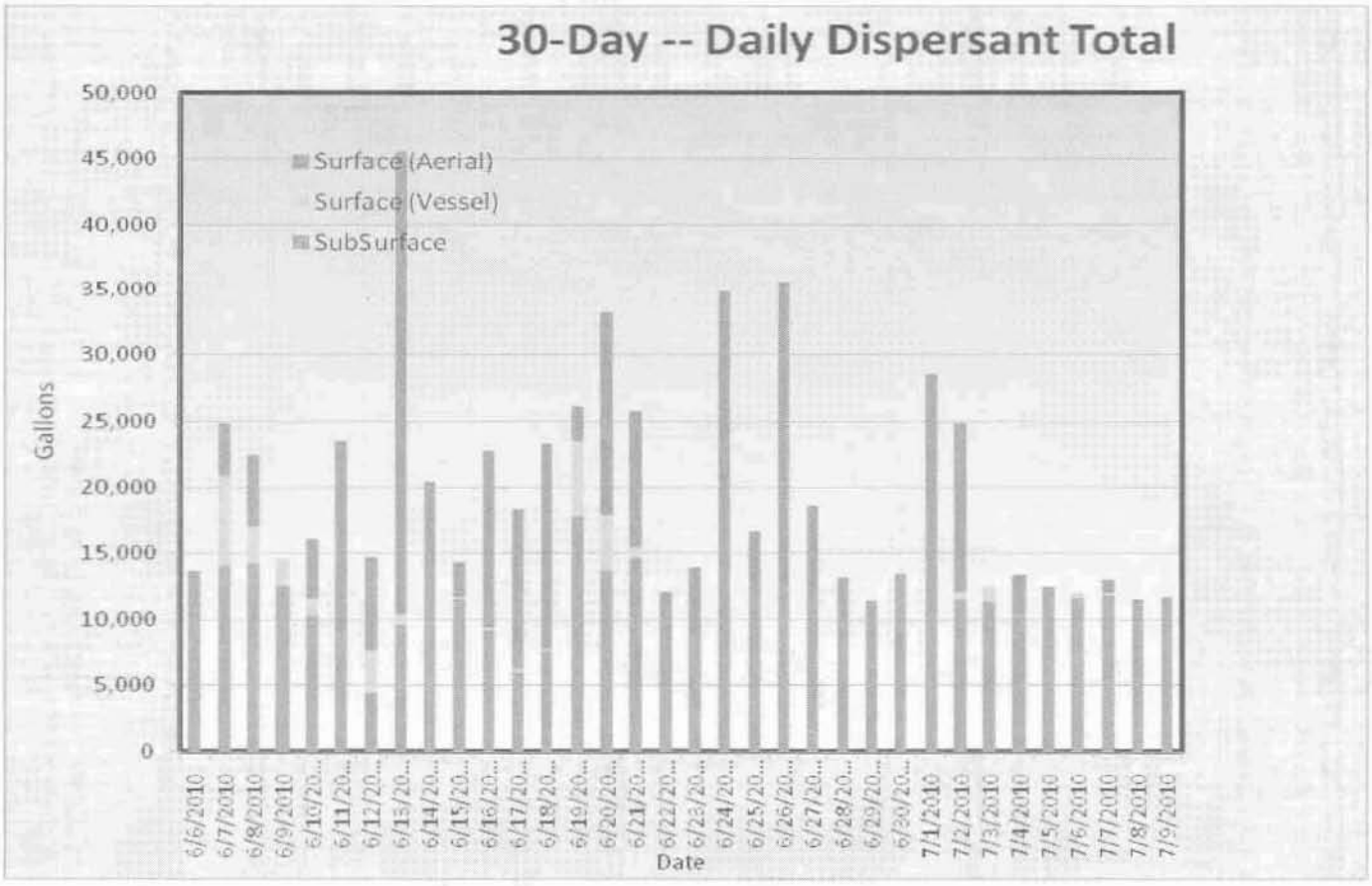
From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

Date: 07/09/2010

Reporting Period: 15 MAY – 09 JULY, 2010
Update: 0900 10 July 2010

1. Current Activities

- Friday 09 July update: period from 2200hrsL on 07/08/10 to 2200hrsL on 07/09/10:
- Injection rate average not provided **(estimate by calculation is 8.1 gallons/minute)**
- Flow disrupted for: No interruptions.
- Period Volume: 11,673 gallons (Total Cumulative: 692,470 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.



1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

PART 1.

Towed Flourometer at 1 meter
LISST Particle Analysis at various intervals from surface to 550 meters
Dissolved Oxygen at various intervals from surface to 550 meters
CTD – Conductivity, Temperature, and depth at various intervals from surface to 550 meters
Water sampling from surface to 550 meters for PAH analysis
Aerial Visual Observation – Weather Permitting

PART 2.

Cast Flourometer – surface to sea floor
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Aerial Visual Observation
Rototox toxicity testing
UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

- Sampling of dispersant/oil and oily waters must be continued, and in addition, baseline data of water without direct application of dispersant or oil shall also be collected by BP.
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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

1. If there is a significant reduction in DO from background to below 2 mg/L; or
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- 7222 gallons COREXIT 9500 pumped this time period.

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- No disruptions
- 14,130 gallons of COREXIT pumped in this time period.
- Injection is still on-going at time of this POLREP Update

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- 14,040 gallons of COREXIT pumped in this time period. (183,832 gallons cumulative)
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Injection rate: 9.8 gal/min. Injection disrupted 1 times for SIMOPS (0 hour and 45 mins not injected)
Volume: 13,640 gallons (Total Cumulative 317,555 gallons)
The Brooks McCall was on-station since am of 05 JUNE and remains on-station for required sampling.
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5/31/10 – 6/1/10	13,122	13,122	238,509
6/1/10 – 6/2/10	7,465	7,758	246,267
6/2/10 – 6/3/10	10,241	16,495	262,762
6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

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- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

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- Veritas on station for sampling, as weather permits

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 09 June, 2010
Update: 0900 10 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

This is considered as an operational trial of the proof of concept method previously performed for this event in discrete test phases. Currently, BP has authority from the EPA and the Coast Guard per its Dispersant Monitoring Directive for Subsurface Dispersant Application dated 10 May 2010 and modified on 14 MAY 2010 as Addendum 1, to conduct sub-sea dispersant injection of COREXIT 9500. Additionally, stakeholders within the response effort continue to monitor any potential environmental impacts of these operations.

1.1.2 Co-Requisite Vessel Monitoring Requirements

The R/V BROOKS McCALL has been O/S since 5/15/2010, and is required to perform sampling in accordance with the 14 May 2010 Addendum 1 to the Dispersant Monitoring and Assessment Directive of 09 May both of which were signed and approved by FOSC RADM Mary Landry, and Sam Coleman, Director of Superfund Division, EPA Region VI.

A brief summary of testing required to be performed is IAW the Dispersant Monitoring and Assessment Directive is as follows:

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Rototox toxicity testing

UV- Fluorescence testing of Dispersant – Parameter Requirements

PART 3.

Type of Dispersant to be used
Rate of Dispersant Injection
Process for monitoring pump rate
Procedures for FOSC to start and stop injection

Note: Key additions to these protocols added on 14 May as requirements by Addendum I are as follow, but are not limited to the following:

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The Federal On-Scene Coordinator will immediately convene the Regional response Team (RRT) when either of the following conditions are reported:

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Note: Sub-Sea Dispersant application (Operational Phase Chronology) has followed these major start-stop intervals since the approval of Addendum 1 on 14 May which established final sampling and shut-down protocols, agreed upon by USCG and EPA. There have been minor interruptions in this schedule to allow for operational & pumping concerns, but below summary represents the major intervals of operation at an approx rate of 10 gallons per minute when pumping:

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- 2200 Central 31 MAY thru 1920 Central 01 JUNE, continued subsurface dispersant application
- Rate: 10 gpm
- Volume: 13,122 gallons (Total Cumulative- 238,530 gallons)
- Disruptions: Sub-Sea Injection of Dispersant was stopped at 1920 hours.
- >>>>

- The Brooks McCall was on-station beginning am of 05 JUNE and scheduled to depart station pm of 07 JUNE for a return to Port Fourchon. The Ocean Veratas is confirmed on-station am of 08 June conducting the required sampling.

>>>

U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

From: AREA COMMAND, ROBERT, LOUISIANA

Date: 5/17/2010

Reporting Period: 15 MAY - 09 June, 2010
Update: 0900 10 June 2010

1. Current Activities

1.1 Operations Section (Sub-Sea Dispersant Operations Only)

1.1.1 Narrative

As an emergent strategy, the application of sub-sea dispersants to mitigate the sea surface spreading of oil, has been implemented again (specifically the COREXIT 9500) is being injected into the expelling oil plume at the sea floor at the depth of 5,000 feet (the depth from surface of the MC 252 oil plume) at a rate of approximately 10 gallons per minute.

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U.S. COAST GUARD / SITUATION REPORT
Mississippi Canyon 252 Sub-Sea Dispersant Injection Status POLREP

Unified Area Command (Robert, LA – New Orelans, LA)

Subject: **POLREP # 1**
Initial (Update)

Mississippi Canyon 252 Sub-Sea Dispersant Injection Status

Latitude: 28.755286 **Longitude: -88.386402**

To: DIST

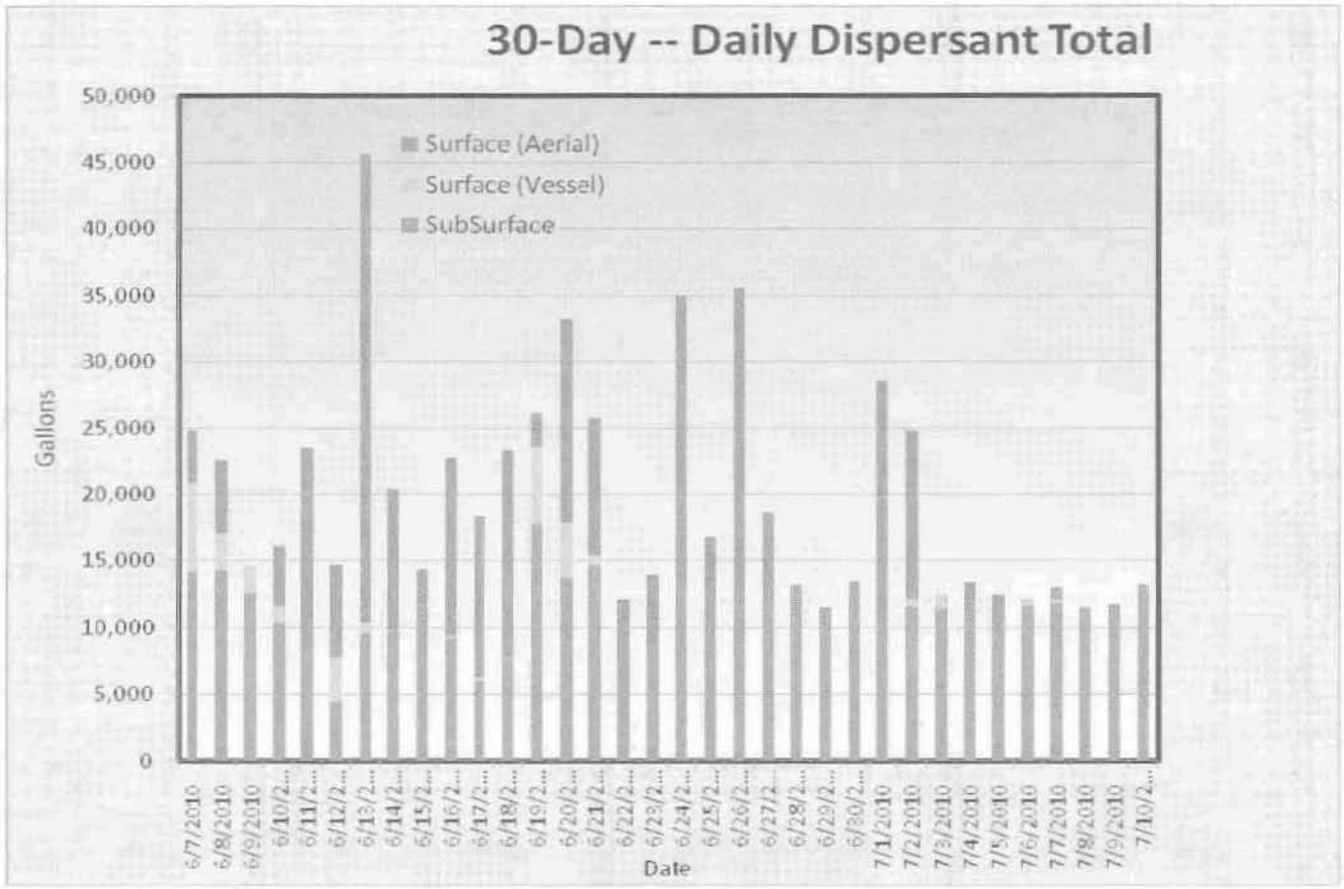
From: AREA COMMAND, ROBERT, LOUISIANA – NEW ORLEANS, LOUISIANA

Date: 07/10/2010

Reporting Period: 15 MAY – 10 JULY, 2010
Update: 0900 11 July 2010

1. Current Activities

- Saturday 10 July update: period from 2200 hrsL on 07/09/10 to **2400** hrsL on 07/11/10: Note **26-hour** reporting period.
- Injection rate average: varied from 10 - 12 gpm **(estimate by calculation is 9.2 gallons/minute).**
- Flow disrupted for: There were several disruptions during the period due to capping operations.
- Period Volume: 13,210 gallons (Total Cumulative: 705,680 gallons).
- Ocean Veritas and International Peace are on site and conducting monitoring.



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6/3/10 – 6/4/10	13,931	20,651	283,413
6/4/10 – 6/5/10	13,513	21,143	304,556
6/5/10 – 6/6/10	13,640	13,640	318,196
6/6/10 – 6/7/10	14,105	14,105	332,301
6/7/10 – 6/8/10	14,207	14,207	346,508
6/8/10 – 6/9/10	12,521	12,521	359,029
6/9/10 – 6/10/10	10,279	10,279	369,308
6/10/10 – 6/11/10	9,193	9,193	378,501
6/11/10 – 6/12/10	4,371	4,371	382,872

>>>

- Period Volume: 14,583 gallons (Total Cumulative 482,718 gallons).
- The Ocean Veritas left port on 19 June, on station starting am 20 June for required sampling.

>>>

- Veritas on station for sampling, as weather permits

>>>

May 20, 2010

Rear Admiral Mary Landry
Commander, Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

Samuel Coleman, P.E.
Director, Superfund Division
U.S. EPA Region 6
Dallas, TX 75202

Re: May 19, 2010 Addendum 2 to Dispersant Monitoring and Assessment Directive ("Addendum 2")

Dear Admiral Landry and Mr. Coleman:

This letter is the response to the directive in Addendum 2 for BP Exploration & Production Inc. ("BP") to identify within 24 hours of issuance of Addendum 2 one or more approved dispersant products from the National Contingency Plan Product Schedule that are "available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopis, as indicated on the NCP Product Schedule".

BP's response below considers the criteria set forth in the directive in the following order (1) dispersants with a toxicity value greater than or equal to 32.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopis, as indicated on the NCP Product Schedule, (2) the availability based on existing stockpiles, the estimated time to begin aerial and subsurface application, and time for manufacturing, shipping and warehousing, and (3) as effective as Corexit EC9500A at dispersing the oil plume. As discussed below, given the above criteria, BP continues to believe that Corexit EC9500A is the best alternative.

(1) Toxicity Value.

Only five products on the NCP Product Schedule meet the criteria in the May 19th directive. These are: Sea Brat #4, Nokomis 3-F4 and Nokomis 3-AA, Mare Clean 200, and Neos AB3000.

EPA has used acute toxicity criteria to evaluate dispersants that will be applied to oil floating on the water surface. When evaluating the same materials for subsea use, additional criteria may be relevant. We have attached a summary of the criteria that BP is using to evaluate dispersant options, and comparison tables that evaluate each dispersant by such criteria, based on information currently available to us.

One relevant criterion, given the amount of dispersant that is required at this site and the proposed application near the ocean floor, is the potential long term effect and persistence of the chemicals in each dispersant.

In this regard, Sea Brat #4 contains a small amount of a chemical that may degrade to a nonylphenol (NP). The class of NP chemicals have been identified by various government agencies as potential endocrine disruptors, and as chemicals that may persist in the environment for a period of years. The manufacturer has not had the opportunity to evaluate this product for those potential effects, and BP has not had the opportunity to conduct independent tests to evaluate this issue either. BP learned of this issue after it applied for permission to use Sea Brat #4 at the incident site.

With this additional information in hand, we believe it would be prudent to evaluate the potential NP issue more carefully before EPA or the FOSC require Sea Brat to be used at the incident site, and in particular, before it is applied underwater near the ocean floor.

It would also be prudent to obtain the chemical formulas for the other dispersants that meet the acute toxicity criteria in the May 19th directive, and evaluate them for their potential to degrade to NP, or any other chemical that has been identified as a potential endocrine disruptor. BP has not been able to obtain this information in the 24 hour time frame provided in the directive.

COREXIT does not contain chemicals that degrade to NP. The manufacturer indicates that COREXIT reaches its maximum biodegradability within 28 days of application, and that it does not persist in the environment. These qualities make COREXIT a better choice for subsea application, based on the information currently available. COREXIT appears to have fewer long term effects than the other dispersants evaluated.

(2) Availability.

BP has an inventory of 246,380 gallons of COREXIT that are available for immediate use, and the manufacturer is able to produce an additional 68,000 gallons/day, which is sufficient to meet all anticipated dispersant needs at this site.

BP also has an inventory of 100,000 gallons of Sea Brat #4 available for immediate use. The manufacturer is able to produce an additional [ ] gallons/day, which would be sufficient to meet all anticipated surface application needs, but may not be sufficient to meet both surface and subsurface application needs combined.

BP does not have a stockpile of the other dispersants that meet the criteria in the May 19th Directive, and the manufacturers tell us that they cannot produce the requested volume for 10 to 14 days or more.

Attached to this letter is a table that describes the availability and production capability for each dispersant option (See "Dispersant Supply Profile.')

(3) Effectiveness.

COREXIT was 55% to 63% effective in dispersing samples of South Louisiana Crude Oil. Sea Brat #4 was 61% effective in dispersing samples of the same material. The products are expected to have similar levels of effectiveness in the field.

Attached to this letter is a table that shows the expected effectiveness ratings for the four other dispersants that meet the acute toxicity criteria in Addendum 2. The Nokomis products are slightly more effective (64-65%), while Mare Clean and Neos AB3000 are reported to be substantially more effective at dispersing oil (84% and 90%).

(4) Conclusion.

In the midst of an oil spill response, one of the most important criteria is whether the dispersant in question can be obtained in sufficient volumes to meet immediate needs. Dispersants must be applied to the spill shortly after release to be effective. As oil weathers in the environment, it becomes increasingly difficult to disperse with any of the listed products.

COREXIT was the only dispersant that was available immediately, in sufficiently large quantities, to be useful at the time of the spill. Subsequent efforts have identified Sea Brat #4 as a possible alternative that is equally effective at dispersing oil, but has fewer acute toxicity effects. In the short

time provided to us, BP and the manufacturer of Sea Brat #4 have not had the opportunity to evaluate other potentially significant criteria, including the risk that a small fraction of Sea Brat #4 may degrade to NP, and/or may persist in the environment.

None of the other dispersants that meet the acute toxicity and effectiveness criteria in Addendum 2 are available in sufficient quantities at this time. In addition, before supporting a decision to switch to those dispersants, it would be important to review the formula for each alternative, and evaluate it for additional risks, such as persistence in the environment. BP has not been able to do this in the time provided.

Based on the information that is available today, BP continues to believe that COREXIT was the best and most appropriate choice at the time when the incident occurred, and that COREXIT remains the best option for subsea application.

Before the Coast Guard and EPA issue further directives requiring a change in dispersant products or monitoring, we would appreciate the opportunity to meet with you to discuss the options and their efficacy and potential impacts, in view of the circumstances at the spill site, and the proposed methods of usage.

After you have the opportunity to review the attached information, please let me know the earliest time when you might be available to meet with our team to discuss these issues.

Sincerely,

Douglas J. Suttles

I. INTRODUCTION

This attachment contains detailed technical information in response to the directive addendum from the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA), directing BP to identify "one or more approved dispersant products from the National Contingency Plan Schedule that are available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value [greater][1] than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopsis." *See* Dispersant Monitoring and Assessment Directive - Addendum, dated May 19, 2010 ("May 19th Directive").

To respond to the short deadline contained in the May 19th Directive, the information that we can provide is necessarily limited to the information that was in hand or could be obtained on 24 hours notice.

II. BACKGROUND

By way of background, and to provide some context, we begin by briefly describing why COREXIT was selected and approved for use by the EPA and the USCG. COREXIT is on the list of dispersants that are pre-approved for surface application to oil. It is one of the most commonly used dispersants, and has been used before in the Gulf of Mexico. Most important is that it was possible to quickly obtain a large enough supply of COREXIT to meet the anticipated needs at this site, by purchasing it from the manufacturer and by borrowing it from other companies. No other dispersant was available in the required amounts at the time of the oil spill.

III. POTENTIAL ALTERNATIVE DISPERSANTS

BP has identified the following dispersant products as potential alternatives to the COREXIT products approved for use:

1. Dispersit SPC 1000;
2. JD 2000;
3. Mare Clean 200;
4. Neos AB3000; and
5. Nokomis 3-AA;
6. Nokomis 3-F4
7. SAF-RON Gold;

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[1] The directive says "less than or equal to," but BP presumes that the intended expression was "greater than or equal to," since lower toxicity values indicate higher toxicity.

8. Sea Brat #4;

The Mare Clean 200, Neos AB3000, Nokomis 3-AA, Nokomis 3-F4 and Sea Brat #4 all have LC50 values greater than or equal to either the *Menidia* or *Mysidopsis* criteria, as required by the May 19th Directive.

IV. EVALUATION CRITERIA

In the table in section __ below, BP provides nine categories of information to assist the USCG and EPA in choosing alternative dispersants for use in the Spill Response. These categories are the following:

A. NCP Product Schedule Listing

Pursuant to Subpart J of the National Oil and Hazardous Substances Pollution Contingency Plan, no dispersant may be used in the United States if it is not listed on the National Contingency Plan Product Schedule. Accordingly, the only dispersant products being considered for possible use in the spill response are among those currently listed on the NCP National Product Schedule.

B. Effectiveness in Laboratory Trials

Each dispersant must be tested for effectiveness before it is listed in the Product Schedule. In addition, pursuant to EPA and U.S. Coast Guard approval, samples of Dispersit SPC 1000, JD-2000, Nokomis 3-AA, SAF-RON Gold, and Sea Brat #4 were tested in the laboratory for their effectiveness in dispersing oil using both the swirling task method (EPA-approved method) and a modified EXDET (Exxon Dispersant Effectiveness Test).[2] The test oil used was a surrogate from the nearby Thunder Hawk rig since fresh crude oil from the MC 252 was unavailable at the time.

C. Effectiveness in Field Trials

Actual field trials can provide a more accurate assessment of the potential performance of dispersants than laboratory trials. Field trials on MC 252 oil in various stages of weathering have been completed for Nalco EC 9500A.

D. Acute Toxicity

Each dispersant must be tested for acute toxicity before it is listed in the Product Schedule. In addition, we have reviewed and will continue to review information available from

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[2] The EXDET test measures relative dispersant effectiveness, allows comparisons among small-scale laboratory tests, and assists with comparisons to field trials (Becker, K.W., L.G. Coker, and M.A. Walsh. 1991. "A method for evaluating oil spill dispersants, Exxon Dispersant Effectiveness Test (EXDET)" in Oceans '91 Proceedings, Oceanic Engineering Society of IEEE, New York, NY. pp. 1486-1490).

material data safety sheets (MSDS), toxicity information available from the National Product Schedule, information provided by manufacturers and information available in scientific literature.

E. Persistence, Bioaccumulation and Chronic Effects and Endocrine Disruption

BP is reviewing available information about the persistence, bioaccumulation, chronic effects, endocrine disruption and other impacts of each dispersant to determine which dispersants will have the fewest impacts overall, and not just the best performance on the tests for the Product Schedule. There may be only limited data on long-term impacts for many of the dispersants as formulated, however. In addition, there may be only limited information on the constituents of the dispersants, since the dispersants typically contain proprietary substances whose identities are not publicly available. For those dispersants where constituents and/or data are publicly available, BP will identify and catalogue long-term impacts. For those where constituents are not publicly available, BP will endeavor to obtain confidential information about the constituents so that we may identify long-term impacts and review them with the EPA in a confidential manner.

*** CONFIDENTIAL INFORMATION BELOW***

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[redacted]

[redacted]

* CONFIDENTIAL INFORMATION ABOVE*

F. Whether Potential Alternatives Have Been Prohibited Outside the United States

As part of our evaluation of the COREXIT products approved for use, BP has reviewed available information concerning their use outside the United States.[3] BP has conducted similar research for the 8 potential alternatives products. To date, we are not aware that any have been prohibited by any foreign regulators.

G. Behavior in the Environment

The behavior of dispersants in the environment may affect both its effectiveness and its long term impacts. One factor determining the behavior of dispersants after application is the tendency of a dispersant to rise or sink in the water column which, in turn, depends on whether the dispersants contain significant quantities of petroleum-based solvents that are less dense than water. Two other factors are the biodegradation of the dispersant and its tendency to bioaccumulate and bioconcentrate.

H. Quantities Currently Available and Reliability of Supply

An important consideration in identifying and selecting possible alternative dispersants is the commercial availability of those products in quantities sufficient to meet current and anticipated needs. Approximately 75,000 gallons of dispersant is used each day for surface

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[3] We have learned that COREXIT 9527 and COREXIT 9500 were removed from the list of approved dispersants in the UK. Our understanding is that these two products were removed due to a new test added by the UK regulators. The test, known as the "rocky shores test," is designed to evaluate the toxicity of the dispersants when sprayed in the tidal zone, and the mortality of limpets exposed to the dispersant. The test was added because of concerns that dispersants may cause more significant ecological impacts on rocky shores than they do on sandy or pebble beaches (primarily seaweed overgrowth due to increased mortality in the harvester species). The UK regulators continue to allow the use of existing stockpiles of these COREXIT products away from rocky shorelines, with approval. We have not been informed by the On Scene Coordinator that the "rocky shores test" is applicable to the conditions in the Gulf, as most tidal areas near the release are not rocky, and again US EPA and Coast Guard have approved both products for use in this response.

and subsea application. Going forward, an estimated 50,000 gallons per day will be needed for continued aerial spraying. It is also important to consider the extent to which a manufacturer can reliably produce and deliver sufficient quantities of quality-grade product to the field. Therefore, we have and will continue to evaluate any potential supply chain problems (e.g., interruptions in the manufacturer's ability to obtain raw materials needed to make the product), quality control issues (e.g., production of significant volumes off-specification product that is ineffective in dispersing oil and could not be used) and delivery problems (e.g., inability to arrange timely transport of the product to the field).

V. Available Data on the Potential Alternatives

In the following table, BP has compiled the available information relevant to the dispersants and criteria described above.

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
A. NCP Product Schedule		Yes	Yes	Yes	Yes	Yes	Yes	Yes
B. Effectiveness (EPA Swirl Test)	% Effective (Prudhoe Bay crude)	45.3	37.4	60.4	40	63.20	53.6	84.80
	% Effective (South Lousiana crude)	54.7	63.4	77.8	100	65.70	60.7	53.80
	% Effective (Average)	50.0	50.4	69.1	73	64.50	57.1	69.30
C. Effectiveness (Gulf Field Test)	Based on field test protocols developed by the Dispersant Operation Group				Not yet tested	Not yet tested	May 8 field test indicated oil dispersed with formation of droplets with a likely median diameter <50 microns	Not yet tested
D.1 Acute Toxicity Data (NCP Schedule)	*Mysidopsis bahia* (shrimp) *48hr LC50 (mg/L)*	32.23	24.14	90.50	16.6	20.16	14.0	63.00
	Menidia beryllina (inland silverside fish) *96hr LC50 (mg/L)*	25.20	14.57	407.00	3.5	34.2	30.0	29.43
D.2 Additional Acute Toxicity Data (from MSDS)	*Acartia tonsa* marine copepod) 48hr LC50 (mg/L)	34	--	--	--	--	--	--
	Artemia (shrimp) 48hr LC50 (mg/L)	20.7	--	--	--	--	--	--
	Psetta maxima (Turbot flatfish) 96hr LC50 (mg/l)	--	50	--	--	--	--	--

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
E. Persistence, Bioaccumulation and Chronic Effects and Endocrine Disruption: Constituents	Based on Information Provided by Manufacturer	Proprietary Mixture	Proprietary Mixture	Proprietary Mixture	Proprietary Mixture	Formulations may contain nonylphenol polyethylene ethoxylates (NPE), which biodegrade to nonylphenol, a potential endrocrine disruptor NPE use restricted in EU, under review in US.	Proprietary Mixture	Proprietary Mixture
G.1. Behavior in the Environment: Solvent	Based on Information Provided by Manufacturer	Petroleum based solvent with proplyene glycol	2-butoxyethanol and propylene glycol	Proprietary mixture, insufficient information	Water based containing emulsifiers, dispersants, and water dilutable coupling solvent	Water and propylene glycol	Water and propylene glycol	Proprietary mixture, insufficient information

Evaluation Criteria for Selected Dispersants								
Evaluation Criteria	**Comment**	**Corexit® EC9500A**	**Corexit® EC9527A**	**JD-2000**	**Dispersit SPC 1000™**	**Nokomis 3-F4**	**Sea Brat #4**	**Saf-Ron Gold**
G.2. Behavior in the Environment: Biodegradation	Based on Information Provided by Manufacturer	Manufacturer describes as biodegradable, majority of components expected to readily biodegrade	Manufacturer describes as biodegradable, majority of components expected to readily biodegrade	Proprietary mixture, insufficient information	Manufacturer describes as "completely biodegradable surfactants" - Proprietary Mixture Currently Insufficient Composition Information to Assess	Nonylphenol, degradation product of NPE, potentially resistant to biodegradation during subsurface application - Proprietary Mixture Currently Insufficient Composition Information to Assess	MSDS describes product as highly biodegradable	Proprietary mixture, insufficient information
G.3. Behavior in the Environment: Potential for Bioaccumulation	Based on Information Provided by Manufacturer	Manufacturer reports component substances have a potential to bioaccumulate	Manufacturer reports component substances have a low potential to bioconcentrate	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information	Proprietary mixture, insufficient information
H. Quantities Currently Available and Reliability of Supply		BP to provide	BP to provide	BP to provide	Anticipates increasing to 20,000 gallons per day, and possibly later to 60,000 gallons per day.	BP to provide	BP to provide	BP to provide

VI. Conclusions

As discussed above, there are many considerations that are relevant to selecting dispersants for use.

*** CONFIDENTIAL INFORMATION BELOW***

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*** CONFIDENTIAL INFORMATION ABOVE***

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		Daily Dispersant Used (gallons)				Daily Approved (gallons)			Approved Minus Used (gallons) Negative number indicates amount used was less than the approved amount			
Date	ADD-Houma SitRep	Subsea	Aerial	Vessel	Total	Subsea	Aerial	Vessel	Subsea	Aerial	Vessel	
5/26	14400	11,529	299	7,453	19,281							Directive signed on 5/26 by USCG and EPA, on 5/28 by BP, daily subsea limit 15,000 gallons, surface requires FOSC approval. Top kill ops commenced.
5/27	14040	14,347	229	800	15,376	15,000	229	0	-653	0	800	Approval processes for new Directive being finalized; 229 aerial used for dispersant test, retroactively approved
5/28		13,670	12,045	6,400	32,115	15,000	15,000	6,400	-1,330	-2,955	0	Approval processes for new Directive being finalized; 6,400 vessel required to control VOCs and ensure safe operations near the source; retroactively approved. Top Hat Ops - high flow from well.
5/29	14974	14,588	0	2,900	17,488	15,000	15,000	6,000	-412	-15,000	-3,100	Top kill declared unsuccessful. Top Hat Ops commenced - high flow from well.
5/30	12948	13,073	15,131	2,500	30,704	15,000	19,000	6,000	-1,927	-3,869	-3,500	Top Hat Ops - high flow from well.
5/31	13122	13,936	11,676	10	25,622	15,000	19,000	6,000	-1,064	-7,324	-5,990	Top Hat Ops - high flow from well.
6/1	7465	12,201	0	0	12,201	15,000	0	6,000	-2,799	0	-6,000	Top Hat Ops - high flow from well.
6/2	10243	8,073	0	3,375	11,448	15,000	0	6,000	-6,927	0	-2,625	6/2 ongoing vessel approval allows more than 6,000 gallons when needed for VOC control per approved vapor suppression guidelines. Top Hat Ops - high flow from well.
6/3	13931	17,753	1,900	4,300	23,953	17,753	2,000	6,000	0	-100	-1,700	17,753 subsea retroactively approved; required for high VOC control during LMRP cap removal, actual amount greater than anticipated due to meter error. Top Hat Ops - high flow from well.
6/4	13513	20,655	0	13,701	34,356	23,000	0	13,701	-2,345	0	0	Several hours of no subsea dispersant use afternoon of 6/3 during LMRP cap removal led to high VOCs; 23,000 subsea approved for 6/4; vessel dispersant use consistent with approved plan. Top hat in place.
6/5	13640	20,306	125	0	20,431	19,666	125	6,000	640	0	-6,000	19,666 subsea retroactively approved; amount over 15,000 result of meter error; amount later revised from 19,666 estimate to 20,306
6/6	14105	13,937	0	0	13,937	15,000	2,000	6,000	-1,063	-2,000	-6,000	
6/7	14207	14,732	3,998	6,746	25,476	15,000	4,000	6,746	-268	-2	0	late on 6/6 high VOCs resulted after subsea reduced to 4 gpm per EPA step down; VOCs took 1.5 days to bring under control; vessel dispersant use consistent with approved plan
6/8	12521	13,763	5,505	2,819	22,087	15,000	32,000	6,000	-1,237	-26,495	-3,181	
6/9	10279	12,112	0	2,100	14,212	15,000	0	6,000	-2,888	0	-3,900	
6/10	9193	10,163	4,506	1,366	16,035	15,000	21,000	6,000	-4,837	-16,494	-4,634	
6/11	4371	8,447	14,305	0	22,752	15,000	15,700	6,000	-6,553	-1,395	-6,000	
6/12	4371	4,852	6,996	3,360	15,208	15,000	7,000	6,000	-10,148	-4	-2,640	
6/13		9,916	35,212	800	45,928	15,000	36,000	6,000	-5,084	-788	-5,200	
6/14	9596	9,800	10,706	35	20,541	15,000	17,800	6,000	-5,200	-7,094	-5,965	
6/15	9689	11,726	2,608	160	14,494	15,000	15,500	6,000	-3,274	-12,892	-5,840	Discoverer Enterprise Down due to lightning strike - high flow from cap.
6/16	11578	8,777	13,380	213	22,370	15,000	19,000	6,000	-6,223	-5,620	-5,787	
6/17	9152	5,763	12,123	300	18,186	15,000	18,700	6,000	-9,237	-6,577	-5,700	
6/18	5962	9,148	15,564	147	24,859	15,000	19,200	6,000	-5,852	-3,636	-5,853	
6/19	7642	16,911	2,604	5,906	25,421	21,600	12,300	6,000	-4,689	-9,696	-94	late on 6/18 high VOCs resulted after a shut down of Enterprise oil recovery during EPA step down (4 gpm); VOCs took 1.5 days to bring under control - high flow from cap.
6/20	13635	14,070	15,403	4,173	33,646	15,000	15,500	6,000	-930	-97	-1,827	
6/21	14583	14,233	10,355	862	25,450	15,000	10,400	6,000	-767	-45	-5,138	Discoverer Enterprise down for ~2 hrs due to pressure regulator failure
6/22	10046	9,793	2,008	0	11,801	15,000	10,487	6,000	-5,207	-8,479	-6,000	
6/23	8086	9,891	5,099	0	14,990	15,000	10,000	6,000	-5,109	-4,901	-6,000	
6/24	13808	12,871	21,088	0	33,959	15,000	22,400	6,000	-2,129	-1,312	-6,000	Discoverer Enterprise down for ~12 hrs due to accidental disconnect of cap
6/25	12085	12,540	4,633	0	17,173	15,000	14,400	6,000	-2,460	-9,767	-6,000	
6/26	12535	12,654	23,022	0	35,676	15,000	43,600	6,000	-2,346	-20,578	-6,000	Discoverer Enterprise down for ~2 hrs due to fire alarm detection
6/27	11982	11,558	6,623	3	18,184	15,000	10,880	6,000	-3,442	-4,257	-5,997	
6/28	13135	13,174	0	0	13,174	15,000	5,000	6,000	-1,826	-5,000	-6,000	Discoverer Enterprise down for ~1 hr for lightning
6/29		11,560	0	324	11,884	15,000	10,000	6,000	-3,440	-10,000	-5,676	Discoverer Enterprise down for ~1.5 hrs for lightning
6/30	13424	13,609	0	0	13,609	15,000	10,000	6,000	-1,391	-10,000	-6,000	
7/1	10758	10,558	17,852	0	28,410	15,000	20,100	6,000	-4,442	-2,248	-6,000	Discoverer Enterprise down for ~2 hrs for lightning
7/2	11505	11,065	12,737	1,473	25,275	15,000	20,000	6,000	-3,935	-7,263	-4,527	
7/3	11363	11,698	0	432	12,130	15,000	10,000	6,000	-3,302	-10,000	-5,568	
7/4	10323	10,429	3,000	79	13,508	15,000	3,840	6,000	-4,571	-840	-5,921	
7/5	11649	11,688	803	0	12,491	15,000	6,700	6,000	-3,312	-5,897	-6,000	
7/6	11654	11,655	0	473	12,128	15,000	10,000	6,000	-3,345	-10,000	-5,527	
7/7	11779	11,770	1,000	245	13,015	15,000	10,000	6,000	-3,230	-9,000	-5,755	

Notes:
- Aerial and Surface data sourced from ICS 209s
- Subsea data sourced from 'Subsea Dispersant Injection Dispensed Running Total BP Log' housed on Houston IMT sharepoint
- Aerial requests are for specific identified dispersible targets as identified by over flights
- Aerial approved amount is frequently less than requested (not shown) amount
- Aerial dispersant used is typically less than approved amount, with most frequent causes being weather or late approvals limiting flight time or presence of people or animals in target zone

		Daily Dispersant Used (gallons)				Daily Approved (gallons)			Approved Minus Used (gallons) Negative number indicates amount used was less than the approved amount			
Date	ADO-Houma SitRep	Subsea	Aerial	Vessel	Total:	Subsea	Aerial	Vessel	Subsea	Aerial	Vessel	
7/8	11553	11,512	0	0	11,512	15,000	10,000	3,000	-3,488	-10,000	-3,000	Vessel approval allows 3,000 during stable well cap operations. 6,000 during active well cap, as well as additional vessel dispersant if needed to control VOCs per approved vapor suppression guidelines
7/9	11675	10,748	0	0	10,748	15,000	10,000	3,000	-4,252	-10,000	-3,000	
7/10	13210	13,210	0	0	13,210	15,000	10,000	6,000	-1,790	-10,000	-6,000	Cap Removed - Stacking Cap - high flow from well.
7/11	15420	15,420	0	0	15,420	20,000	10,000	6,000	-4,580	-10,000	-6,000	20,000 subsea approved. Well Integrity Test and cap replacement plan approved by Adm Allen calls for 12gpm subsea when operationals permit to prevent high VOCs during reduced containment and critical operations. Cap Removed - Stacking Cap - high flow from well.
7/12	14038	14,038	0	0	14,038	17,280	10,000	6,000	-3,242	-10,000	-6,000	12gpm (17,280) subsea approved. Well Integrity Test and cap replacement plan approved by Adm Allen calls for 12gpm subsea when operations permit to prevent high VOCs during reduced containment and critical operations. Cap Removed - Stacking Cap - high flow from well.

May 20, 2010

Dispersant Monitoring and Assessment Directive – Addendum

This is an addendum (Addendum 2) to the Dispersant Monitoring and Assessment Directive issued on May 10, 2010, and Addendum 1 issued on May 14, 2010 by the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA) to BP. The requirements in this Addendum 2 apply to Parts 1 and 2 of the May 10, 2010 Directive and are in addition to the requirements of that Directive. BP shall commence Parts 1 and 2 requirements before subsurface application of dispersant is initiated and continues the Parts 1 and 2 requirements, Addendum 1, and this Addendum 2 until cancelled or modified by the USCG and EPA.

Alternative Dispersant additional Requirements:

1. Sampling of dispersant/oil and oil-only waters must be continued per the Directive, and in addition, baseline data of waters without direct application of dispersant or oil shall also be collected by BP. Monitoring of subsurface dispersant application by BP shall be performed from a vessel capable of performing all requirements of the May 10, 2010, Dispersant Monitoring and Assessment Directive and Addendum 1 on each day that dispersant is applied. As used in this Addendum 2, a "day" shall mean a calendar day.
2. Within 24 hours of the issuance of this Addendum 2, BP shall identify to the FOSC and the EPA RRT Co-chair for EPA's and the FOSC's approval, one or more approved dispersant products from the National Contingency Plan Product Schedule that are available in sufficient quantities, are as effective at dispersing the oil plume, and have a toxicity value less than or equal to 23.00 ppm LC50 toxicity value for Menidia or 18.00 ppm LC50 for Mysidopsis, as indicated on the NCP Product Schedule (http://www.epa.gov/oem/content/ncp/tox_tables.htm). The less toxic dispersant product(s) shall be used by BP for surface application and subsurface application as directed by the FOSC. Within 72 hours after submitting the list of alternatives, and after receiving EPA approval, BP shall immediately use only the approved alternative dispersant. Should BP not be able to identify alternative dispersant products, BP shall provide the FOSC and EPA RRT CO-Chair a detailed description of the products investigated, the reason the products did not meet the standards described above. Availability shall be based on existing stockpiles of dispersants, the estimated time to begin and aerial and subsurface application, time for manufacturing, shipping, and warehousing.
3. The effectiveness of the dispersant in subsurface application shall be determined as specified in Directive 1 Part 1, and Part 2. Dispersant application can be applied subsurface if, and only if, daily monitoring is performed.
4. BP shall provide 48 hours advanced notice of departure and trip duration timelines of the monitoring vessel to the FOSC and the EPA RRT Co-chair.
5. Monitoring data on the use of the less toxic dispersant product(s) shall be reported by BP to the FOSC and the EPA RRT Co-chair on a daily basis. This reporting shall include a sample tracking table. Daily data reports shall thereafter be provided by BP to the FOSC and the EPA RRT Co-chair as soon as practicable on the day following use of the less toxic dispersant product(s) by BP, but in no event later than 24 hours after use.

May 26, 2010

Dispersant Monitoring and Assessment Directive - Addendum 3

Reduction in Use of Dispersants. BP shall implement measures to limit the total amount of surface and subsurface dispersant applied each day to the minimum amount possible. BP shall establish an overall goal of reducing dispersant application by 75% from the maximum daily amount used as follows:

a. Surface Application. BP shall eliminate the surface application of dispersants. In rare cases when there may have to be an exemption, BP must make a request in writing to the FOSC providing justification which will include the volume, weather conditions, mechanical or means for removal that were considered and the reason they were not used, and other relevant information to justify the use of surface application. The FOSC must approve the request and volume of dispersant prior to initiating surface application.

b. Subsurface Application. BP shall be limited to a maximum subsurface application of dispersant of not more than 15,000 gallons in a single calendar day.

Application of dispersant in amounts greater than specified in this Addendum 3 shall be in such amounts, on such day(s} and for such application (surface or subsurface) only as specifically approved in writing by the USCG Federal On-Scene Coordinator (FOSC).