CLAIM DETERMINATION[1]

Claim Number:	N13024-0001
Claimant:	Taylor Energy Company, LLC
Type of Claimant:	RP
Type of Claim:	Sole Cause Act of God
Claim Manager:	(b) (6)
Amount Requested:	$353,881,719.70
Action Taken:	Denied

EXECUTIVE SUMMARY:

On or about September 16, 2004, the Taylor Energy MC-20A platform sank and discharged oil into the Gulf of Mexico, a navigable waterway of the United States. The MC-20A platform was located on tract 66-110 of lease OCS-G 04935, Mississippi Canyon Block 20 of the Gulf of Mexico. Taylor Energy Company, LLC, (Taylor) owner and operator of the MC-20A platform made notification to the National Response Center on September 17, 2004.[2] Taylor responded, assumed responsibility for the incident and has participated in a series of events in an effort to stop the continuing discharge of oil from its site and to comply with the plugging & abandonment requirements as required for Outer Continental Shelf lessees and operators. On November 16, 2018, Taylor presented an act of God defense claim to the National Pollution Funds Center (NPFC) for $353,881,719.70.[3] The NPFC has thoroughly reviewed all documentation submitted with the claim, analyzed the applicable law and regulations, and concluded that Claimants have not demonstrated an entitlement to an act of God defense.[4]

I. BACKGROUND, HURRICANE IVAN, INCIDENT, RESPONSIBLE PARTY, CLAIM AND HISTORY OF RESPONSE ACTIVITIES:

Background

In December 1980, the Department of Interior New Orleans Outer Continental Shelf office published a Final Environmental Impact Statement of the Outer Continental Shelf (OCS) for the proposed sale of oil and gas leases within A66 and 66 of the OCS. The proposed sale offered 385 tracts of land totaling 1,979,794 acres in federal waters on the OCS located within the Gulf of Mexico.[5] Of the 385 tracts surveyed for consideration, 30 tracts were found to contain geohazardous conditions. Three of these tracts were considered sufficiently hazardous to be recommended for withdrawal. The remaining 27 tracts were subject to geohazardous conditions

[1] Taylor's claim was properly presented and acknowledged by the NPFC on November 16, 2018. (Email between (b) (6), NPFC and (b) (6), Schwabe Williamson & Wyatt, representing Taylor, dated November 16, 2018.) This determination is based upon information currently before the NPFC as provided with the claim submission or obtained independently.
[2] National Response Center Report #735409, reported on September 17, 2004.
[3] Taylor claim submission cover letter dated November 15, 2018, page 2. The sum certain represents costs through August 31, 2017. Taylor asserts that it has incurred additional costs since August 31, 2017, and will submit an updated sum certain at a later date.
[4] 33 U.S.C. § 2703(a).
[5] Department of Interior Final Environmental Impact Statement OCS Oil and Gas Proposed 1981 Sales of A66 and 66 dated December 1980, page 7.

specific to seafloor instability caused by unconsolidated sediments, slumping, shallow faulting or gaseous sediments. These remaining 27 tracts (3 tracts within Sale A66 and 24 tracts within Sale 66) were restricted to drilling or the placement of structures or wellheads unless or until the lessee had demonstrated that mass movement of sediments was unlikely or that exploratory drilling operations, structures (platforms), casing, wellheads, and pipelines could be safely designed to protect the environment in case such a mass movement. Tract 66-110 within Sale 66 was identified within such a geohazardous area.[6]

Tract 66-110 is located within the Mississippi Canyon (MC) of the Gulf of Mexico. The MC is described as a scar in the outer margin of the continental shelf that was formed by a combination of erosion, faulting, slumping and down warping. It was most active during the late Pleistocene (colloquially referred to as the "Ice Age") and sedimentation has since been filling the canyon ever since. The orientation of the canyon runs east-west across the northern half of three blocks and is filled by over two thousand feet of sediment. The sea floor is irregular and large scale slumping occurs near the canyon walls. Near surface sediments are folded, faulted, and gassy. Mud flow may occur down the canyon axis and the fill may experience long-term movement. Because of the relatively rapid infilling of the original canyon, it is believed that some portion or all of the sediment may in fact be moving down slope.[7]

On October 20, 1981, Sohio Petroleum Corporation (Sohio) purchased lease OCS-G 04935 on tract 66-110 located within the MC Block 20 (MC20) of the Gulf of Mexico.[8] That lease identified portions of the tract that were subject to mass movements of sediment and required Sohio to conduct site-specific surveys and mapping to determine the potential for unstable bottom conditions.[9] In response, Sohio hired Woodward-Clyde Oceaneering (Woodward) to perform geologic studies of the MC20 to determine the characteristics of seafloor instability features of the region and to gauge the potential for mass sediment movements within the site. Sohio also tasked Woodward to perform a geotechnical analysis to supplement the geology evaluations of seafloor instability and to provide data for the design of a platform to resist a future mud flow.[10]

Woodward hired Dr. Joseph Suhayda to assist in the geotechnical analysis of the bottom pressures that would most likely be exerted during 100-year wave conditions at the MC20 site. Dr. Suhayda's geotechnical analysis performed for the foundation system of MC20 platform considered the effects of potential mudflow overruns and sediment movement caused by storm wave bottom pressures and concluded that the extreme wave in terms of bottom pressure-generating capability most likely to exist at MC20 would have a maximum height of 69.6 feet and an associated wave period of 14 seconds. Additionally, such a soil design wave would exert 249 pounds per square foot (psf) of bottom pressure on the 482 foot-deep seafloor at MC20.[11]

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[6] Department of Interior Final Environmental Impact Statement OCS Oil and Gas Proposed 1981 Sales of A66 and 66 dated December 1980, page 37-38.
[7] *Id*. at page 237.
[8] Department of Interior Bureau of Land Management Oil and Gas Lease for Submerged Lands for lease OSC-G 4935 on tract 66-110 issued to Sohio Petroleum Company effective December 1, 1981.
[9] Department of Interior Bureau of Land Management Oil and Gas Lease for Submerged Lands for lease OSC-G 4935 on tract 66-110 issued to Sohio Petroleum Company effective December 1, 1981, Stipulation #4.
[10] Woodward-Clyde Oceaneering Analysis Block 20 Mississippi Canyon Volume 1 dated March 1983, page 10.
[11] Analysis of Wave Conditions at Mississippi Canyon Area Block 20 during Hurricane Ivan prepared by Dr. Joseph Suhayda, dated February 5, 2018, page 6.

Woodward accepted Dr. Suhayda's findings, completed its survey, proposed a site for the construction of a platform within the MC20 in 480 feet of water, and located approximately 10 miles southeast of South Pass of the Mississippi River. In its analysis provided to Sohio, Woodward described the delta front within this proposed site as prograding seaward by means of large mass soil movements and pointed out that the present seafloor had been built up from several episodes of mudflow activity. Woodward also described the proposed site as being immediately downslope of a large oblate-shaped mudflow terminal deposit and described the mudflows within the deposit as being triggered by large waves that had periodically swept into the delta front; by oversteeping of the slopes through rapid deposition; and by other factors which were, in some instances, poorly understood.[12] In an effort to monitor mass soil movements upslope of the proposed site, Woodward recommended a program of periodic geophysical surveys around and upslope from the platform site utilizing the same geophysical tools and following the same track lines as used in the 1982 survey for the purpose of monitoring seafloor instabilities and sediment accumulations. Woodward also recommended bi-ennial geophysical surveys and surveys following any major storms of the mudflow channels and depositional lobes above the proposed site to monitor seafloor instabilities. [13]

On August 8, 1983, Sohio submitted its Initial Plan for the Development and Production of Lease OCS-G-04935, Block 20, of the MC to the Department of Interior Mineral Management Service (MMS) for review. MMS approved its plan specific to the construction of the MC-20A platform, the drilling of wells A1 – A28, and oil pipelines that served as tie-in points with other platforms within the Gulf for the transport of oil. The approval was granted pursuant to 30 CFR 250.34 with the stipulation that high resolution surveys be conducted just prior to platform installation and every two years thereafter. In addition, high resolution surveys were required to be conducted after any major storms in the area.[14]

Construction of the MC-20A platform, an 8-pile structure with 28 well slots was completed in August 1984 and production from the wells associated with the platform began in December 1984. Sohio drilled wells A-1 through A-18 to develop and produce the oil and gas and all of those wells except the A-5 and A-15, which were plugged and temporarily abandoned, were completed as producing wells. BP Exploration and Oil, Inc. acquired Sohio in 1987[15] and operated the MC-20A platform and field until it sold the lease to Taylor Energy Company LLC (Taylor) in 1994.[16]

Taylor continued operation of the MC-20A platform and drilled 10 additional wells (A-19 through A-28) in 2000. These wells continued to operate and produce oil and gas until the MC-20A platform was toppled and all oil production was halted by Hurricane Ivan in September 2004. At the time of the casualty, there were a total of 30 completions (named wells) on the platform because 2 of the 28 wells (A-12 and A-16) were dual completions. Specifically, there

[12] Woodward-Clyde Oceaneering Analysis Block 20 Mississippi Canyon Volume 1 dated March 1983, pages 10 and 17.
[13] Woodward-Clyde Oceaneering Analysis Block 20 Mississippi Canyon Volume 1 dated March 1983, page 10.
[14] Letter from the Department of Interior Mineral Management Services to Sohio Petroleum Company dated September 6, 1983 page 5.
[15] Critical Review of the Design, Construction and Pre-Storm Condition of the MC-20A Platform and Wells by John Rogers Smith Petroleum Consulting, LLC dated March 29, 2018, page 4.
[16] Bill of Sale between BP Exploration and Oil, Inc. and Taylor Energy Company dated August 31, 1994.

were 4 producing gas wells, 13 oil wells producing on gas lift, 10 shut in wells (including A-12D and A-16), and 3 temporarily abandoned wells. The wells were producing approximately 1,200 BOPD (barrels of oil per day), 5 MMSCFPD (million standard cubic feet of gas per day) and 7,800 BWPD (barrels of water per day).[17]

Taylor was asked if it conducted periodic geophysical surveys of the areas around and upslope of the platform site for the purpose of monitoring seafloor instabilities and sediment accumulations from years 1994-2004 as recommend by Woodward. Taylor responded that it had only conducted one geophysical survey of MC21 block in 2001 and that its survey had extended into the MC20 platform site and areas upslope of the MC20. Taylor was also asked if it conducted geophysical surveys every other year or after a major storm in the mudflow channels and depositional lobes above the platform site from years 1994-2004 as recommended by Woodward and required by the MMS as part of its Lease approval. Taylor responded that beside the 2001 survey of the MC21 that extended into the MC20, Taylor had not conducted any surveys in or around the platform site or around the mudflow channels or depositional lobes every other year or following major storms as recommended by Woodward or as required by MMS as part of the lease.[18] There were six named storms that entered the Gulf of Mexico between 2002 and Hurricane Ivan and Taylor failed to conduct geophysical surveys as recommended by Woodward and required by MMS.

Hurricane Ivan

The National Hurricane Center reported that Hurricane Ivan entered the Gulf of Mexico as a Category 5 hurricane during the morning of September 14, 2004 with sustained wind speeds as high as 140 to 150 knots.[19] It passed approximately 50 miles to the east of the MC-20A platform[20] at about 0:00 UTC on September 16 (7:00 pm CDT September 15). Weakening as it approached shore, it made landfall near Gulf Shores, Alabama as a Category 3 hurricane with sustained 105-knot winds about 07:00 UTC, September 16, 2004.[21]

A total of seven fixed platforms were destroyed as a result of Hurricane Ivan. Commentators have suggested the MC-20A platform sank as a result of a mudslide, while the other six failures were attributed to the environmental loads (i.e., wind, wave and current associated with the storm) exceeding the capacity of the structures.[22]

Incident:

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[17] Critical Review of the Design, Construction and Pre-Storm Condition of the MC-20A Platform and Wells by John Rogers Smith Petroleum Consulting, LLC dated March 29, 2018, page 4-5.
[18] Letter from Schwabe, Williamson & Wyatt, attorneys representing Taylor Energy to Mr. (b) (6) , NPFC, dated March 15, 2019.
[19] Critical Review of the Design, Construction and Pre-Storm Condition of the MC-20A Platform and Wells by John Rogers Smith Petroleum Consulting, LLC dated March 29, 2018, page 5.
[20] NPFC Task for the Analysis of Wave Conditions at Mississippi Canyon Block 20 During Hurricane Ivan prepared by Mr. James Pettigrew dated April 1, 2019, page 10.
[21] Critical Review of the Design, Construction and Pre-Storm Condition of the MC-20A Platform and Wells by John Rogers Smith Petroleum Consulting, LLC dated March 29, 2018, page 5.
[22] Assessment of Fixed Offshore Platform Performance in Hurricanes Andrew, Lili and Ivan by Energro Engineering, Inc. dated December 2005 page iii and Table E1. *See, also*, 2005 Hurricane Readiness and Recovery Conference by E.G. Ward, Robert Gilbert and Robert Spong dated October 2005 page 21.

The MC-20A platform sank and began to discharge oil from stripped and unsecured well conductors into the Gulf of Mexico, a navigable waterway of the United States. In response, Taylor contracted Fugro-McClelland Marine Geosciences, Inc. (Fugro) to conduct a survey of the seafloor in and around the platform site to locate the sunken platform and to identify the sources of discharge originating from Taylor's stripped and unsecured well conductors. The survey located the toppled MC-20A platform lying approximately 550 feet downslope and southeast from its original location [23] and identified seafloor sediment plumes at the original conductor well bay area as well in the vicinity of the northwest corner of the platform wreckage.[24] The response continues.

Responsible Party:

Taylor Energy Company was the lessee and operator of all wells, platforms, facilities, easements, and owned all contract rights and business records associated with lease OCS-G 04935 on tract 66-110 located within the MC20 of the Gulf of Mexico.[25]

Claim:

On November 16, 2018, Taylor presented an act of God defense claim to the NPFC for $353,881,719.70.[26] Taylor asserts that a massive seafloor failure associated with Hurricane Ivan toppled its MC-20A platform, stripped its well conductors, and subsequently discharged oil into the Gulf of Mexico. Taylor further asserts that these events were caused by an event extrinsic to Taylor and not the result of any actions or neglect on the part of Taylor.[27] Taylor is represented by the law firm of Schwabe, Williamson & Wyatt.[28]

History of Response Activities:

On September 17, 2004, a sheen was observed in the vicinity of the missing MC-20A platform. Taylor activated its spill management team and began a series of daily overflights to monitor the oil being discharge from the site. Taylor also activated several oil spill response contractors in the event the oil being discharged was determined to be recoverable or impacted the shoreline. A Unified Command was established to oversee the response efforts, oversee pipeline isolation and depressurization activities with other operators that had lines in the MC20, and to oversee the evaluation of excavation methods and contractors.[29]

Early operations included the establishment of a Pipeline Stopple group to oversee the partial decommissioning, abandonment in place and the flushing and pickling of the Taylor pipelines associated with the lease. An Excavation group was also established to oversee the excavation of

[23] Fugro-McClelland Marine Geosciences Seafloor Failure Analysis MC-20A Platform Block 20, Mississippi Canyon Area Gulf of Mexico dated February 21, 2006, page 5.
[24] Fugro-McClelland Marine Geosciences Excavation Project Block 20, Mississippi Canyon Area Gulf of Mexico dated December 14, 2007, page 28.
[25] Bill of Sale between BP Exploration & Oil, Inc. and Taylor Energy Company executed August 31, 1994.
[26] Taylor claim submission cover letter dated November 15, 2018, page 2. The sum certain represents costs through August 31, 2017. Taylor asserts that it has incurred additional costs since August 31, 2017, and will submit an updated sum certain at a later date.
[27] Taylor claim submission cover letter dated November 15, 2018, pages 1-2.
[28] Letter from Taylor Energy authorizing Schwabe, Williamson & Wyatt to act of its behalf dated April 5, 2018.
[29] Taylor Energy Incident Action Plan 10-18-04 – 10-25-04 pages 9, 16 and 23.

40 feet of mud from the existing mudline at the site in a radius of 292 feet in an effort to allow for safe operations and minimal sloughing of the soil back into the excavated area. The intent of the excavation was to expose the well conductors to allow for the plugging and abandonment of the wells located on the lease.[30] These attempts proved to be unsuccessful as the sediments in and around the well bay were soft and poorly consolidated.[31]

On June 27, 2007 Taylor relinquished 100 percent of its interest in MC-20 back to MMS. Notwithstanding, Taylor remained liable to permanently plug and abandon (P&A) all of the wells associated with the lease and to remove all structures in accordance with applicable Oil and Gas Regulations for Operations in the OCS.[32] Additionally, Taylor was ordered to take all actions necessary to determine the extent and source of a hydrocarbon sheen identified in and around the well bay and MC-20A platform wreckage and to take immediate remedial action to prevent further soil contamination and/or hydrocarbon seepage.[33]

On March 19, 2008, Taylor and the MMS entered into a Trust Agreement, which established a lease-specific abandonment account under rules implementing the Outer Continental Shelf Lands Act (OCSLA). In lieu of lease and area wide bonds under 30 C.F.R. 556.900(a), the abandonment account provided a secure source of funds to pay for decommissioning undertaken by Taylor or by BOEM the event of default by Taylor. The rule at 30 C.F.R. 250.1703 (general decommissioning requirements) requires OCS lessees and operators to: "Permanently plug all wells"; "Remove all platforms and other facilities"; "Decommission all pipelines"; and "Clear the seafloor of all obstructions created by your lease[.]" Each of the regulatory obligations was a defined Obligation under the Trust Agreement and identified in its Schedule A to include:[34]

1. permanently plug and abandon 25 wells in accordance with CFR 250.1710-1717;
2. remove deck and flare boom in accordance with 30 CFR 250.1725-1730;
3. clear the seafloor in accordance with 30 CFR 250.1740-1743;
4. remove pipelines in accordance with 30 CFR 250.1750-175; and
5. remove contaminated soil in accordance with 30 CFR 250.300.

In April 2008, the MMS conducted an Environmental Assessment for the Approval of Alternate Procedures or Departures from MMS Regulatory Requirements associated with the MC-20A platform and associated wells. Its assessment found that due to Taylor's inability to excavate the wellbay and because of the depth of the wellheads, unstable seafloor sediments and continued dangers to divers of moving sediment in a confirmed mudslide area, it was technically infeasible to conduct standard P&A operations of Taylor's wells.[35] As such, the MMS authorized the drilling of intervention wells to intercept existing wells and set deep plugs as an

[30] Taylor Energy Incident Action Plan 2-1-05 – 2-28-05 pages 15 and 16.
[31] Fugro GeoServices, Inc. Survey Proposal dated April 29, 2005, pages 2-3.
[32] U.S. Department of Interior Mineral Management Services letter to Taylor Energy Company dated October 18, 2007.
[33] Letter from the DOI MMS to Taylor Energy dated December 5, 2007.
[34] Trust Agreement between Taylor Energy and Bureau of Ocean Energy Management dated March 19, 2008, pages 20 and 21.
[35] MMS Environmental Assessment for the Approval of Alternate Procedures or Departures from MMS Regulatory Requirements dated April 2008 and signed May 1, 2008, page 11.

alternate procedure and departure for 25 wells to the detailed specifications in 30 CFR 250.1714 and 30 CFR 250.1715.[36] As allowed by MMS' Environmental Assessment, Taylor prepared and submitted a decommissioning plan of operations for the intervention of nine wells that it considered to have the highest potential to pollute, from the flowing, leaking, or seeping of hydrocarbons.[37] From March 2009 – March 2011, Taylor submits that it successfully drilled and completed nine intervention wells.[38]

During the summer of 2008, there was a period of hydrocarbon flow resulting in plumes and surface expressions of oil in the MC-20. These ongoing discharges were discussed at Unified Command meetings and a discussion of alternative options, specifically a subsea containment system was presented to Taylor on July 8, 2008.[39] Taylor was provided the opportunity to identify a containment system suitable for the MC-20 but failed to do so in a timely manner. As such, the U.S. Coast Guard Federal On-Scene Coordinator (CG FOSC or FOSC) issued Administrative Order (Admin Order) 006-08 to Taylor on September 23, 2008, requiring them to address the ongoing discharge of oil from the MC20 site. The Admin Order required Taylor Energy to:[40]

1. Immediate deploy an open water skimmer to mitigate the continuous discharge at MC20 until such time that pollution domes were installed;
2. Conduct overflights twice daily to monitor the discharge from the MC20 and provide Coast Guard the results of the overflights;
3. Install pollution domes to mitigate the continuous discharge in the MC20 no later than November 1, 2008;
4. Provide an Incident Action Plan reflecting all requirements in this admin order.

Admin Order 006-08 was issued in conjunction with an MMS Site Specific Environmental Assessment for Pollution Containment System Installation and Operation (MMS containment system EA) to ensure that a subsea oil recovery system would have no significant impact to the environment.[41]

Taylor's proposed subsea recovery system was eventually designed with containment domes that were to be installed over the three ongoing plumes of oil identified in the vicinity of Taylor's well bay and platform wreckage, a suspended separator/collection unit and a modified surface buoy that was connected to the separator/collector unit that was equipped with a retractable hose that could be used to empty the separator/collector unit.[42] Taylor deployed its subsea oil recovery system over the MC20 site in May 2009.[43]

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[36] MMS Letter to Taylor Energy dated April 30, 2008, page 2.
[37] Taylor Energy Plan of Operation MC-20A Decommissioning dated May 19, 2008.
[38] Taylor claim submission dated November 15, 2018, pages 72 and 73.
[39] Taylor Energy Company MC20 Final Risk Assessment and Cost Estimate document page 72.
[40] CG Sector New Orleans Admin Order 006-08 issued to Taylor Energy dated September 23, 2008.
[41] MMS Site Specific Environmental Assessment for Pollution Containment System Installation and Operation dated October 2008, page 10.
[42] Oceaneering Taylor Energy MC 20 Containment System revised May 21, 2009, pages 26-39.
[43] CG Incident Action Plan 05-04-09 – 05-11-09 page 202.

Over the next several years, Taylor's subsea containment system began to fail and oil continued to discharge from the MC20 site. On March 9, 2012, the CG FOSC authorized Taylor to defer repairs to its subsea oil recovery system pending the results of an environmental work group that was evaluating the ongoing source of pollution from the MC20 site. In the interim, Taylor was required to monitor sheen volumes and address any changes that might require immediate commencement of its containment system repairs.[44]

With Taylor's subsea containment system in disrepair and the MC20 site continuing to discharge oil into the Gulf of Mexico unchecked, the CG FOSC issued Admin Order 12-001 to Taylor on June 25, 2012, requiring Taylor Energy to:[45]

1. Begin the design and planning for a new pollution dome system that is suitable for the environmental conditions at the MC20 discharge site;
2. Submit a written plan that shows a projected timeline for fabrication and installation to the Unified Command no later than September 1, 2012.

On November 26, 2012, the CG FOSC amended Admin Order 12-001 which allowed Taylor to make repairs to its containment domes as an interim step in meeting the requirements of the Admin Order while acknowledging that a redesign or overhaul of its existing containment dome system was appropriate. As such, Taylor was given until January 30, 2013, to identify two companies that could design a new pollution dome system or make recommendations for the proper repair to its current system.[46] Taylor deferred work on the development of the system pending further discussions of subsea containment design considerations.[47] It was not until March 2017 when it finally designed and fabricated three new containment domes.[48] In November 2018, Taylor presented these containment domes to the Unified Command as a proposal to contain the ongoing plume(s) of oil being discharged from the site and as a replacement for its failed subsea containment system. That proposal was soundly rejected by the Unified Command for numerous reasons to include that the domes would result in increased bottom disturbances; if used alone the domes would have limited storage capacity and would require a vessel to remain on-site for continuous processing and offloading; the domes were not big enough to cover the affected area; and multiple domes would require several hose connections to the collector/separator which would introduce multiple failure points associated with sediment issues, possibly hydrates and/or paraffin buildup.[49]

With the MC20 site continuing to discharge oil and Taylor's reluctance to properly address the ongoing discharge, the CG FOSC rescinded Admin Order 12-001 and issued Admin Order 19-001 on October 23, 2018, citing the government's position on the primary source location and site condition information as follows:[50]

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[44] CG Sector New Orleans Admin Order 12-001 issued to Taylor Energy dated June 25, 2012.
[45] *Id*.
[46] CG Sector New Orleans amended Admin Order 12-001 issued to Taylor Energy dated November 26, 2012.
[47] Email from Mr. (b) (6) to LCDR (b) (6), CG Sector New Orleans dated January 17, 2014.
[48] Taylor claim submission page 85.
[49] CG Sector New Orleans Decision Memorandum – Containment Dome System, Taylor Energy Corporation MC 20 dated November 16, 2018.
[50] CG Sector New Orleans Admin Order 19-001 issued to Taylor Energy dated October 23, 2018.

1. One or more wells are actively discharging oil and gas from the erosional pit near the former Dome C location;
2. The worst-case estimate of the daily volume of release for exceed previous estimates and is in the order of hundreds of barrels per day;
3. Temporary containment and recovery of oil being discharged at the erosional pit near the former Dome C location is needed and feasible while a more permanent solution to stopping the source is developed.

Accordingly, Taylor was ordered to institute a containment system to capture, contain, and remove oil from the erosional pit near the former Dome C location. In addition, Taylor was directed to comply with the following terms of the Administrative Order as follows:[51]

1. A Unified Command Meeting will be held from 6-9 November 2018 for the purpose of evaluating containment and recovery systems and developing an implementation plan and timeline;
2. A workshop will be held during the Unified Command meeting from 7 to 8 November, 2018 to evaluate proposals from potential contractors on the design of an effective containment system;
3. You are directed to conduct new market research prior to the November Unified Command meeting and make arrangements with potential contractors to provide an overview of potential designs and service based on the attached documentation. Attached to this letter I have also provided you with the known site conditions and market research questions to assist you with the evaluation process prior to and during the UC meeting;
4. The containment system must eliminate the surface sheen and avoid the deficiencies associated with prior containment systems. Design of the containment system shall take into consideration the site conditions provided to you. The containment system shall be designed to contain an amount with a worst case daily discharge between 250 barrels and 700 barrels per day. A design of a minimum of 250 barrels per day is acceptable at this time;
5. You are directed to choose at least two companies to present their most effective proposed containment system designs during the November Unified Command workshop;
6. By the conclusion of the Unified Command meeting, 6-9 November, we will select one of the proposals presented during the workshop;

[51] *Id*.

7. The containment system must be inspected and approved by the Operations Section and Environmental Unit prior to installation.

Taylor participated in the Unified Command workshop and presented two containment dome proposals to the Technical Evaluation Team (TET)[52] participating in the event. The first containment proposal involved a modified barge placed over the top of the jacket while the second proposal involved the use of its pyramidal containment domes. Both of Taylor's proposals were rejected as unsatisfactory. The Unified Command identified a contractor that designed a Rapid Response System that was reviewed and found satisfactory to the TET. Taylor was provided the opportunity to hire the designer of the Rapid Response System but failed to do in a timely manner.[53] In response, the CG FOSC issued a Notice of Federal Assumption to Taylor, partially assuming response actions pertaining to all activities related to the development and installation of a containment system; removal and disposal of oil collected in the containment system; and maintenance of a containment system at the MC20 site, as identified in Administrative Order 19-001. The Federal assumption did not relieve Taylor of its financial responsibilities or obligation to abate the source of the discharge. Taylor's requirement to conduct overflights and respond to recoverable oil also remained.[54]

II. DISCUSSION AND DETERMINATION:

The NPFC utilizes an informal process when adjudicating claims against the OSLTF.[55] As a result, 5 U.S.C. § 555 (e) requires the NPFC to provide a brief statement explaining its determinations. This determination is issued to satisfy that requirement for the Claimant's claim against the OSLTF.

When adjudicating claims against the OSLTF, the NPFC acts as the finder of fact. In this role, the NPFC considers all relevant evidence, including evidence provided by claimants and evidence obtained independently by the NPFC, and weighs its probative value when determining the facts of the claim. The NPFC is not bound by the findings of fact, opinions, or conclusions reached by other entities.[56] If there is conflicting evidence in the record, the NPFC makes a determination as to what evidence is more credible or deserves greater weight, and finds facts and makes its determination based on the preponderance of the credible evidence.

The Oil Pollution Act of 1990 (OPA)[57] established a strict liability scheme for owners and operators of vessels that discharge oil into or upon the navigable waters and adjoining shorelines of the United States. When enacting OPA, Congress "explicitly recognized that the existing

[52] Technical Evaluation Team consisted of the Federal On-Scene Coordinator, Source Control Support Coordinator, and the Scientific Support Coordinator. *See also*, CG Sector New Orleans Decision Memo – Containment Dome System, Taylor Energy Corporation MC-20, dated November 16, 2018.
[53] CG Sector New Orleans Decision Memo – Containment Dome System, Taylor Energy Corporation MC-20, dated November 16, 2018.
[54] CG Sector New Orleans Notice of Federal Assumption issued to Taylor Energy Corporation dated November 16, 2018.
[55] 33 CFR Part 136.
[56] *See, e.g.*, *Use of Reports of Marine Casualty in Claims Process by National Pollution Funds Center*, 71 Fed. Reg. 60553 (October 13, 2006) and *Use of Reports of Marine Casualty in Claims Process by National Pollution Funds Center* 72 Fed. Reg. 17574 (concluding that NPFC may consider marine casualty reports but is not bound by them).
[57] 33 U.S.C. §§ 2701-2761.

federal and states laws provided inadequate cleanup and damage remedies, required large taxpayer subsidies for costly cleanup activities and presented substantial burdens to victim's recoveries such as legal defenses, corporate forms, and burdens of proof unfairly favoring those responsible for the spills."[58] OPA was intended to cure these deficiencies in the law. Under the OPA, a responsible party is liable for all removal costs and damages resulting from either an oil discharge or a substantial threat of oil discharge into a navigable water of the United States.[59] Further, a responsible party's liability is strict, joint, and several.[60] In the case of an offshore facility, as relevant to this discussion, the responsible party is the lessee or permittee of the area in which the facility is located or the holder of a right of use and easement granted under applicable State law or the Outer Continental Shelf Lands Act[61] for the area in which the facility is located (if the holder is a different person than the lessee or permittee).[62]

As Taylor articulates in its submission, notwithstanding the above, under limited circumstances the OSLTF may reimburse a responsible party for its uncompensated removal costs and damages. In order to receive OSLTF reimbursement a responsible party must show an entitlement to either a defense or limited liability under the OPA. Specifically, 33 U.S.C. § 2708(a) (emphasis added) provides that:

> The responsible party for a vessel or facility from which oil is discharged, or which poses the substantial threat of a discharge of oil, may assert a claim for removal costs and damages . . . ***only if the responsible party demonstrates*** that--
> (1) the responsible party is entitled to a defense to liability under section 2703 of this title. . .

In Section 2703, OPA gives a responsible party three limited defenses to liability. The statute provides:

> A responsible party is not liable for removal costs or damages under OPA . . . ***if the responsible party establishes, by a preponderance of the evidence***, that the discharge or substantial threat of a discharge of oil and the resulting damages or removal costs were caused ***solely*** by—
>
> (1) an act of God;
>
> (2) an act of war;
>
> (3) an act or omission of a third party, other than an employee or agent of the responsible party or a third party whose act or omission occurs in connection with any contractual relationship with the responsible party (except where the sole

[58] *Apex Oil Co., Inc. v United States*, 208 F. Supp. 2d 642, 651-52 (E.D. La. 2002)(*citing* S. Rep. No. 101-94 (1989), *reprinted in* 1990 U.S.C.C.A.N. 722).
[59] 33 U.S.C. § 2702(a).
[60] *See*, H.R. Conf. Rep. No. 101-653 at 102 *reprinted in* 1990 U.S.C.C.A.N. 779, 780.
[61] 43 U.S.C. §§ 1301-1356.
[62] 33 U.S.C. § 2701(32)(C).

> contractual arrangement arises in connection with carriage by a common carrier by rail), if the responsible party establishes, by a preponderance of the evidence, that the responsible party—
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> > (A) *exercised due care* with respect to the oil concerned, taking into consideration the characteristics of the oil and in light of all relevant facts and circumstances; and
> > (B*) took precautions against foreseeable acts* or omissions of any such third party and the *foreseeable consequences* of those acts.[63]

Taylor has claimed that it is entitled to an act of God defense to liability under 33 U.S.C. § 2703. In order to be successful under an act of God claim, Taylor must establish, by a preponderance of the evidence, that the discharge of oil and resulting damages or removal costs were caused ***solely*** by an "act of God."[64] The phrase "act of God" is defined by OPA as:

> an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character the effects of which could not have been prevented or avoided by the exercise of due care or foresight.[65]

The seminal case, *Apex Oil Company, Inc. v. United States*,[66] analyzed what a claimant must show in order to be entitled to an act of God defense under the OPA. In that case, the court construed the defense in the context of similar defenses in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)[67] and the Federal Water Pollution Control Act (FWPCA)[68] [also referred to as the Clean Water Act (CWA)]. The court reasoned that an act of God defense under OPA, CERCLA, or the CWA is much harder to prove than a common law act of God defense.

The Apex court was correct in its approach

In its claim submission, Taylor argues that *Apex*, the only OPA case interpreting the act of God provision, "was incorrect."[69] Taylor finds many flaws with the *Apex* court and beseeches the NPFC to discount the *Apex* court's decision, methodology and analysis. The gravamen of Taylor's argument revolves around the court's interpretation of the CWA and CERCLA as applied to OPA; and the court's review of the legislative history each of the statutes including OPA. Taylor argues that the proper analysis of an act of God claim under OPA should be performed using the common law definition of "act of God." The NPFC disagrees. The NPFC declines to adopt Taylor's proposed interpretation and considers the nearly 20-year old jurisprudence sound case law. In *Apex*, the Eastern District of Louisiana was facing a matter of first impression. While the jurisprudence of the act of God defense in environmental statutes had

[63] 33 U.S.C. § 2703.
[64] 33 U.S.C. § 2703(a)(1) (emphasis added)
[65] 33 U.S.C. § 2701(1).
[66] 208 F.Supp.2d 642 (E.D. La. 2002).
[67] 42 U.S.C. §§ 9601-9675.
[68] 33 U.S.C. §§ 1251-1387.
[69] Taylor claim submission at page 99.

a long history, it had not yet been raised in the context of the relatively nascent OPA. Of note, the court agreed that the NPFC had correctly interpreted the act of God defense in OPA. Additionally, it adroitly analyzed the context in which to view the defense in OPA by comparing the intent, language, and defenses in OPA with those found in the CWA and CERCLA as well as reviewing the intent of Congress at the time OPA was enacted. This approach was sound as these three statutes comprise the major federal environmental statutes that occupy the law in this area, and are necessarily intertwined in their application.

The three major federal environmental statutes that could apply when there is a discharge of oil or hazardous material are CWA, CERCLA, and OPA.[70] Each Act prescribes the actions, in accordance with the National Contingency Plan (NCP)[71], that must be taken in an emergency when oil or hazardous substances are involved.[72] The NCP was originally established by the Clean Water Act, with the purpose of providing "efficient, coordinated, and effective action to minimize damage from oil and hazardous substance discharges, including containment, dispersal, and removal of oil and hazardous substances. . . ."[73] The CWA and OPA focus on removal costs and damages resulting from an incident in which oil is discharged, or poses a substantial threat of discharge, into navigable waters or adjoining shorelines or the Exclusive Economic Zone[74], while CERCLA provides for the cleanup of sites contaminated by hazardous substances as defined by the Act. Each of the statutes are explained in further detail below.

The Federal Water Pollution Control Act / The Clean Water Act

The Clean Water Act was originally passed in 1972 as the Federal Water Pollution Control Act.[75] The CWA is a comprehensive statute enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[76] The CWA imposes a standard of strict liability.[77]

If the United States incurs cleanup costs, it may recover against the vessel or against the owner or operator, in any court of competent jurisdiction, unless the spill was caused solely by one of the liability exceptions, including an act of God.[78] If the spiller has incurred cleanup costs, it may recover against the United States if it can prove that the spill was caused solely by

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[70] The following discussion was primarily taken from Laurencia Fasoyiro, *Invoking the Act of God Defense*, 4 Envt'l & Energy L. & Pol'y J. 1, 4–6 (2009) and Joel Eagle, *Divine Intervention: Re-Examining the "Act of God" Defense in A Post-Katrina World*, 82 Chi.-Kent L. Rev. 459, 493 (2007). Several other commentators and courts have analyzed these statutes with similar conclusions.

[71] *See*, 40 CFR Part 300. "The NCP is required by section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9605, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499, . . . and by section 311(d) of the Clean Water Act (CWA), 33 U.S.C. 1321(d), as amended by the Oil Pollution Act of 1990 (OPA), Pub. L. 101-380." 40 CFR 300.2.

[72] *See* 33 U.S.C. §1321(d)(4) ("[T]he removal of oil and hazardous substances and actions to minimize damage from oil and hazardous substance discharges shall, to the greatest extent possible, be in accordance with the National Contingency Plan."); 33 U.S.C. §2702(b)(1)(B)(including removal costs "incurred by any person for acts taken by the person consistent with the National Contingency Plan"); 42 U.S.C. §9605(a) (requiring the President to "revise and republish the national contingency plan for the removal of oil and hazardous substances,...to reflect and effectuate the responsibilities and powers" under CERCLA in addition to those matters specified in the CWA).

[73] *See, e.g.*, 33 U.S.C. §1321(d)(2); *see also,* 40 CFR Part 300.

[74] *See* 33 U.S.C. §1321 (CWA); 33 U.S.C. §2701 (OPA).

[75] *Clean Water Act of 1977*, Pub L. No.95-217, 91 Stat. 1566 (codified at 33 U.S.C. §§ 1251-1387).

[76] 33 U.S.C. § 1251(a).

[77] 33 U.S.C. § 1321; *Steuart Transp. Co. v. Allied Towing Corp.*, 596 F.2d 609, 613 (4th Cir. 1979).

[78] 33 U.S.C. § 1321.

an act of God.[79] The CWA defines an act of God as an act occasioned by an unanticipated grave natural disaster.[80]

The Comprehensive Environmental Response Compensation and Liability Act

Passed in 1980, CERCLA provides for the cleanup of site contaminated by hazardous substances.[81] CERCLA is a broad remedial statute that Congress enacted to enhance the authority of the Environmental Protection Agency to respond effectively and promptly to toxic pollutant spills that threaten the environment and human health.[82]

As in the CWA, CERCLA imposes strict liability on responsible parties[83] notwithstanding any other provision or rule of law, and subject only to limited defenses, such as the act of God.[84] CERCLA relieves a responsible party from liability in the release of hazardous material if it can establish by a preponderance of the evidence that the release or threatened release of hazardous substances was caused solely by an act of God.[85] In CERCLA, an act of God is defined exactly as it is found in OPA: "an unanticipated natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight."[86]

The Oil Pollution Act

Congress passed the Oil Pollution Act in 1990 in the wake of the eleven million-gallon Exxon Valdez oil spill disaster in Prince William Sound, Alaska.[87] Prior to the OPA, the CWA provided liability limitations for federal pollution removal costs associated with oil spills.[88] OPA amended the CWA to require federal removal of oil spills and federal approval of oil spill response plans, provided expanded cleanup and oversight responsibilities of the federal government, and increased the potential liabilities of responsible parties, significantly broadening their financial responsibility requirements.[89] However, the OPA retains many of the same

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[79] *Id*.
[80] 33 U.S.C. § 1321(a)(12); see also, *Skandia Ins. Co., 173 F. Supp. 2d at 1241-42*.
[81] *Comprehensive Environmental Response, Compensation and Liability Act of 1980*, Pub. L. No. 96-510, 94 Stat. 2767 (codified at 42 U.S.C. §§9601-9675 (2000)). In 1986 Congress passed the Superfund Amendments and Reauthorization Act ("SARA"), and today the Act is concurrently known as CERCLA, SARA, or Superfund.
[82] *See e.g*., *B.F. Goodrich Co. v. Murtha*, 958 F.2d 1192, 1197 (2d Cir. 1992).
[83] Congress intended, in enacting CERCLA, to make parties defined as covered persons in liability section of statute strictly liable, in that no showing of fault is required, for response costs, subject only to limited affirmative defenses set forth in liability section of statute. *U.S. v. Shell Oil Co.*, 841 F.Supp. 962 (C.D.Cal.1993), affirmed 281 F.3d 812, withdrawn and superseded on denial of rehearing 294 F.3d 1045, *cert denied* 537 U.S. 1147 (2003). *See also, Tanglewood East Homeowners v. Charles–Thomas, Inc.,* 849 F.2d 1568, 1572 (5th Cir.1988); *State of New York v. Shore Realty Corp.,* 759 F.2d 1032, 1042 (2d Cir.1985). *See O'Neil v. Picillo,* 883 F.2d 176, 178–79 (1st Cir.1989), *cert. denied sub nom. American Cyanamid Co. v. O'Neil,* 493 U.S. 1071 (1990); *United States v. R.W. Meyer, Inc.,* 889 F.2d 1497, 1506–08 (6th Cir.1989), *cert. denied,* 494 U.S. 1057 (1990).
[84] 42 U.S.C. § 9607(b) .
[85] *Id*. *See e.g*., *U.S. v. Stringfellow*, 661 F. Supp. 1053, 1061 (C.D. Cal. 1987).
[86] 42 U.S.C. § 9601(1). *Cf.*, OPA definition of act of God at 33 U.S.C. § 2701(1).
[87] *Oil Pollution Act of 1990*, Pub. L. No. 101-380, 104 Stat. 484 (codified as 33 U.S.C. §§2701-2761).
[88] 33 U.S.C. §§ 1251-1387.
[89] The legislative history of OPA includes such statements as: "This new law, the Oil Pollution Act, is the latest in what I believe is an impressive record of significant marine environmental protection laws which have been developed in the Merchant Marine and Fisheries Committee and approved by this Congress." 7136 Cong.Rec. E3021–03 (Jones, W.). "The primary goal of this legislation is to prevent oil spills from occurring in the future. We must make every effort to ensure that accidents like the Exxon Valdez and the Mega Borg do not happen again and

elements as the CWA. The legislative history of OPA is clear that it while it amended, expanded, and strengthened pre-existing statutes that addressed oil spill cleanup, liability and compensation, the body of law already established under Section 311 of the CWA is the foundation of the OPA.[90] Many of that section's concepts and provisions are adopted directly or by reference.[91] Removal costs under the OPA, for example, are referred to as all removal costs incurred under the CWA,[92] and the same language is used to establish strict liability.[93] As with the CWA, recovery costs are available for responsible parties if they can establish one of the defenses, one of which is again the act of God defense.[94] The OPA relieves a responsible party of liability for removal costs or damages if the responsible party establishes, by a preponderance of the evidence, that the discharge or substantial threat of a discharge of oil and the resulting damages or removal costs were caused solely by an act of God.[95] Similar to the CWA and CERCLA, liability under the OPA is strict, and the absence of fault or the exercise of due care is not a defense.[96]

Congressional Intent

Congress has the power to legislate in the area of maritime law and has created legislation which has affected general maritime law with the passage of several statutes.[97] The Supreme Court has recognized the court's obligation to recognize the laws established by Congress and stated, "when [Congress] does speak directly to a question, the courts are not free to 'supplement' Congress's answer so thoroughly that the act becomes meaningless."[98] More specifically, the Supreme Court recognized the preemption of Federal Common Law and General Maritime Law by Congress's comprehensive legislation in the area of water pollution.[99] In finding that the Federal Water Pollution Control Act preempted federal common law of nuisance in the area of ocean pollution, the Court stated, "[i]n the absence of strong indicia of a contrary congressional intent, we are compelled to conclude that Congress provided precisely the

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that our waterways are free from the ravages of oil." 9136 Cong.Rec. H6933–02 (Fields, J.).*See generally*, S. Rep. No. 101-94 (1989), *reprinted in* 1990 U.S.C.C.A.N. 722.; H.R. Conf. Rep. No. 101-653 (1990) *reprinted in* 1990 U.S.C.C.A.N. 779.

[90] *See* S.Rep. No. 101–94, 101st Cong., 2d Sess., *reprinted in* 1990 U.S.C.C.A.N. 722, 723–724, 726.

[91] *Id.*

[92] *See* 33 U.S.C. §2702(b)(1) (stating that removal costs include those incurred under 33 U.S.C. § 1321(c)-(d), (e), (l)).

[93] *See*, 33 U.S.C. §2702(a) ("Notwithstanding any other provision or rule of law, and subject to the provisions of this Act, each responsible party...is liable for removal costs and damages specified [in the Act]...."). Congress specifically chose this language: "The Oil Pollution Liability and Compensation Act of 1989 continues to rely on Section 311 of the Clean Water Act as the basic law providing for cleanup authority, for penalties for spills and failure to notify of spills, and, by adopting the standard of liability under section 311 as the standard of liability under this Act [OPA]. That standard of liability has been repeatedly determined to be strict, joint, and several liability. This bill adopts these standards for economic damages, as well as for removal costs and natural resource damages." S.Rep. No. 101–94, 101st Cong., 2d Sess., *reprinted in* 1990 U.S.C.C.A.N. 722. 732.

[94] 33 U.S.C. § 2708(a)(1).

[95] 33 U.S.C. § 2703(a)(1).

[96] *See, e.g.*, *In re Metlife Capital Corp*., 132 F.3d 818, 820-21 (1st Cir. 1997).

[97] *See, e.g.*, the Limitation of Liability Act, the Harter Act, the Jones Act, the Oil Pollution Act of 1924, the Federal Water Pollution Control Act, and the Clean Water Act, and the Oil Pollution Act of 1990. (Citations omitted for brevity).

[98] *Miles v. Apex Marine Corp.,* 498 U.S. 19, 32 (1990)(*citing Mobil Oil Corp. v. Higginbotham,* 436 U.S. 618, 625 (1978)).

[99] *Middlesex County Sewerage Authority v. National Sea Clammers Ass'n,* 453 U.S. 1 (1981).

remedies it considered appropriate."[100] The plain language of the statute makes it clear that Congress did not intend for the common law definition to be used. The first step in interpreting a statute is examining the statutory language.[101] When the meaning of statutory language is plain, the reviewing court must abide by it; the court may depart from the plain meaning only to avoid a result "so bizarre that Congress 'could not have intended' it."[102] Under OPA, an "act of God" means "an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character the effects of which could not have been prevented or avoided by the exercise of due care or foresight."[103] In reviewing OPA's language regarding claims submissions, a court determined that since "OPA explicitly states the damages to which it applies and the remedy to be pursued, the courts are to recognize this direct answer of Congress rather than seek to subvert it by allowing pursuit of the types of claims covered by OPA under the general maritime law prior to proper submission of the claims as articulated in OPA."[104] The similar principle applies here. Congress has explicitly defined the term "act of God" and it provided through detailed legislative history what it meant by the term and how narrowly it should be applied. One of the earliest reported cases of an "act of God" defense in the United States was in 1868.[105] There have been an innumerable amount of cases since then in the maritime and on land, each defining and re-defining the act of God defense. Even after 100 years of jurisprudence, when Congress passed the Clean Water Act in 1972, it did not leave the definition of "act of God" to chance (or to common law). It specifically defined it. Likewise, in 1980, when passing CERCLA, Congress specifically defined it. And finally, in 1990, Congress built on the previous definition in the Clean Water Act, and used the verbatim definition found in CERCLA.

It is clear that Congress has intentionally spoken on this issue and did not intend for the common law definition to control matters brought under the three major federal environmental statutes. The three major statutes are strict liability statutes with specific defenses and definitions which apply to them. It is further clear that courts have interpreted Congress' intent similarly. While there are a number of cases that have upheld the "act of God" defense in the tort and maritime law context (many of which are cited in Taylor's claim), the number of reported cases where we have found the act of God defense has been successful against environmental liability, under all statutes and all federal circuits, is exactly zero.[106] It stands to reason. It is an elementary

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[100] *Id.* at 15.
[101] *Uniroyal Chemical Co., Inc. v. Safewav Transportation. Inc.*, 160 F.3d 238, 244 (5th Cir. 1998) (citing *Greyhound Corp. v. Mt. Hood Stages. Inc.*, 437 U.S. 322, 330 (1978)).
[102] *Id.*
[103] 33 U.S.C. § 2701(1).
[104] *Gabarick v. Laurin Mar. (Am.) Inc.*, 623 F. Supp. 2d 741, 746–47 (E.D. La. 2009). *Accord, In re Oil Spill by the Oil Rig Deepwater Horizon in the Gulf of Mexico*, 808 F.Supp.2d 943 (E.D. La. 2011).
[105] *Polack v. Pioche*, 35 Cal. 416, 417 (1868).
[106] *See*, Clifford J. Villa*, IS THE "ACT OF GOD" DEAD*, 7 Wash. J. Envtl. L. & Pol'y 320, 322 (July 2017)(citing to a Memorandum from Ernesto A. Long, Prof. of Law Librarianship, Univ. N.M. School of Law, to Mr. Villa, Assistant Prof. of Law, Univ. N.M. School of Law dated Dec. 16, 2016)(on file with Mr. Villa). This conclusion was reached independently by other researchers as well. *See, e.g.*, Frank Leone & Mark A. Miller*, Acts of God, War, and Third Parties: The Previously Overlooked CERCLA Defenses*, 45 ENVTL. L. REP. NEWS & ANALYSIS 10129, 10132 (Feb. 2015) (finding "no reported opinions have rejected liability based on an act of God defense."); Kenneth T. Kristl, *Diminishing the Divine: Climate Change and the Act of God Defense*, 15 WIDENER L. REV. 325, 344 (2010) ("In fact, there appears to be no reported cases actually finding the Act of God defense successful under these federal environmental laws.").

principle of maritime law that liability must be based on fault,[107] where in the three federal environment statutes, strict liability applies, even in the absence of fault. The act of God defense is more broadly applied in the common law tort and maritime contexts because generally the issue *du jure* in those cases is whether the court should find fault, or should it absolve fault. In the environmental liability context, the act of God defense is construed narrowly because fault is of no moment to the courts; and thus, often the only question for the court is whether an otherwise responsible party should be absolved by a Congressionally-conscious, very narrow tailored exception in the law. And as we have seen, the answer has been historically, no.[108]

The terms of the OPA are clear and the definition of the "act of God" defense is plain. One could argue that there is no reason to look beyond the statute to determine intent of Congress when it defined "act of God".[109] However, to ensure a more comprehensive review of the term, the *Apex* court also relied on the concomitant environmental statutes and the attendant legislative histories.[110] As detailed above, the definition of an act of God in the OPA is similar to the definition in the CWA and is identical to that provided by CERCLA.[111] There are numerous cases interpreting the CWA and CERCLA "act of God" provisions and the court in *Apex* correctly applied the law and sought guidance from those decisions.[112] Contrary to Taylor's articulated position, the court in Apex correctly concluded:

> The close analogy to the OPA found in cost recovery actions under section 107 of. . . CERCLA, cannot be ignored. CERCLA section 107. . . like OPA section 2712, provide for reimbursement of costs incurred from remediation of a discharge or response to a threat of

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[107] Gregory C. Buffalow, *The Force Majeure Defense - Recent Cases, Boilerplate and Analysis*, 42 J. Mar. L. & Com. 211 (2011)(citing Parks and Cattell, *The Law of Tug, Tow and Pilotage*, p. 222, 239 (3d Ed. 1994) the "well-settled rule that liability must be based upon fault ...").

[108] Villa, et al., *supra*, n 106.

[109] *See, Sabine Towing & Transp. Co. Inc. v. United States,* 666 F.2d 561, 563-6 (Ct. Cl. 1981) (applying the plain meaning of the CWA "act of God" language).

[110] *See, e.g.*, *Passamaquoddy Tribe v. State of Me.,* 75 F.3d 784, 788-89 (1st Cir. 1996). ([A]ssuming *arguendo* that the language is ambiguous, the legislative history is consistent with our interpretation… "the chief objective of statutory interpretation is to give effect to legislative will. To achieve this objective a court must take into account the tacit assumptions that underlie a legislative enactment, including not only general policies but also preexisting statutory provisions."). *See Ohio ex rel. Popovici v. Agler,* 280 U.S. 379, 383 (1930); *Greenwood Trust Co. v. Massachusetts,* 971 F.2d 818, 827 (1st Cir.1992), *cert. denied,* 506 U.S. 1052 (1993). Put simply, courts must recognize that Congress does not legislate in a vacuum. *See Thinking Machines Corp. v. Mellon Fin. Servs. Corp. # 1 (In re Thinking Machines),*67 F.3d 1021, 1025 (1st Cir.1995).

[111]33 U.S.C. § 2701(1); 42 U.S.C. § 9601(1); 33 U.S.C. § 1321(2).

[112] *See, e.g., United States v. West of England Ship Owner's Mut. Protection & Indem. Assoc.,* 872 F.2d 1192, 1199, n.13 (5th Cir. 1989) (CWA "act of God" legislative history uses foreseeability to set the parameters of the term "caused" in § 1321 (f)); *Liberian Polar Transports, Inc. v. United States,* 26 Cl. Ct. 223, 225-6 (1992) (CWA "act of God" not available when severe thunderstorm occurred during transfer of oil at pier); *Kyoei Kaiun Kaisha. Ltd. v. M/V BERING TRADER,* 795 F. Supp 1054, 1056, n.2 (W.D. Wa. 1991) (defendants did not prove 100-knot wind could not have been foreseen or guarded against, so no CWA "act of God" defense available); *St. Paul Fire & Marine Ins. Co. v. United States,* 4 Cl. Ct. 762 (Ct. Cl. 1984) (soil settlement not a CWA "act of God"); *Sabine Towing & Transp. Co. Inc. v. United States,* 666 F.2d 561, 563-6 (Ct. Cl. 1981) (vessel striking unknown underwater object caused by spring run-off not a CWA "act of God"); *United States v. Stringfellow,* 661 F. Supp. 1053, 1061 (C.D. Cal. 1987)(heavy rainfall was not the kind of "exceptional" natural phenomena to which the narrow CERCLA "act of God" defense applies); and, *United States v. Alcan Aluminum Corp.,* 892 F. Supp. 648, 651 (n.1) (M.D. Pa. 1995) (plaintiff could not show that torrential rains from Hurricane Gloria were sole cause of pollution, so summary judgment motion relying on the CERCLA "act of God" defense denied).

discharge. Courts recognize that CERCLA actions for recovery of response costs . . . are actions for equitable relief (equitable claims for restitution/reimbursement of funds expended to respond to health and environmental danger posed by hazardous substances).[113] Section 101(1) of CERCLA identically defines the term "act of God" as "an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight."[114]

. . . .

Although there have been few, if any, cases construing the OPA definition of "act of God," there is a substantial body of law interpreting that term pursuant to the CWA, 33 U.S.C. § 1251 and CERCLA, 42 U.S.C. § 9607. The legislative history of the OPA, the textually similar definition "act of God" in the CWA, the textually identical definition in CERCLA, considered together with the fact OPA was intended to expand that liability of the discharger, strongly militates in favor of finding that Congress intended to establish a uniformly and *singularly* limited "act of God" defense." These defenses are narrowly construed, and only in the situation where the discharge was totally beyond the control of the discharging vessel would the responsible party be excused from liability."[115]

. . . .

Congressional intent is clearly that the "exceptional natural phenomenon" (*i.e.,* the "act of God") defense be construed as much more limited in scope than the traditional common law "act of God" defense. The discharger's burden of proof on the defense of "exceptional natural phenomena" is much more onerous than

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[113] *See, International Marine Carriers v. Oil Spill Liability Trust Fund,* 903 F.Supp. 1097, 1102 (S.D.Tex.1994); *Mustang Tractor & Equipment Co. v. Liberty Mutual Insurance Co.,* 1993 WL 566032 (S.D.Tex. October 8, 1993).

[114] 42 U.S.C. § 9601(1). *See*, *United States v. Barrier Industries, Inc.,* 991 F.Supp. 678 (S.D.N.Y.1998) (spills of hazardous substances caused by bursting pipes following unprecedented cold spell not an "act of God" within the meaning of CERCLA so as to absolve principal of bankrupt corporate owner of waste site from liability for response costs given other factors antedating cold weather which contributed to the spills); *United States v. M/V SANTA CLARA I,* 887 F.Supp. 825 (D.S.C.1995) ("loss of containers of arsenic trioxide overboard resulting from storm not 'act of God' within the meaning CERCLA where weather predicted by weather service was known to captain and crew prior to their departure, and in light of bad weather crew was directed to take extra precautions to insure vessel and cargo were secure for rough seas"); and *United States v. Stringfellow,* 661 F.Supp. 1053 (C.D.Cal.1987) (heavy rainfall not an exceptional natural phenomenon within the meaning of CERCLA's "act of God" defense to payment of response cost incurred as a result of release of hazardous waste from toxic waste disposal site, where rains were foreseeable based on normal climactic conditions, and where harm caused by rain could have been averted by properly designed drainage canals).

[115] *United States v. English,* 2001 WL 940946 (D.Hawai'i March 28, 2001) (citing *Reliance Ins. Co. v. United States,* 230 Ct.Cl. 390, 677 F.2d 844, 849 (1982)).

> that required for common law or traditional "act of God" defense. The legislative history of CERCLA includes the following explanation regarding the *singular* "defense for exceptional natural phenomena":
> The defense for the exceptional natural phenomenon is similar to, but more limited in scope than, the traditional 'act of God' defense. It has three elements: the natural phenomenon must be exceptional, inevitable, and irresistible. Proof of all three elements is required for successful assertion of the defense**. The 'act of God' defense is more nebulous, and many occurrences asserted as 'acts of God' would not qualify as 'exceptional natural phenomenon.' For example, a major hurricane may be an 'act of God,' but in an area (and at a time) where a hurricane should not be unexpected, it would not qualify as a 'phenomenon of exceptional character.'**[116]
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> *Apex Oil Co. v. United States*, 208 F. Supp 2d 642, 652-54.

The court's approach in Apex was neither whimsical nor unusual. Courts interpreting other OPA provisions for the first time, such as third-party liability, have similarly looked to CWA and CERCLA interpretations for guidance.[117] The court in Apex approached the interpretation of "act of God" under OPA with diligence and precision, utilizing the canons of statutory construction, parallel jurisprudence and legislative interpretation as guide posts to reach a sound decision; and one that NPFC is not persuaded to discount in this determination.

The elements of the OPA act of God defense in the context of the claim[118]

In order to be successful under an act of God claim, Taylor must establish, by a preponderance of the evidence, that the discharge of oil and resulting damages or removal costs were caused ***solely*** by an "act of God."[119] The phrase "act of God" is defined by OPA as:

> an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character the effects of which could not have been prevented or avoided by the exercise of due care or foresight.[120]

Was the event grave and of an exceptional, inevitable and irresistible character?

At its outset, the definition requires the event must be of a sufficiently severe nature to overcome otherwise strict liability. The statutory definition prescribes a very general outline for what might constitute such an event: a "grave natural disaster or other natural phenomenon of an

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[116] *Apex Oil Co. v. United States*, 208 F. Supp. 2d 642, 653 (E.D. La. 2002) (citing H.R.Rep. 99–253(IV) *reprinted in* 1986 U.S.C.C.A.N. 3068, 3100 (emphasis added).
[117] *International Marine Carriers v. OSLTF*, 903 F.Supp. 1097, 1102-3 (S.D. Tx. 1994).
[118] Adapted from Joel Eagle, *Divine Intervention: Re-Examining the "Act of God" Defense in A Post-Katrina World*, 82 Chi.-Kent L. Rev. 459.
[119] 33 U.S.C. § 2703(a)(1) (emphasis added)
[120] 33 U.S.C. § 2701(1).

exceptional, inevitable, and irresistible character . . . ."[121] Clearly Congress did not intend every "natural disaster" or "natural phenomenon" to be eligible for the act of God defense. Indeed, by including the qualifying adjective "grave," Congress seems to indicate a heightened level of severity.[122] When the text is vague or ambiguous, other sources, such as legislative history and case law interpretation, are helpful to clarify meaning.[123]

OPA's definition of act of God is verbatim with CERCLA's definition. CERCLA's legislative history provides some indication as to what Congress intended would (or would not) qualify as an act of God for purposes of relieving liability. A 1986 House report during deliberations for passage of the amendments to CERCLA[124] states that

> [t]he "act of God" defense is more nebulous, and many occurrences asserted as "acts of God" would not qualify as "exceptional natural phenomenon." For example, a major hurricane may be an "act of God," but in an area (and at a time) where a hurricane should not be unexpected, it would not qualify as a "phenomenon of exceptional character."[125]

While not dispositive of this element, this report indicates that Congress believed that the majority of hurricanes should not fall within the domain of the statutory defense.

In line with the strict liability standard of the environmental statutes and the legislative history, case law has held that the "grave natural disaster . . . of an exceptional, inevitable, and irresistible character" language creates a very narrow exception. In *Sabine Towing*,[126] the natural phenomenon in question was a freshet condition on the Hudson River--a sudden rise in the river level, coupled with an increased rate of flow due to rain and the spring runoff of melted snow, that is known to wash down sediment, gravel, logs, rocks, and other debris.[127] *Sabine* sought to recover the costs associated with cleaning up thirty to fifty thousand gallons of oil released into the Hudson, when an allegedly unknown object struck its vessel and created a twenty foot tear in the ship's hull.[128] In holding that the conditions did not constitute a grave natural disaster, the court pointed to evidence at trial indicating that the flow rate on the day of the incident was equaled or exceeded on twenty-five percent of all days that year, and "[t]o contend that the freshet . . . was a disaster is to contend that the Hudson is in a disaster condition one-quarter of the time."[129] Similarly, there were 87 days in 2018 where a named storm was in the Atlantic

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[121] 33 U.S.C. §2701(1).
[122] *See, Sabine Towing & Transp. Co. v. United States*, 666 F.2d 561, 565 (Ct. Cl. 1981).
[123] *See, e.g.*, *In re Sinclair*, 870 F.2d 1340, 1342-44 (7th Cir. 1989) (discussing the proper use of legislative history in interpreting statutes); *see also* n. 110, *supra*.
[124] In 1986 Congress passed the Superfund Amendments and Reauthorization Act ("SARA"), and today the Act is concurrently known as CERCLA, SARA, or Superfund. Pub. L. No. 96-510, 94 Stat. 2767 (codified as 42 U.S.C. §§9601-9675).
[125] H.R. Rep. No. 99-253(IV), at 71, *reprinted in* 1986 U.S.C.C.A.N. 3068, 3101
[126] *Sabine Towing & Transp. Co. v. United States*, 666 F.2d 561 (Ct. Cl. 1981).
[127] *Id*. at 563.
[128] *Id*. at 562-3.
[129] *Id*. at 565.

Ocean, Caribbean Sea and/or the Gulf of Mexico, which is roughly also one-quarter of the time.[130]

A number of other courts have determined that the natural phenomenon which caused the release of oil or hazardous substances did not rise to the level contemplated by Congress. In *United States v. Stringfellow*, the United States sued responsible parties for the releases and threats of release of hazardous substances, including the owners and operators of a toxic waste disposal site, the generators of waste at the site, and the transporters of waste from the generators to the facilities.[131] The natural phenomenon in question was heavy rains in two distinct years, which the defendants attempted to qualify as an act of God under the definition found in CERCLA.[132] The court was not persuaded, noting that the rains "were not the kind of 'exceptional' natural phenomena to which the narrow act of God defense of section 107(b)(1) applies."[133]

In *United States v. Alcan Aluminum Corp.*, defendant Alcan, an aluminum manufacturer, dumped a large amount of oily wastes containing hazardous substances down an air shaft leading to a network of coal mines that bordered the east bank of the Susquehanna River in Pittston, Pennsylvania.[134] In September 1985, Hurricane Gloria struck the East Coast, and approximately one hundred thousand gallons of the emulsion was discharged into the Susquehanna River, which the EPA cleaned up at a cost of roughly $1.3 million.[135] Alcan raised the act of God defense in that a hurricane (Gloria) caused the release, and that this constituted a "grave natural disaster or phenomenon."[136] The court disagreed in part held that, like in *United States v. Stringfellow*, that the event was "not the kind of exceptional natural phenomenon to which the act of God exception applies."[137] Further, the court found another reason to deny the defense under the statute. It found that "no reasonable factfinder could conclude that Hurricane Gloria was the sole cause of the release . . . ."[138] An element of the statute that will be discussed in detail later.

From these cases it is clear that the weather event must not simply be severe, unprecedented, or destructive. While there is no baseline standard of severity for an event to be categorized as a "grave natural disaster . . . of an exceptional, inevitable, and irresistible character," what is clear is that neither the freshet condition in *Sabine Towing*, nor the heavy rains in *Stringfellow* nor the hurricane in *Alcan Aluminum*, were of a level great enough for the courts to deem this element satisfied.

Taylor's positions and NPFC's analysis

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[130] *See*, https://www.nola.com/hurricane/2018/11/a-look-back-as-the-surprisingly-active-2018-atlantic-hurricane-season-ends.html. *See generally*, https://www nhc noaa.gov/climo/ (Both last visited May 8, 2019).
[131] 661 F. Supp. 1053, 1058 (C.D. Cal. 1987).
[132] *Id*. at 1061.
[133] *Id*.
[134] 892 F. Supp. 648, 651 (M.D. Pa. 1995).
[135] *Id*.
[136] *Alcan*, 892 F. Supp. at 658.
[137] *Id*. at 658.
[138] *Id*.

Taylor argues that Ivan's waves were **exceptional.** Specifically, it emphasizes the 91-foot wave measured by the NRL tidal gauge was larger than any wave previously measured in the United States and the peak spectral periods of the waves measured at the Marlin platform (19 seconds) and the NBDC buoys (17 seconds) were extremely long as compared to the peak spectral period of Dr. Joseph Suhayda's 100 year storm design wave of 14 seconds. Taylor asserts that because both wave height and wave period affect the pressure exerted by waves on the seafloor, the combined heights and periods of Ivan's waves at MC20 created bottom pressures that exerted an average of 473 psf of bottom pressure on seafloor sediments and created a maximum bottom pressure as generated in Dr. Forristall's hind cast at MC20 of 572 psf, which was more than twice the bottom pressure of 249 psf as predicted in Dr. Suhayda's 100 year storm design. Taylor further asserts that the bottom pressures associated with Hurricane Ivan were truly unique as the MC20A Platform's foundation was 482-feet deep and that before Ivan, it was generally accepted that a change in seafloor pressure was generally inconsequential in water depths that exceeded 400 feet. Lastly, Taylor contends that the large bottom pressures exerted in 482 feet of water which caused sediment movements that reached a depth of 100 feet below the surface was truly remarkable and that such a failure of a large block of seafloor especially at water depths greater than 400 feet had never been observed or predicted in the Gulf.[139]

Based upon a review of the information provided by the Taylor and obtained independently, the NPFC disagrees. Relevant to the wave heights when reviewing Dr. Suhayda's report and the hind cast data relied upon by Dr. Suhayda in his geotechnical analysis of the MC20, the NPFC relies on the opinion[140] proffered by Dr. Cortis Cooper and others,[141] which states that "[while] Ivan generated the highest waves ever measured or hind cast in the Gulf of Mexico… [it] does not appear to have generated any freak conditions unexplainable by present hind cast methods or physical understanding of hurricane winds and waves. Hence, the extreme waves generated by Ivan do not appear to be an unexpected event."[142] Additionally, the measurement of wave heights within the Gulf of Mexico had and continues to become more sophisticated with the placement of additional monitoring sensors throughout the region. Specifically, the NRL Slope to Shelf and Exchange Dynamics field sensor which recorded the 91-foot wave referenced by Taylor in its claim submission was only temporary and had been placed on station for the purpose of an experiment. Without that sensor, other wave measurements recorded throughout the Gulf during Ivan would have placed Hurricane Ivan on par with other previously recorded hurricanes.[143]

Regarding elevated sea bottom pressures, Dr. Suhayda relied upon single point climatologic, average environmental information for his 1983 assessment of the MC20 and didn't consider the full environment of the Gulf of Mexico that could have affected the MC20 in 2004. Specifically, Hurricane Ivan entered the Gulf of Mexico as a category 5 hurricane as it passed the western tip

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[139] Taylor Energy claim submission dated November 15, 2018, pages 107-109.
[140] Cortis Cooper and James Stear, ChevronTexaco Energy Technology Company; John Heideman and Markku Santala, ExxonMobil Upstream Research Company; George Forristall, Forristall Ocean Engineering, Inc.; David Driver, BP America, Inc.; Paul Fourchy, Murphy Exploration and Production Company, "*Implications of Hurricane Ivan on Deepwater Gulf of Mexico Metocean Design Criteria*" (2005).
[141] Hereinafter shortened to "Dr. Cooper".
[142] *Cooper*, *et al.*, *supra* n. 140.
[143] NPFC Task for the Analysis of Wave Conditions at Mississippi Canyon Block 20 during Hurricane Ivan written by Mr. James Pettigrew, dated April 1, 2019, pages 20-21.

of Cuba and drove long-period swell waves out front of its path northward. These long-period swells propagated northward into the northern Gulf for 48 hours and most certainly would have impacted the wavelength characteristics in the environment. That scenario was not considered by Dr. Suhayda in his 1983 geotechnical analysis as he only considered the presence of wind and waves as part of his analysis and as such, utilized shorter wavelengths in the design of his wave characteristics. As such, the elevated sea bottom pressures of Ivan could have been more than twice the sea bottom pressure of 249 psf as predicted in Dr. Suhayda's 100-year storm design but Sohio failed to plan for that event as Dr. Suhayda did not consider and report on the effects of long-period swell waves generated as a result of hurricanes.[144]

In addition, Taylor refers to other studies in which the change in seafloor pressures in water depths exceeding 400 feet is described as inconsequential. However, inconsequential doesn't mean zero which is documented and supported by Dr. Suhayda in his 1977 report "Surface Waves and Bottom Sediment Response, Marine Georesources and Geotechnology" in which he states that "Because of the importance of wind-wave induced bottom pressures in water depths of less than 500 feet, those pressures were measured for this current study." Additionally, Taylor's statement that hurricane waves were not capable of exerting significant sea bottom pressures in water depths greater than 400 is simply inaccurate as it does not take into account the physics of the wave structure, specifically wavelength, period and depth, all of which are critical in assessing the environment being described.[145]

Additionally, Taylor contends that the large bottom pressures exerted in 482 feet of water which caused sediment movements that reached a depth of 100 feet below the surface was truly remarkable and that such a failure of a large block of seafloor especially at water depths greater than 400 feet had never been observed or predicted is false. Seismic data indicate that mudflow deposition commenced in the northern portion of the MC20 before 1874 and that subsequent mudflow activity towards the southeast portion of the MC20 has emplaced numerous individual mudflow units which varied in thickness between 70 to 90 feet. And while there was also equivocal geologic evidence of larger-scale mudflow events resulting in possible mudflow deposits ranging from 70 to 90 feet in thickness, these events were regarded as being the product of very infrequent and large-scale disturbances of the seafloor accompanying very extreme surface wave conditions, such as produced by Hurricane Camille.[146] Such a large-scale sea floor disturbance toppled the Shell Platform "B" during Hurricane Camille. The Shell Platform "B" had been installed within the South Pass Block of the Mississippi Delta and operated in 325 feet of water. The large sea bottom pressures created by the waves associated with Hurricane Camille triggered a mass sediment movement extending to depths up to 90 feet below the surface of the seafloor which toppled the Shell Platform "B" and moved it almost 100 feet down slope from its original position.[147] The loss of the Shell Platform "B" in 1969 and the loss of the MC-20A platform in 2004 are almost identical in that they occurred in areas within the Gulf of Mexico known to contain geohazards and were the result of mass seafloor sediment movements that occurred well below the surface of the seafloor resulting from elevated sea bottom pressures produced by hurricane force waves.

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[144] *Id*. at page 19.
[145] *Id*. at page 4.
[146] Woodward-Clyde Oceaneering Analysis Block 20 Mississippi Canyon Volume 1 dated March 1983, pages 40-42.
[147] Wave Induced Slides in the South Pass Block 70, Mississippi Delta written by Robert B. Bea, Stephen G. Wright, Members, ASCE, Partha Sircar and Alan Niedoroda, page 3.

Taylor also argues that Ivan's waves were inevitable and irresistible. However, it **specifically** state that Ivan's waves were "incapable of being avoided or evaded" by either the seafloor at MC20 or by the MC20A Platform. As such, NPFC analyzes this argument in conjunction with the "could not have been prevented or avoided" element of the statute, further below.

In order to succeed Taylor must demonstrate by a preponderance of the evidence that Hurricane Ivan was not only much more grave and exceptional than other natural phenomena from past act of God cases in the environmental liability context, but one of the most grave, exceptional, inevitable, and irresistible of all time. Considering the discussion above, it was not. And while as Taylor contends, the largest ocean wave height on record came from Ivan near its eyewall, Ivan does not rank in the top ten in size[148], nor intensity[149], nor wind strength[150], nor in one-minute sustained winds.[151] And while Ivan stands as the thirteenth costliest hurricane in history,[152] likely because of its impact to the oil and gas industry, it is nowhere near one of the most severe, grave, nor exceptional hurricanes of all time.[153]

Unanticipated; and the effects of which could not have been prevented or avoided

Intertwined the definition of the act of God defense is the requirement that the event must be unanticipated and the effects of the event could not have been prevented or avoided. The terms "unanticipated" and "could not have been avoided" have been equated to the idea of "foreseeability" and the term "could not have prevented" has been viewed through the lens of "due care". For ease of reading, the NPFC will analyze these terms similarly.

The legislative history of both CERCLA and the CWA are clear that if the storm was foreseeable, predicted, or not unusual at the time and place it occurred, the defense should not apply. A 1970 Congressional Report prior to passage of the CWA provides a concise discussion of Congress's opinion on the act of God:

> The term "act of God" is defined to mean an act occasioned by an unanticipated grave natural disaster. . . . [O]nly those acts about which the owner could have had no foreknowledge, could have made no plans to avoid, or could not predict would be included. Thus, grave natural disasters which could not be anticipated in design, location, or operation of the facility or vessel by reason of historic, geographic, or climatic circumstances or phenomena

[148] *See*, https://www.wunderground.com/cat6/will-global-warming-create-larger-hurricanes. *See also*, https://www.rappler.com/science-nature/43351-world-strongest-cyclones-history. (Both last visited May 8, 2019).
[149] "Atlantic hurricane best track (HURDAT version 2)." Hurricane Research Division (Database). National Hurricane Center. May 1, 2018.
[150] *Id*.
[151] *Id*.
[152] Adjusted for inflation. NOAA Technical Memorandum NWS NHC-6, National Hurricane Center (August 2011).
[153] *Id*. *See also*, the Hurricane Severity Index. The Hurricane Severity Index is an enhanced hurricane rating system which more accurately defines the strength and destructive capability of a given storm than other scales currently utilized. The Hurricane Severity Index uses comprehensive equations which incorporate not only the intensity of the winds but the size of the area the winds cover. (Accessible at "iwxsl0.impactweather.com/hsi/hsi.pdf").

> would be outside the scope of the owner's or operator's responsibility.[154]

Similarly, and as discussed above, CERCLA's legislative history also addresses the idea of a hurricane being unanticipated: "[A] major hurricane may be an 'act of God,' but in an area (and at a time) where a hurricane should not be unexpected, it would not qualify as a 'phenomenon of exceptional character.'"[155] The House reports prior to the passage of both the CWA and CERCLA clearly conclude that if a major hurricane occurs in an area where hurricanes normally occur, or geographic circumstances, such as a mudslide, occurs in an area where they are anticipated, then those are anticipated and foreseeable events and, thus, do not qualify for the act of God defense.

In terms of geographic expectations, both the Atlantic and Gulf Regions of the United States are well-known for their hurricane seasons. See a graphical representation below:

[154] H.R. Rep. No. 91-940 (1970) (Conf. Rep.), *reprinted in* 1970 U.S.C.C.A.N. 2712, 2722.
[155] H.R. Rep. No.99-253(IV), at 71 (1986), as reprinted in 1986 U.S.C.C.A.N. 3068, 3101.

The courts have often based their decision to deny the defense, at least in part, on the fact that the phenomenon should have been anticipated, with two trends emerging. The first involves storms occurring in a region and at a time when they are known to occur. The second involves storms that were actually forecasted, such that the responsible facility/vessel should have prepared itself for the event.

In *Sabine Towing*, discussed above, the court held that the circumstances of the hull damage were not unanticipated, noting that the "frequency of freshet conditions on the Hudson and the danger that they cause are well known to those who navigate the river."[156]

The court reached a similar conclusion in *Apex*. While Apex navigated a pushboat and oil barges on the Lower Mississippi River during the 1995 floods, the captain, faced with a strong

[156] *Sabine Towing & Transp. Co., Inc. v. United States*, 666 F.2d 561, 565 (Ct. Cl. 1981).

current and a sharp bend in the river, chose to navigate past a bridge. The current overwhelmed the barges and pushboat, which soon collided with the bridge, releasing approximately 840,000 gallons of slurry oil into the river.[157] Apex accepted responsibility, funded removal activities (costing $2.7 million), and after losing a claim for reimbursement from the National Pollution Funds Center ("NPFC"), sought judicial review.[158] In concluding that the flood conditions did not constitute an act of God within the meaning of the OPA, the court agreed with the NPFC conclusion that Apex could have anticipated that spring floods would result in high river stages, and that strong flood currents associated with the floods are not unusual and/or unanticipated.[159]

The second type of case involves the storm being forecasted before the release occurs. In *Kyoei Kaiun Kaisha v. M/V Bering Trader*, a storm in Lost Harbor, Alaska led to the grounding of a ship containing oil.[160] The defendant raised the act of God defense in an attempt to show that they were not liable for the cost of the Coast Guard's activities in preventing a threatened oil spill from the grounded vessel.[161] Specifically, the master of the vessel claimed it was "the wind in excess of 100 knots (reported at Dutch Harbor) [that] should be considered the cause of the accident."[162] The court found that the defendants put forth no evidence that the weather on the night of the storm could not have been foreseen, and further cited a Coast Guard navigation guide for Alaska in effect at the time of the grounding which warned that weather in the region is characterized by "persistent overcast skies, strong winds, and violent storms . . . ."[163]

In *United States v. M/V Santa Clara I*, during a storm off the New Jersey coast that was predicted by the National Weather Service and known by the captain and crew of the vessel prior to departure, roughly 441 barrels of arsenic trioxide were lost overboard, and some 800 pounds of magnesium phosphide spilled in the hold of the vessel.[164] The EPA issued an administrative order directing the owners and operators of the vessel to retrieve and dispose of the lost barrels of arsenic trioxide. After six weeks and an estimated $5 million, the vessel owners recovered approximately 320 barrels.[165] Hoping to recover the response costs, the owner of the vessel invoked the act of God defense. The court, however, was not convinced, finding that even a poorly forecasted storm is not an act of God because it was predicted and was avoidable.[166]

Another important aspect of the foreseeability of a storm comes from *Liberian Poplar Transports, Inc. v. United States*, another case in which a severe but predicted storm caused a vessel to release oil into the Delaware River.[167] Liberian argued that the storm was unanticipated because it was not "well forecasted, and was not visually foreseeable by the ship's watch. . . ."[168] The court noted that "the [CWA] and the legislative history do not subscribe to a subjective

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[157] 208 F. Supp. 2d 642, 645 (E.D. La. 2002).
[158] *Id*. at 645-46, 648.
[159] *Id*. at 656-57.
[160] 795 F. Supp. 1054, 1055 (W.D. Wash. 1991).
[161] *Id*. at 1055, 1056 n.2.
[162] *Id*.
[163] *Id*. at 1056 n.2.
[164] 887 F. Supp. 825, 830, 843 (D.S.C. 1995).
[165] *Id*. at 830-31.
[166] *Id*. at 843 (citing Liberian Poplar Transp., Inc. v. United States, 26 Cl. Ct. 223, 226 (Cl. Ct. 1992)).
[167] 26 Cl. Ct. at 224.
[168] *Id*. at 226.

test for anticipation."[169] Therefore this element of the defense, and thus the entire defense, failed.[170]

Taylor's positions and NPFC's analysis

Taylor argues that Ivan's waves were **unanticipated.** Specifically, that Ivan's waves were measured at the Naval Research Laboratory (NRL) tidal arrays and by the National Data Buoy Center (NBDC) buoys with return intervals between 2,500 and 10,000 years and the return interval of the bottom pressures at MC20 greatly exceeded 2,000 years. Taylor also contends that Ivan's waves were unanticipated, not only because of their heights and periods, but also because it was produced by a relatively normal hurricane in terms of meteorological characteristics and that post hind cast studies confirmed that the models were unable to predict the height and period of the waves created by Ivan based on the storm's meteorological characteristics. Lastly Taylor contends that the waves generated by Ivan were inconsistent with the waves generated by other major hurricanes that had the same central pressure."[171]

Based upon a review of the information provided by the Taylor and information obtained independently, the NPFC disagrees. Specifically, Taylor's claim that Ivan's waves were measured at the NRL tidal arrays and NBDC buoys with return intervals between 2,500 and 10,000 years are only estimates based upon interpolation and ratios used to infer maximum wave height as relied upon by Dr. Suhayda in his report. The same methods of inferring weather conditions were relied upon by Dr. Suhayda when reporting his 2,000-year sea bottom pressure return intervals. In reality, the NRL tidal arrays and NBDC buoys associated with Dr. Suhayda's inferred data were located more than 20 miles away from the right front quadrant of Hurricane Ivan meaning that none of this scientific equipment ever measured the maximum wave heights associated with Hurricane Ivan. Additionally, the NBDC buoys relied upon in Dr. Suhayda's report have been sensing and reporting data since 1981 and 1995, respectively. As such, relying upon buoys with data sets of 25 years and 11 years to determine a recurrence interval of 10,000 years should be cautioned as Drs. Panchang and Li wrote in 2006, "We readily acknowledge that datasets covering a maximum of 30 years or so cannot be readily used for extrapolating to very large recurrence intervals. Some oceanographers have speculated that the large waves associated with Ivan represent something more on the order of 1,000 year event and that in view of the limited duration of these datasets, wave heights associated with such large recurrence intervals cannot be readily established with certainty."[172]

Taylor's claim that post-hindcast studies confirmed that the models were unable to predict the height and period of the waves created by Ivan are questionable. Specifically, when comparing the measurements at the NDBC buoy 42040, there was less than 4% difference in predicted vs. measured significant wave height (51 feet predicted vs. 53 feet measured); and less than 2% difference in predicted vs. measured spectral wave periods. Differences of less than 5%

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[169] *Id*.
[170] *Id*.
[171] Taylor Energy claim submission dated November 15, 2018, pages 109-111.
[172] Vijay G. Panchang and Dongcheng Li, "Large Waves in the Gulf of Mexico Caused by Hurricane Ivan", *Bulletin of the American Meteorological Society,* Vol. 87, No. 4 (April 2006), pp. 481-489 cited in NPFC Task for the Analysis of Wave Conditions at Mississippi Canyon Block 20 during Hurricane Ivan written by Mr. James Pettigrew, dated April 1, 2019, pages 13-14.

in these critical components specific to Taylor's assertions that computer based wave forecasting models were unable to predict the waves created by hurricane Ivan are simply misleading.[173]

Additionally, Taylor's claim that the waves generated by Ivan were inconsistent with the waves generated by other major hurricanes that had the same central pressure does not consider the full environment of the Gulf of Mexico in the vicinity of the MC20 in 2004. Specifically, Ivan entered the Gulf as a category 5 storm as it passed the tip of Cuba and drove long-period swell waves out in front of its path for more than 48 hours which most certainly would have impacted the wavelength characteristics in that environment.[174] Additionally, as relied upon by Dr. Suhayda, Dr. A.T. Cox and his team stated: "The question of how a category 3 storm could excite peak sea states heretofore thought to be associated with more intense hurricanes is answered implicitly by the success of the hind cast. Simply, the particular combination of Ivan's intensity history, its several cycles of eyewall replacement which led at times to a large radius of maximum wind, its evident optimum forward velocity for ocean response and its large core wind field structure all conspired to allow Ivan to generate record measured peak sea states for a Gulf hurricane."[175]

Lastly, the events of Hurricane Ivan were not unanticipated as noted by Dr. Cooper: "Ivan generated the highest waves ever measured or hind cast in the Gulf of Mexico. However, Ivan does not appear to have generated any freak conditions unexplainable by present hind cast methods or physical understanding of hurricane winds and waves. Hence, the extreme waves generated by Ivan do not appear to be an unexpected event." Additionally, the Shell Platform "B" was toppled in South Pass Block of the Mississippi Delta as a result of a seafloor failure resulting from elevated sea-bottom pressures associated Hurricane Camille in 1969. Sohio may have used the best available techniques in 1983 to design the MC-20A but it did not have the full picture of a worst-case scenario when constructing the platform in an area subject to geohazardous conditions and hurricanes. Specifically, Sohio relied upon a geotechnical analysis provided by Dr. Suhayda which never mentioned the subaqueous unstable sea-bottom at the MC-20, the potential for long-period swells that could be generated by a hurricane transiting west of Cuba on a northerly course or the failure of the Shell Platform "B" just 14 years previous in an area of the Gulf similar in characteristics to the MC20.[176]

Taylor also argues that Ivan's waves were **inevitable and irresistible.** Specifically, it argues that Ivan's waves were "incapable of being avoided or evaded" because they were incapable of being avoided or evaded by either the seafloor at MC20 or by the MC20A Platform. Additionally, the seafloor sediments lacked the capacity to move to evade the forces imparted on them by Ivan's waves and unlike a vessel that can move away from a hurricane, the MC20A Platform was a fixed structure that couldn't move to evade either Ivan's waves or the seafloor failure caused by the waves. Taylor also asserts that the forces imparted on the seafloor sediments by Ivan's powerful waves were irresistible as they were more than twice as great as the forces that a 100 year storm's waves would have imparted on the sediments which resulted in

[173] *Id*. at 15.
[174] *Id*. at 19.
[175] *Id*. at 16.
[176] Robert B. Bea, Stephen G. Wright, Members, ASCE, Partha Sircar and Alan Niedoroda, *Wave Induced Slides in the South Pass Block 70, Mississippi Delta,* pages 27-29.

a regional seafloor failure which created lateral forces against the MC20A Platform piles that exceeded the capacity of the piles to withstand, causing the piles to fail.[177]

Regarding Taylor's assertion that the forces imparted on the seafloor sediments by Ivan's waves were irresistible as they were more than twice as great as the forces that a 100 year storm's waves would have imparted on the sediments, the NPFC refers to Dr. Suhayda's 1983 report in which he failed to address the potential for sea-bottom pressure uncertainties nor did he recommend or assign any type of safety factor when calculating the bottom pressures used for his 100-year storm design. It appears that Dr. Suhayda limited his geotechnical analysis of the MC20 to climatological average conditions instead of identifying the most likely scenario or climatologic mean values and then bounding those values with the most dangerous scenario, in this case a category 5 hurricane entering the Gulf of Mexico west of Cuba and running northerly (similar to hurricane Camille which occurred in 1969) into the area and thus creating a risk based decision that could be have been used in the design and construction of the MC-20A platform.[178] As such, had the designers of the MC-20A been better informed of the potential for hazards associated with the MC-20, perhaps the design of the MC-20A would have been more resistant to the weather events of Hurricane Ivan.

Additionally, Taylor failed to conduct geophysical surveys every other year or after major storms of the mudflow channels and depositional lobes located above the platform site as recommended by Woodward[179] and required by the MMS.[180] When Taylor was questioned about the frequency of its geophysical surveys in, around or upslope of the platform site as well as its geophysical surveys of the mudflow channels and depositional lobes located above the platform, Taylor responded that it had only conducted one geophysical survey of MC21 block in 2001 and that survey had extended into the MC20 platform site and areas upslope of the MC20.[181] Taylor's failure to conduct these surveys calls into question the stability of the mudflow channels, depositional lobes and areas upslope of the MC20 and requires Taylor to speculate on the condition of the sediments subject to this claim based upon a geophysical survey conducted 3 three years before the casualty and geophysical surveys conducted post casualty as part of Taylor response to plug and abandon its wells as required for Outer Continental Shelf lessees and operators.

The historic bathymetry of the MC20 that suggests major mudflow activity occurred within MC 20 during the period between 1874 and 1940, producing up to 85 feet of sediment accumulation and the period between 1940 and 1979 involved localized deposition of 30 feet to 40 feet of sediment in the north and south portions of the block.[182] The sediment movements documented between 1940 and 1979 occurred just above the site and were possibly triggered by

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[177] Taylor Energy claim submission dated November 15, 2018, pages 112-113.
[178] Wave Induced Slides in the South Pass Block 70, Mississippi Delta written by Robert B. Bea, Stephen G. Wright, Members, ASCE, Partha Sircar and Alan Niedoroda, pages 27-28.
[179] Woodward-Clyde Oceaneering Analysis Block 20 Mississippi Canyon Volume 1 dated March 1983, page 10.
[180] Letter from the Department of Interior Mineral Management Services to Sohio Petroleum Company dated September 6, 1983 page 5.
[181] Letter from Schwabe, Williamson & Wyatt, attorneys representing Taylor Energy to Mr. (b) (6) , NPFC, dated March 15, 2019.
[182] Fugro McClelland Marine Geosciences, Inc. Assessment of Seafloor Movements MC 20 A Structure Mississippi Canyon Area, Block 20 dated January 24, 2005, page 18.

Hurricane Camille in 1969.[183] And Taylor's apparent disregard of sediment instability and movement is certainly worth scrutinizing as bathymetric changes between 2001 and 2004 in the MC20 show an elevation increase (sediment accumulation) of about 50 feet at the MC-20A structure. Additionally, comparison of the 2001 bathymetric profile and the 2004 sub bottom profiler data indicate that a total of about 70 feet of the pre-Hurricane Ivan stratigraphy may have been removed and/or remolded. Therefore, it is possible that about 120 feet of "new" mass-transport deposits comprised the shallow stratigraphy of the MC-20A site.[184] Of course, all of that sediment instability and movement could have also resulted from Hurricane Isadore which passed within 75 mile of the MC-20A platform or Hurricane Lili which passed within 150 miles of the MC-20A in 2002 but remains unknown and subject to speculation as Taylor's last geophysical survey of the MC20 occurred in 2001.[185]

Further to the foreseeability that this area was prone to mudslides and that a storm could exacerbate that probability, the NPFC not only relies on the terms of the lease itself, and Taylor's exhibits documenting the work Sohio performed as a mandatory pre-requisite to DOI entering the lease, and the discussion above, it also finds value in a 2006 study commissioned by the Department of Interior.[186] This purpose of this study, conducted by William Lettis and Associates and Dr. Jim Hooper was to "delineate mudflow failures, sediments susceptible to future slope failure, and areas of relative stability in the Mississippi Delta."[187] NPFC reprints the background section below and retains the original citations as written, to highlight not only the inherent instability of the region and the fact that hurricanes were known to potentially increase the likelihood of a seismic event, but that these concerns were known to exist well-before Taylor decided to purchase the lease, and yet Taylor obtained the lease, notwithstanding.

> The Balize delta, or 'birdsfoot delta', is an active depositional delta that began prograding in the Gulf of Mexico over 1,000 years ago (Saucier, 1963). The Balize delta is unique to current and recent deltas formed by the Mississippi River in that it is a 'shelf-stage' delta that has prograded in deep water to near the submarine shelf edge (Roberts, 1997). The delta is supplied with sediment by three major distributary channels (Southwest Pass, South Pass, and Pass A Loutre; Figure 2). Although partial capture of the Mississippi River flow by the Atchafalaya River has diminished sediment supply to the Balize delta within the last several hundred years (Kesel, 1988; Roberts, 1997), the major river distributaries have grown seaward at an average rate of 100 to 200 ft/yr over the past 150 years (Morgan, 1977). For example, analysis of historic maps of South Pass show that the South Pass bar advanced seaward

[183] Fugro McClelland Marine Geosciences, Inc. Assessment of Seafloor Failure Analysis MC 20 A Structure Mississippi Canyon Area, Block 20 dated February 21, 2006, page 14.
[184] Fugro McClelland Marine Geosciences, Inc. Assessment of Seafloor Movements MC 20 A Structure Mississippi Canyon Area, Block 20 dated January 24, 2005, page 6.
[185] Wave Induced Slides in the South Pass Block 70, Mississippi Delta written by Robert B. Bea, Stephen G. Wright, Members, ASCE, Partha Sircar and Alan Niedoroda, page 7.
[186] A Pilot Study for Regionally-Consistent Hazard Susceptibility Mapping of Submarine Mudslides, Offshore Gulf of Mexico (available at https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program//550aa.pdf)(last visited May, 8, 2019). See also, Fugro McClelland Marine Geosciences, Inc. Assessment of Seafloor Movements MC 20 A Structure Mississippi Canyon Area, Block 20 dated January 24, 2005, page 6.
[187] *Id*.

> more than 1 mile between 1867 and 1953 (Lindsay et al., 1984). **Deposition rates as high as 1 to 2 ft/yr at the mouths of the distributary channels result in rapid accumulation of low shear strength, low permeability sediment** (Coleman et al., 1982; Hooper and Suhayda, 2005). **The submerged delta apron therefore consists of thick, very weak sediments that are inherently unstable and vulnerable to hurricane wave-induced failure** (Bea et al., 1975; Hooper, 1980). Rapid sedimentation can change the slope of the seafloor, causing oversteepening in critical areas and loading of the underlying sediments (Lindsay et al., 1984). Associated increased pore-water pressure and buildup of methane gas further makes the accumulated sediment susceptible to failure (Wheland et al., 1978; Roberts, 1997). **Even a small change in prevailing conditions (gas content or wave input) can trigger a mudflow. As a result, wave-induced bottom pressures accompanying large hurricanes can cause spectacular failures of the accumulated sediments** (Bea et al., 1975; Hooper, 1980; Hooper and Suhayda, 2005).[188]

It is nearly inconceivable that a facility that deals with oil or hazardous substances in the region will succeed by arguing that it was unaware of the strong possibility of a tropical storm or a hurricane disrupting or disabling operations.[189] Further, given the terms of the lease and the voluminous research describing the instability of the area of MC-20, it would be difficult that Taylor was unaware of the potentiality of this platform and others in the area collapsing.[190] Based upon the history of hurricanes within the Gulf, the propensity for sediment movement within the MC20, and the loss of the Shell Platform "B" in 1969 as discussed above, Taylor either foresaw or should have foreseen of the possibility of such an event occurring. Yet, knowing the risks, Taylor purchased the lease notwithstanding. As such, the NPFC determines that Taylor has not demonstrated by a preponderance of the evidence that this event was "unanticipated" nor that the effects "could not have been prevented or avoided."

Sole Cause

Assuming, *arguendo*, that Taylor was able to demonstrate by a preponderance of the evidence that the event was "an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character the effects of which could not have been prevented or avoided by the exercise of due care or foresight" it must also demonstrate by the

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[188] *Id*. (emphasis added).

[189] *See generally*, Ted Steinberg, *Acts of God: The Unnatural History of Natural Disaster in America* (2000) (discussing how decision-makers in the United States have literally paved the way for greater loss of life and property from floods, earthquakes, hurricanes, etc.).

[190] One could argue that Taylor clearly understood the risks involved with operating in the Gulf of Mexico, and specifically the region around MC-20. At the time of Ivan, Taylor had an insurance policy with Lloyd's of London that with hundreds of millions of dollars of coverage on its operations in the Gulf, which included MC-20. The yearly premium alone on the policy totaled roughly $3M. Specifically, as to MC-20, Taylor obtained a specific provision that would insure it received $80,000 per day for 365 days if it stopped producing caused by "a peril or accident." All of this suggests that this incident was foreseeable.

same burden of proof that the act was the sole cause of discharge. NPFC determines that it has not met its burden.

A successful act of God defense under OPA (and the other two related statutes) requires that the natural disaster or other natural phenomenon be the sole cause of the release or threatened release.[191] The terms "solely" and "caused" are not defined.[192] However, in determining the meaning of the term "solely", a court aptly defined it as "without an associate: singly, alone."[193]

This necessarily imposes a burden on a party seeking to avoid liability, in that any factor other than the natural event that even slightly contributed to the release will destroy this element, and consequently, the entire defense. Generally, "an act of God must be caused exclusively and directly by natural causes because when the cause is found to be in part the result of the participation of man, whether it is from active intervention or neglect, the whole occurrence is thereby humanized and removed . . . from acts of God."[194] In essence, there can be no combination of an act of God and fault of man; the act of God must be the sole cause.[195]

United States v. Alcan Aluminum Corp., as noted above, presents a clear situation in which the natural event, regardless of whether it might have been labeled a "grave natural disaster," was not the sole cause of the release. Recall that in the late 1970s, Alcan dumped as much as two million gallons of oily wastes containing hazardous substances down an air shaft leading to a network of coal mines and related tunnels bordering the Susquehanna River, and as argued, a result of Hurricane Gloria, approximately one hundred thousand gallons of the waste were discharged from a tunnel into the river.[196] Alcan's act of God defense was rejected in part because "no reasonable factfinder could conclude that Hurricane Gloria was the sole cause of the release and resulting response costs."[197] The court found that while the storm was part of the chain of events that led to the harm, it was not the sole cause.

In *Stringfellow*, discussed above, referring to CERCLA's section 107(b) act of God defense, the court held that the polluters must show that the release of hazardous substances was caused solely by an act of God.[198]

In *Apex*, the court observed that it was Apex's conduct, not simply a strong current associated with the 1995 floods, that contributed to the collision and resulting spill.[199] Apex used an underpowered tug which contributed to the loss of control, and the tug captain chose to negotiate the bridge with his tug and tow, eliminating any argument that the conditions, even if the floods were considered an act of God, were the sole cause of the discharge.[200]

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[191] *See*, 33 U.S.C. §2703(a); 33 U.S.C. §1321(f)(1)-(3); 42 U.S.C. §9607(b).
[192] *Id*. *See e.g.*, U.S. v. W. of Eng. Ship Owner's Mut. Prot. & Indem. Ass'n, 872 F.2d 1192, 1196, 1198 (5th Cir. 1989).
[193] *Id*. at 1198.
[194] *Shea-S&M Ball v. Massman-Kiewit-Early*, 606 F.2d 1245, 1249 n.6 (D.C. Cir. 1979).
[195] *Sky Aviation Corp. v. Colt*, 475 P.2d 301, 304 (Wyo. 1970).
[196] 892 F. Supp. 648, 651 (M.D. Pa. 1995).
[197] *Id*. at 658.
[198] *Stringfellow*, 661 F. Supp. at 1061.
[199] 208 F. Supp. 2d 642, 657 (E.D. La. 2002).
[200] *Id*. at 657-58.

In *United States v. Barrier Industries, Inc.*, the United States sought to recover response costs for cleanup of a site under CERCLA, stemming from a spill allegedly caused by a bursting pipe resulting from "an unprecedented cold spell."[201] Although the cold spell may have been unusual and damaging, in dismissing the defense the court observed that the government presented "substantial undisputed evidence" that numerous other factors prior to the cold weather contributed to the problems at the Barrier site.[202]

It is often difficult to discern in Taylor's 100-plus page claim what event it claims solely caused the discharge. At times, it appears to concentrate on the hurricane itself. At other places, it provides a detailed analysis of the waves attendant to the hurricane, as if to separate the two and claim that it was the waves themselves (not the hurricane) that should be considered the act of God. Finally, based on its lengthy explanation of the studies surrounding the geo-stability of the region, perhaps it is claiming it was the mudslide not the hurricane nor its waves that was the act of God. Regardless of the approach, what is consistent throughout NPFC's analysis is that there is not one sole cause of the platform's collapse. It can be argued that the mudslide was the actual cause of the collapse. But as Taylor argues, and the research suggests, that the storm caused or contributed to, the mudslide. Conversely, if the argument is that the hurricanes, or its waves, were the act of God, then inevitably one must look to the mudslide that resulted. In any event, there were many contributing factors, these and others, that were the cause of the discharge.

Finally, if one is to look at this event from an even-wider lens, there could be an argument that Taylor could be successful as to this element if it could establish that its own conduct in no way contributed to the release of oil or hazardous substances. Even under this theory, Taylor fails given its knowledge of the region and the history of the seafloor, as well as, its failure to conduct the surveys as required by MMS, as outlined in detail above.

Nota Bene

Taylor raises other issues in its claim that NPFC considered but determined did not warrant discussion in this determination. NPFC reserves the right to opine on them later, if necessary. However, NPFC would like to address two additional areas in the claim that merit discussion but were not addressed in detail above.

Reasonable Cooperation

Even if an act of God defense would otherwise be meritorious, it would fail if the NPFC determined that the responsible party either failed to provide all reasonable cooperation and assistance requested by a responsible official in connection with removal activities; or without sufficient cause, to comply with an order issued under proper authority.[203]

In its claim submission, Taylor asserts that it fully cooperated with federal officials overseeing Taylor's response to the incident and had reasonably cooperated and complied with

[201] 991 F. Supp. 678, 679 (S.D.N.Y. 1998).
[202] *Id*. at 679-80.
[203] 33 U.S.C. § 2703(c).

administrative orders directing them to take certain removal actions.[204] Additionally, Taylor states when it did not comply the refusal was not without sufficient cause.[205]

In an effort to gauge Taylor's cooperation throughout the response, the NPFC contacted several officials who were involved in the Unified Command and responsible for the oversight of Taylor's activities. Those officials spoke candidly of Taylor and provided opinions as to Taylor's cooperation based upon their personal interactions within the Unified Command relative to the response. Many of the comments specific to Taylor centered on a common theme of a Taylor's reluctance to cooperate or its cooperation through coercion. Taylor was described as obstinate, difficult to deal with and verbally combative. Taylor was also described as preferring to employ stall tactics over cooperation with an intention to confuse, delay or misdirect the Unified Command. These officials were also asked to comment on Taylor's subsea containment designs presented in accordance with CG Admin Order 19-001 and they responded that Taylor's subsea containment designs lacked real concept and were soundly rejected by the Unified Command. Specifically, Taylor's designs ranked last among the eight bids that were submitted and reviewed by the Unified Command for consideration. Lastly, these officials with over one hundred years of environmental response and FOSC experience, were asked to compare Taylor to other RPs they had previously worked with as part of a large and complicated response. They collectively described Taylor as the worst, or one of the worst, and least cooperative RP they had ever dealt with in a response and/or as part of the Unified Command.[206]

An example of Taylor's failure to cooperate with a responsible official is documented in an exchange of communications between Captain (b) (6) (the CG FOSC at the time) and Taylor relative to the findings of the Sheen Source Location Workgroup (SSLWG). The SSLWG report identified the primary location of the source of discharge from the Taylor site and Captain (b) (6) wrote to Taylor requiring them to present, at a minimum, one preferred response and/or a containment option to the Unified Command within five weeks of the date of his letter.[207] Taylor responded four weeks later citing Taylor's ongoing litigation against the U.S. Government, questioning the validity of the data contained within the SSLWG report and wanting to postpone the delivery date of information as required by the Unified Command.[208] Captain (b) (6) responded acknowledging Taylor's ongoing litigation and emphasizing the merits of meeting to discuss the response options. As such, he refused to postpone the upcoming Unified Command meeting.[209] Taylor attended the Unified Command meeting but failed to provide one preferred response and/or a containment option to the Unified Command. This attitude of non-compliance continued through October 23, 2018, when the CG FOSC was forced to issue Admin Order 19-001 to Taylor in response to the ongoing discharge of oil from its site.

The administrative record also suggests that Taylor may have failed to comply with Admin Order 12-001 dated June 25, 2012, which required Taylor to begin the design and planning of a new pollution dome system that was suitable for the environmental conditions at the MC20[210] and was later amended to identify two companies that could design a new pollution dome system

[204] Taylor claim submission cover letter dated November 15, 2018, page 2.
[205] *Id*.
[206] Summary of conversation with responsible officials dated April 15, 2019.
[207] Letter from CG FOSC (b) (6) to Taylor Energy dated March 5, 2018.
[208] Letter from Taylor Energy to CG FOSC (b) (6) dated April 4, 2018.
[209] Letter from CG FOSC (b) (6) to Taylor Energy dated April 11, 2018.
[210] CG Sector New Orleans Admin Order 12-001 issued to Taylor Energy dated June 25, 2012.

or make recommendations for the proper repair to its current system.[211] Without consultation or coordination with the Unified Command,[212] Taylor designed and fabricated three new containment domes in March, 2017[213] but made no immediate attempts to deploy those units in place of its failed subsea containment system.[214] More than one year later and only in response to CG Admin Order 19-001, Taylor presented these containment domes to the Unified Command as a proposal to contain the ongoing plume(s) of oil being discharged from the site and as a replacement for its failed subsea containment system. That proposal was soundly rejected by the Unified Command for numerous reasons to include that the domes would result in increased bottom disturbances; if used alone the domes would have limited storage capacity and would require a vessel to remain on-site for continuous processing and offloading; the domes were not big enough to cover the affected area; and multiple domes would require several hose connections to the collector/separator which would introduce multiple failure points associated with sediment issues, possibly hydrates and/or paraffin buildup. As such, it could be argued that Taylor did not comply with CG Admin Order 12-001 as it failed to design a pollution dome system suitable for the environmental conditions of the MC20.

The administrative record further supports that Taylor failed to comply with Admin Order 19-001 which cited the government's position on the primary source location and condition of the site in and around the wreckage of the MC-20A platform. Specifically, the CG FOSC identified one or more wells that were actively discharging oil and gas from the erosional pit near the former Dome C and amended the worst-case estimate of daily volume of oil discharge from Taylor's site to hundreds of barrels of oil per day which required the immediate need for temporary containment and recovery of oil being discharged at the erosional pit near the former Dome C location while a more permanent solution of stopping the source was developed. As such, the CG FOSC ordered Taylor to conduct new market research for a containment system capable of eliminating the surface sheen and designed to contain an amount of oil with a worst case daily discharge between 250 barrels and 700 barrels per day.[215]

As previously described above, Taylor failed to properly identify a contractor capable of designing a containment dome system to the satisfaction on the Unified Command as required by the admin order. Taylor was then offered the opportunity to hire the contractor recommended and approved by the Unified Command but failed to do so in a timely manner.[216] As such, the CG FOSC issued a Notice of Federal Assumption to Taylor, partially assuming response actions pertaining to all activities related to the development and installation of a containment system; removal and disposal of oil collected in the containment system; and maintenance of the containment system at the MC20 site.[217]

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[211] CG Sector New Orleans amended Admin Order 12-001 issued to Taylor Energy dated November 26, 2012.
[212] Summary of conversation between Captain (b) (6), USCG Sector New Orleans and Mr. (b) (6), USCG NPFC dated April 19, 2019.
[213] Taylor claim submission, page 85.
[214] Summary of conversation between Captain (b) (6), USCG Sector New Orleans and Mr. (b) (6), USCG NPFC dated April 19, 2019.
[215] CG Sector New Orleans Admin Order 19-001 issued to Taylor Energy dated October 23, 2018.
[216] CG Sector New Orleans Decision Memo – Containment Dome System, Taylor Energy Corporation MC-20, dated November 16, 2018.
[217] CG Sector New Orleans Notice of Federal Assumption issued to Taylor Energy Corporation dated November 16, 2018.

In its claim submission, Taylor acknowledges to be "reasonably cooperative" and only failing to comply with admin orders with "sufficient cause" under the auspice that the site in, and around, the location of the MC-20A platform wreckage was not actively discharging oil and it could therefore stall or delay the orders of the Unified Command indefinitely. The NPFC notes from speaking with the responsible officials on-scene and charged with the oversight of operations that Taylor's actions were more often than not misguided and counterproductive to efforts of the Unified Command. The administrative record highlights Taylor's history of chronic reluctance which resulted in the CG FOSC issuing Admin Orders to Taylor on three separate occasions requiring them to act responsibly and design a containment system capable of preventing the ongoing discharge of oil from the site. And as discussed above, an argument could be made that Taylor failed to comply with two of those Admin Order which ultimately led to the CG FOSC federalizing the response and hiring a contractor capable of design, construction and installation of a subsea containment system.

Based on this information, the NPFC reserves judgment in this determination on whether Taylor failed to provide all reasonable cooperation and assistance or without sufficient cause, failed to comply with an order issued under proper authority as required by the statute. For the purposes of adjudicating this claim, the NPFC has assumed, without deciding, that Taylor was compliant with the provisions of 33 U.S.C. 2703(c).

Costs Associated with this Claim

Taylor claims to have incurred $353,881,719.70[218] of OPA compensable pollution removal costs associated with its response and describes its costs as being incurred from the following activities:

a. The allocation of MC20 well costs;
b. MC-20A A-11 relief well;
c. MC-20A A-19 relief well;
d. MC-20A A-17 relief well;
e. MC-20A A-23 relief well;
f. MC-20A A-1 relief well;
g. MC-20A A-21 relief well;
h. Engineering survey work;
i. MC-20A A-3 relief well;
j. MC-20A A-4 relief well;
k. MC-20A A-10 relief well;
l. MC-20A A-13 relief well;
m. MC-20A A-16 relief well;
n. Planning for O.A. drilling rig;
o. Prep charges for the SARATOGA;
p. Batch set prep charges;
q. Rig downtime in the shipyard;
r. Pipeline abandonment;

[218] Taylor claim submission cover letter dated November 15, 2018, page 2. The sum certain represents costs through August 31, 2017. Taylor asserts that it has incurred additional costs since August 31, 2017, and intends to submit an updated sum certain at a later date.

s. Survey of deck removal;
t. Debris removal;
u. Preliminary technical;
v. MC20 excavation;
w. MMS departure request;
x. Containment systems.[219]

The decommissioning requirements for Outer Continental Shelf Lessees and Operators are clear and defines decommissioning as:[220]

> (1) Ending oil, gas, or sulphur operations; and
>
> (2) Returning the lease or pipeline right-of-way to a condition that meets the requirements of regulations of BSEE[221] and other agencies that have jurisdiction over decommissioning activities.

Parties who are required to meet these decommissioning obligations are described as Lessees and owners of operating rights and are jointly and severally responsible for meeting decommissioning obligations for facilities on leases, including the obligations related to lease-term pipelines, as the obligations accrue and until each obligation is met.[222] As Taylor Energy was the lessee and operator of lease OCS-G 04935, it remains jointly and severally responsible for meeting decommissioning obligations as described above.

As documented in the decommissioning requirements associated for Outer Continental Shelf Lessees and Operators,[223] Taylor remains liable to permanently plug and abandon (P&A) all of the wells associated with the lease and to remove all structures in accordance with applicable Oil and Gas Regulations for Operations in the OCS.[224]

Additionally, Taylor was ordered by the MMS to take all actions necessary to determine the extent and source of a hydrocarbon sheen identified in and around the well bay and MC-20A platform wreckage and to take immediate remedial action to prevent further soil contamination and/or hydrocarbon seepage.[225]

Lastly, Taylor entered into a Trust Agreement with the MMS which established a lease-specific abandonment account under rules implementing the Outer Continental Shelf Lands Act and provided a secure source of funds to pay for decommissioning undertaken by Taylor or by BOEM the event of default by Taylor. The obligations of this Trust Agreement were specific and

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[219] Declaration of (b) (6) , Taylor Chief Financial Officer dated August 7, 2018, pages 4-6.
[220] 30 CFR 250.1700(a).
[221] The Department of the Interior (DOI) established two independent bureaus, the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM) to carry out the offshore energy management and safety and environmental oversight missions currently under the jurisdiction of the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE). The establishment of BOEM and BSEE marked the completion of an effort to reorganize the former Minerals Management Service (MMS). https://www.doi.gov/news/pressreleases/Interior-Department-Completes-Reorganization-of-the-Former-MMS
[222] 30 CFR 250.1701(a).
[223] 30 CFR 250.1700(a).
[224] U.S. Department of Interior Mineral Management Services letter to Taylor Energy Company dated October 18, 2007.
[225] Letter from DOI MMS to Taylor Energy dated December 5, 2007.

required Taylor to permanently plug all wells, remove all platforms and other facilities associated with the lease, decommission all pipelines and clear the seafloor of all obstructions created by its lease.[226]

The OPA defines removal costs as the costs for removal that are incurred after a discharge of oil has occurred or, in any case in which there is a substantial threat of discharge of a discharge of oil, the costs of which to prevent, minimize or mitigate oil pollution from such an incident.[227] The response activities and associated costs as identified above were undertaken by Taylor as required by the Oil and Gas Regulations for Operations in the OCS as lessee and operator of lease OCS-G 04935 and may not be OPA compensable even if Taylor's act of God defense was successful.

III. CONCLUSION:

Taylor Energy made a business decision to purchase the MC20 lease and fixtures knowing that the lease was located on a tract of land that was identified to contain geohazardous conditions and described to contain instabilities caused by unconsolidated sediments, slumping, shallow faulting or gaseous sediments in an area of the country prone to hurricanes. Taylor leverages its business decision by stating the MC-20A platform was built to all applicable standards and that the MMS approved of the design and installation. However, neither the design approval nor the lease issuance was an indemnification of Taylor. To be clear, Taylor accepted the risk of locating its facility where anticipated events, such as mass sediment movements and hurricanes that would likely cause a discharge in which no amount of preventive measures could prevent the discharge of oil and as such, causes Taylor's claim to an affirmative defense to fail. The evidence in this claim is clear that the MC20 lease was located within the Mississippi Canyon which was formed by a combination of erosion, faulting, slumping and down warping with mud flow activity that continues to occur.[228] And when you consider there have been 296 hurricane strikes on the Atlantic and Gulf coast regions of the United States between 1851-2006, it becomes evident that Taylor's business decision to purchase the MC20 lease in an area subject to geohazards and prone to hurricanes fails to meet the criteria for an OPA act of God affirmative defense.

The NPFC has thoroughly reviewed all documentation submitted with the claim, analyzed the applicable law and regulations, and as discussed in detail above, has concluded that the claimant has not demonstrated, by a preponderance of the evidence, that it is entitled to an act of God defense. As such, it is denied.

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[226] Trust Agreement between Taylor Energy and Bureau of Ocean Energy Management dated March 19, 2008, pages 20 and 21.
[227] 33 U.S.C. § 2701(31).
[228] Department of Interior Final Environmental Impact Statement OCS Oil and Gas Proposed 1981 Sales of A66 and 66 dated December 1980, page 237.

Claim Supervisor: (b) (6) (b) (6)

Date of Supervisor's review: ***May 14, 2019***

Supervisor Action: ***Denied***