

U.S. Department
of Transportation
United States
Coast Guard



Commander
8th Coast Guard District
Hale Boggs Federal Bldg

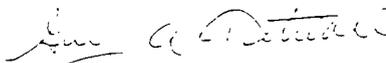
501 Magazine Street
New Orleans, LA 70130-3396
Staff Symbol: (moc)
Phone: (504) 589-3624

16455
17 JUL 1997

From: Commander, Eighth Coast Guard District
To: Distribution

Subj: CARGO TANK INTERNAL EXAMINATION

1. Enclosure (1) outlines alternative inspection procedures that have been used to verify the structural adequacy of cargo tanks on certain double hulled barges with externally framed cargo tanks. Questions regarding the legality and advisability of using these techniques as the sole source of tank verification have been raised.
2. While it may be beyond the authority of the CCMI to fully waive an internal examination, he may limit the scope of that examination based upon the use of other inspection techniques.


G. A. TETREAU
By direction

Encl: (1) MSC Huntington ltr 16455 dated Jan 15, 1997 w/endorsements
Dist: All Eighth District MSCs, MSDs and MSU

MOC
16455
17 JUL 1997

SECOND ENDORSEMENT on MSO Huntington's ltr 16455 of 15 Jan 1997

From: Commander, Eighth Coast Guard District
To: Commandant (C-MCO)

Subj: ALTERNATIVE CARGO TANK INTERNAL EXAM

1. Forwarded, recommending acceptance of Ashland's request to use alternative means to conduct cargo tank internal examinations. While MSO Huntington seeks this authorization for a limited number of cargoes, the same argument could be made for many additional products. Therefore, it is further recommended that the Coast Guard develop alternative structural examination procedures that do not require entry into some externally framed cargo tanks.
2. MSO Huntington's letter supports the argument that economic and personnel safety factors warrant the use of alternative inspection procedures. MSO Huntington and MSO Pittsburgh's work with Ashland, Inc. could serve as the forum for development and testing of alternative cargo tank internal examination procedures that minimize potential exposure to Coast Guard and industry personnel.


G. A. TETREAU
By direction

Copy: MSO Huntington
MSO Pittsburgh
MSO Memphis
MSO Paducah
DWFO

16455
12 May 1997

FIRST ENDORSEMENT TO CO MSO HUNTINGTON'S ltr 16455 dtd January 15, 1997

From: Commander, Eighth Coast Guard District (dwro-m)
To: Commandant (G-MCO)
Via: Commander, Eighth Coast Guard District (mc)

Ref: (a) COMDTINST M166000.6 MSM VOL. II, par 8.D.6.e.(3)

Subj: ALTERNATIVE CARGO TANK INTERNAL EXAM

1. A proposal for an internal examination protocol for tank barges which have carried heavy oil products is forwarded for your approval.

2. Current policy contained within reference (a) states an external cargo tank examination may satisfy the requirement for a cargo tank internal under the following conditions:

- (a) The barge must be fully double-hull, with externally framed tanks and accessible for an external examination;
- (b) An external inspection for damage and cargo leakage must be conducted to the satisfaction of the OCMI; and
- (c) An internal examination of the cargo tanks must have been conducted at last drydocking.

3. The protocol outlined in the attached proposal is similar to the MSM in all respects except for the requirement stated in item (c). After reviewing the attached proposal and given the potential health hazards to those who clean and/or enter the cargo tanks it is recommended the MSM be amended to read:

- (d) Internal entry is not required for barges which carry heavy oils, i.e., carbon feedstock, carbon black, and coal tar, when external cargo tank plate gauging has been conducted which shows no more than 20% deterioration; or a third party certifies (with level B protection) after entry that there is no substantial wastage or deterioration.

4. I feel the above represents a reasonable alternative by which the regulatory requirement can be met without jeopardizing the health of marine inspectors and marine industry personnel. In the event wastage is detected, the cargo tank would be made gas free to affect the necessary repairs. Following the repairs the marine inspector could enter the cargo tank and witness the repairs and complete an internal examination.

16455
12 May 1997

FIRST ENDORSEMENT TO CO MSO HUNTINGTON'S ltr 16455 dtd January 15, 1997

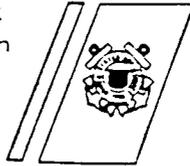
5. If there are any questions concerning this proposal you are requested to contact me at (314) 539 3900, ext 396.


M. L. SCHAFERSMAN

Copy: MSO Pittsburgh
MSO Memphis
MSO Paducah

U.S. Department
of Transportation

United States
Coast Guard



Commanding Officer
U.S. Coast Guard
Marine Safety Office

1415 6th Avenue
Huntington, WV 25701-2420
Phone: (304) 529-5524
Fax: (304) 529-5051

JAN 15 97

16455

From: Commanding Officer, CG Marine Safety Office Huntington
To: Commandant (G-MCO)
Via: Director, Western Rivers Operations
Commander, Eighth Coast Guard District (m)

Ref: (a) COMDTINST M16000.6, Marine Safety Manual Vol. II, Ch. 8

Subj: ALTERNATIVE CARGO TANK INTERNAL EXAM

1. I am forwarding a request by Ashland, Inc., a major inland river customer, for an alternative means of conducting cargo tank internal examinations (CTIE) on tank barges whose products pose unique tank entry health risks. MSO Pittsburgh has also been petitioned on this same issue. This letter is a coordinated effort by our two offices. I believe industry's requests have merit, and thus, recommend approval of plate gauging in lieu CTIE's for the limited circumstances described below.

2. The tank barges for which this alternative inspection procedure is requested carry carbon feedstock, coal tar, carbon black and occasionally crude oil. Carbon feedstock, carbon black and coal tar are prone to the accumulation of hardened residuals or "heels" on the tank bottoms. These cargoes contain high levels of benzene and other contaminants, which are trapped within the residue when crude oil or other high benzene cargoes have been transported in the same tanks. Ashland informs us that the majority of these particular products transported by vessel are produced and used in the Huntington and Pittsburgh areas.

3. The barges in question have type II hulls with double skins and raised cargo trunks. Cargo tank bulkheads are externally framed and thus tank stiffeners can be inspected from the weather deck and void spaces at any time. Though not equipped with thermal fluid heaters, these barges are equipped with steam heating systems. Despite industry's best efforts to heat the cargoes - and thus cause the precipitants to remain in suspension - several feet of these heels can accumulate within the tanks. (Eventually, removal of the accumulation of heels becomes an economic necessity because of the corresponding restriction on available cargo volume.) Experience shows these hardened products can only be removed by mechanical means. Often this necessitates the removal of the tank top and digging it out

by shovel and "bobcat", costing in the order of \$70k to \$150k. (Costs are doubled if the residues are classified hazardous.)

4. Cargo tanks cannot be effectively gas freed as long as residuals are present. Additionally, while the atmospheres of some of the cargo tanks may contain less than 10 ppm benzene, they may also contain unacceptable levels of other constituent chemicals. We have confirmed with a marine chemist that no amount of purging of the ullage above the heels will reduce the atmosphere on some of these vessels to standards safe for personnel entry, even using air-purifying respirators. Given the Coast Guard's policy on confined space entry under non-emergency conditions and likewise being concerned for the safety of shipyard personnel accompanying marine inspectors during entry, I felt it prudent to find an alternate means to fulfill the CTIE requirement.

5. Last year Ashland requested tank shell gauging in lieu of CTIE for 3 such barges in coal tar service with this problem. Extra time was needed to schedule this cleaning at the limited facilities capable of accomplishing the task. Having wrestled with drydock extensions on such vessels for years, we knew first hand they were not merely trying to avoid a required inspection. Given the personnel entry complications, I approved their request with conditions. I believed this to be a determination of equivalency, rather than a waiver of a regulation. My decision, however, quickly unearthed the likelihood of claims of uneven economic advantage between neighboring OCMI zones. I therefore rescinded my approval, authorized a more limited CTIE extension and agreed to work toward a reasonable policy determination to address these entry problems.

6. Under such circumstances a conventional CTIE seems unnecessarily burdensome. The cargoes are generally non-corrosive and protected by double skins. All stiffeners are exterior to the cargo space, and the tanks will eventually be entered once tank cleaning becomes an economic necessity. (Several barges have remained in Ashland's reserve fleet for years - necessitating enclosure 5 - while awaiting cleaning/gas freeing for drydocking.) Tank cleaning options are limited. Should tank shell gauging from the void spaces miss a location of severe wastage, the product would enter the void space, not the environment. In most cases, tank entry fulfills solely the regulatory requirement: in the past 4 years, we have not discovered any internal damage on such heavy oil barges that was not otherwise indicated (e.g. steam coils).

7. Plate gauging in lieu of internal examination is one alternative to ensure tank integrity. Additional alternatives proposed by Ashland are:

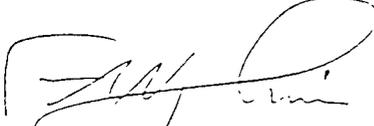
- Examine the tank via safe video equipment deployed by appropriately equipped technicians (presumably Level B PPE) under the direction of a marine inspector. I am aware of precedents

for similar remote examinations authorized by the Coast Guard, but close investigation of this "safe" video equipment (with necessary lights) would be in order.

◀ Third party certification (again with Level B PPE), with tank entry under the direction of a Marine Chemist. This follows the Coast Guard's trend toward limited third party inspection.

◀ To these, I would add the possible option that OCMI's be delegated a more liberal extension authority. Reference (a) authorizes OCMI's to grant up to two 12-month CTIE extensions to permit harmonization with other hull exams. Other extensions "should not be considered except in those cases where unusual circumstances exist, e.g. those beyond the control of the owner." While not necessarily beyond the owner's control, these are unusual circumstances and a year is a reasonable and precedented period.

8. I believe external tank plate gauging will serve as an effective alternate under these circumstances to satisfy the CTIE requirement when the safety and health of Coast Guard and industry personnel - even with Level C PPE - would otherwise be placed at risk by tank entry. Further policy direction on this issue is requested.



F. A. NYEUIS

Encl: (1) Ashland, Inc. ltr dtd 16 Feb 96
(2) Ashland, Inc. ltr dtd 27 Dec 96
(3) MSO Huntington ltr dtd 17 Nov 96
(4) MSO Huntington ltr dtd 09 Dec 96
(5) MSO Huntington Inspection Department Note 01-92
(6) DTC ltr dtd 13 Nov 96 to MSO Pittsburgh

Copy: MSO Pittsburgh
MSO Memphis
MSO Paducah

Ashland

Ashland Petroleum Company

DIVISION OF ASHLAND OIL INC.

P. O. BOX 391 • ASHLAND, KENTUCKY 41114 • (606) 329-3333

Commanding Officer
Marine Safety Office
United States Coast Guard
Huntington, West Virginia 25725

February 16, 1996

Subject: HBL barges - Cargo Tank Internals

Reference: Conversation with your office on 02/13/96

Dear Sir:

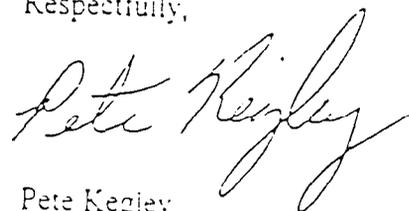
Please be advised that we have three (3) double skin HBL barges that are due cargo tank internals next year, (HBL 3009, HBL 3011, HBL 3012). These barges have heels of 3'0" to 6'0" of carbon feed stock bottoms.

or We are proposing that we clear out two (2) 5'0" square areas in the cargo tanks and randomly gauge the cargo tanks from the void side of the cargo tanks for the cargo tank internal inspection.

In order to do the inspection, the cargo tanks will be blown down for gas free entry, half mask or full mask respirators will be worn for entry (this will be determined by our marine chemist), coveralls and rubber boots will also be worn.

If further information is needed, please advise. Your cooperation in matters such as these are greatly appreciated.

Respectfully,



Pete Kegley
Maintenance Supervisor
Technical Services
(606) 921-3759

ENCLOSURE 1

December 27, 1996

Commanding Officer
Marine Safety Office
1415 Sixth Avenue
Huntington, WV 25725

Reference: (a) Ashland Inc. letter dated February 15, 1996
(b) MSO Huntington letter dated November 17, 1996

Subject: Alternate Cargo Tank Internal Exam Procedures

Dear Sir,

Ashland was extremely disappointed when we found that you had rescinded your approval letter allowing for an alternative procedure in lieu of a conventional Internal Cargo Tank Exam requiring physical entry by personnel.

This letter is written to renew our request and forward it to the Commander, Eighth Coast Guard District for further review and hopefully subsequent approval.

Ashland feels your decision in granting the approval for the externally framed double skin tank barges in question, was a viable solution to a long existent problem for Industry. Ashland knows the research and joint effort involved with specialists in the Marine industry and your office in arriving at your decision which provides a feasible solution to the following problems:

- Entry into cargo tanks with known contaminants in the residue such as benzene and phenols creates an unnecessary exposure to personnel.
- To provide a risk free atmosphere for personnel often entails the complete removal of all residue which poses an unnecessary economic hardship on industry. Some barges could cost up to \$250, 000 should the solid residue be classed as hazardous.
- Removal of the residue often results in physical destruction of the cargo tank top and the interior steam heating system resulting in other unnecessary economic burdens.
- Cleaning facilities and alternative processes are few in number and stay well booked in advance causing extensive out of service time to equipment.

Ashland feels that the regulatory intent for a CTIE is satisfied with the alternate procedure and physical entry by a Marine Inspector would not reveal anything worthwhile that could not be determined by an intensive external exam complete with NDT gauging and hydrostatic test of the steam coils. It should be remembered that these are externally framed double skin tank barges in question.

If it is determined in the review process that entry by a Marine Inspector is mandatory by regulation to grant a CTIE. Ashland would like to propose two additional alternatives to removing the cargo residue.

1. Examine the cargo tank with safe video camcorder equipment utilizing a technician appropriately equipped with necessary PPE. The Marine Inspector could direct the technician by radio communications to the areas to be examined while he is topside in a safe environment. This type procedure has already been approved and used with optical

microscopic equipment while inspecting vapor recovery manifolds for polymeric cargo residue at their annual inspection.

2. The cargo tank could also be examined by a certified Marine Surveyor familiar with the construction of the barge and instructed by the Marine Inspector on the areas he wants examined. The Marine Surveyor would use appropriate level of PPE as deemed necessary by the attending Marine Chemist.

It should be noted that Ashland has twelve double skin barges currently in active trade which would qualify for the alternate procedure. Seven of these barges are due CTIE this coming year. Three of our barges are so heavily laden with residue that we are committed to cleaning these vessels, since economics do not warrant to continue operating the barges at reduced capacities. Granting the approval for the other barges will allow scheduled time for cleaning these barges which we anticipate will be lengthy.

Ashland has one barge, Logicon 409, which recently completed an ISE in Pittsburgh MSO zone which we have been unable to obtain the < 1 PPM benzene atmosphere for entry by a Marine Inspector. This vessel has only six to eight inches residue in the tanks, but resulted in Pittsburgh granting us a 90 day extension of time for the CTIE while the alternate procedures are again being reviewed. Bob Reed, owner of DTC Environmental cleaning and repair facility made a request in November, 1996, for the alternate CTIE through Pittsburgh MSO citing many of the same arguments.

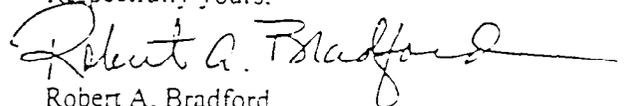
Ashland believes that the Huntington MSO approval of our request exemplifies the vision and guiding principles of the "Prevention Through People" program of the US Coast Guard which are:

- Seeking and respecting the opinion of those who "do the work" afloat and ashore
- Engaging all elements and resources of maritime operations to drive continuous improvements
- Emphasizing incentives and innovation while improving basic regulations to maintain a minimum level of safety
- Recognizing and acting upon the responsibility of government, management, and workers to foster a safe and environmentally sound marine transportation system
- Applying cost-effective solutions to marine safety and environmental issues, consistent with our shared stewardship responsibilities

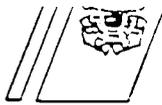
If we at Ashland can offer any additional information, please feel free to contact us.

As mentioned before, we have several barges which will be affected by this review, the Logicon 409 barge remains out of service pending a 8 on this matter. I trust prompt attention will be given to this matter and it can be resolved to the satisfaction of all concerned.

Respectfully yours,



Robert A. Bradford
Maintenance Supervisor
Technical Services Dept.



16455

NOV 18 96

Mr. Pete Kegley
Maintenance Supervisor, Technical Services
Ashland Oil, Inc.
P.O. Box 391
Ashland, KY 25725

Dear Mr. Kegley:

Your proposal to use random plate gauging from the void side of externally framed double-hull tank barge cargo tanks containing hardened heavy oil product is approved for use on a case by case basis. Due to safety concerns precluding visual inspection, this procedure will be sufficient to satisfy the Cargo Tank Internal exam requirement. This conditional authorization applies only to barges due for examination in this zone.

Arriving at this decision we considered Coast Guard safety and occupational health policies and discussions with your marine chemist. Our policy prohibits inspection personnel from entering with restrictions.

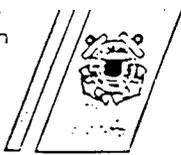
You are responsible to perform hydro testing of steam heating coils within the cargo tanks and to provide the results of the tests to the attending Coast Guard inspector. Written notice should be provided to this office reflecting:

1. The intended date of gauging/inspection.
2. The results of the hydrostatic test of the steam heating system and notation of any deficiencies discovered.
3. The date and method intended for removal of the hardened cargo residue from the barge.

Sincerely,

F. A. NYHUIS
Commander, U.S. Coast Guard
Officer in Charge of Marine Inspections
Huntington, WV

ENCLOSURE 3



16455

DEC 09 96

Mr. Pete Kegley
Maintenance Supervisor, Technical Services
Ashland Oil, Inc.
P.O. Box 391
Ashland, KY 25725

Dear Mr. Kegley:

I am rescinding my letter of November 18, 1996, regarding the use of gauging as an alternate procedure for the cargo tank internal examinations (CTIE) that involve heavy product residues. The issue of approving alternative methods to conduct the CTIE is currently under high level consideration within the Coast Guard. I note the nearest CTIE due date of your initial request will occur in April, 1997.

An immediate matter of Coast Guard concern is the possibility that a variation of policy on this issue among Coast Guard units could result in some transportation and repair entities being placed at an economic disadvantage. A broad based approach to the issue is currently being pursued.

As an interim measure, I am prepared to offer CTIE extensions of limited duration on a case by case basis. Written requests for other CTIE extensions may be made to this office. The requests must specify the nature of the hardships (safety, logistical, economic) that make an extension of the CTIE due date desirable, and contain a proposed alternate date at which time the vessel will be ready for inspection.

I intend to address this issue and the unique nature of your request more thoroughly with the Eighth District Commander. Your input is welcome.

Sincerely,

F. A. NYHUIS
Commander, U.S. Coast Guard
Officer in Charge of Marine Inspections
Huntington, WV

Copy: MSO Pittsburgh
DWRO
CCGDS(mvs)

RECEIVED
MARINE SAFETY OFFICE
HUNTINGTON, WV
DEC 11 1996

30 OCTOBER 1992

MARINE SAFETY OFFICE HUNTINGTON, WV
INSPECTION DEPARTMENT NOTE 01-92

SUBJ: CARGO TANK INTERNAL INSPECTION OF HEAVY PRODUCT TANK
BARGES

1. BACKGROUND: Seven barges within MSO Huntington's zone have been placed in a special lay-up status because of a heavy coal tar/creosote mixture that has hardened in the tanks. Amounts of cargo range from just over a foot to well over six feet in each tank. The barges are required to maintain a Certificate of Inspection because they cannot be gas freed and they cannot be operated because of lapsed cargo tank internal exam dates. The barges have been in this condition for several years but the cargo tank internal exams are only due once every ten years, so the problem has just recently been addressed.

The cause is most likely the way the cargo is handled. It's heated so it can be loaded and heated again to be off loaded. During transit, the cargo is allowed to cool and solidify. In the case of these particular barges, the cargo was not completely off loaded and the heavy residue hardened at the bottom. Due to repeated incomplete emptying of the cargo tanks during transfer over a long period of time the residue can no longer be liquefied by heating.

The owners are trying to figure out how they can get the solidified cargo out of the tanks as inexpensively as possible and have come up with several ideas. The most successful to date is cutting holes in the side of the raised trunk and mucking out the solid cargo with augers and laborers. They estimate it will cost them from \$80,000 to \$150,000 per barge to get them clean.

Another idea they have tried is adding a compatible solvent to soften the solid cargo so it can be pumped out. The biggest problem with this technique is getting the solvent to mix with the coal tar. It needs some form of mechanical mixing and they haven't figured out how to do that yet. With out mechanical mixing the solvent only softens a thin top layer. After dozens of loading and unloadings they are still left with several feet of cargo in the tanks.

The latest idea came from a company in Chicago that has offered to cut the tops off the barges and use a clam shell to dig out the coal tar. It's not hard to see how expensive that will be.

In the mean time the remaining barges are setting in floats, in a partial load condition, being inspected by the owners every week to insure safety.

We're starting to see similar problems with barges carrying asphalt and naphthalene as well.

ENCLOSURE 5

SUBJ: CARGO TANK INTERNAL INSPECTION OF HEAVY PRODUCT TANK
BARGES

2. The following is an alternate Cargo Tank Internal inspection procedure to provide some relief to industry. Use of the alternate CTI procedure is to be approved on a case by case basis considering the age of the vessel, general condition of the internal structural members in the void spaces and general condition of the external cargo tank. This procedure is for tank barges carrying coal tar heels or asphalt only!

SINGLE SKIN TANK BARGES:

No variance. Vessel will be cleaned to essentially bare metal.

DOUBLE SKIN TANK BARGES:

All vessel must be safe for worker without the use of a respirator, with the exception of benzene (a respirator may be used for an atmosphere of less than 10 PPM benzene). No level C entries are permitted in this District.

The tank atmosphere must be tested by a certified marine chemist on the day of the inspection. The following tests will be performed:

1. Oxygen content.
2. Explosive vapors.
3. Phenol; TNA - 5 PPM
4. Benzene; less than 10 PPM.
5. Coal tar pitch volatiles (for coal tar heels only);
PEL = .2 mg/m³.

The reading for each will be recorded on the gas free certificates.

A respirator will be worn for the tank entry using a combination cartridge for organic vapors, paint, lacquer and enamel mists, dusts, fumes, asbestos, radionuclides and radon daughters (NORTH model N7500-81 or equivalent). The respirator will be worn regardless of how low the reading may be.

The owner/operator will provide each inspector a tyvac suit, rubber boots, rubber gloves and flashlight for the entry. Disposal/cleaning of soiled equipment is the responsibility of the owner/operator.

SUBJ: CARGO TANK INTERNAL INSPECTION OF HEAVY PRODUCT TANK
BARGES

Constant forced air ventilation will be provide for a minimum of 2 hours prior to entry and continuously during entry using a minimum blower capacity of 1500 CFM.

SPECIFIC ITEMS TO BE EVALUATED:

- a. Internal structural members of the void space will be examined (cargo tank external).
 - b. Ultrasonic gauging will be conducted on each cargo tank in at least two areas (belts). Additional spot gauging around potential high corrosion areas may be required by the marine inspector (ie, tank bottom plate in way of the cargo line ball mouth; top, bottom and side plate in way of through plate fittings; top and bottom plate in way of main vertical support member, etc).
 - c. The internal area of the cargo tank bottom will be examined over a minimum of sixteen (16) square feet in a minimum of two separate locations. This evaluation will consist of examining the steel coils if the tank is internally coiled, the bottom plate condition, and the condition of plate weldments.
 - d. Internal steam coils will be hydrostatically tested at the working pressure of the system as determined by the safety relief valve setting. The system will be pressurized throughout the entire inspection activity. No loss of pressure will be allowed.
3. VESSELS AFFECTED TO DATE: Allied Signal's fleet of seven barges, Ashland Oil's HBL 1601, AO 29, AO 35, and Union Carbide's USL 608 UBL 609.

S. L. WOOD

Commander Fink
Captain of the Port
United States Coast Guard
Kossman Building
100 Grant Street
Pittsburgh, Pa.

November 13, 1996

RE: Alternative procedure of cargo internal inspection of heavy oil barges.

Dear Sir,

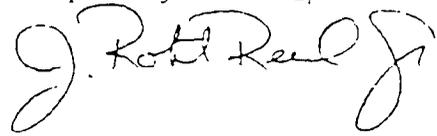
I would like to submit for your review and possible approval of an alternative procedure for the internal cargo tank inspection of heavy oil barges. I would like to give you some background information on this situation and why it has become a problem in the recent past.

Up until 1990, they were not a problem at all for our industry, because the USCG had no standard for benzene. The MSO officers would climb down in a barge that had been vented and inspect the internals of these barges sometimes without any respirator protection at all. We would blow these barges down and enter them. However, we have all become much more intelligent since that time. The standards for the Coast Guard are much more stringent than they are for any one else, 1PPM. I can allow my people to enter with up to 10 PPM with just a respirator. Therefore, getting a barge ready for an inspection is almost impossible for this material without a complete removal of material and almost a chemical wash. And then, other than the fact that the regulations say that you must enter the barge for the inspection, I have witnessed enough inspections to know that our proposal would give us a much better picture of what shape the barge is in even if we don't enter it. Almost all of these barges go right back into the heavy oil trade and the cleaning is all a mood point after the first loading. The other side of this point is that the Coast Guard is trying to work with industry to try and save regulating and costing the companies unnecessary monies when possible. This is definitely one of those areas. The problem with the cleaning is not only the labor and equipment to do the cleaning, it is the disposal. The actual cleaning of one of these barges is in the area of \$100,000.00. The disposal and transportation of the residue material to a facility to liquefy or dispose of the material is \$150,000.00. I realize that the Coast Guard, or government does not look at these things, but in the overall picture it has to. They are the ones that made doing the internal cargo tank inspection to where it is not possible to do them the way it used to be done.

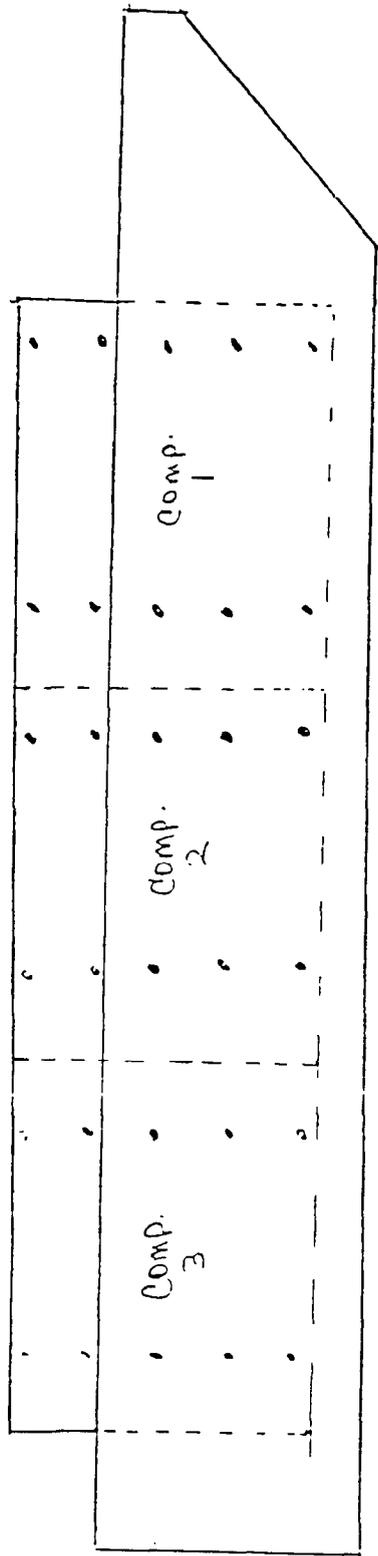
ENCLOSURE | 6 |

Please give this method some serious consideration. I feel that it is in everyone's interest to find an alternative to the present method. If the situation were the same as 6 years ago, we would not have a problem. I can understand why the Coast Guard changed their regulations on Benzene, but they seldom foresee all the repercussions that something like those changes create. But then, you and I deal with that situation every day.

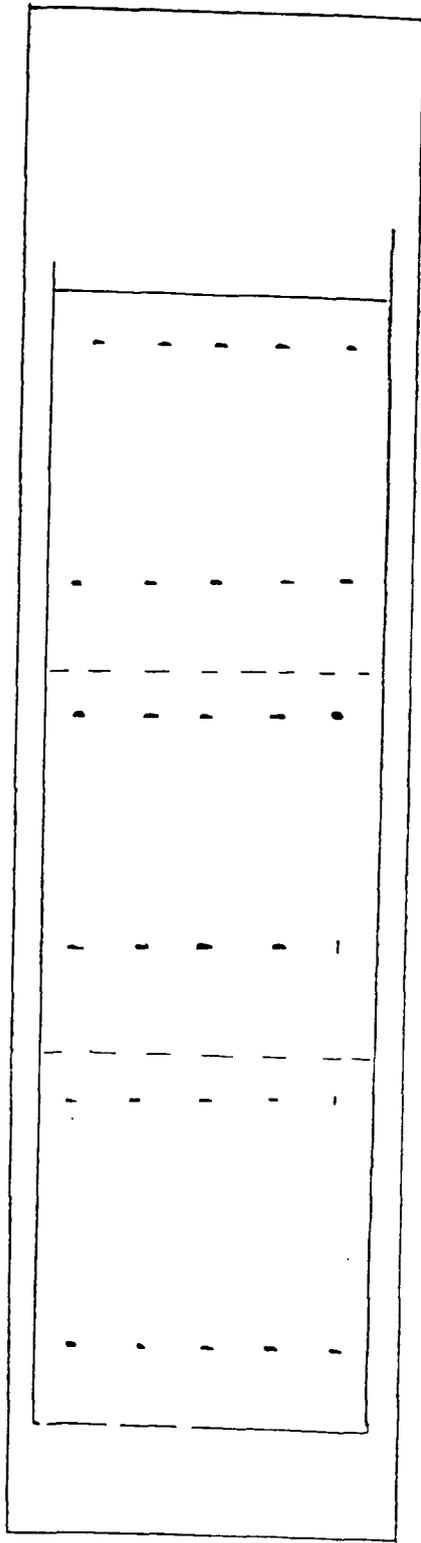
Respectfully submitted,

A handwritten signature in cursive script, reading "J. Robert Reed Jr.".

BAND 1 | BAND 2 | BAND 3 | BAND 4 | BAND 5 | BAND 6 |



EACH GAUGE POINT MARKED WITH DOT.
GAUGE BOTH PORT & STARBOARD IN SAME LOCATION



THESE GAUGE POINTS ARE ON TOP CARGO TANK
& THE FLOOR OF THE CARGO TANK
TAKE 120 GAUGE READINGS.

ITC ENVIRONMENTAL
-96 DRAWING
Alternative C.A.C.

		COMPARTMENT 1						
PAISGO	FORE	.227	.220	.205	.209	.245		
	AFT	.245	.221	.221	.202	.237		
		TOP → BOTTOM						
SIDE	FORE	.235	.242	.254	.249	.306	.312	
	AFT	.252	.252	.251	.299	.302	.299	
		TOP → BOTTOM						
SIDE SHELL	FORE	.190	.216	.240	.235	.311	.310	
	AFT	.226	.236	.240	.200	.304	.259	
		PORT → STBD						
CARGO	FORE	.297	.306	.287	.289	.302		
	AFT	.308	.286	.302	.299	.297		
		COMPARTMENT 2						
		STBD → PORT						
RAISED	FORE	.241	.213	.241	.200	.223		
	AFT	.245	.227	.220	.190	.221		
		TOP → BOTTOM						
SIDE SHELL	FORE	.250	.248	.245	.282	.292	.291	
	AFT	.220	.261	.259	.300	.297	.260	
		TOP → BOTTOM						
SIDE SHELL	FORE	.196	.216	.240	.235	.311	.310	
	AFT	.226	.236	.240	.200	.304	.259	
		PORT → STBD						
CARGO	FORE	.293	.287	.301	.309	.304	.289	.291
	AFT	.247	.284	.299	.287	.297	.295	