

# Public Hearing

before

SENATE COASTAL RESOURCES AND TOURISM COMMITTEE  
and  
ASSEMBLY ENERGY AND HAZARDOUS WASTE COMMITTEE

"On the loss of 441 drums of arsenic trioxide in waters  
30 miles east of Cape May from the vessel Santa Clara I,  
during the January 3, 1992 coastal storm"

LOCATION: Auditorium  
Atlantic County  
Office Building  
Atlantic City, New Jersey

DATE: March 11, 1992  
11:00 a.m.

## MEMBERS OF SENATE COMMITTEE PRESENT:

Senator Joseph M. Kyrillos, Jr., Chairman  
Senator Andrew R. Ciesla, Vice-Chairman

## MEMBERS OF ASSEMBLY COMMITTEE PRESENT:

Assemblyman Ernest L. Oros, Vice-Chairman

## ALSO PRESENT:

Senator William L. Gormley, District 2  
Assemblyman John F. Gaffney, District 2  
Assemblyman Fredrick P. Nickles, District 2

John Hutchinson  
OLS, Aide  
Senate Coastal Resources and Tourism Committee  
Kevil D. Duhon  
OLS, Aide  
Assembly Energy and Hazardous Waste Committee



***Hearing Recorded and Transcribed by***

The Office of Legislative Services, Public Information Office,  
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**New Jersey State Legislature**

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**SENATE COASTAL RESOURCES AND TOURISM COMMITTEE**

**ASSEMBLY ENERGY AND HAZARDOUS WASTE COMMITTEE**

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**NOTICE OF A PUBLIC HEARING**

The **Senate Coastal Resources and Tourism Committee** and the **Assembly Energy and Hazardous Waste Committee** will hold a joint public hearing on the loss of 441 drums of arsenic trioxide in waters 30 miles east of Cape May from the vessel "Santa Clara I," during the January 3, 1992 coastal storm. Testimony will be solicited from public officials, federal and State agencies and other interested parties regarding the facts of the incident, potential negative public health and safety impacts of the arsenic, the effect of the release of arsenic trioxide upon the marine environment and the status of operations to remove the arsenic drums from the ocean floor.

The hearing will be held on **Wednesday, March 11, 1992 at 11:00 a.m.** in the auditorium of the Atlantic County Office Building, First Floor, 1333 Atlantic Avenue, Atlantic City, New Jersey.

*The public may address comments and questions to John Hutchison, III, Raymond E. Cantor or Kevil D. Duhon, Committee Aides, at (609) 984-7381 or (609) 292-7676. Those persons wishing to testify should contact Sharon Constantini, secretary, at (609) 984-7381. Those persons presenting written testimony should provide 20 copies to the committee on the day of the hearing.*

**Directions to the Atlantic County Office Building:**

Garden State Parkway south to Exit 38 onto the Atlantic City Expressway. Proceed on the expressway until the end (**Stay in the left lane**). Proceed to the third light and turn left onto Atlantic Avenue. Proceed to New York Avenue and turn left. Proceed to the stop sign and turn right into the parking lot. The Atlantic County Office Building, which is attached to the public library, is located on the corner of Atlantic Avenue and Tennessee Avenue. The auditorium is on the first floor, off of the atrium.

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SENATOR JOSEPH M. KYRILLOS, JR. (Co-Chairman): Ladies and gentlemen, may I have your attention, please? We will begin our public hearing. I am Senator Joe Kyrillos, Chairman of the Senate Coastal Resources and Tourism Committee. To my right is Assemblyman Ernie Oros, who will be chairing the Assembly Energy and Hazardous Waste Committee. We will break from protocol -- strict protocol -- right now. Allow me to introduce Atlantic City -- Atlantic County Assemblyman Fred Nickles.

ASSEMBLYMAN NICKLES: Well, thank you, Senator. It is good to be here today. It is my job to officially welcome everyone to Atlantic City. John Gaffney, my partner from the Assembly here in Atlantic County District 2, and I also serve as Freeholders, so it is especially nice to have you in our County Office Building.

Needless to say, this is of deep concern to all of us, the 441 arsenic drums which lay off of the coast of Cape May, which would have effects to Atlantic County, and even Ocean County and districts further north. We believe what we are going to do today is receive as much information as possible, so we can make intelligent decisions on what needs to be done at the State level.

So, welcome. We hope you will find this as informative as we hope it will be. John?

ASSEMBLYMAN GAFFNEY: Thanks, Fred. Welcome, everyone, to Atlantic County. I think you will get a lot of information. Those of you who have not been following this any more than just in the local papers will get some answers, I think, as to what happened. I think, from my perspective, I am more interested in making sure that it doesn't happen again, and what we can do, or what the plans are to speed up the recovery projects.

At this time, I would like to turn it over to the Senator from Atlantic County, Bill Gormley. Bill?

SENATOR GORMLEY: Okay, thank you. I would like to thank everybody for the wonderful turnout we have had. People have shown up today with the level of expertise that is necessary to fully understand this problem.

The hearing will be one which will, hopefully, first of all, address any misconceptions people might have, so that we can further get the facts out about what has occurred, and hopefully assure the public that everything is being done. In the materials I have reviewed I have been impressed by the work of the Coast Guard. I have been impressed by the cooperation of both State and local officials. But not only do we have to address the question of getting the information out, but what can we do prospectively to make sure that this does not occur again; to see what Federal and State partnerships might become necessary in order to address problems like this.

Last year we passed a bill dealing with strict liability on oil spills which was unique in terms of placing liability on the company or whomever might have ordered the oil, if there should be an oil spill. Maybe the potential exists for legislation like that in terms of an area like this if the destination should ever be New Jersey. But the important point is, I have been impressed with the cooperation from the various levels of government. The more, obviously, that we can get the word out that the health, safety, and welfare of New Jersey residents is protected, and also that our major industry, tourism, will not be affected by even the question of pollution, is in the best interests of everyone and of the region's economy.

To Senator Kyrillos, and to everybody, I want to thank you. It took a lot of staff time and a lot of work by the Chairmen of this Joint Committee to put this effort together. We are most appreciative of that, and for the excellent turnout we have today, I want to thank you.

SENATOR KYRILLOS: Thank you very much, Senator Gormley.

For the record I have a brief statement I will read, and then I know Assemblyman Oros will have one as well.

I would like to welcome everyone officially to this joint meeting of the Senate Coastal Resources and Tourism Committee and the Assembly Energy and Hazardous Waste Committee. I want to particularly thank Senator Gormley and Assemblymen Nickles and Gaffney for bringing this issue to the forefront and making sure that this Joint Committee hearing be held.

Today the Committees, as you know, will examine the issues pertaining to the loss of approximately 441 drums of arsenic from a freighter en route from New York to Baltimore in the waters 30 miles off of Cape May. Although the criminal responsibility for the spill of the arsenic drums and the cleanup operations to remove them from the ocean floor are largely Federal matters, the consequences of the spill may have a great effect on the State of New Jersey, and are, therefore, worthy of the attention of these Committees.

Specifically, we are concerned that the spilled arsenic may constitute a threat to the State's commercial, recreational, and sportfishing industries. There are also questions about whether or not the arsenic, if disturbed by a fisherman or a recreational diver, could become a threat to human life.

While I understand there are issues pertaining to the spill that the Coast Guard cannot directly address due to the pending Board of Inquiry into this matter, I look forward to receiving a briefing -- we do -- on the response of Federal agencies to the spill at the time it occurred, and to hearing what steps are being taken to remove the drums from the ocean. We are also interested in hearing from officials from the State Department of Environmental Protection and Energy on what New

Jersey can do to be prepared for future incidents such as this, and whether there are any actions the Legislature should take to support those efforts.

At this point I would like to introduce Acting Chairman Oros, of the Assembly Energy and Hazardous Waste Committee, for his comments. Assemblyman?

**ASSEMBLYMAN ERNEST L. OROS (Acting Co-Chairman):**  
Thank you, Senator Kyrillos. I, too, welcome everyone here today for this hearing on the arsenic spill that happened in January about 30 miles off the coast of Cape May. I would particularly like to welcome Captain Richard S. Tweedie, of the United States Coast Guard, and Mr. Thomas E. Bigford, of the National Oceanic and Atmospheric Administration. I understand that Mr. Lavine had a delayed flight and couldn't make it. I also understand that these two Federal agencies have been organizing the cleanup and monitoring the threat to the environment. I would like to thank Captain Tweedie and Mr. Bigford for their efforts, and for taking the time from their task to come here to testify today.

As Senator Kyrillos mentioned, the arsenic off Cape May represents a threat to fisheries, and to fishermen working in those waters. I am pleased to learn that the area where the arsenic drums fell has been temporarily closed to fishing, and I would be interested in hearing what criteria will have to be met before the area is opened again. I believe these Committees will also be interested in hearing when we might be able to expect the arsenic drums to be removed from the ocean.

Thank you.

**SENATOR KYRILLOS:** Thank you very much, Assemblyman.

At this point let me introduce everyone at this table. You've met the hometown members of the General Assembly -- Assemblymen Nickles and Gaffney. Next to them is the aide to the Assembly Committee from the Office of Legislative Services, Kevil Duhon, and Assemblyman Oros. To my left, from

the Office of Legislative Services, aide to the Senate Committee, Mr. John Hutchison; Senator Gormley, of course; and Senator Andrew Ciesla, Vice-Chairman of the Senate Committee, a representative from Ocean County. Seated next to him, Mr. Tom Edwards, aide to the Senate Minority.

At this point, Senator Ciesla, is there anything you would like to add?

SENATOR CIESLA: Nothing of any substance, Mr. Chairman, other than to indicate that there are representatives here from Ocean and Monmouth Counties who share many of the same concerns that have been articulated. There is, obviously, a need for immediate corrective action, as well as a long-term plan in order to avoid occurrences such as this in the future.

I am pleased to have been invited here by our contingent from Atlantic County, in order to find out the information necessary to get a better handle on this matter. I thank you for your introduction.

SENATOR KYRILLOS: Thank you very much, Senator. Thanks for coming down from Ocean County to be here for this important hearing.

With that, we will go right into our list of witnesses. It is quite lengthy, so I caution everyone to be as succinct as possible. I am quite sure members of the Joint Committee will have questions for some, or all, of the witnesses. Leading off will be Captain Richard Tweedie, from the United States Coast Guard Marine Safety Office in Philadelphia. Captain, welcome. Thank you for being with us.

CAPTAIN RICHARD S. TWEEDIE: Good morning. Chairmen and Committee members: Thank you for giving me the opportunity to testify this morning. I have been asked to provide an update of the arsenic incident, and I will attempt to do so.

The Santa Clara I is a 479-foot freight vessel built in 1974, Panamanian registry. On the morning of January 4,

1992, the vessel was on a voyage from New York to Baltimore, following a track line approximately 20 to 30 miles off the coast of New Jersey. It came into Delaware Bay through the C and D Canal, down the Chesapeake Bay into Baltimore. I have some illustrations here which may help. (pause while aide distributes illustrations) The first illustration basically shows the partial track line the vessel made.

During the voyage it encountered -- it is the first one here -- a storm, with estimated waves of 25 feet to 40 feet, and winds up to 50 knots. The Santa Clara I lost overboard 21 containers from the number two hatch. Four of these containers were carrying arsenic trioxide, a Class B poison.

The second illustration in that packet shows the container layout on the number two hatch. You can see that the arsenic trioxide are the ones that are shaded, the two on the starboard side, on the bottom; and the two vertical ones on the port side were the ones that were lost overboard. The two bottom ones in the center did not go overboard.

Arsenic trioxide is a hazardous substance under both the Clean Water Act and the Comprehensive Environmental Response Compensation Liability Act, commonly referred to as CERCLA. Under CERCLA, spills of arsenic trioxide of one pound are required to report it -- are required to be reported. Arsenic trioxide is very heavy. It sinks in water, and has a density of almost three times the density of water. It is lethal if ingested, even in very small amounts. It mixes very slowly with water, and is toxic to aquatic life in low concentrations.

This incident was first reported to the Coast Guard by the Baltimore Port Authority at 4:45 p.m. on the 4th of January. The Fifth Coast Guard District in Portsmouth, Virginia, immediately commenced an aerial search for the missing containers, using aircraft outfitted with side-looking airborne radar.



On January 7, the Fifth Coast Guard District assigned me as the on-scene coordinator. Up until the 7th, the surface search had been coordinated by the Commander of the Fifth Coast Guard District. I basically initiated a three-phase response plan, the first being an underwater search. The second phase involved positive identification of the containers, with the third phase to be recovering and disposal of the containers, or drums, if, in fact, that was feasible.

The search phase was conducted using Navy MH-53 mine-detecting helicopters using towed side-scanning sonars. These helicopters operated out of the FAA Technical Center here in Atlantic City. Additionally, the EPA vessel Peter W. Anderson, equipped with side-scan sonar and underwater remotely operated vehicles, were used. It operated out of the Coast Guard base at Cape May.

On January 20, the Navy helicopters located a debris field that was approximately 30 miles due east of Cape May. The sonar indicated several large boxlike objects in the debris field. During the period of the 19th to the 30th, the Anderson, using a TV-equipped, remotely operated vessel identified three containers in this debris field as having the same numbers as those on the Santa Clara's manifest. One of these was an arsenic trioxide container. No drums were sighted.

To kind of give you an idea of what we are talking about, on that first illustration the debris field is located slightly south and slightly to the west of the 0151 position on that track line. The expanded boxes on that first illustration are the search areas that were done by the Navy mine-detecting helicopters.

On the 22nd of January, the Anderson was relieved by the commercial vessel E.T., under contract to U.S. Navy Supervisor of Salvage. It was also fitted with a side-scanning sonar and TV-equipped, remotely operated vehicles. The E.T. mapped the debris field as shown in illustration three. To

kind of give you an idea of what I am talking about, that left-handed piece of paper on the screen over there -- that blue paper -- is a sonar printout of the debris field. The actual pieces of metal are the red dots. If anyone wants to take a look afterward, we have the little piece of paper put on the sonar printout of what each container, or each contact actually did contain. Obviously, the identification of each container was made by using the remotely operated vehicle. Chief, do you want to start the tape, please? (speaking to colleague operating audio/visual equipment)

To date, 15 of the 21 containers have been identified, including three of the four missing arsenic trioxide containers. In two instances, the arsenic drums are located in piles close to a container. What you are seeing here is a container with two drums inside. As you can see, the drums are collapsed. This was due to the pressure. We obtained two drums from the vessel in Baltimore, had them cleaned, took them to a pressure tank, pressure tested the drums down to 130 feet, and they collapsed, basically the same as you see here. Again, this is another shot of the same container with the two drums inside.

In just a minute here we will be moving to a-- Here we go. This is a pile of drums. As you can see, they are partially buried. You can see clamshells. The debris field is in a large clam bed. You can also see that corrosion has started to occur. The brown stripes on the blue drums is corrosion, where the creases were when the drums collapsed.

ASSEMBLYMAN GAFFNEY: Captain, these are not-- Excuse me. These drums are not like the 50-gallon oil drums we think about, are they?

CAPTAIN TWEEDIE: No. They are smaller than that, sir. They are 25-gallon, but with the contents inside -- the arsenic trioxide -- they weigh between 370 pounds and 400 pounds apiece. So, they are much smaller, but much heavier.

That drum there is basically buried -- half buried -- as you can see. The test we ran, once we brought the pressure off the drums-- They did contain water, so water did get in, a small amount, but the lids did stay on, and remained basically intact. Again, as you can see, there are several lids there. We looked at these videotapes, about 16 hours of them, and were not able to detect a single drum where the lid was clearly off. There are some that may be off, or partially off, but none where they were clearly off.

I will go ahead with the testimony here, and that can continue to run, I guess. (referring to audio/video equipment)

On February 8, I temporarily suspended search operations for three reasons: The contacts identified by the Navy helicopters had all been looked at. The E.T. had done an expanded search, with no contacts. And three, the Navy Salvage Master felt that the drums from the fourth container could possibly be located in one of the piles from one of the other containers.

Here is the one container that was relatively intact. The cover was off. What the ROB is doing is peering inside. As you can see, there are six to eight containers that are visible. Around this container we found no pile of drums. It is a possibility that all the drums are located inside. The ROB was too big to be able to get in there. This is another one. You can see a crab down there and, again, a claim bed. The area these drums are in does have quite a bit of aquatic life.

During the salvage operation, we will attempt to locate the fourth container. Hopefully it is in the debris field we have out there. You can shut that off now. I think we have basically seen enough of that, Chief. Thank you. (speaking to colleague)

The other drawing we have over here -- and it is very difficult to see -- basically outlines, in a little bit bigger

detail, the search areas of the helicopters, and the yellow area indicates the expanded search area that the surface vessel E.T. followed. Near the middle you can see the Xs where the actual debris field is.

Additionally, we found one container that is outside-- Well, we found two containers which were outside the debris field, further southwest along the track line. One of these containers had the numbers on it that the manifest would indicate would contain tungsten concentrates. However, the ROB showed that it had a placard on the side -- on all four sides, the placard being a diamond-shaped number that indicated that the number was for sodium cyanide.

Now, the question is, what is inside this container? When the vessel was offloaded in Charleston, they found another container that had placards for sodium cyanide, but in actuality contained metal shavings. Apparently what happened in that situation was, the placard had failed to be removed when they changed the use of the container. We hope that is the situation with this container. However, any salvage operation is going to determine the contents of that container. If it is unable to determine the contents of that container, it will be raised to the surface.

I have reviewed various courses of action, including retrieval, intentional release, and leaving the drums on the bottom to corrode and eventually leak. During this evaluation, many Federal and State agencies provided input. For instance, on 24 January we held a multiagency scientific conference in Philadelphia to consider the various alternatives. Representatives from New Jersey included: the Department of Environmental Protection and Energy, the New Jersey Fish and Game, and the New Jersey Department of Health. All provided valuable input. Many Federal agencies, including: NOAA, EPA, National Marine and Fisheries, and ASTDR, also participated in that conference.

Based on the input provided at that meeting, as well as the follow-up discussions and documentation, I made the decision to attempt recovery. On 3 February, I sent a memo to the EPA requesting funds to undertake a removal action. That request was approved on 6 February. Since that time, we have been pursuing two parallel tracks: One is reviewing retrieval and disposal proposals and going through the contracting procedures for a relatively complex operation. Various facets include: handling the drums on the bottom, bringing the 400-pound drums to the surface, transporting them to a hazardous waste transfer site, and then disposal. One example of the complexities is the requirement that any damaged drum be repackaged in an approved, decontaminated drum prior to placing within a container for transport on a vessel or overland.

The second track we have pursued is to have the owner and operator take over the recovery/disposal operation. On 20 February, I issued an administrative order to representatives of the owner and operator in order to enforce this issue. The administrative order directs the owner and operator to remove and properly dispose of the arsenic trioxide, and to determine what is in the container that is placarded as sodium cyanide.

The owner and operator had until 26 February to respond to the order and advise me if they intended to comply. On 26 February, they requested a 25-day extension in order to do a risk assessment. I denied that request, since I had made the determination that recovery was the preferred alternative. The Coast Guard is now in the final phases of the contracting process, and we hope to award a contract within days, for removal.

That is the end of my prepared statements, sir. If you have any questions, I will attempt to answer them.

SENATOR KYRILLOS: Thank you very much, Captain. Let me ask Senator Gormley, or should we go to the members of the Assembly delegation--

SENATOR GORMLEY: Why don't we start with the members of the Assembly delegation?

SENATOR KYRILLOS: Let's start with Assemblyman Nickles. You, sir, may lead the questioning of the Captain.

ASSEMBLYMAN NICKLES: Yes. Thank you, Captain, for your testimony. It was most informative. I guess one of my concerns is why the Santa Clara was permitted to sail from New York City loaded with at least two volatile, dangerous chemicals, without an inspection. Is it proper for a ship carrying this type of hazardous waste -- or hazardous material, rather -- to be permitted to sail with it strapped to the top deck and without a proper inspection?

CAPTAIN TWEEDIE: We do an inspection of every container vessel. There is a required annual inspection, sir, called a "freight vessel exam," as well as a cargo monitor every six months. The Santa Clara did have these inspections and exams in the time frames which are in the policy for the Coast Guard. No, we do not look at every vessel before it makes a trip. Almost every container ship you see that comes into any port will have hazardous materials on board in various containers.

ASSEMBLYMAN NICKLES: As a follow-up, is this the first time the Santa Clara has had problems with hazardous materials, or has it been cited in the past?

CAPTAIN TWEEDIE: It has been cited in the past. As a matter of fact, the vessel came into Philadelphia and we did the tank vessel -- excuse me, the freight vessel exam in '89, for that year. I have the report of that, if I may here:

The violations at that time were basically technical in nature. For instance, there was a new regulation -- or a relatively recent regulation -- at that time to have maneuvering information on the bridge. It did not have that type of information on the bridge. They did not have a written record of the date and results of the most recent test of the

oil transfer system -- technical things of that nature. In that exam we did at that time, there was no indication that they had hazardous material containers stowed improperly or misplacarded containers.

ASSEMBLYMAN NICKLES: Thank you, Captain.

SENATOR KYRILLOS: Assemblyman Gaffney?

ASSEMBLYMAN GAFFNEY: Yes. As a follow-up to Mr. Nickles' question, what would have to happen in order for the Coast Guard to-- Obviously you are made aware of the cargo before it departs. If you are aware that there is a potentially hazardous substance, especially stored in the containers on deck, what would have to happen for the Coast Guard to inspect the ship, then, after loading?

CAPTAIN TWEEDIE: I would start off by saying, the premise that the Coast Guard knew there was hazardous material aboard-- There is no requirement to report that hazardous material is being carried, sir. As I indicated, almost every container ship would have some containers with hazardous material in them. The requirement to carry a dangerous cargo manifest goes with the vessel, and that manifest would indicate the location -- the storage location on the vessel -- the type of cargo, the hazard, and so on and so forth, and a 24-hour telephone number where you can get information about that product. It is basically similar to the-- Many of these containers are then, you know, put on a truck chassis and carried over the roads, or may be put on a railroad. The Federal requirements for the carriage of hazardous materials of this nature are basically a unified type set of regulations contained in the 49th Code of Federal Regulations. It covers airplane transportation, vessel, railroad, and truck.

ASSEMBLYMAN GAFFNEY: So, possibly some adjustment to that regulation requiring post loading of cargo might be in order. There is no regulation right now, you're saying?

CAPTAIN TWEEDIE: That is correct, sir. There is no requirement for the Coast Guard to inspect the loading of the container vessel.

ASSEMBLYMAN GAFFNEY: Okay, one other quick one, because I know there are other people. From what we have seen in the video, it was hard to determine what condition the clamping devices, I guess -- I don't know the proper term-- On each container there is a device to which a cable is attached on board ship, I assume, right, a lashing mechanism?

CAPTAIN TWEEDIE: Okay. The drums are stored inside a 40-foot container. This is an 8 x 8 x 40-foot container. They have dunnage around them and various packing materials so that they cannot shift. They are wooden type dunnage materials. Then, that container is strapped on the deck of the vessel.

ASSEMBLYMAN GAFFNEY: Excuse me. Were there any evidence that the strapping failed or that the clamps failed? I am talking about the containers, not the drums.

CAPTAIN TWEEDIE: Yes, sir. I really cannot answer that question. Number one, there is an investigation going on, and a Board of Inquiry -- a Coast Guard Board of Inquiry and an investigation in Baltimore, I understand. The second reason is, I honestly don't know any of the facts surrounding that loss, because the vessel never came into any of the ports that are in my zone. We simply did not board the vessel after the casualty occurred.

ASSEMBLYMAN GAFFNEY: None of your people boarded the vessel in Baltimore?

CAPTAIN TWEEDIE: Well, the Coast Guard people did, sir, not from the Captain of the Port Philadelphia Office.

ASSEMBLYMAN GAFFNEY: And, they did not report any improper loading procedures or weakness of cables or anything?

CAPTAIN TWEEDIE: Again, I don't know, sir.

ASSEMBLYMAN GAFFNEY: You don't know. The reason I asked that, on this graphic here--



CAPTAIN TWEEDIE: Right?

ASSEMBLYMAN GAFFNEY: --it seems unusual, if I am reading this correctly, that some of the containers that stayed on board seem to be right next to the ones that went overboard. I was just wondering--

CAPTAIN TWEEDIE: Maybe I didn't make that clear. I did indicate which ones-- The only ones I indicated as staying aboard were the two arsenic ones that are right here. (demonstrates by holding up graphic)

ASSEMBLYMAN GAFFNEY: Okay.

CAPTAIN TWEEDIE: The six gray shaded containers are the arsenic containers, and the two middle ones on number two hatch port are the ones that stayed aboard. Now, all of the containers in this general area here, and all the containers over here did go off, as well as most of the ones up here. The empties are forward of that.

ASSEMBLYMAN GAFFNEY: Okay, thank you. That's all I had, Senator.

SENATOR KYRILLOS: Thank you very much, Assemblyman Gaffney. Assemblyman Oros?

ASSEMBLYMAN OROS: One of the questions I had was on the sodium cyanide, but you did touch on that. That took care of that one, but I do have another one here. I would like you to outline what penalties you believe the owners and the operators of the Santa Clara are subject to. You know, they are talking anywhere from \$2 million to \$3 million, up to \$5 million.

CAPTAIN TWEEDIE: Sir, I prefer not to comment on that. The total enforcement of my administrative order has been turned over to the Department of Justice, and the Department of Justice does have a suit in the Federal District Court in Charleston. I would prefer not to comment on that, sir.

ASSEMBLYMAN OROS: Okay. They have already started the suit?

CAPTAIN TWEEDIE: There was a suit filed several weeks ago in the Federal District Court in Charleston, yes, sir.

SENATOR KYRILLOS: Thank you, Assemblyman Oros. We will now go to members of the Senate Committee. Senator Ciesla?

SENATOR CIESLA: Nothing, Joe, thank you.

SENATOR KYRILLOS: Okay. I think Senator Gormley may have a question, and then next on the witness list will be the representative from NOAA -- NOAA's Hazardous Materials Response and Assessment group. Senator Gormley?

SENATOR GORMLEY: Okay. First of all, the terms of the cost of the cleanup, in terms of the money spent to date, in terms of the photography, and whatever-- Pre-cleanup, is that cost approximately \$5 million?

CAPTAIN TWEEDIE: No, sir.

SENATOR GORMLEY: What is it?

CAPTAIN TWEEDIE: We did basically what is called under CERCLA a "104 Investigation" to determine if it is a spill. I believe it is \$1.38 million now; \$1.38 million has been spent to date on the investigation, sir.

SENATOR GORMLEY: How much further is budgeted for investigation?

CAPTAIN TWEEDIE: We have authority up to \$1.75 million, sir.

SENATOR GORMLEY: Okay. Now, the ship was held in Baltimore and then a bond was posted. Is that correct?

CAPTAIN TWEEDIE: I don't know, sir. I don't believe that is the case, but I really don't have the facts on that.

SENATOR GORMLEY: Okay. Well, let me--

CAPTAIN TWEEDIE: I believe that was in Charleston, sir.

SENATOR GORMLEY: All right. Let me give you my general thrust on this, okay? I want to look at the overall

cost of investigation and of cleanup, and the problem we have with foreign vessels, which is what we have incurred -- the same problem we have had with oil spills. Okay? The projected cost of the cleanup-- It is going to go to bid, I assume?

CAPTAIN TWEEDIE: Yes, sir.

SENATOR GORMLEY: Okay, and the total cost of investigation. Could you give me the costs of both of those -- the projected total cost of investigation, understanding--

CAPTAIN TWEEDIE: Hopefully it doesn't go any higher. We are right around--

SENATOR GORMLEY: Around 1.75?

CAPTAIN TWEEDIE: Well, it won't go above that; no, sir, I don't think. As I say, the contract award is going to be in the near future. I did make a rough projection at one time to the Federal -- you know, the Congress in Washington, that it was between \$2 million and \$4 million for recovery and disposal. That was an estimate at the time. In a few days I would probably be able to give you a much more detailed answer, sir, for the recovery and the disposal.

SENATOR GORMLEY: Okay, fine. Now, the question of dealing with a foreign company, in terms of liability. As I understand it, they initially had not posted-- They had not come under the Federal guidelines in terms of posting the necessary bond, or whatever, at the time of the incident. They did it post incident, and they put up the ship as collateral, posted a bond following the incident. Is that correct?

CAPTAIN TWEEDIE: I believe a bond was posted. I say, "I believe," in the truest sense here, because I don't know for a fact. But I believe a bond was posted to allow the vessel to leave in Charleston.

SENATOR GORMLEY: Well, I guess the point to be made is--

CAPTAIN TWEEDIE: They do have insurance, sir. Excuse me, I didn't mean to interrupt.

SENATOR GORMLEY: Okay, fine.

CAPTAIN TWEEDIE: They do have insurance in their Certificate of Financial Responsibility.

SENATOR GORMLEY: Okay.

CAPTAIN TWEEDIE: Yes, the--

SENATOR GORMLEY: My understanding is that that did occur after the fact. Here comes a fact from the first row, and it might be helpful. (referring to colleague of Captain Tweedie's handing him something)

CAPTAIN TWEEDIE: Sir?

SENATOR GORMLEY: I'm sorry. Is that germane to the question?

CAPTAIN TWEEDIE: That's okay. He just passed a note saying that in Charleston a bond was posted for \$2.9 million.

SENATOR GORMLEY: Okay, fine. So, we feel that the cost of investigation, the cost of cleanup, will be covered by the insurance or by bonds or whatever, but that will come from the shipper, in terms of the total cost? None of the costs will be passed on to the government. Is that a fair characterization?

CAPTAIN TWEEDIE: We hope so, sir. We are going to have to wait for the court cases to be decided and so forth.

SENATOR GORMLEY: Well, let me put it another way: Under the existing-- Going over the materials, it seems as though Congress has definitely passed enough laws to deal with this. Somewhere it should be in there. Let's see if it is or not. Are they, under existing Federal law, strictly liable in terms of these types of cleanups -- under laws like Superfund? In other words, if it falls off the ship, I don't want to hear about a storm; I don't want to hear about an excuse; I don't want to hear why. Are they strictly liable for cleanup costs? In other words, we say there is going to be litigation -- potential litigation -- to pay the costs, and we are talking about insurance. Are they going to be strictly liable for the

cleanup? Is that the standard of law that they are held to in terms of cleanup? In other words, there is no defense. If it was on your ship and it is at the bottom of the ocean, then you are responsible to clean it up. Are they held to that standard?

CAPTAIN TWEEDIE: I am not an attorney, sir, but--

SENATOR GORMLEY: Well, you're lucky. I am.

CAPTAIN TWEEDIE: The CERCLA statute does apply to waters that are outside the U.S. territorial waters that are affected by the Magnuson Act. So, yes, this is outside the territorial waters of the United States, but the CERCLA provisions do apply.

SENATOR GORMLEY: Okay. So, under CERCLA-- It is your understanding that under CERCLA, consequently, that if you were the company carrying the cargo and an incident like this occurred, the standard of proof would have to be merely that you were the company carrying the materials. The point to be made is-- What I would like to see is, should we be making a recommendation to the Federal government? Should we be working in conjunction with the Federal government? Obviously, we don't want to see defenses that are made available under circumstances like this. If someone takes on the responsibility of shipping hazardous waste of this nature, we want to make sure that they are held to a standard of strict liability.

In other words, if they do not have a defense, barring someone intentionally intervening, or performing an act, or whatever, we don't want defenses such as gross negligence, or whatever, available to them. We want them to be liable. That is the point I am trying to make. Obviously, it is unfair to someone who is dealing particularly with getting the cleanup done.

I would like to go back to another point: We think they have the money to pay for the cleanup. Is that a fair characterization so far? We don't have posted-- It is my

understanding that there was a bond, I think a bond, and -- anybody can help me on this -- the value of the bond was \$2.3 million that was posted, which was equivalent to the value of the ship. Is that correct?

CAPTAIN TWEEDIE: That is correct, sir.

SENATOR GORMLEY: That is, the \$2.3 million?

CAPTAIN TWEEDIE: Well, whatever it is.

SENATOR GORMLEY: Whatever it is, it was equivalent to the value of the ship?

CAPTAIN TWEEDIE: It was to allow the vessel to leave, sir.

SENATOR GORMLEY: It was to allow the vessel to leave. Consequently, we have that, plus whatever insurance coverage they have. We have the bond, plus the other insurance.

CAPTAIN TWEEDIE: I prefer not to address that, because I really don't know, sir--

SENATOR GORMLEY: All right; all right.

CAPTAIN TWEEDIE: --you know, whether they can be combined or not. I don't know.

SENATOR GORMLEY: All right. I guess my point is, we have approximately \$6 million of potential costs -- potentially -- maybe more, maybe less. We have a bond that is worth \$2.3 million, and we have potential insurance coverage, but we are not sure of the-- We might be in the future, but we are not sure of the amount of coverage beyond the \$2.3 million.

CAPTAIN TWEEDIE: The Federal government is sure. I am not sure what it is.

SENATOR GORMLEY: Okay, thank you. Oh, by the way, I would like to compliment you on the nature of the performance of your job and what you have been doing, and the thoroughness of implementation of what you have done in terms of organizing the cleanup, and whatever. It has been excellent from everything I have been told. Thank you.

CAPTAIN TWEEDIE: Thank you, Senator.

SENATOR KYRILLOS: Thank you, Senator Gormley, for your excellent questions.

Members of the Assembly, any further questions for the Captain? (no response) Captain, I have two brief questions, and then we will move on.

There were a couple of questions that Senator Gormley had where it seemed you were not quite sure of the answers, or the proper response. Who is the right person to speak to, or the right agency? I assume it is the Coast Guard, and is it possible that it is the solicitor -- the solicitor's office there?

CAPTAIN TWEEDIE: I believe it is the Department of Justice, sir.

SENATOR KYRILLOS: The Department of Justice.

CAPTAIN TWEEDIE: They basically handle suits and so forth for the Federal government. The Department of Justice is the one that filed suit in the Charleston Federal District Court.

SENATOR KYRILLOS: Thank you very much. Finally, has the Coast Guard made any recommendations, or will they be making any recommendations as to how we can change Federal or State policies to prevent this kind of a thing from happening in the future? You may have gotten into that in some of your testimony and I may have missed it. Any final thoughts on that question?

CAPTAIN TWEEDIE: I think that is basically being handled-- The policy type questions and solutions are being handled in Washington. Admiral Henn, as most of you probably know, testified before Congress -- two subcommittees -- I think it was last week.

SENATOR KYRILLOS: Assemblyman Oros?

ASSEMBLYMAN OROS: Yes. Once this is let out -- once the contract is let out -- how long will it take, in your opinion, to clear this up, this being March now?

CAPTAIN TWEEDIE: I would like to move as fast as I can, sir.

ASSEMBLYMAN OROS: Do you have any idea, so that the citizens in the area could be--

CAPTAIN TWEEDIE: I would like to see the gear up-- There has to be a gear up. There is large equipment that has to be brought to the scene. I would love to see removal action start in the first part of April. That is a goal. I would love to see that happen. There are a lot of reasons why we would like to get it done as soon as possible; obviously the spring fishing and diving season and so forth. So, there are a lot of good reasons why we would like to get it done as soon as possible.

I guess I would like to point out one thing. These drums are not going to move from where they are. I mean, they are very, very heavy and, as you can see from the videos, they are pretty much buried. They are not going to-- They don't float. They are not going to come up on any beaches, or anything of that nature, and I think that is important. They are not going to move from where they are. They weigh 400 pounds, and they are there.

ASSEMBLYMAN OROS: But if you start, let's say, April 1-- You don't have any estimate at all how long it would take to do the job?

CAPTAIN TWEEDIE: It depends on so many things, sir -- the equipment, the weather. That is one of the considerations in awarding the contract. There are just so many variables that I would hate to guess. I would like to see it done. I would love to say, "Well, I'd like to have it done within a month. I would love to have it done by the 1st of May," but I cannot guarantee that.

ASSEMBLYMAN OROS: I realize that you cannot guarantee it, but your estimate would be about a month to do this, if things went well?



CAPTAIN TWEEDIE: If things went extremely well and we had good weather, yes, sir.

ASSEMBLYMAN OROS: Okay, thanks. That's all I have, Joe.

SENATOR KYRILLOS: Thank you, Assemblyman Oros. Assemblyman Gaffney?

ASSEMBLYMAN GAFFNEY: Just a couple of quick questions, Captain. I appreciate the time and the professionalism you and your people have shown.

I attended a meeting in the first week in February in Congressman Hughes' office in Washington with some of your people and the EPA. It was related to us at that time that within a week-- They were going to give the shipowner a week from that date -- which would have been the second week in February -- to either come up with a plan, or the Coast Guard and the EPA were going to start the recovery operation. I won't go into why the contracts are just being awarded now.

There was some concern at that meeting more to the safety of the divers of the recovery operation. Is that still-- Obviously I don't want you to say, "It is still a concern." It would be. But, has there been any recovery attempt of any one particular drum, to see if the drum fell apart, or anything like that, as it was being retrieved?

CAPTAIN TWEEDIE: No, sir. The amount of equipment and the type of equipment that has to be brought to the scene to do recovery-- They are large pieces of equipment, very expensive. To bring that type of equipment to make test runs would be -- would be basically prohibitive. I think the most cost-efficient way of doing it is to do extensive planning ahead of time and test out various pieces of gear.

Just to kind of give you an idea, you know, the overpacking of these drums themselves, is a big operation. For instance, the ROB, when brought aboard a vessel-- We had a decon team that would go and hose the ROB down, first with

saltwater and then with fresh water, and then test the material to make sure there was no arsenic left on it, using test strips. These people are all fitted out in level B response gear, which is, you know--

But to answer your question, the first part of the question about divers, obviously that is a concern. It would require special suits. If divers were to be used, they would be hard-hat divers with no external regulators. So there are some precedents to doing it with divers.

ASSEMBLYMAN GAFFNEY: One other quick one: I know you have-- Fish and Wildlife, or whatever, or Fisheries has closed off that certain area of the ocean to commercial fishing. That's still in effect, I assume?

CAPTAIN TWEEDIE: Yes, sir.

ASSEMBLYMAN GAFFNEY: But we were also told in Washington that someone was going to be taking drums similar -- visually similar -- to these drums around to the commercial fishermen showing -- especially the clammers -- because there was real concern that we have not located all the drums, and if a commercial clammer outside of the protected area should haul up one of these drums aboard his ship, it could be a significant danger.

CAPTAIN TWEEDIE: Yes, sir. I believe we did that.

ASSEMBLYMAN GAFFNEY: And to date nothing has surfaced, I assume, right? Nobody has accidentally brought a drum up.

CAPTAIN TWEEDIE: No, sir. Not to my knowledge, no sir. We did take an empty, intact drum and we provided that to the New Jersey Department of Environmental Protection and Energy. I believe they took it around the Cape May area to the people who are doing the clamming operations in the area.

ASSEMBLYMAN GAFFNEY: Thank you.

SENATOR KYRILLOS: Thank you, Assemblyman. Captain, thank you very much for your excellent testimony and for being with us today.

CAPTAIN TWEEDIE: Thank you, sir.

SENATOR KYRILLOS: Next, from the National Oceanic and Atmospheric Administration, from their Hazardous Materials Response and Assessment Team, Mr. Tom Bigford.

Let me remind this and all future witnesses, as well as members of the Joint Committee, that we do have quite a few people left to testify, including representatives from our own Department of Environmental Protection, and several environmental officers and mayors from affected communities. With that, Mr. Bigford, please begin. Welcome.

**T H O M A S   E .   B I G F O R D:** Mr. Chairman and members of the panel: Thank you for the opportunity to discuss the National Oceanic and Atmospheric Administration's role in this event. My name is Thomas E. Bigford. I am the Chief of the Habitat and Protected Resources Division of the northeast region of the National Marine Fisheries Service. Your introduction had the name right, but the agency with the person who was supposed to be here, Edwin Lavine, he is detained in Boston because of foul weather. Dave Kennedy, who was requested to participate is detained in Seattle. I'm third; I'm pinch hitting.

SENATOR KYRILLOS: You're a good pinch hitter. Thanks for being with us.

MR. BIGFORD: Well, we'll see. I was participating with the NOAA testifiers, Dave Kennedy and Ed Lavine, at the U.S. House of Representatives joint hearing on February 27, and I've been intimately involved with this event since January 4. But I am substituting for the other components of NOAA, specifically the National Oceanic Service, which is the home of the Hazardous Materials Response branch that Ed Lavine and Dave Kennedy work in. That is the part of NOAA that responds immediately in cooperation with the Coast Guard to spills of hazardous material.

I will summarize written testimony that has already been provided to the panel. What I am leaving out is information that has already been summarized by the Coast Guard.

Over the last decade the NOAA Scientific Support Team involving National Ocean Service, National Weather Service, National Marine Fisheries Service, and other parts of the agency have responded to over 2000 spills, nationwide, and even some internationally, such as in the Persian Gulf last year. NOAA's goal in all efforts is to provide the best scientific information on any technical question. So we serve as technical consultants to the on-scene coordinators, in this case, Captain Tweedie's office in Philadelphia. Our goal is to provide timely and useful information to enhance the effectiveness of the response operations and to reduce environmental injury.

In this particular case, the National Ocean Service, the National Marine Fisheries Service, and the National Weather Service have been supporting the Coast Guard and other State and Federal agencies in the entire Santa Clara event.

Specifically, on the effectiveness of the government's response so far -- and my comments are pretty much paralleling the train of questioning and thought at the Federal hearing on February 27 -- there were a lot of questions about the Federal government's response. We were notified by the Coast Guard promptly after the event. NOAA then worked continuously and aggressively with the U.S. Coast Guard Federal on-scene coordinator, especially providing chemical and particularly toxicological characteristics or arsenic in the marine environment.

Because arsenic trioxide is a poison that presents a potential toxic threat to marine organisms and humans, NOAA's team included scientific support coordinators to work with the Coast Guard. It included members of the National Weather Service who could provide immediate information through NOAA

Weather Radio to vessels, to fishermen, and to people along the coast, because at the time we weren't sure if the drums could wash ashore or not; also the National Marine Fisheries Service, which provided resource and industry concerns.

One of the first issues which the Coast Guard addressed was determining the exact location where the arsenic trioxide had been lost. At the Coast Guard's request, NOAA worked with other regional response team members, including many from New Jersey agencies, to recommend high priority search areas for the Navy and EPA search operations. Specifically we looked at areas of recent fishing activity that coincided with the track line of the vessel. So the fishing industry and the marine resources that could be harvested -- commercial and recreational -- and also the possible occurrence of marine mammals and other endangered species later on in the year, where those occurrences overlapped with the track line was the area of our primary focus from the beginning. That was reflected in the information that we gave to the Coast Guard.

The Coast Guard arranged for the Navy to use antisubmarine warfare mine sweeping helicopters to try and locate the arsenic trioxide drums. NOAA provided weather and ocean current information in support of those operations to try to predict the trajectory of the drums and the containers, once they were lost overboard.

There is concern about the potential impact to commercial and recreational fisheries in the areas where drums were lost. NOAA, the Food and Drug Administration, the Agency for Toxic Substances and Disease Registry --ATSDR-- the Public Health Service, and State agencies have been working together with fishermen since January to ensure that any seafood that might be contaminated does not reach consumers. Those concerns were high on our list in the beginning, but with the area closure and the location of the drums, the FDA, I believe, determined that the possibility of contamination was lessened,

but that's an issue that the FDA should really address. The National Marine Fishery Service does not get into seafood quality issues, per se.

Initial efforts on our part focused on broadcasting the potential locations of drums over NOAA Weather Radio and contacting by personal letter each clammer that was known to have harvested clams from the area in the month preceeding the event, thinking that perhaps they would return to the area. So a personal letter was written from the National Marine Fisheries Service to each of, I believe, 22 clammers known to have landed clams from that area. During these efforts NOAA communicated frequently with the New Jersey Public Health Department and other State agency officials, including some who are here today.

On February 6, the Secretary of Commerce closed the known drum locations area to fishing for 90 days under the emergency authority of the Magnuson Fishery Conservation and Management Act. That was effective February 6, and will end on May 12. That was in direct response from New Jersey on February 29, and from the Food and Drug Administration on February 28. To that point the agencies were not sure whether there was a threat to public health -- whether there was a threat from seafood contamination, but as a result of interagency telephone conference calls, it became clear in late January that a closure was warranted.

When the closure was-- When letters were received in the National Marine Fisheries Service to use its Magnuson Act's powers on January 28 and 29, we immediately drafted the necessary paperwork to make a formal announcement in the "Federal Register." The next day it was sent to Washington. It was cleared over the weekend in the Department of Commerce, and was published in the "Federal Register" February 12. The closure was effective when the materials were filed at the "Federal Register." Therefore, the closure was effective the

6th, but published the 12th; all in response to a request that was received six days earlier.

I have the coordinates for the closure for your information. I believe it was in the testimony, too -- the testimony that was presented to you earlier in writing.

NOAA, FDA, and State public health agencies have developed an at sea monitoring program for water, sediments, and shellfish to provide information on the presence and effects of arsenic in the marine environment. The NOAA vessel Gloria Michelle, stationed in Sandy Hook, began a four-day sampling schedule on February 3 to determine whether arsenic trioxide had been released into the environment. Our strategy was to surround the primary debris area and follow the track line in the Delaware Bay to see if we could find any traces above normal background levels of arsenic in the water, in sediments, or in shellfish -- clams.

Sampling efforts were hampered by bad weather and gear problems. Water and sediment sampling from all 23 stations were completed. It took about three or four days. All of the samples have been analyzed. All of the levels in water or sediments were background levels. Background levels range from 1.3 to 9.3 parts per million in the sediments, and approximately 2 to 3 parts per billion in the water, all perfectly normal and expected levels from past research by a range of State, Federal, and academic researchers in the Midatlantic.

Shellfish sampling was complicated by the inability of our gear, which was research gear, to penetrate the hard-packed bottom in that area. We are still pursuing a contract means of gathering the necessary shellfish to provide to the FDA so they can conduct comparable analysis on shellfish tissue. The Coast Guard and the National Marine Fisheries Service -- NOAA -- are working cooperatively on that. I think we are making progress, but the samples have not been collected yet.

At the Coast Guard's request, NOAA has been working with representatives from New Jersey and other Midatlantic states to evaluate options for salvage. You heard about that earlier. NOAA is definitely participating in that process.

I'd like to make a few comments on the threat of the incident to human health and the marine environment. Shortly after the event, NOAA conducted a literature search, and correlated literature information with expert consultation and trajectory model estimates to indicate the general circulation in the area and the possible effects of arsenic. Our information confirmed that currents on the Delaware shelf are weak and generally to the south or south-southwest. Typical current values are one-tenth to two-tenths of a knot. There are slight variations of mean flow with depth and slight variations with seasons, but the general circulation is also influenced by tides, winds, and storms. Arsenic trioxide that could leak into the bottom waters would be transported as a whiffy, filament of tainted waters from the source in the direction of the local current. However, when averaged over a relatively long period, the arsenic trioxide will move down coast south, or south-southwest, as a diffuse plume in an overall direction, as I just indicated.

Some mortality of a localized population of organisms may have occurred if some of the tops came off. That has not been shown yet. If there is a release, the mortality could continue until salvage is complete; only in the immediate vicinity of the spilled arsenic trioxide. That's the projection.

Many resources that inhabit the area are potentially affected by the spill. The waters off southern New Jersey and the mouth of Delaware Bay support right whales, the most endangered marine mammal; also humpback whales, fin whales, bottlenose dolphins, loggerhead turtles, and ridley turtles -- the most endangered sea turtle. So the most endangered marine



mammal and the most endangered sea turtle do inhabit those areas -- or that area. The right whales are there now. The sea turtles could be there after June 1, or thereabouts when the bottom waters reach about 15 degrees centigrade.

Fisheries in the area include surf clams and ocean tautogs. As waters warm and the fisheries return there could be mackerel, summer flounder, striped bass, bluefish, scup tuna, and other fisheries targeted by commercial and recreational vessels.

Arsenic trioxide toxicity has been the subject of intense scrutiny by NOAA and its consultants. The chemistry is complex. Inorganic forms of arsenic such as the compound of concern in this event are significantly more toxic than organic forms. Large amounts of arsenic from natural sources and human activities are cycled through coastal Atlantic waters and the spilled amount represents a small quantity -- small proportion -- of the total pool of arsenic. Its concentration, however, is definitely worthy of special concern.

The potential risk to human health from consumption of seafood items or from direct exposure to fishermen who may haul up drums is being expressed by the appropriate officials such as the State public health and FDA.

That concludes my comments. There was one question posed before that I would like to respond to -- the question from Assemblyman Oros. You raised the question of when the area that is now closed to fishing would reopen. The area was closed on February 6 and will reopen automatically on May 12, after a 90-day closure. Under the Magnuson Act we do have the authority to renew the emergency closure, so it could be closed again for another 90 days. What we do on May 12 -- or in the days leading up to May 12 -- depends in large part on salvage and our consultations with State and Federal agencies about the success of the salvage. But we do have the powers to renew the 90-day emergency closure.

The closure is not based on levels of arsenic found in the environment. It's not like other closures that are for public health based on concentrations of red tide organisms or levels of fecal coliform or anything like that. We do not have to prove a certain cleanliness of the environment or cleanliness of a seafood product to reopen the area. The area was closed largely to keep vessels out of the area and not to complicate search and salvage, and also to make sure the fishermen did not bring up any of the drums.

That concludes my remarks. I, too, am available for questions.

SENATOR KYRILLOS: Thank you very much, Mr. Bigford. We'll start with Assemblyman Nickles of Atlantic County.

ASSEMBLYMAN GAFFNEY: Assemblyman Nickles was called away.

SENATOR KYRILLOS: Oh, Assemblyman Nickles is no longer with us, at least for the moment.

ASSEMBLYMAN GAFFNEY: For the moment, no. He hopes to get back. He had another meeting. I have a couple of quick ones: Is your agency responsible for the actual testing of the shellfish, or are there other agencies going to be involved or involved in testing the shellfish?

MR. BIGFORD: Shellfish testing is entirely within the purview of the Food and Drug Administration. The National Oceanic and Atmospheric Administration was providing the platform, and now working with the Coast Guard to provide a contract platform, to make sure that we get samples of shellfish. Those samples will be handed over to the FDA and transported to their laboratory in Cincinnati, Ohio for analysis.

So FDA is handling shellfish analysis. NOAA handled water and sediment analysis.

ASSEMBLYMAN GAFFNEY: But none have been taken to this date, as far as you know?

MR. BIGFORD: None of the shellfish sampling-- Right. Shellfish have not been sampled so the analysis have not been started.

ASSEMBLYMAN GAFFNEY: Again, I guess I must have gotten the wrong impression in Washington on the first week of February. I don't have a transcript of that meeting, but it was my impression that some sampling had been done and there didn't appear to be any contamination.

MR. BIGFORD: That based on sediments and water, if that's true.

ASSEMBLYMAN GAFFNEY: But not shellfish?

MR. BIGFORD: Shellfish we have yet to prove that. All of the sediments and shellfish were collected in early February. Perhaps that's what you're thinking of. All those collections were February 3 to 6.

ASSEMBLYMAN GAFFNEY: Thank you.

SENATOR KYRILLOS: Thank you, Assemblyman Gaffney. Senator Ciesla, and then Senator Gormley.

SENATOR CIESLA: Thank you, Mr. Chairman. A couple of questions regarding the chronology here: I heard that the testing was done in early February and that there wasn't a problem, per se, in that you weren't able to determine any other levels other than normal background levels of arsenic in the environment. Has any testing been done subsequent to that at the immediate area? I ask the question because as I saw the video before, as the drums crushed, they were subject to corrosion, and I'm wondering if the problem isn't becoming more severe, and we haven't tested since that time?

MR. BIGFORD: We have not revisited the area to sample, and therefore we have not done any analysis since the first sampling at the first 23 sites. We're planning on working with the Coast Guard to discuss the need for further sampling in association with the salvage operations. So we have not been back.

SENATOR CIESLA: Is arsenic trioxide, when it's combined with seawater, corrosive to the drums? Or is the corrosion of the drums just normal corrosion that would be expected outside the chemical itself?

MR. BIGFORD: Outside my area of expertise. I really don't know.

SENATOR CIESLA: Is it your opinion that this procedure of testing, fully a month ago, is satisfactory in order to determine the level of risk, and perhaps need to push the bureauracuracy along?

MR. BIGFORD: I'm satisfied that the level of testing we did confirms that there has not been a release now.

SENATOR CIESLA: As of this date you're convinced that the February tests indicate that nothing has happened in the last month?

MR. BIGFORD: Well, as of the date of the collection, we're satisfied, but that's a short-term solution. We definitely support the Coast Guard's efforts to retrieve the drums, to recover the drums and to recover the contents, because a slow release will be a slow threat to resources and users of those resources. Further testing will have to confirm whether there is a release.

SENATOR CIESLA: I agree. Is there any schedule for that further testing to be done prior to the actual recovery operation commencing?

MR. BIGFORD: I don't think there is going to be any further testing other than the shellfish prior to recovery, but there could very well be testing or monitoring in association with recovery. We talked about that briefly with the Coast Guard before. We have to talk about that more.

SENATOR CIESLA: Senator, just a comment: It would be my recommendation that perhaps if we don't have a severe problem now, that testing occur immediately, again, in order to determine if any of the levels have been elevated. Obviously

the bureaucracy, in all cases, is extensive, and if we can minimize it in any way by acting expeditiously, I think it might be in our best interest.

Thank you, Mr. Bigford, for your testimony. I found it very informative.

SENATOR KYRILLOS: A very good point, Senator. Senator Gormley?

SENATOR GORMLEY: How much have you expended to date in terms of actual costs? Are you entitled to recover your costs involved in this process from the owner of the ship?

MR. BIGFORD: We have spent about \$15,000 in staff time and about \$100,000 in laboratory and ship time associated with the at-sea monitoring. All of it is covered within the expenses reported earlier by the Coast Guard. So, we expect to recover our expenses associated with this event.

SENATOR GORMLEY: Obviously, when you are used to dealing with State bureaucracy, and now-- I don't mean this in a negative sense, but obviously reading over the reports last night, and it came to light in your testimony a bit-- You said, "Well this is one area," or, "Oh, that's their area," or whatever. How many different agencies are involved in coping with the spill?

MR. BIGFORD: Well, my role was funneled directly through one person to the Coast Guard, so I did not deal with all the different agencies. Certainly several dozen.

SENATOR GORMLEY: Several dozen. I really can appreciate that, yes.

MR. BIGFORD: I dealt with one or two. My job was easier.

SENATOR GORMLEY: Okay.

MR. BIGFORD: I dealt with Ed Lavine and the Coast Guard people in Philadelphia.

SENATOR GORMLEY: In your experience, how many times have you dealt with spills of this nature? I mean, how many years have you been involved in this process?

MR. BIGFORD: Fifteen years, and I have dealt with a dozen or so spills; none of them of a chemical nature, almost always oil.

SENATOR GORMLEY: Okay. Let's reverse roles. Let's assume you are the legislator. What would you like to see changed? In other words, if you had the opportunity, on the State or Federal level, to say, "I think this would be an improvement to the system," what would you recommend? Even after 15 years you have one pet gripe. Come on. (laughter) There is something you would like to do.

Seriously, is there something you would like to change, either streamlining, which would lend a greater efficiency, or provide a greater level of protection, or certain regulations or rules -- changes? Is there anything you would like to see?

MR. BIGFORD: Nothing specific. I think this process was very streamlined. I think this process worked extremely well, with regular telephone conference calls and coordination by the Coast Guard and everybody else involved. This is the biggest event that I have been involved in. This has extended the longest time, because usually there is oil. It leaks from the hull, it is over in a couple of days, and you move on to the next stage. This has lingered. I think it has worked very well.

The larger issues related to area closures and power such as that, that might deserve further attention. But that is not my role, and it is not my right to speak up on that. But there certainly has been intense scrutiny about that.

SENATOR GORMLEY: Okay. Thank you.

SENATOR KYRILLOS: Thank you, Senator Gormley. Mr. Bigford, thank you very much for being with us.

MR. BIGFORD: You're welcome.

SENATOR KYRILLOS: Next we will have two representatives from New Jersey's Department of Environmental

Protection and Energy. From the Bureau of Emergency Response, Lance Miller, and from the Division of Fish, Game and Wildlife, Bruce Freeman. Both of you may come up, and we will begin with Mr. Miller.

A S S T. C O M M. L A N C E R. M I L L E R: Good morning -- good afternoon, Mr. Chairman.

SENATOR KYRILLOS: That's right. It's good to see you, Lance.

ASSISTANT COMMISSIONER MILLER: My name is Lance Miller. I am the Assistant Commissioner for the Site Remediation Program, New Jersey Department of Environmental Protection and Energy. I also serve as the Commissioner's Emergency Response Coordinator. With me, to my left, is Bruce Freeman, a Research Scientist with the Division of Fish, Game and Wildlife, and directly to my rear on the right is William Eisele, Chief of Marine Water Classification and Analysis. They will assist me in answering any questions the Joint Committee may have.

Testimony has been provided. I will just go over the points that have not been covered by the Coast Guard and NOAA thus far.

I am pleased to be here today to offer testimony regarding the 441 drums of arsenic trioxide which were lost from the vessel Snata Clara I approximately 30 miles east of Cape May. The loss of these drums has generated significant concern and activity in the Department of Environmental Protection and Energy and in many other State and Federal agencies. Initially, the potential risks to human health and to the marine and wildlife environment were unknown. The Department's position on this important issue has remained steadfast. The drums must be removed to eliminate any potential impact to the environment and to our fishing and tourist industries.

As Captain Tweedie covered the actual incident and the response, I will not go over that. The Coast Guard, and particularly Captain Tweedie, took quick and positive steps toward damage control in this situation. The use of Navy high technology mine sweepers was very effective in demonstrating an intent to resolve the issue through location and removal, if possible. The employment of remotely operated underwater video equipment further demonstrated the competence of the Coast Guard to locate the drums. I think it is nice to see that our military equipment can also be used for other purposes. I think years ago we would not have had the capability to find these drums, as we were able to this year and at this time.

These effective response actions on the part of the Coast Guard should not, however, overshadow the occurrence of the incident itself. As we all know, it is more desirable and less costly to prevent incidents of this type than to respond to them. Close attention needs to be paid by our Legislature to ensure that increased controls are instituted by the Federal government to more effectively regulate shipments of hazardous substances in our nation's waters.

In general, the response by the various Federal participating agencies has been excellent. The Regional Response Team structure functioned appropriately to identify the important issues and to focus the capabilities of all participants to resolve them. The Regional Response Team provided a forum for the environmental agencies of New Jersey and Delaware to voice their positions.

Captain Tweedie was selected as the Federal on-scene coordinator and convened a local entity, the Multi-Agency Local Response Team -- MALRT -- which is comprised of State, Federal, and local response agencies, to supplement the operations undertaken by the Regional Response Team. Historically, the MALRT has been very effective in coordinating mutually agreeable regional solutions to spills and it is functioning



well in this case. The Coast Guard, MALRT, and Captain Tweedie deserve commendation for their response actions so far. It is through these organizations that the Department has been providing input and receiving updates all along on this particular incident.

Captain Tweedie has provided the status of the Coast Guard's discussions with the responsible party and their schedule for commencing the recovery. The Department intends to carefully monitor this activity to ensure that the remedial actions occur quickly and that the remedial action is protective of human health and the environment.

With reference to my earlier statement regarding the need to ensure that increased controls are instituted by the Federal government to regulate shipments of hazardous substances in our nation's waters, I offer the following concerns:

A disturbing issue which has arisen during this response has to do with the degree of control exercised over coastal shippers of hazardous materials. Not only are there questions about the appropriateness of loading acutely hazardous materials in such a precarious manner as to allow the loss of half of a load during a predicted storm, but there were also other examples of questionable practice by either the dock loadmaster or the ship's master. As Captain Tweedie described, underwater videos indicated shipping containers marked with placards for sodium cyanide, a serious poison. According to ship's records, these containers were supposed to be carrying tungsten nuggets. This incident raised serious concern not only about the manifest's accuracy, but also as to what hazardous materials were really in the search area.

Again as Captain Tweedie indicated, investigations indicated that similar containers, which were not lost overboard, had not had their sodium cyanide placards removed from previous use, but, until the salvage operations actually

check and retrieve the submerged container, this will remain a concern. The Santa Clara I had other hazardous material-related problems in Baltimore and Charleston which further call into question the level of concern displayed by the officers and crew, but also the degree of control exercised by the Coast Guard over vessels loaded with hazardous material transiting only 25 miles to 30 miles off New Jersey shores. Perhaps it is time for the State and Federal Legislatures to revisit the regulatory and enforcement structure which governs the shipment of hazardous substances on our nation's waters.

The State of Delaware has suggested, and this agency concurs, that a hazardous cargo tracking system to address not only traffic within, but also between ports, would help to alleviate or at least to provide adequate documentation for response to such incidents in the future. It should also be noted that equipment which could have helped to locate the containers more quickly is technologically available. If the containers were equipped with this equipment -- which are called sonic pingers -- significant time and effort could have been saved. What these devices would do is, if a container went overboard, they would then be able to be activated and the container could be located by sonar.

In closing, the Department supported the ocean closure within the vicinity of the search not only to maintain the viability of the fish and shellfish harvest in other areas along the New Jersey coast, but also to reduce the risk to fishermen who might be working in this area. While there has been some economic loss associated with the closure of the search area, it is not a high harvest area in January and February. Restoring the area for active fishing before summer arrives is a priority that depends on the successful removal of the drums.

The Department remains committed to closely monitoring this situation, and will alert you to any problems or difficulties which we uncover.

Again, I thank you for this opportunity to speak on this very important issue. We would be happy to answer any of your questions.

SENATOR KYRILLOS: Thank you, Assistant Commissioner Miller. I know Mr. Freeman doesn't have prepared testimony, and I am sure there will be some questions for him. Is there anything you would like to say right now, or should we--

B R U C E F R E E M A N: Well, the only point I would like to reemphasize is what Assistant Commissioner Miller has indicated; that it is paramount that we remove these drums as quickly as possible. The impacts that have occurred, and will continue to occur even when these drums are removed, are having a negative impact on both our commercial and recreational fisheries, and certainly we are very much concerned about the resource.

SENATOR KYRILLOS: Thank you very much, Mr. Freeman.

Let me just say before we begin questions that I inadvertently skipped over New Jersey's environmental prosecutor, Steve Madonna, who will be testifying next.

Assemblyman Gaffney has returned. Shall we go to the Senate side, or would you like to begin?

ASSEMBLYMAN GAFFNEY: Turnabout is fair play.

SENATOR KYRILLOS: Go ahead if you have anything.

ASSEMBLYMAN GAFFNEY: No, I don't have anything.

SENATOR KYRILLOS: Okay. Assemblyman Oros?

ASSEMBLYMAN OROS: Yes, I have a couple of questions. With all the literature that has been given to us, somewhere in here there are some recommendations to leave the drums where they are, and so forth and so on. But I notice in your testimony, Assistant Commissioner Miller, you say that the drums must be removed. You are insisting that the drums must be removed?

ASSISTANT COMMISSIONER MILLER: Yes, Assemblyman, we are. That has been the position of the Department since we

became involved with the incident. If at all possible we want those drums removed from the ocean.

ASSEMBLYMAN OROS: Good. Does this cause any conflict with the Federal authorities? Can they overrule us on this?

ASSISTANT COMMISSIONER MILLER: Yes, to be succinct in my answer. They are the on-scene coordinator. They have the authority to make the decision as to whether or not a removal will occur. I am confident that in our workings with the Regional Response Team and the MALRT that our position has been expressed and has been accepted by those Federal authorities. I am confident that we will see a removal action occur.

ASSEMBLYMAN OROS: Okay. So, you are going to stick to your guns on that one?

ASSISTANT COMMISSIONER MILLER: Absolutely.

ASSEMBLYMAN OROS: Very good. Senator Gormley brought up a wonderful point here about recovering costs. You, of course, will hope to recover your costs also -- the costs the Department has spent on this?

ASSISTANT COMMISSIONER MILLER: That is correct. Any of our costs we would also seek to recover. At this point they have just been the expenditure of salary time, which we are documenting and will also attempt to recover.

ASSEMBLYMAN OROS: Thank you.

SENATOR KYRILLOS: Thank you, Assemblyman Oros. Senator Andrew Ciesla?

SENATOR CIESLA: A quick question, Joe. In terms of the Department's recommendation of alternative measures to find the material, doesn't it make more sense -- and we talked a little bit about this briefly coming in -- that when hazardous materials are shipped by these freighters, that you take the hazardous materials and put them in the hole, and take the Sony TVs and put them on the deck, so that if they fall off we are not worrying about them?

ASSISTANT COMMISSIONER MILLER: I think that is a good suggestion, Senator. I think that is something the Department will be discussing with the Coast Guard and other appropriate agencies as we continue to evaluate this situation and determine what changes are necessary in our statutes or regulations to ensure that we do not have a repeat of the situation in the future.

SENATOR CIESLA: Thank you.

Mr. Chairman, just because I have to leave for another engagement, I would just like to make one recommendation. From sitting here today, it seems to me that collectively the Federal and State governments -- all collectively -- agree that there is a need to remove these drums post haste. I believe, and I am hopeful, that the costs of removal will be borne by the people who have caused it. I know Senator Gormley is going to push for some establishment of strict liability laws, where there is no defense when this occurs. I would recommend that we urge the Federal government to do that immediately.

But, even more important, if we could, I would urge both the Senate and the Assembly, through your guidance and the Assembly Chairman's guidance, to urge the Federal government to begin this process of cleanup immediately. Besides the technical support which we have received here today, it makes common sense to minimize the problem, to get the job done now. I don't want to attend -- and I am sure none of us want to attend -- a meeting in the future where we find that the drums have corroded, all the lids have collectively come off, and a plume is migrating now slowly southward to the detriment of the entire environment.

I would urge, if we could, perhaps even as early as tomorrow, place something on the Senate and Assembly desks to urge the Federal government to speed the process up. That would be a fitting effort by this Committee.

I thank you for your consideration, and I apologize for having to attend another meeting.

SENATOR KYRILLOS: Thank you very much, Senator Ciesla. An excellent recommendation. In fact, I have asked Mr. Hutchinson, of the Office of Legislative Services, to begin drafting a resolution for our consideration that would urge the Federal government to move just as quickly as possible.

Senator Ciesla, thank you for being with us.

SENATOR CIESLA: Thank you, Mr. Chairman.

SENATOR KYRILLOS: Senator Gormley?

SENATOR GORMLEY: We have talked about one recommendation in terms of changing Federal regulations so that these types of materials would be stored in the hole, which I think screams of common sense, and I think everybody agrees with that. Are there any other specific recommendations in terms of regulatory changes on the Federal level that you think would be of a general benefit, or would be of a specific benefit, to DEPE in terms of working with the Federal government?

MR. BIGFORD: Senator, at this time I do not have any specific recommendations to make. We are evaluating what could be done. We will be talking, through our organizations, to the Coast Guard, both in Philadelphia and in New York, as to what types of changes should be instituted; whether we have the statutory authority to institute those changes; whether we need to do regulations; or whether we need either State or Federal legislation. We will certainly be continuing in that endeavor. You can rest assured that if we need State legislation, we will be back to you to recommend the enactment of that legislation.

SENATOR GORMLEY: And beyond that on the Federal level, we mentioned earlier strict liability in terms of not providing a way out, or a defense. Has there been any consideration of any recommendations like that to the Federal

level in terms of -- in other words, holding the company to such a standard that if this happens, a trial would be a meaningless exercise.

MR. BIGFORD: I, also, am not an attorney, Senator, but it is my understanding that -- and I deal with Superfund quite a bit in my responsibility -- the owner and operator of this vessel would be considered responsible parties under Superfund under the CERCLA and SARA amendments, and thus would be held strictly liable.

SENATOR GORMLEY: What do you estimate your costs to be so far?

MR. BIGFORD: At this point, I have not seen a computer printout of our salary costs. They are not significant at this point in time; probably on the order of \$20,000. That is a rough guesstimate at this point in terms of salary expenditures.

SENATOR GORMLEY: I appreciate your testimony. What is nice to hear at a hearing of this nature-- It is nice to hear good news in terms of a valid response system in which the State and the Federal government work very well together, instead of picking up the pieces and saying, "What can we construct?" There might be certain things in terms of rapidity of the cleanup, and whatever, but it would appear that the level of cooperation has been excellent, and it is to be complimented.

MR. BIGFORD: Thank you. I would agree with that.

SENATOR KYRILLOS: Thank you, Senator Gormley.

One final question, for Mr. Freeman. I take it we are now in the middle of the 90-day moratorium on fishing at the site. The representative from NOAA indicated that the Secretary of Commerce -- the United States Secretary of Commerce -- has the ability to extend that. Does the Division or the Department have any feelings as to whether or not that

would be a good idea, or whether that would be necessary, and will you be making any recommendations?

MR. FREEMAN: Well, in all likelihood, as Commander Tweedie indicated, the cleanup may take that amount of time. The principal concern we have for the closure -- and again, the closure was made by the Federal agency-- Since it is in the exclusive economic zone out of the jurisdiction of the State, we only make recommendations. But our concern is one for the fishermen, because of the fact that they do get these drums in their gear and they bring it up. A few grams of this ingested could very well lead to a death. So there is a very real problem we have with fishermen accidentally bringing up this arsenic.

Secondly, we are very much concerned that vessels stay clear of the area, to allow the salvage to occur as quickly as possible. The faster we get this material up from the bottom, the better everything is going to be.

Thirdly, in order to assure the consuming public that seafood is not taken from this area that may or may not be contaminated, and that we supported the closure.

We believe these reasons are very important and if, in fact, the second 90-day closure is necessary, then we certainly would support it. The safety factor, obviously, is one of great concern.

Under the Magnuson Fishery Conservation and Management Act, it is my understanding that the National Fishery Management Council could ask for an extension under their rule. The Secretary has emergency authority, as Mr. Bigford indicated, for 90 days, and then renewing that for another 90. But, in fact, the renewal might have to go beyond that if, in fact, these drums have not all been removed. We certainly look seriously at extending it, if need be.

ASSISTANT COMMISSIONER MILLER: And, Senator, we will be evaluating that as the salvage operation gets underway. We



will certainly be continuing to work with the various Federal authorities to make the Department's position known.

SENATOR KYRILLOS: Very good. Well, thank you, gentlemen, very much.

I know Assemblyman Gaffney is concerned, and rightfully so, about many of the mayors he represents who are here waiting to speak. I thank you for your patience. We have a couple more witnesses, and then we will hear from the mayoral delegation.

Next, Mr. Madonna. Steve Madonna, from New Jersey Department of Law and Public Safety, the Environmental Prosecutor.

S T E V E N J. M A D O N N A, ESQ.: Chairman Kyrillos, Chairman Oros, members of this joint hearing board. It is my pleasure as a State's Environmental Prosecutor to appear before you today with respect to your inquiry.

Initially, I'd like to commend the sensitivity of Senator Gormley, Assemblyman Gaffney, and Assemblyman Nickles, for sponsoring the particular hearing at this time, because I think that it's extremely important that we realize the significance -- or potential significance -- of this, and that having this hearing will focus attention on this particular event and underscore its significance and importance.

I requested the opportunity to appear and testify. I will be very brief. I requested that opportunity for the purpose of assuring this gathering, this board, of the interest and concern of the State Environmental Prosecutor, who, as you know, has been charged with the responsibility to enforce the criminal, civil, and administrative laws of this State, especially in the context of significance events such as this, and I want to assure you that although this happened 30 miles out, we are, in fact, interested and monitoring the activities and the facts as they are being developed.

I have been in touch and remain in constant touch with

the United States Attorney's Office and Region II -- the Regional Administrator and the Chief Criminal Investigator out of that region for EPA, and I am working through the Division of Criminal Justice and the State Police -- both Marine and Emergency Response Group; or Emergency Management Group -- to assure that we are, in fact, accumulating the facts. We will continue to monitor this and make an evaluation at such appropriate time in the future, as to whether or not there is the likelihood of proceeding in any particular mode of enforcement.

As you may be aware, criminal prosecution presents its own difficulties from the point of view of jurisdiction, and there are essentially two bases for exercising criminal jurisdiction in a situation such as that. One would be impact on the State of New Jersey, and the second would be, the criminal conduct occurring within the State of New Jersey or its territorial waters. As I said, we are monitoring very closely, in concert with the Federal authorities, the development of the facts with respect to either of these two bases for jurisdiction, and will make a determination at such point in the future as we have enough facts to do so.

That's essentially what I wanted to relate to you, and I would be happy to answer any questions if you might have any.

SENATOR KYRILLOS: Thank you, Mr. Madonna.

Assemblyman Gaffney?

ASSEMBLYMAN GAFFNEY: No, none other than I'm glad to hear that you're monitoring it because it sounds like we have the usual amount of loose ends here in coordinating between the Federal and the State agencies. I hope that one of the good results of this hearing will be getting all that out before the public, so the public knows what we know, so far, and what we need to know. And we're counting on your office to monitor any action that would need to be taken after the results are complete.

MR. MADONNA: There is every likelihood -- and I believe this would probably be the fourth such incident -- but there's every likelihood that an enforcement action in this context would in all probability -- assuming there were one -- be a joint action with the Federal government. That would be definitely so, should there be a criminal action. We would work jointly combining our resources as we've done in the past in several of these types of cases.

ASSEMBLYMAN GAFFNEY: Thank you.

That's all I had, Senator.

SENATOR KYRILLOS: Assemblyman Oros?

ASSEMBLYMAN OROS: I was very happy to hear, and so was most of our panel, that Commissioner Miller stated that those drums must be removed. That was their indication, and that makes us feel pretty good because he will pursue that as best he can, so, I guess your assurance will be right there with us, right?

MR. MADONNA: I concur in that recommendation completely.

ASSEMBLYMAN OROS: Wonderful. I guess one other question, what would have been the process if it had fallen in State waters?

MR. MADONNA: Okay. If it had fallen-- Well, let me just clarify. The basis of State jurisdiction would be proceeding under the Clean Water Enforcement Act. The Clean Water Enforcement Act defines a discharge to be the dumping -- or in this case, the falling into the water -- either in the waters of the State of New Jersey, or outside of the jurisdiction of the State of New Jersey with the pollutant entering the waters of the State of New Jersey.

It didn't have to happen within the three miles, but we would have the obligation to prove as an element of a crime that, in fact, the pollutant entered the waters of the State. In other words, it's a little better than just the three mile

zone, but there is a certain burden of proving that, in fact, the arsenic did find its way into the waters of the State. If we were confronted with that in that context in which we had that type of jurisdiction, we could proceed under the Clean Water Enforcement Act provision which is, I believe, a fourth-degree crime; and I would make certain observations about that.

The Clean Water Enforcement Act, as you know, was amended within the past year or so. I would make an observation: The base provisions; the knowing, intentional, or reckless violations of that Act are third-degree crimes, and as the number gets fourth, third, and second, it gets more serious as a crime. The third-degree provision would be upgraded one level to a second-degree, which in all probability means somebody goes to jail if the effect of the conduct was a significant adverse environmental effect, okay?

Now, that does not apply to the fourth-degree provision which is gross negligence. We're dealing with levels of culpability. If the conduct was gross negligence, it would be fourth-degree. It does not get moved up a degree because of the impact. The provisions of intentional, knowing, or reckless, would be moved from third to second, but not the fourth -- doesn't go fourth to third. I'm just making observations.

I'm also making an observation that significant adverse environmental impact which would apply, conceivably, had this happened in the waters and was, in fact, impacting on the fish life and the quality of the shellfish and what have you-- But an observation that I make in this context is that it is strictly a definition and a concept that is environmental. So, instead of it being, for instance, "significant impact," in which you would have an economic element in addition to the element impacting on the environment -- because the State of New Jersey could have an impact for

instance from the mere fact that they can no longer fish in a given area. You can have impacts not directly equated to the quality of the fish life, or whatever, that could have a significant impact in the sense of economic harm.

You know, there's nothing wrong with the concept, but there are limitations, and when you try and evaluate it in the context of a case like this, you begin to see the limitations. If it had, for instance, a threshold, if it caused economic harm of \$150,000, \$250,000, \$500,000, something like that, then, of course, it would also have the ability to upgrade -- kick the provision up one. So, I make that observation to the members of the Legislature.

I also would observe that while we are thinking about some of the -- shall we say -- inadequacies or shortcomings in our particular statutory scheme, as curious as it is, the Clean Water Enforcement Act still does not have a provision that allows for citizen's awards or bounty hunters -- people coming forward with information relevant to a crime, reporting information on a crime. We do not have that in the Clean Water Enforcement Act or Water Pollution Control Act. We have it for hazardous waste, we have it for ocean dumping, for solid waste, but we don't have it for one of the acts that we use most frequently, and that's Clean Water Enforcement. Okay?

ASSEMBLYMAN OROS: Very good. Thank you.

SENATOR KYRILLOS: Senator Gormley.

SENATOR GORMLEY: Is that in the original draft to the Clean Water Enforcement Act?

MR. MADONNA: Senator, that predates my position. I'm not really sure that it was. I tend to think it might have been, but I'm not positive. I'd abide your recollection.

SENATOR GORMLEY: I'm trying to piece that together.

On the Federal level, in terms of recommendations to Federal government -- and I think everybody's generally complimentary, obviously, about the level of cooperation --

what statutory changes on the Federal level would you make from your perspective? What recommendations would you make to the Federal government that would make it easier for you to deal with situations of this nature?

MR. MADONNA: Obviously, everybody has a concern for the impact of regulation and crimes on business, port activity, and what have you. It seems to me, you can make some logical distinctions when dealing with things like hazardous materials, or ultra hazardous materials, and make certain requirements, whether we get into things like manifesting -- and I don't think that I'd go that far-- But it would seem to me that it would not be an inappropriate recommendation, and I think that Assistant Commissioner Miller already alluded to it in the context of his comments: There's no reason, logical reason, why this kind of material should be above -- on the deck of a ship. It seems to me it would not be an unreasonable requirement that hazardous and ultra hazardous type materials be in the hold, below the ship. That would have solved the problem, as simple as that, in this particular context.

SENATOR GORMLEY: I know in terms of other materials, we have talked about manifesting before. Why not manifesting? Maybe it's more of an academic question, but why not when we're dealing with hazardous waste and substances of this level?

MR. MADONNA: I'm just kind of off-the-cuff on this one, okay? Because, Senator, my thinking is -- and I obviously could be confronted with facts that suggest otherwise -- that it is probably fairly common that we are moving hazardous chemicals and hazardous materials on ships. I think that's probably fairly common. So that the fact that there is a ship moving, and there's a manifest, would have one benefit: that is, when people respond, they know what they're responding to. But in the same case, if the paperwork that's required currently had been accurate and the markings on the containers had been accurate, we would also have the same information. So

from the point of view of just letting us know what's there, if they're not going to abide the regulation one way, I'm not so sure they're going to abide it another way.

If you get these manifests and it says that all of these ships are moving hazardous materials, I suggest to you that probably little would happen after that. I mean, what really would happen with all this information, assuming it were generating either into a computer or into a pile of manifests? Where would we go with all that from an enforcement point of view?

Now, if we got so sophisticated that we had, for instance, the Coast Guard Record of Violations in a computer, and the same computer could kick out that hazardous materials were in port on a particular ship because of this manifesting system, then I guess you could see some potential benefit. But adding a layer or another requirement without some clear benefit, I'm not so sure that it would be justified.

Let me point out something on the State level you might consider. You are familiar, I'm sure, as members of the Legislature, with the change that was made subsequent to the rash of oil spills that provided an extensive strict liability for, I believe, it was spills of oil over 100,000 gallons. I'm not recommending, because, as I say, you raised the question now, but I would recommend at least consideration that maybe that be expanded in concept to include such things as hazardous and ultra hazardous materials be within that same kind of a scheme, because, quite frankly, if this had occurred in the waters of the State, from the point of view of a civil penalty, my understanding is we would have \$50,000 a day, and I don't know that that's a terrible deterrent.

SENATOR GORMLEY: Well, seeing how that was my bill last year, I'll be more than happy to consider taking it beyond oil.

MR. MADONNA: And I commend you on the bill itself, but-- (laughter)

SENATOR GORMLEY: Well, I knew I always liked you.

MR. MADONNA: (laughter) It's Notre Dame, Senator.

SENATOR GORMLEY: That's it. It's Notre Dame.

The situation is one, therefore, that on the Federal level we're addressing the containers above the hole, but you don't see the need for any specific recommendation on the Federal level beyond that?

MR. MADONNA: I'd be unfairly precluding or possibly making a suggestion that wouldn't be based on enough facts. What I would suggest to the Committee is, I am working, as I've indicated, with the Commissioner of Region II, Regional Administrator Eristoff, his criminal people, and the United States Attorney's Office, and I would be happy to interrelate in that as the facts begin to develop -- as this board of inquiry comes in with facts -- and get back to the group with certain recommendations if the Federal government or I see shortcomings as we see the facts developing.

SENATOR GORMLEY: And on a State level you would consider the availability because-- If it were to be in State waters there would be a question as to whether you would have the ability to have strict liability available to you?

MR. MADONNA: From the civil or administrative point of view. I think that \$50,000 is probably-- I think we would all agree that's not much of a deterrent, but if you had the significant deterrent that you have in the bill that's in the oil spill bill, I think that would have people take a little more notice.

SENATOR GORMLEY: Okay, we'll pursue that. Thank you.

SENATOR KYRILLOS: Thank you Senator Gormley and Mr. Madonna. Thank you very much for coming today. We appreciate your remarks and your recommendation. We'll be following your progress as you work in conjunction with the Federal Justice Department on this matter and future ones.



MR. MADONNA: Thank you very much.

SENATOR KYRILLOS: Thank you, sir.

We have three mayors from Cape May County and the Mayor of Longport, Atlantic County that we'll hear from next. It's now 1:00 and if I could ask all the remaining witnesses to limit their remarks and time to three minutes or so, I know members of the Committee and members of the assembled audience will be grateful.

From Longport we have Mayor Howard Kupperman. Mayor?

**MAYOR HOWARD KUPPERMAN:** Thank you. I appreciate this. I was just advising Senator Gormley that I had an appearance at 1:00 in Superior Court that I had to go to, so thank you very much for calling me and letting me speak, and giving me this opportunity.

First of all I'd like to thank the Committee for having this hearing. I think it's something that's very much needed. A spill like this off the coast is very disastrous -- public relations-wise -- to our tourists, to our citizens, to the people coming down here. We get millions and millions of questions, and a panel like this that has an open discussion as to what's happening, why it happened, and what's going to be done about it, is of great good to us. The fact that the press is here covering it, I think, is also good because I'm looking forward to having some of the fears of the people alleviated when they read the papers tomorrow or watch TV tonight and see something is being done.

Mainly, I'm here just to echo the fears of the people who live here. The main fear is the fear of contamination; the fear of actual death. When you have chemicals like this in the water, the people are not aware of what can happen, but there's a great fear that they can somehow have our water system contaminated; the fish could be contaminated. We need reassurance as to what is going on; that we're not in danger.

The next point would be the tourism for the summer. It certainly will affect rentals -- of people coming down here for the season -- to think that they may have a bad beach or they may have chemicals in the water. Several years ago when we had these problems, it certainly affected everyone down here and our economy.

So, I'd like to, again, express my thanks to the panel for coming here and opening this up publicly and for the good information that I'm hearing today that the press is hearing, too, which I'm sure they will report. And, again, I'll look forward to possible legislation that this panel may come up with to help clean these things up if they happen again. Thank you very much.

SENATOR KYRILLOS: Mayor, thank you very much and thanks for being here to relay the concerns of your town.

Assemblyman Gaffney?

ASSEMBLYMAN GAFFNEY: That's all right, Howard. You can go to court. I'll see you at the Mayor's meeting at the end of the month.

I appreciate you coming out.

MAYOR KUPPERMAN: Thank you, Gerry.

SENATOR KYRILLOS: From Cape May County, the town of Avalon, Mayor Martin Pagliughi. Thank you, Mayor.

M A Y O R M A R T I N P A G L I U G H I: Senators, Assemblyman: I'm also representing-- As the President of the Cape May County League of Municipalities, I think I can speak for the majority of the towns.

I'd like to commend Senator Gormley and Assemblyman Gaffney for taking the bull by the horns on this issue. Cape May County was sort of wondering what's going on at the local level? We seem to hear everything, coming out of the Federal government.

I'm not going to get into the prepared statement, but I'd like to commend you on the stand that it looks like you're

going to take: that is to demand that these drums be removed from the ocean. I don't have to tell the legislators from Atlantic County that Cumberland County is in the same boat. Our heaviest industry in the County is tourism, our commercial fishing, and our sport fishing.

The environmental impact study that's been talked about -- and it's probably going to have to be done anyway as far as I'm concerned -- is of second importance right now. The perception of the drums being in the water, I think, is the biggest detriment to the County of Cape May with regards to tourism and sport fishing. We don't have to go back too many years when we remember the problem with a few dead dolphins that washed up on the beach. The perception was there.

The economic problem of 1987 was devastating to Cape May County and to the entire State of New Jersey, not just on a regional basis as Cape May County, but there were estimates of over a couple of hundred million dollars in lost anticipated sales tax and lost gasoline tax from that problem that we had. We talk about an ecosystem, how important it is to control pollution within the Atlantic Ocean and how environmentally sensitive it is, but there's a very fine line between the environment and our tourism and commercial fishing industry as far as the economy goes in Cape May County. The slightest little perception or impact on that tourism would have a devastating effect statewide.

I'd also like to caution the panel on the possibility of New Jersey doing some type of knee-jerk reaction. I think it should be a coordinated regional approach of any type of tracking of hazardous waste or any type of inspection or what have you, as far as transporting it. It should be a national joint effort between all the states. We saw what problems we got into when we went into our own ocean testing. I think the big push now is it should be a uniformed ocean testing up and down the coast. So, I'd like to caution you that it be a

coordinated effort between the other coastal states on the entire Atlantic seaboard.

Gentlemen, again, I'm going to echo, I guess, what's going to be said again and again and again: that the priority here, I believe, is to have those drums removed as soon as possible.

I'd like to thank you for inviting the Borough of Avalon here today. Thank you.

SENATOR KYRILLOS: Mayor, thank you very much. It's good to see you again.

Next, we have from Wildwood Crest, the Mayor of the town, Joyce Gould.

M A Y O R J O Y C E G O U L D: Gentlemen, thank you. Welcome to our little part of the world.

First of all, I will say to you I'm glad you're having these hearings, but where have you been? Because this is two months ago that this happened, and already the people in Cape May County, the people in Wildwood Crest who are literally living on top of these drums, are very frightened and very worried what their summer has in store for them.

My little borough is worth over \$800 million. I would hate to see no income come in from the summer season. Because this is what we're talking about. We're talking about the perception that if this arsenic should leak, and harm come to people, than an entire industry from the southern New Jersey shore, the Wildwoods, in particular-- We have no idea of how much we make to give to the State in sales tax, but it's certainly monumental numbers for June, July, and August, now into September.

The Governor's shore summit that he had last month where many people talked about the arsenic, and there were some things that came up that were really-- I wanted to read to you some minutes that came back to me from Mr. Neafsey, from the DEP: "Appreciating that accidents of this type can happen

during severe storms, a review of the loading procedures, container identification, and the need for electronic beams to mark the locations of containers lost at sea, is recommended."

Assemblyman Oros, I, too, am in favor that these drums be lifted immediately; be out; be contained; be gone.

Thank you, gentlemen.

SENATOR KYRILLOS: Mayor, thank you very much for being here and for sharing our concern.

Please know that if this accident had taken place within the three-mile State waters, this Joint Committee would have reconvened much sooner. But it is a Federal matter. We are anticipating -- hoping for a very strong tourism season. I don't think this accident should prevent that from happening.

Thank you for being here.

We have, from Cape May City, Mayor Gerry Gaffney.

ASSEMBLYMAN GAFFNEY: This is not a conspiracy. Mayor, you can just--

MAYOR WILLIAM G. GAFFNEY: No relation. No relation.

Mr. Chairman, members of Committee, I'm Gerry Gaffney. I'm the Mayor of Cape May City.

Today I directed our City Manager to Fax to you a rather lengthy document indicating our concern: "The City of Cape May--" I will not read that document. I hope that you all have copies of it. There are seven major points. Have you received the document possibly? (affirmative response) Fine.

There are seven major points there, all of which, I think, have already been addressed today.

What we are faced with in the City of Cape May -- this is in our own backyard -- thirty miles off our shore-- Tourism is our biggest livelihood. Fishing is certainly paramount. We have a very large harbor where we do a lot of fishing -- a lot of fishing boats, commercial and sport fishing.

This probably could be the most devastating thing to the City of Cape May as well as to the entire South Jersey shoreline.

As a side comment, I heard earlier this morning-- I think it was Senator Gormley who asked concerning insurance and a bond. I have been in the insurance business for many, many years, and I think it's important to note that insurance on a vessel running into, say, a ferry boat in the Delaware Bay is one thing; that's legal liability. But I think that there's a possibility of a pollution exclusion within the insurance contract which would negate possible coverage on behalf of the guilty party.

Everything that has been said here today is very, very technical. The party that dropped the drums, they were legally liable. I don't think there's any question about that at all. The liability rests with them. However, we may not be able to recover in view of that insurance exclusion, if, in fact, there is one in their policy. I think that's something the Committee should be aware of and should explore.

I can only echo -- I'll try to be brief here -- the concerns of the City of Cape May and all the other shore towns. The Mayor of Wildwood Crest made a very good point. Why did it take so long to get this hearing together? That's also my concern.

We are facing a tourist season. It begins in Cape May on or about May 1. Our tourism is based on our beaches, our restaurants, our fishing, our sport fishing. If one incident occurs on the beaches, whether it's a natural caused death of a dolphin or a sea turtle, people are going to panic. Tourism could be affected tremendously. I urge this Committee to move forward as quickly as possible to remove those drums to contain whatever problem there is. When I heard the gentleman from NOAA speak, and he stated what happens when the arsenic leaks, and how it flows, I was hoping he would say -- and I'm not a

scientist -- but I was hoping he would say that when it reaches a certain stage it will break apart, dissipate. He didn't say that. He didn't say that. He said it's going to drift, and it's going to drift southwest. Well, he predicts it's going to drift southwest, but what if it doesn't and it ends up-- It's frightening. It's absolutely frightening. The effects it can have on the tourism industry in this State are devastating.

So, gentlemen, in conclusion, I urge you to do all you possibly can to move this forward, get it accomplished, get it corrected prior to our tourist season. I thank you for your concern and thank you for hearing me.

SENATOR KYRILLOS: Thank you very much, Mayor, and allow me to suggest that perhaps a resolution to your Federal legislators or to your United States Senators would be in order to expedite what we all hope to expedite; the removal of those drums. Thank you, Mayor.

Next, we have from Rutgers University Institute for Marine and Coastal Sciences, Dr. Fred Grassle. I'm sorry, Dr. Fred Grassle, Marine Ecologist and Oceanographer. Dr. Grassle? J. F R E D E R I C K G R A S S L E, Ph.D.: Thank you, Mr. Chairman, and Committee members. I'm simply here to offer expert comment on scientific issues that may be raised in the course of these proceedings.

First of all, I would congratulate the Coast Guard working with NOAA and DEPE, on their quick response and particularly their decisive action in obtaining approval for removing the drums from the continental shelf. I also concur with the comments that were made by the representatives of the Coast Guard, NOAA, and DEPE.

I, and other Rutgers faculty associated with the Institute of Marine and Coastal Sciences, have been conducting research on sea life and movements of sediments on the continental shelf off this coast. We have no direct responsibility to recommend a course of action or conduct

research on this specific problem. However, there are a couple of points that I would briefly like to make.

I appreciate the concerns that the mayors have stated, and I'm sure those concerns are shared by the Committee and our Federal representatives. As an outside expert, I would like to stress the point that has not been explicitly stated. There is no threat to tourists or coastal citizens from swimming, diving, or fishing on our shore from this toxic material on the continental shelf.

There's only one other comment that I would like to make and that is, when the salvage takes place, it's very important to collect clams and sediments from the area to provide similar guarantees that there's no contamination of shellfish from our coast.

I'm happy to take any questions.

SENATOR KYRILLOS: Dr. Grassle, thank you very much. Thank you for mentioning the specific threat to bathers, divers, etc. in the ocean. That was a question I was going to ask you. I think it's important for local officials and local chambers of commerce, and others interested in promoting tourism this summer that they get that message out; that they don't overstate the case and, in effect, drive away people from coming to the shore this summer. They have, in my opinion, an obligation to make that case, and I thank you for pointing that out to us today.

Any other questions? (negative response)

Dr. Grassle, thank you very much for being with us. We look forward to seeing you often before our Committee.

Next, from the Jersey Coast Anglers, Tom Fote.

Is Dolores Phillips here from the New Jersey Environmental Federation? (negative response)

Tom, welcome.

T O M F O T E: Thank you for having this, Senator Kyrillos. We would like to thank you and Assemblyman Rooney, the Committee Chairman, for allowing this hearing to be heard.



I have a letter here from Clean Ocean Action. I'm not going to read the letter. Basically, it was sent January 6 to the Governor and requested a lot of the questions that were answered here about a lot of the problems -- a lot of the concerns. As I said, a lot of these answers have been put forth here, so I'm just going to give this letter to you and you can answer the questions for Clean Ocean Action. Cindy Zipf expressed her concern that if she would have had some of these answers earlier, she could have gotten it out in her releases and quelled a lot of the doubts that were there.

One of the other hats that I wear is Commissioner of the Atlantic States Marine Fisheries Commission from the State of New Jersey. And right now, as Commissioner, I've been appointed Chairman of the Habitat Committee for the Atlantic States Marine Fisheries Commission.

This is a serious issue for the whole Atlantic coast, and the whole Pacific coast, and the whole Gulf coast. This issue could happen anyplace, and it could ruin an industry; it could ruin tourism as you all know. Tom Bigford has volunteered to come to the Habitat Committee of the Atlantic States Marine Fisheries Commission and discuss this matter and discuss the laws that we want to recommend to the Federal Legislature. I mean, these proposed bills here do not take into consideration the economic cost of the commercial fisherman, of the sport fisherman, and the tourist industry. Maybe that should be part of the Federal bill. I know Congressman Hughes has said that they're two years away from working on that treaty, and I think we should push for a shorter span, because, as you know, we lose-- The fishing industry in this State is worth \$2.5 billion between the commercial and recreational sector. That's livelihoods; that's tens of thousands of jobs on the whole east coast of New Jersey.

That's it. I'm going to make it real short because I know there are other people who would like to discuss--

Hopefully, if you want to contact me about the Commission or any of the stuff you would like me to take to the Atlantic States Marine Fisheries Commission which represents the 14 states on the eastern seaboard, I'll take that information to them. Thank you.

SENATOR KYRILLOS: Tom, thank you very much for being here, and thank you for your offer. Please send our best to Cindy Zipf.

Next -- and we have four more witnesses -- the Environmental Officer from Ocean City, Ms. Kitt Wright. Is she with us?

K I T T W R I G H T: (speaking from audience) I have no prepared statement at this time.

SENATOR KYRILLOS: Okay. Thank you for being with us Ms. Wright. We acknowledge your concern.

The Environmental Commissioner from Cape May City, Charlotte Todd.

ASSEMBLYMAN GAFFNEY: Senator, I think Ms. Wright did have-- Did you change your mind?

MS. WRIGHT: (speaking from audience) Would you take a statement from our Executive Director of the Chamber of Commerce in Ocean City, instead?

SENATOR KYRILLOS: That's fine. We can call her up in a little bit, or if you prefer you can enter her testimony into the official record. We'll get to you in just a bit.

Ms. Todd, thank you.

ASSEMBLYMAN GAFFNEY: Thanks for waiting.

C H A R L O T T E T O D D: Our Environmental Commission works aggressively within the City to protect and improve the quality of the ocean waters through nonpoint source pollution procedures for the State of New Jersey's coast and the waters which are not only under the jurisdiction of the State of New Jersey, but also those waters under the domain of the Federal government, including the 200-mile exclusion economic zone. We

work aggressively to protect the health of the fish, the shellfish, the sea birds, the marine mammals, and the ocean waters adjacent to and along the New Jersey coast. We make comments regularly to CAFRA applications. We also work to protect and improve the quality of the New Jersey beaches: to prevent them from receiving washed up debris. We work to protect all industries and commercial concerns on or near the New Jersey coast, whose economic livelihood depends on ocean waters and coastline recreation, fishing, and other coastal related activities. Primarily, we are concerned that future generations having to inherit an unhealthy natural resource, an unhealthy environment, or unhealthy food, is not within the jurisdiction of our particular agency.

We recommend that you, as a group, recommend to the Federal government, an increase in the Coast Guard's budget to monitor the coastal waters and the open sea by conducting surprise visits aboard vessels. We also endorse more funding for scientific research in contamination effects on the health of fish, species' production or reduction, and habitat availability.

We really appreciate the fact that you have given us this time to make our comments known. We also have some other specific suggestions.

I have been hearing about what kind of appraisals have been made about these drums, but I'm more concerned now that I have learned that the lids are partially disrupted. This is a powder form, and I wonder we don't have immediate types of results. So, I think that we need that testing immediately. I think that has been suggested today.

We also want you to investigate at the Federal level how these types of incidents could be limited in the future. Certainly this is something that we have to be very, very concerned about in terms of our particular town or any coastal waters within the United States. We also want to know in terms of responding to emergencies.

On land we have something called 911, and we get results for people's health and other types of emergencies. We wonder if there can't be that same kind of immediate assistance in clearing up problems such as this chemical spill? We really had hoped that it would have been taken care of by this time. We also want to know, could you insist that this cleanup takes place and we would hope that it would be expedited just as soon as possible -- tomorrow if at all possible; that the State be a part of that monitoring, so that we know exactly how the cleanup goes along.

I wish to thank you for allowing this comment time, and we as a Commission will continue to let our thoughts be known to you.

SENATOR KYRILLOS: Thank you very much for your thoughtful remarks.

Next, Will Kahane, from the Cape May Hotel/Motel Association.

W I L L I A M K A H A N E: Thank you, gentlemen of the Committee for letting me speak. It's been said very often in this Committee in testimony and in the press that this has taken place 30 miles off the coast of Cape May, and we are from Cape May. It's in our backyard. I'm glad this is going on; this Committee is happening. I would have preferred that it happened in Cape May so that you could hear some of the comments of the citizens of that area. But, be that as it may, I'm going to try and convey some of the feelings of our members of the Hotel/Motel Association.

Captain Tweedie said that this vessel was registered -- Panama registry. I'm wondering if that has any bearing on the safety and the equipment -- the level of equipment that's available on these ships, and the safety of these ships because every time you hear about these things, it seems to be Liberian or Panamanian registry ships?

Another question that I had of Captain Tweedie was that the Coast Guard recommended that oil tankers have double hulls. Now this was never approved by the Federal government mainly because the oil companies, I believe, felt that the cost was too expensive to build tankers with double hulls. But we see with the Exxon Valdez and other incidents that maybe the preventative cost of double hull tankers would be cheaper in the long run.

It seems to me that when we have to do anything on land, like, for example, people in our industry, if we want to build a motel we would need to get various approvals -- lots of approvals -- from CAFRA, and other government agencies before we make any moves. I was astounded when Captain Tweedie said that when you transport hazardous materials on a vessel, the Coast Guard doesn't have to be notified. Apparently there are no permits required.

I think that this is outrageous. If you're going to be endangering public safety by transporting hazardous materials, I think that there should be some permits required of these people, not only on sea, but on land as well.

Perception is often more important than reality as has been stated by some of the other mayors here, and we are afraid that the perception of pollution by these toxic chemicals in our ocean are going to drive tourists away. We urge you-- Apparently, on February 6 money was approved to salvage these drums and so far nothing has happened except that it's been going out to bids. If the money has been approved as of February 6, we would urge you to ask the Federal government to expedite this salvage, along with everyone else who has requested. I'm sure you're going to do that.

Thank you very much.

SENATOR KYRILLOS: Thank you very much. We will be asking the Federal government to expedite things. I will remind everyone of Dr. Grassle's comments, that there is no danger to swimmers, and that is something that--

That is a message that we must get out there to people in the months before the summer season, and not overstate our concerns, for those who will recreate in June, July, and August.

We have one more scheduled speaker, and then I'll ask the representative from Cape May if she'd like to speak. From the Cape May County Party and Charter Boat Association, Neil Robbins.

**N E I L R O B B I N S:** Thank you very much, Mr. Chairman, for giving us an opportunity to find out more information about this today. As a lot of people have already stated, a lot of our questions have already been answered here. We weren't quite sure what we were going to find out when we came to this hearing today.

A timetable seems to be the most important thing about this whole effort because, as we well know, steel canisters won't last very long in seawater. It's very important that we get to them. If they start to crumble, recovery will be impossible, and then you will have a long-term problem here.

The economic impact on fishing and diving in this area is going to be pretty extensive. There's a lot of the members in my Association that make a living in this immediate area -- diving boats, fishing boats. They depend on this area to a certain degree. So, I know it's going to economically impact those fellows who have to fish there this spring. I'm one of them.

We want to try to definitely get around a prolonged, negative press coverage into the summer season. It's very imperative that we get on top of that problem. Also, an environmental impact study is an absolute necessity, to keep track of the residual problems of this spill. I'm sure there's going to be residual problems. I'm sure they won't track down every last canister. It's very important that this impact study is followed up. Thank you very much.

SENATOR KYRILLOS: Thank you very much, Mr. Robbins. We appreciate your being here. Cape May Chamber, would you like to say something, or should we enter your--

J O A N N D E L V E S C I O: Ocean City.

SENATOR KYRILLOS: I'm sorry, Ocean City. Excuse me.

MS. DELVESCIO: Thank you. My name is Joann Delvescio. I'm the Executive Director of the Ocean City Chamber of Commerce, and also the Tourism Commission in Ocean City. I would just like to reiterate what has already been stated regarding the removal of the drums. Our tourist season, as you know, is around the corner. One of the concerns that we have in Ocean City is-- My office is at the Information Center, and we have an 800 number. Each and every time a story runs on the national news or on the networks, the phones light up. We get hundreds of telephone calls, and we have been receiving hundreds of phone calls, from people who are looking to come into the Ocean City area to vacation this summer, as to whether or not it's going to be safe to swim. So, there is going to be some impact on tourism if something is not done almost immediately.

I think it's wonderful that Dr. Grassle stated that there is no threat to swimmers. However, there are so many various opinions. I mean, today it will come out that there is no threat to swimmers, and next week another opinion will come out and say that there is a threat. I think we need to be able to get one voice out there stating, you know, exactly what the concerns are, or if there are any concerns. We can't have the Doctor saying that there is no threat, and then the State or the Federal -- or the Coast Guard officials coming out and stating that there is a threat. There needs to be one opinion as to what is going to be happening. Tourism, as you know, is the number three industry in the State of New Jersey, and it certainly is going to impact all of us.

Thank you very much.

SENATOR KYRILLOS: Thank you very much for your very thoughtful comments.

Is there anyone else in the audience I have not called who would like to speak? (affirmative response from audience) Sir?

R O D B O O N E: I didn't get on the list. I'm sorry. I don't hear and I'm old, but I want to emphasize the fact that I am President of the American Association of Retired Persons in Ocean City. We have 900 members, one of the largest memberships in the State.

Ever since this happened they have been very upset. I personally do not think it is just a matter of New Jersey -- Ocean City, Cape May. These fish cannot be controlled that go through this arsenic if the containers break and allow any of the arsenic -- or whatever the other stuff is -- out. They are unlike cattle. You can put them in a corral and keep them there. This may not appear for three or four years.

What bothers me, personally, is the buck passing of the Coast Guard. In other words, this was an important matter when they first found it out. I immediately went over to the Coast Guard Station in Ocean City and asked them about it. They referred me down to the central-- I called Philadelphia. I told them, "This is bad. It is bad for everybody concerned, and it could cause an epidemic," or whatever arsenic poisoning does. I don't know.

But anyway, it has been kicked around. It has been two-and-a-half months since that thing happened. I certainly wish you boys would get on the ball and get the ones who are supposed to get those cans out of there. Get them up, because otherwise I would suggest that you don't eat fish. The shad season is running, and you cannot tell where the shad is going to go.

Thank you.

SENATOR KYRILLOS: Thank you very much, sir.



Our final speaker. Yes, sir?

K E N N Y L A W S: (speaking from audience) Thank you, sir. My name is Kenny Laws. I am a resident of this area.

My basic concern is-- Well, it is just like what happened during the filming of "Jaws," when we get to the panic of the economic impact and everything.

One of the things that I would like to see happen is some type of research being done, regardless of whether it is done by the EPA or whomever, to have disposable waste shipped in floatable types of containers or drums, so they could be easily spotted and easily retrieved. One of the things that they have not done-- (remainder of sentence indiscernible; no microphone) This is probably one of the greatest catastrophes that has happened to our shore. It could be worse than anything else could ever do to our shores.

I congratulate you, gentlemen, for trying to do something about it, but I would like to see some research and development in the way we transport these hazardous materials, so they could easily come to the surface and be retrieved, and not create this type of impact on us.

Thank you very much.

SENATOR KYRILLOS: Thank you, sir. And for the record, will you just state your name?

MR. LAWS: My name is Kenny Laws. I am a local resident, but we are also scoutmasters and we have a bunch of kids. One thing we tell them is, "Don't smoke, drink, use drugs, or eat fish." (laughter)

SENATOR KYRILLOS: Mostly good advice. Thank you, sir.

Let me conclude, speaking on behalf of Assemblyman Oros and myself, by thanking Assemblyman Gaffney for really driving this issue forward and for seeing to it that this Joint Committee convened, and convened here in Atlantic City. Assemblyman, I thank you very much for your efforts. I know that all of us on the Committee will be going through the

written testimony, and the transcript, when it is available, and talking with all available experts and folks from the Federal and State governments, to see what it is that the State government can do, on our own, and what we can urge the Federal government to do. It is very frustrating, because this is a Federal matter. We would like to do more, but to some extent our hands are tied.

We will be following this issue very closely and carefully, and we will report back by appropriate means to you on our progress, and on the progress of the Federal government. There will be a written transcript of today's hearing. I would recommend that you contact your local State Senator or Assemblyman, or directly to the Office of Legislative Services in Trenton, if you would like a copy.

With that, I will conclude the hearing. Gentlemen, thank you, and thank you, ladies and gentlemen.

**(HEARING CONCLUDED)**

APPENDIX



JOINT LEGISLATIVE PANEL  
ON ARSENIC DRUM SPILL

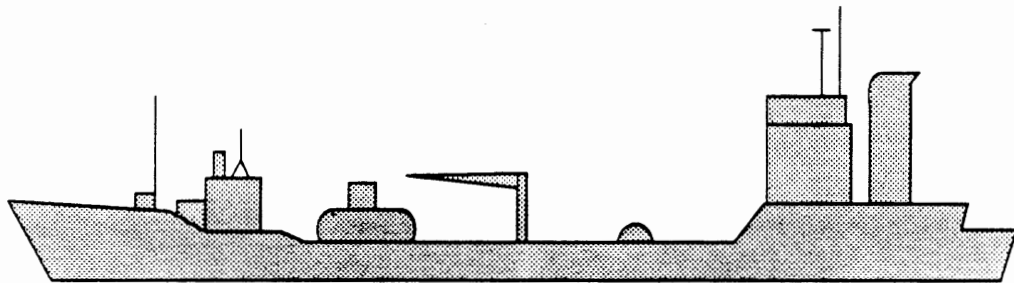
March 11, 1992

11 a.m.

Atlantic County Office Building Auditorium

Sponsored by:

**Senator Bill Gormley**  
**Assemblyman John Gaffney**  
**Assemblyman Fred Nickles**



**Senate Committee on Coastal Resources and Tourism**  
**Chaired by Senator Joseph Kyrillos**  
**Assembly Committee on Energy and Hazardous Waste**  
**Chaired by Assemblyman Ernie Oros**

## **AGENDA**

- 1 Introduction and welcoming:  
Assemblyman Fred Nickles
- 2 Introduction and brief comments from  
the panelists

### **Senate Coastal Resources & Tourism Committee**

**Chairman, Joseph Kyrillos  
Vice Chairman, Andrew Clesla  
James Caflero  
Joseph Palaia  
Walter Rand  
Raymond Lesniak**

### **Assembly Energy & Hazardous Waste Committee**

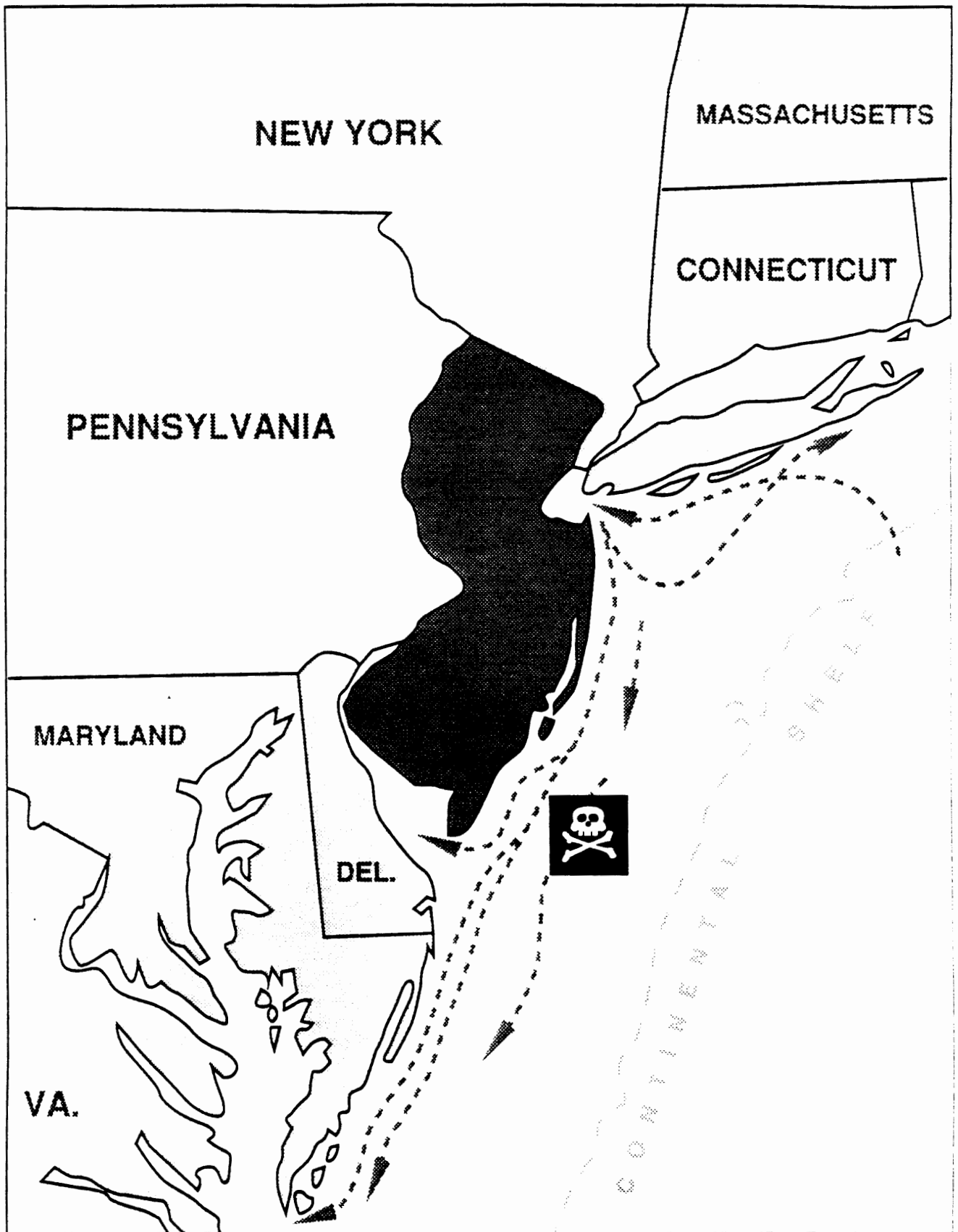
**Chairman, John Rooney  
Vice Chairman, Ernie Oros  
Arthur Albohn  
David Russo  
Barbara Wright  
Anthony Improvuto  
Robert Smith**

- 3 Topic of discussion (a list of witnesses  
scheduled to testify is attached)

The purpose of today's forum is to serve as  
a clearinghouse for information regarding  
the recent spill of 441 arsenic drums off the  
coast of Cape May. The panel will seek  
information regarding:

- \* the events which led to this accident.
- \*The environmental and economic impact  
of this accident
- \* the proper role of the state of New Jersey  
in response to the accident.

- 4 Closing remarks from panelists



**CONFIRMED WITNESSES FOR JOINT COMMITTEE HEARING  
ON THE ARSENIC DRUM INCIDENT AS OF 03/10/92**

**SPEAKERS**

Capt. Richard Tweedie, US Coast Guard, Marine Safety Office,  
Philadelphia

Edwin Lavine, Scientific Support Coordinator, NOAA Hazardous  
Materials Response & Assessment

Steve Madonna, Environmental Prosecutor/Assistant Attorney  
General, NJ Dept. Of Law & Public Safety

Lance Miller, NJ-DEPE Bureau of Emergency Response

Bruce Freeman, NJ-DEPE Division of Fish, Game & Wildlife

Dr. Fred Grassle, Marine Ecologist/Oceanographer, Director -  
Institute for Marine & Coastal Sciences, Rutgers  
University

Cindy Zipf, Clean Ocean Action

Dolores Phillips, NJ Environmental Federation

Mrs. Kitt Wright, Environmental Officer, Ocean City, Cape May  
County

Martin Pagliughi, Mayor, Avalon, Cape May County

Howard Kupperman, Mayor, Longport, Atlantic County

Joyce Gould, Mayor, Wildwood Crest, Cape May County

**OBSERVERS**

Thomas E. Bigford, Chief, NOAA Habitat Resources Protection  
Division (on hand to answer questions)

Norm Miller, NJ-DEPE Legislative Affairs Office

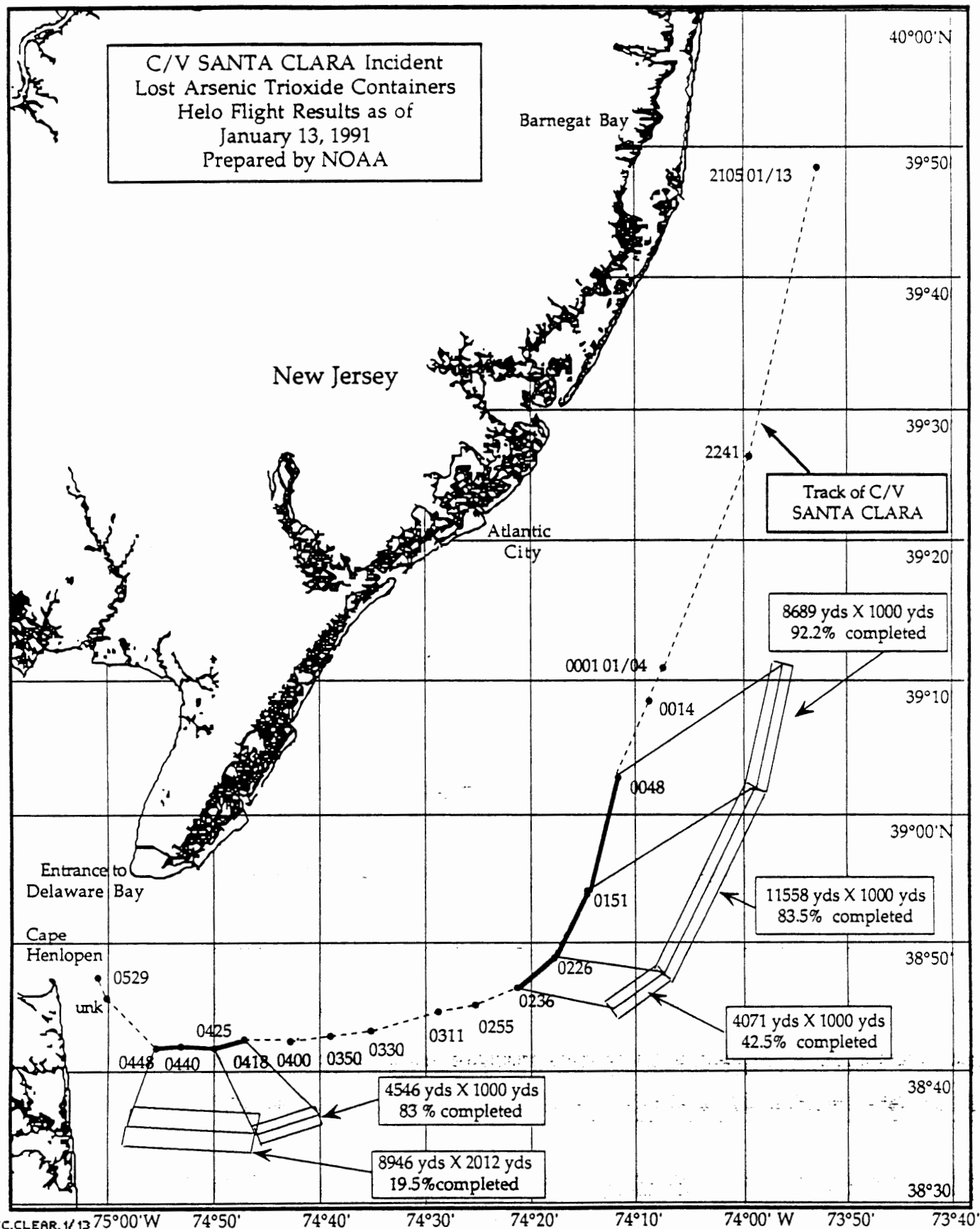
Stuart Farrell, Center for Coastal Studies, Stockton State  
College

Scott Becker, Mayor, Ventnor, Atlantic County

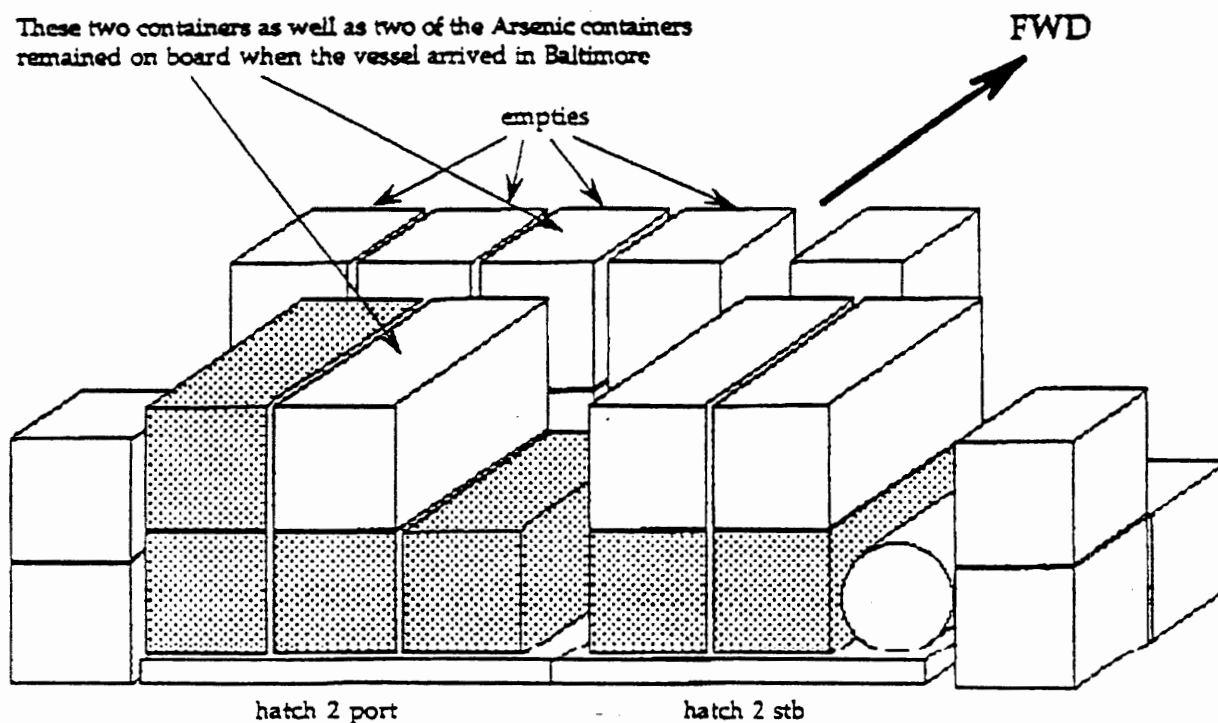
Bill Ross, Mayor, Margate, Atlantic County

representative, NJ Dept. of Health





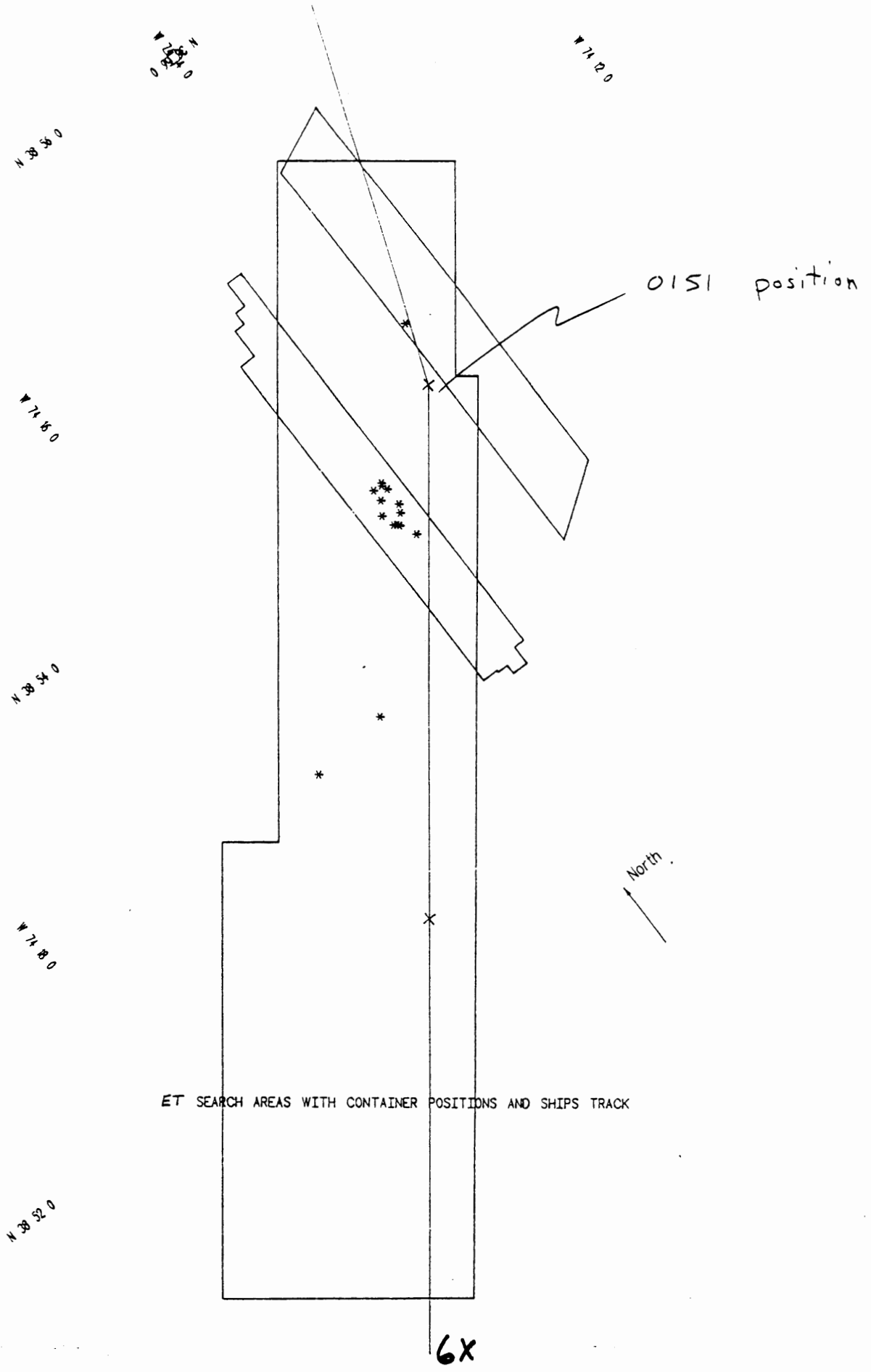
4x



Forty foot shaded containers were loaded with Arsenic Trioxide  
Four of the six were lost overboard

Original arrangement of containers  
on the C/V SANTA CLARA on and  
outboard of hatch 2

5X





State of New Jersey  
Department of Environmental Protection and Energy

Site Remediation Program

CN 028

Trenton, NJ 08625-0028

Tel. # 609-292-1250

Fax # 609-633-2360

Scott A. Weiner  
Commissioner

Lance R. Miller  
Assistant Commissioner

March 11, 1992

Dear Senator Kyrillos, Assemblyman Rooney and Members of the Committees:

I am pleased to be here today to offer testimony regarding the over four hundred drums of arsenic trioxide which were lost from the vessel Santa Clara I approximately 30 miles east of Cape May. The loss of these drums has generated significant concern and activity in the Department of Environmental Protection and Energy (Department) and many other state and federal agencies. Initially, the potential risks to human health and to the marine and wildlife environment were unknown. The Department's position on this important issue has remained steadfast. The drums must be removed to eliminate any potential impact to the environment and to our fishing and tourist industries.

I would like to take this opportunity to relay to you today the chronology of events, the current schedule for response actions, and the Department's concerns regarding this type of incident.

The Santa Clara I travelled through severe weather conditions in the waters off the coast of New Jersey and Delaware on January 3 and 4 while en route from New York to Baltimore. The ship travelled by way of the Delaware Bay and River and the Cheseapeake and Delaware Canals. After the Santa Clara I docked in Baltimore (about 12 hours after the incident occurred), over four hundred drums of arsenic trioxide were unaccounted for.

The Coast Guard, and particularly the Philadelphia Port Captain, Captain Tweedy, subsequently took quick and positive steps toward damage control. The use of Navy high technology mine sweepers was very effective in demonstrating an intent to resolve the issue through location and removal, if possible. The employment of remotely operated underwater video equipment further demonstrated the competence of the Coast Guard to locate the drums. These effective response actions on the part

of the Coast Guard should not however overshadow the occurrence of the incident itself. As we all know, it is more desirable and less costly to prevent incidents of this type than to respond to them. Close attention needs to be paid by our Legislature to ensure that increased controls are instituted by the federal government to more effectively regulate shipments of hazardous substances in our nation's waters.

In general, the response by the various Federal participating agencies has been excellent. The Regional Response Team (RRT III) structure functioned appropriately to identify the important issues and to focus the capabilities of all participants to resolve them. The RRT III provided a forum for the environmental agencies of New Jersey and Delaware to voice their positions.

Captain Tweedy was ultimately selected as the federal On Scene Coordinator and convened a local entity, the Multi-Agency Local Response Team (MALRT) which is comprised of state, federal and local response agencies, to supplement the operations undertaken by RRT III. Historically, the MALRT has been very effective in coordinating mutually agreeable regional solutions to spills and it is functioning well in this case. The Coast Guard, MALRT, and Captain Tweedy deserve commendation for their response actions so far.

Captain Tweedy will be providing the status of the Coast Guard's discussions with the responsible party and their schedule for commencing the recovery. The Department intends to carefully monitor this activity to ensure that the remedial actions occur quickly and that the remedial action is protective of human health and the environment.

With reference to my earlier statement regarding the need to ensure that increased controls are instituted by the federal government to regulate shipments of hazardous substances in our nations waters, I offer the following concerns.

A disturbing issue which has arisen during this response has to do with the degree of control exercised over coastal shippers of hazardous materials. Not only are there questions about the appropriateness of loading acutely hazardous materials in such a precarious manner as to allow the loss of half of a load during a predicted storm, but there are also other examples of questionable practice by either the dock loadmaster or the ship's master. Underwater videos indicated shipping containers marked with placards for sodium cyanide, a serious poison. According to ship's records, these containers were supposed to be carrying tungsten nuggets. This incident raised serious concern not only about the manifest's accuracy, but also as to what hazardous materials were really in the search area.

Investigations indicated that similar containers, which were not lost overboard, had not had their sodium cyanide placards removed from previous use, but, until divers actually check and retrieve the submerged container, this will remain a concern. The Santa Clara I had other hazardous material related problems in Baltimore and Charleston which further call into question the level of concern displayed by the officers and crew, but also the degree of control exercised by the Coast Guard over vessels loaded with hazardous material transiting only 25-30 miles off New Jersey shores. Perhaps it is time for the state and federal legislature to revisit the regulatory and enforcement structure which governs the shipment of hazardous substances by our nation's waters.

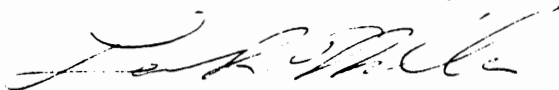
The State of Delaware has suggested, and this agency concurs, that a hazardous cargo tracking system to address not only traffic within, but also between ports would help to alleviate, or at least to provide adequate documentation for response to such incidents in the future. It should also be noted that equipment which could have helped to locate the containers more quickly is technologically available. If the containers were equipped with this equipment (sonic pingers) significant time and effort could have been saved.

In closing, the Department supported the ocean closure within the vicinity of the search not only to maintain the viability of the fish and shellfish harvest in other areas along the New Jersey coast, but also to reduce the risk to fishermen that might be working in this area. While there has been some economic loss associated with the closure of the search area, it is not a high harvest area in January and February. Restoring the area for active fishing before summer arrives is a priority that depends on the successful removal of the drums.

The Department remains committed to closely monitoring this situation and will alert you to any problems or difficulties which we uncover.

Again, I thank you for this opportunity to speak on this very important issue.

Sincerely,

A handwritten signature in dark ink, appearing to read "Lance R. Miller", written in a cursive style.

Lance R. Miller

**William G. Gaffney**  
*Mayor & Council*  
**Joseph W. Fox**  
**Robert W. Elwell, Sr.**

**City of Cape May**  
*National Historic Landmark Resort*  
City Hall - 643 Washington Street  
Cape May, New Jersey 08204-2397  
(609) 884-9525 • FAX: 884-9581

**J. Fred Coldren**  
*City Manager*  
**Virginia E. Petersen**  
*City Clerk*

Statement of  
**Cape May City Manager**  
**J. FRED COLDREN**  
on the  
  
**ARSENIC CONTAINER RECOVERY  
AND FUTURE SAFEGUARDS  
TO HELP PREVENT OCEAN POLLUTION**  
at a  
Public Hearing conducted by the  
**New Jersey Senate Coastal Resources and Tourism Committee**  
and the  
**New Jersey Assembly Energy and Hazardous Waste Committee**  
at the  
Atlantic County Office Building  
1333 Atlantic Avenue  
Atlantic City, New Jersey  
**Wednesday, March 11, 1992**

Senator Gormley, Assemblymen John Gaffney and Fred Nichols, distinguished members of the New Jersey Senate Coastal Resources and Tourism Committee and the New Jersey Assembly Energy and Hazardous Waste Committee, ladies and gentlemen:

On behalf of the people and government of the City of Cape May, New Jersey's southernmost municipality, New Jersey's only National Historic Landmark city, home of the U.S. Coast Guard Recruit Training Center and other Coast Guard commands, home of one of America's largest commercial fishing fleets, and the nation's oldest seashore resort, **thank you for holding these hearings** to focus on the problems created by the incident during January 4, 1992 storm when containers and 441 drums of arsenic trioxide fell off the container ship Santa Clara I into the Atlantic Ocean some 30 miles East of Cape May.

We appreciate being invited to appear before your committees by our State Legislators, Senator James S. Cafiero and Assemblymen Frank A. LoBiondo and John C. Gibson. We know our representatives are working to protect our interests.

Statement of Cape May City Manager Fred Coldren - 3/11/92 - Page 1

As a seashore resort highly dependent on tourism related to ocean recreation, and also because of the economic importance of our commercial fishing industry, the City of Cape May is particularly concerned about the Santa Clara incident and other potential disasters in the Atlantic Ocean.

I will be brief and to the point:

The City of Cape May supports and urges the State of New Jersey to take the following specific actions:

1. **Insist on complete removal** of the drums and containers by the earliest possible date. We understand that the U.S. Coast Guard is the responsible federal agency to accomplish the recovery of the drums and containers. As the home of the U.S. Coast Guard Recruit Training Center, the City of Cape May has total confidence in the Coast Guard ability and determination to handle this challenge.
2. **Support all necessary funding** by the federal government to the Coast Guard to complete its mission. We know that budget austerity and cut-backs are having an impact on all federal agencies, but the recovery of the arsenic containers is too important to be delayed for lack of money. New Jersey should support any federal funding necessary to expedite and accomplish the clean-up.
3. **Monitor the clean-up** to protect our interests. The State of New Jersey should assign its best and most aggressive environmental inspector to monitor every aspect of the clean-up. The Coast Guard should welcome such a monitor representing our interests so that they do not have to deal with numerous concerned counties, municipalities, organizations, and industries. The person assigned by the state to be our monitor should report regularly to the public.
4. **Join the federal lawsuit** to recover any and all costs incurred by the State of New Jersey and its political sub-divisions, including the City of Cape May in connection with this incident. This should preserve our right to recover any damages that may result from spillage of the arsenic trioxide to our economy.
5. **Support strong and uniform federal legislation** to help prevent similar incidents in the future. It would be in everybody's best interests to have uniform legislation applicable to packaging and transportation of hazardous materials.
6. **Tighten up state regulations** on the packaging and transportation of hazardous materials by ships leaving New Jersey ports.
7. **Insist on truth and accuracy** concerning the incident and swiftly correct any sensationalism or inaccurate news reporting. For instance, the media has been using the term "arsenic spill" in headlines and reports. Is this accurate? Or have containers and drums containing arsenic fallen into the Ocean? Most of us know only



what we read, so it is important that what we read is accurate.

Since the Santa Clara I incident during the January 4th storm, there has been a tremendous amount of nationwide publicity, virtually all of it making reference to Cape May. Most descriptions of the location of the material refer to Cape May, not to Wildwood or Ocean City or Atlantic City which are essentially an equal distance away from the site. As a result, Cape May has a great deal at stake to successful recovery of the containers and drums.

Thank you for considering these comments.

cc: **City Council** via City Clerk  
Hon. James S. Caniero, State Senator (1st-NJ)  
Hon. Frank A. LoBiondo, State Assemblyman (1st-NJ)  
Hon. John C. Gibson, State Assemblyman (1st-NJ)  
Hon. James Florio, Governor of New Jersey  
Hon. George W. Bush, President of the United States  
Hon. Bill Bradley, U.S. Senator  
Hon. Frank A. Lautenberg, U.S. Senator  
Hon. William J. Hughes, U.S. Representative (2nd-NJ)  
Commandant, U.S. Coast Guard  
Capt. Kenneth Allington, Commanding Officer, USCG TRACEN  
Board of Chosen Freeholders, County of Cape May



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
& ENVIRONMENTAL CONTROL  
DIVISION OF AIR & WASTE MANAGEMENT

89 KINGS HIGHWAY  
P.O. BOX 1401  
DOVER, DELAWARE 19903

WASTE MANAGEMENT  
SECTION

ENVIRONMENTAL RESPONSE: (302) 739-3694  
HAZARDOUS WASTE: (302) 739-3689  
SOLID WASTE: (302) 739-3820  
FAX: (302) 739-5060

March 9, 1992

Mr. Francis Rapa  
New Jersey General Assembly  
1500 Route 517, Suite 212  
Hackettstown, NJ 07840

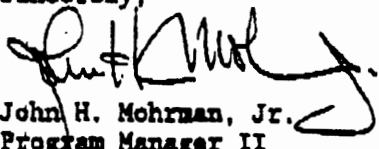
RE: NEW JERSEY STATE SENATE COASTAL RESOURCES AND TOURISM COMMITTEE AND THE  
ASSEMBLY ENERGY AND HAZARDOUS WASTE COMMITTEE SANTA CLARA I HEARING MARCH  
11, 1992

Dear Mr. Rapa:

The State of Delaware's Department of Natural Resources and Environmental Control (DNREC) appreciates the invitation to provide testimony in reference to the loss of arsenic trioxide drums from the M/V SANTA CLARA I into waters off the coast of New Jersey in early January 1992. Although we are unable to attend in person, I have attached copies of written testimony on this event provided by Phillip G. Retallick, Director of the Division of Air and Waste Management, and myself at the U.S. House of Representatives Committee on Merchant Marine and Fisheries on February 27, 1992.

Please contact me at (302)739-3694 if I can be of any further assistance.

Sincerely,

  
John H. Mohrman, Jr.  
Program Manager II  
Environmental Response Branch

JHM:mac  
JHM92049

cc: Secretary Edwin H. Clark, II  
Phillip G. Retallick  
David S. Small  
Incident file

*Delaware's good nature depends on you!*

13x

**SANTA CLARA I ARSENIC TRIOXIDE DRUMS INCIDENT**  
**COMMITTEE ON MERCHANT MARINE AND FISHERIES**  
**UNITED STATES HOUSE OF REPRESENTATIVES**

**Testimony of John H. Mohrman**

**February 26, 1992**

Good afternoon members of the United States House of Representatives Merchant Marine and Fisheries Committee, my name is John H. Mohrman and I am with the Environmental Response Branch of the State of Delaware's Department of Natural Resources and Environmental Control (DNREC). I would like to provide you with a brief review of the Department of Natural Resources and Environmental Control's involvement in this incident, along with some related concerns and recommendations.

**CHRONOLOGY OF DELAWARE'S INVOLVEMENT:**

At 2320 hrs. on the evening of January 4, 1992, while serving on call for environmental emergencies, I was contacted by the Region III Regional Response Team and advised that the M/V SANTA CLARA I had traveled through the severe weather conditions in the New Jersey and Delaware area on January 3 and 4, 1992, on its trip from New York to Baltimore, Maryland, by way of the Delaware Bay and River and the Chesapeake and Delaware Canal. After docking in Baltimore someone noticed that five-hundred and forty drums of arsenic trioxide were missing. Shortly thereafter I contacted the United States Coast Guard (USCG) Captain of the Port of Baltimore and was advised that a total of twenty-one shipping containers had been lost over board. Maryland's Department of the Environment emergency response personnel were with the SANTA CLARA I where a cleanup of arsenic trioxide which had spilled onto the vessel's deck was in progress, and expected to take twelve hours.

On the morning of January 5, 1992 DNREC continued trying to gather information concerning the location of the lost drums and sent two DNREC Environmental Protection Officers to the Port of Baltimore to gather information on the incident. Photographs of the vessel taken by DNREC personnel during that visit appear in Attachment 1.

Since January 5, 1992 DNREC has been involved in numerous telephone conversations and several telephone conferences and meetings involving the Captain of the Port of Philadelphia Multi-Agency Local Response Team, select Region II and III Regional Response Team members and other federal support agencies where updates were provided and various decisions were discussed. Delaware's Division of Public Health became involved in the incident after questions concerning potential food chain contamination and human health impacts arose. In a letter dated January 17, 1992 from Delaware's Governor Michael N. Castle to USCG Captain Richard S. Tweedie, the incident's Federal On-scene Coordinator, Governor Castle documented Delaware's concern for potential arsenic trioxide contamination in Delaware water and related impacts (Attachment 2).

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### CONCERNS:

Knowledge of this significant hazardous materials loss by the appropriate authorities came very late and therefore precious time was lost in controlling access, removing the spilled arsenic and beginning other initial response activities. The contamination on the ship may have been spread both on board and overboard considering the weather both before and after arriving in Baltimore, and until the hazardous nature of the arsenic release was realized. The U.S. Department of Transportation requires in their "List of Hazardous Substances and Reportable Quantities" (49 CFR 172.101) that notification be made when one pound or more of arsenic trioxide is released.

Are there other rules, regulations, or other guidance which would require that appropriate notification(s) be made if twenty-one containers are lost off of a vessel? This question may also relate to the accuracy of the shipping papers and storage information. Magnesium phosphide contamination problems were found later on the vessel and a container later found off of the coast of New Jersey, reported to contain tungsten, exhibits a placard used to identify sodium cyanide contents.

Although initial notifications were made, from Delaware's perspective the information flow and exchange seemed uncoordinated at first, as did the designation of an incident coordinator at the federal level.

### RECOMMENDATIONS:

The following recommendations are provided for your consideration with the understanding that no two environmental incidents like are exactly the same, or occur frequently.

- Vessels operating in waters of the United States should be required to accurately manifest all hazardous materials and be legally responsible for the accuracy of all other related paperwork. Inspections of these documents by the appropriate federal agency should occur as manpower and budget conditions permit, and enforcement actions should be considered for inaccuracies.
- Vessels transporting hazardous materials should properly train their crews in hazard awareness and reporting requirements, similar to worker right-to-know programs. Information concerning hazardous materials cargo such as material safety data sheets should be explained to the crew, onboard spill contingency plans should be developed and the information made readily available at a central location on board.
- Consideration should be given to vessel reporting requirements and any unusual event which may lead to the actual or potential release of a hazardous material should be reported to the U.S. Coast Guard by any party having knowledge of such a situation.

- Vessel tracking system development and utilization should be promoted and required in major ports, major shipping lanes and between major ports if there is a chance that a hazardous material carrier may travel outside waters of the United States between ports.

**SUMMARY:**

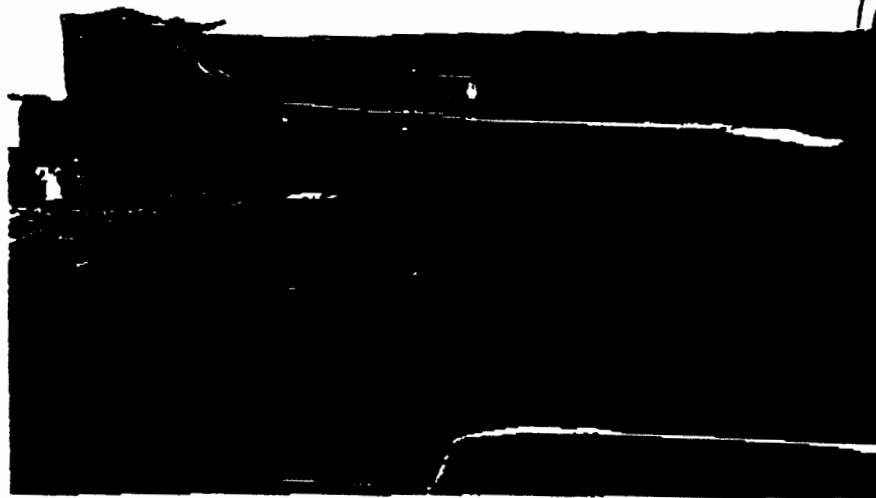
All involved response agencies have put forth great efforts to address this problem. We have learned a little more through this experience and fortunately impacts to human health, safety and the environmental to date appear to be minimal.

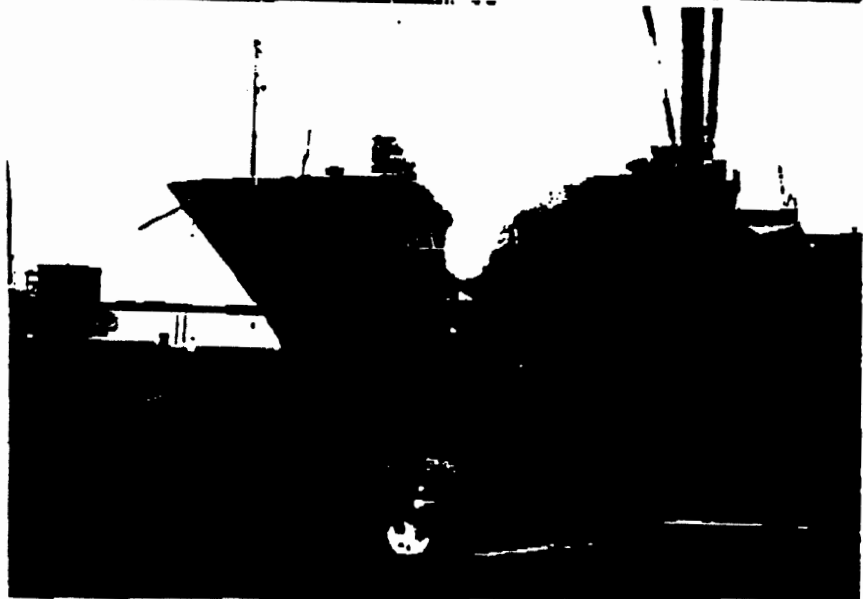
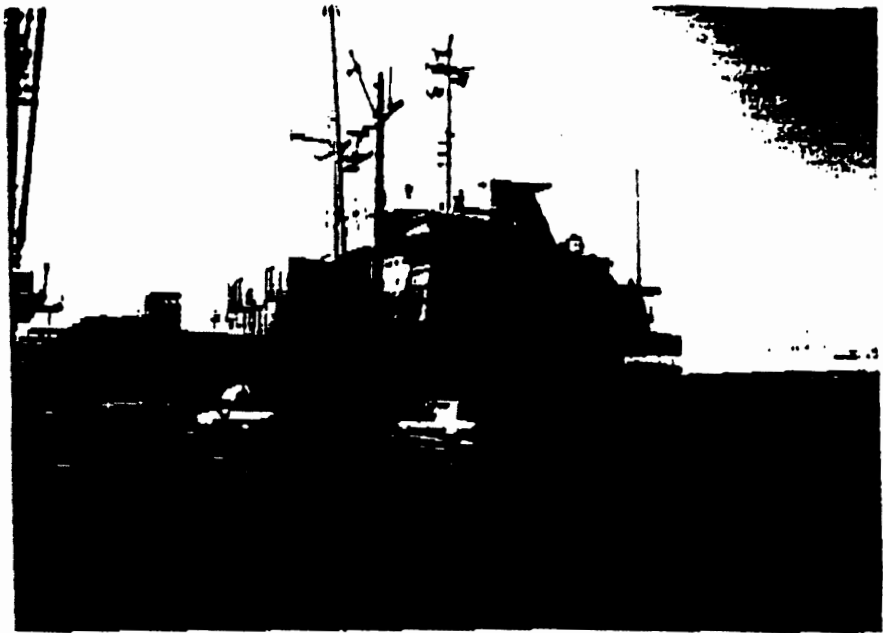
I would now like to refer Delaware's presentation back to Mr. Retallick.

JHM:mac  
JHM92037

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Attachment 1









Attachment 2

*John J. Clark*  
1138STATE OF DELAWARE  
OFFICE OF THE GOVERNORMICHAEL N. CASTLE  
GOVERNOR

January 17, 1992

Captain Richard S. Tweedie  
MSO Group Philadelphia  
1 Washington Avenue  
Philadelphia, PA 19147

JAN 27 1992

Re: Missing Santa Clara I Arsenic Trioxide Drums

Dear Captain Tweedie:

As a result of the loss overboard of an estimated 441 drums of arsenic trioxide by the vessel Santa Clara I during a storm on its voyage from New York to Baltimore, Maryland, I am documenting to you, the Federal On-scene Coordinator for this incident, the State of Delaware's request for assistance. I understand that the investigation is currently focusing on an area roughly thirty miles due east of Cape May, New Jersey, where possible targets have been observed by the federal agencies surveying the ship's track.

The State of Delaware's position in this matter is as follows:

- o If this search and recovery operation does not satisfactorily find, recover or otherwise account for the lost product drums and their contents, Delaware requests that the survey be extended to include the vessel's track up to the point where the Delaware River Pilot boarded the Santa Clara I, around 0603 hrs. on January 4, 1992, inside the mouth of the Delaware Bay.
- o In addition, in the event that all drums are not recovered or accounted for, Delaware requests that the track search above be expanded to include those commercially dredged shellfish beds in Delaware waters, as identified by the State of Delaware and federal resource management agencies, in the vicinity of the vessel's track.

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Captain Richard S. Tweedie  
January 17, 1992  
Page Two.

These requests are based on our State's deep concern and responsibility to protect public health and impacts from potential, direct physical contact, and indirect contact through ingestion or contamination of seafood products and protect the natural resources of the State. We reserve the right to make additional requests for assistance in recovering these materials if the above strategy proves unsuccessful.

Your continued cooperation in this matter is appreciated. Should you have any questions, please contact Department of Natural Resources and Environmental Control Secretary, Edwin H. Clark, II, at (302) 739-4403.

Sincerely,



Michael N. Castle

MNC/pvs  
6385j

cc: Secretary Edwin H. Clark, II

21X

**SANTA CLARA I ARSENIC TRIOXIDE DRUMS INCIDENT**  
**COMMITTEE ON MERCHANT MARINE AND FISHERIES**  
**UNITED STATES HOUSE OF REPRESENTATIVES**  
**Testimony of Phillip G. Retallick**  
**February 26, 1992**

Good afternoon members of the United States House of Representatives Merchant Marine and Fisheries Committee, my name is Phillip G. Retallick. I am the Director of the Delaware Department of Natural Resources and Environmental Control's (DNREC) Division of Air & Waste Management, and am here today to address issues of concern to your committee relating to the loss in early January 1992 of several hundred drums of arsenic trioxide off the coast of New Jersey from the vessel SANTA CLARA I.

Joining me today is John Mohrman, of DNREC's Chemical Emergency Response Team. I would ask that John first present testimony describing his role as an initial responder to the SANTA CLARA I incident and his observations concerning the federal response. Then I would like to provide the committee with Delaware's responses to questions posed by the committee concerning the timeliness of response, prevention measures, etc.

I would like to first note that DNREC's responsibilities to date have been to protect the ecosystem in the Delaware Bay and the Chesapeake and Delaware Canal. In this regard we have closely monitored the incident and its aftermath. We have interviewed the captain of SANTA CLARA I on January 5, 1992, and later the Delaware Bay and River pilot who boarded the vessel near the mouth of the Delaware Bay on January 4, 1992 and remained on board into the Chesapeake and Delaware Canal. We have also participated in the various meetings and telephone conferences, and have received and commented on various incident-specific issues at the request of the Federal On-scene Coordinator (FOSC).

The issues and my responses are as follows:

1. Are federal laws and international agreements governing compensation and liability for hazardous and noxious substance spills sufficient?

Although I may not be aware of all of the laws and agreements applicable to this incident, it appears that given the various unknowns associated with this event some sort of release report should have been filed with the federal government. As you may know the U.S. Department of Transportation and the U.S. Environmental Protection Agency have established procedures for reporting releases of hazardous substance to the environment. In the case of the SANTA CLARA I valid notification did not occur until the ship docked in Baltimore, Maryland about twelve hours after the incident occurred. Secondly, a hazardous cargo tracking system to address not only traffic within, but also between ports would have saved a significant amount of time and effort expended for this problem. As you already know the SANTA CLARA I was not completely free of hazards when it departed Baltimore for Charleston, S.C. an accurate description of cargo on board

could have expanded cleanup efforts at the Port of Baltimore and avoided impacts to the workers and the environment at Charleston. A tracking system may have also limited impacts beyond the Port of Baltimore.

2. What was the effectiveness of federal government entities' response to the incident?

It appears that the National Contingency Plan and the Regional Response Team efforts fulfilled their obligations during the incident. Given the unusual nature of the incident, the dedicated federal response organizations sufficiently coordinated their efforts. The information flow may have been slow initially due to incident-specific gaps but the subsequent planning and mobilization efforts were appropriate. I should note that finding the containers that spilled overboard with an arduous and expensive task. Significant time and effort could have been saved if the containers were equipped with inexpensive water - activated sonar pingers.

3. The role of the responsible party and its insurer in prevention and response.

From the information provided to DNREC it is apparent that neither the responsible party nor their insurer took appropriate action to identify the type and extent of contamination remaining on the SANTA CLARA I after it arrived in the Port of Baltimore. Problems relating to hazardous cargo remaining on the vessel persisted for more than thirty days after the drums were lost overboard off of New Jersey. Human health and safety were impacted, and Port of Charleston operations were greatly restricted as a result of the hazardous materials released on and in the vessel. Here again, properly placarded shipping containers would have aided cleanup. More importantly an accurate cargo manifest would have guided responders in Baltimore to search for other hazardous cargoes that were released during the incident and prevented further human exposure.

The accuracy of a vessel's cargo manifests and storage plan is critical during a hazardous material response. Inaccuracies or incomplete information concerning hazardous materials in a situation like this should not be permitted.

It appears there was no contingency plan in place by the responsible party to address unusual events and chemical contamination problems. The crew may have lacked the appropriate training to recognize hazards associated with the various substances which were released above and below deck. As part of all of this the potential for improper storage of incompatible compounds must be considered. The same federal rules and regulations contained in the Federal Code of Regulation concerning the safe transportation of hazardous materials are applicable here.

4. Were sufficient resources available to the federal entities charged with responding to these types of spills?

The Federal On-scene Coordinator (FOSC) is charged by the National Contingency Plan to decide the coordination and response to a major hazardous material incident either on land or water. It appears that the FOSC of this incident needed more timely assistance in terms of information and appropriate actions from other federal support agencies. In this incident the key response agencies were familiar with the need for very timely information and actions to assist, but some of the other agencies either not so familiar or just not capable of providing information or actions did not move as quickly as might be needed in an incident of this nature. The priorities faced by the FOSC may not have been given an appropriate priority by other Regional Response Team members and support agencies.

5. The threat this incident poses to human safety and the marine environment.

Arsenic trioxide is a highly toxic substance which should not be allowed to contaminate the environment. Depending upon the concentration of the arsenic trioxide and the risk a release of this substance poses to the environment will guide the FOSC toward the final decision.

6. The benefits, risks, and financial cost associated with the various spacing response alternatives, including salvage, abandonment and removal.

In the case of the SANTA CLARA I incident the Federal OSC is acting to remove the drums from the ocean using Superfund Immediate Removal funds. We concur with the FOSC's decisions. The technology exists to remove the arsenic trioxide drums and the drums should be removed. Not only can the hazard be removed, but operational knowledge and experience can be gained as it is inevitable that such incidents will occur in the future.

The overshadowing issue here is not whether the response alternatives should be evaluated in terms of benefits, risks and financial costs, but rather what sort of signal we are sending to future generations, the recreational fisherman, the summer beach vacationer, and others for example. The decisions made during this incident can and will serve as negative precedent in future problems if we choose to focus only on the short-term and its cost in dollars, and not the larger, more important picture, protection of the environment.

Delaware appreciates the opportunity to present its views to the Committee on merchant Marine and Fisheries.

JHM:mac  
JHM92039

24X

