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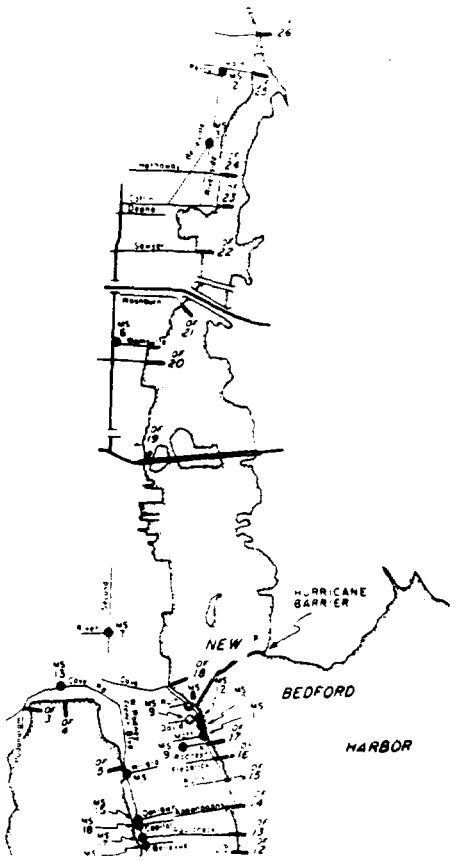
JULY 1986

NEW BEDFORD HARBOR/ACUSHNET RIVER
SEDIMENT SAMPLING CRUISE REPORT



Prepared for:
DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION
CORPS OF ENGINEERS
424 Trapelo Road
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CONTRACT No. DACW33-85-D-0001

CRUISE REPORT

NEW BEDFORD HARBOR/

ACUSHNET RIVER SEDIMENT

COLLECTION AND COMPOSITING

MARCH/APRIL 1986

HMM Document No. 944-15/2904D

JULY 1, 1986,

Prepared for:

US ARMY CORPS OF ENGINEERS
NEW ENGLAND DIVISION
424 Trapelo Road
Waltham, Massachusetts

Prepared by:

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1.0 BACKGROUND

HMM Associates was asked by the Corps of Engineers, New England Division (NED) to conduct sediment collection operations in New Bedford Harbor/Acushnet River, Massachusetts. The request was initiated in reponse to the requirements of Task 5-Composite Sampling, under the New Bedford Superfund Site, Engineering Feasibility Study of Dredging and Disposal Alternatives.

During 1985, NED surveyed the Acushnet River between the Coggeshall Street Bridge and the Wood Street Bridge (Figure 1) and established control points for the development of survey grid coordinates. Approximately 180 grids, 250 ft. X 250 ft., covered the site. A NED sampling crew then collected push tube sediment cores from each grid and analyzed 35% of them for PCB levels. Using this data NED and Corps Waterways Experiment Station (WES) selected grids which would provide sediments deemed appropriate for conducting laboratory tests to determine dredge and disposal alternatives.

In concert with this background, HMM Associates and its subcontractor Science Applications International Corporation developed a field collection program to gather the sediments required by NED/WES.

2.0 SAFETY

Because of the hazardous nature of the sediments due primarily to elevated levels of PCBs, HMM developed a General Health and Safety Plan for use in training and contingency safety planning for its field personnel. This document, HMM Document No. 85-944-15, was delivered to NED in January 1986 for a review and approval, and a final version is attached to this document as Appendix A.

Prior to participation in field activities all field personnel required to wear Level C Personnel Safety Equipment and to work in sediments with PCB concentrations suspected of exceeding levels of 50 ppm were subjected to an intense medical

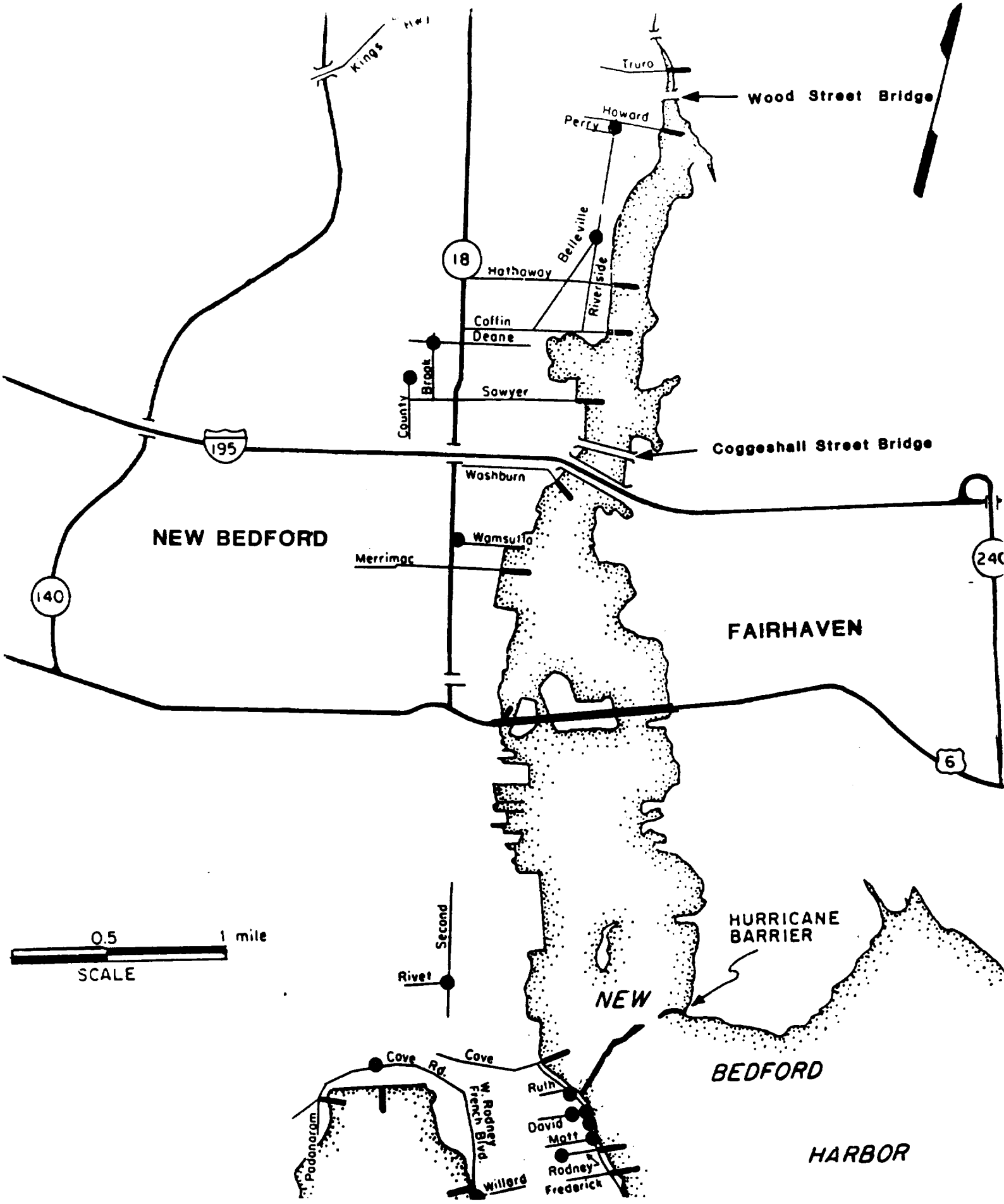


FIGURE 1 GENERAL OVERVIEW OF THE NEW BEDFORD HARBOR AREA

examination which included screening for background blood levels of PCBs. The results from these tests including post field survey blood analyses are appended in Attachment I - the Site Safety Follow-Up Report.

In addition to medical screening, all field personnel were required to participate in a safety training program prior to field operations. This safety training program was given on March 25, 1986.

3.0 FIELD OPERATIONS

The sampling program requirements called for filling steel drums (55 gallons and 30 gallons) with sediment taken from the 2 foot $\pm$ 4 inches surficial layers of the Ascushnet River between the Wood Street and Coggeshall Street Bridges (Figure 1). To accomplish this, a modified box corer, 1 ft. X 1 ft. X 2.75 ft. weighing 450 lbs. was deployed off a mooring barge, the Leonard W. Bailey, using a hydraulic winch and hydraulic A-Frame.

Sampling locations were selected for either their estimated PCB concentration levels and/or sediment physical characteristics. The locations were segregated into three groups ("Hot Spot", "Composite Zone" and "Clean Zone") with a varying amount of material to be collected from each as outlined in Table 1.

Tidal fluctuations dictated accessability to the study area. Firstly, maximum clearance under the I-195 and Coggeshall Street Bridges is approximately 12 feet at MLW. This clearance approached the height of the barge and consequently the ability to enter and leave the sampling area was limited to within approximately two hours of low tide.

Secondly, shallow depths along the margins and upper reaches of the collection area precluded collection opportunities except during periods of near high water. Consequently, for some sampling locations, considerable time was expended waiting for adequate tidal conditions.

TABLE 1

NEW BEDFORD HARBOR SAMPLING STRATEGY

GRID NO.	SAMPLE TYPE AND NUMBER			
	SEDIMENT	SEDIMENT	WATER	WATER
	55 gal. drum	30 gal. drum	55 gal. drum	1 gal. bottle
CLEAN ZONE (Surface Runoff Testing)				
K-26	3.67	-	-	-
K-28	3.67	-	-	-
I-31	3.67	1	-	-
COMPOSITE ZONE				
J-8	1.5	1	1	6
G-17	1.5	-	1	6
I-19	1.5	-	1	6
I-23	1.5	-	1	6
HOT ZONE				
I-11	3	1	-	-

In addition to sediment collections, whole water samples collected from approximately mid-depth were required from particular locations as outlined in Table 1. The water samples were collected with the barge's washdown pumps whose intake in located approximately two feet below the water line. Prior to taking a water sample, the pump was allowed to run for several minutes and all sample containers were rinsed three times. Water was collected either prior to or well after sediment collections.

3.1 Chain of Custody (COC)

A chain of custody procedure was established to secure, track, and maintain records of all materials collected, stored, processed and shipped. COC codes were assigned to and stenciled on each sample container. The codes and their respective relationship to the sampling strategy is provided in Table 2.

Each sediment barrel filled from the "Composite Zone" was subsampled for determining average PCB concentrations. Laboratory analysis was conducted at the NED Hubbardston Laboratory. Subsampling was accomplished by pushing a four foot long, four inch diameter acrylic tube into the approximate center of each barrel. A No. 13 rubber stopper with a center eye bolt to which a rope was attached served to draw the sediment into the tube as it was pushed into the barrel. After removing this tube from the barrel the sediment core was extruded onto an aluminum foil sheet. A knife slit the core lengthwise and a tablespoon scraped along the length of each half of the core provided a subsample. The subsample was placed into a ziploc bag and labelled both internally and externally. The bags and chain of custody forms were taken by a Corps representative to the Hubbardston Laboratory.

Following collection, each sediment barrel and water barrel was closed off with a lid and sealed with a lead/wire seal. COC forms were completed for each set of samples;

TABLE 2
NEW BEDFORD HARBOR CONTAINER LABELING STRATEGY

GRID NO.	SEDIMENT 55 gal. drum	SEDIMENT 30 gal. drum	WATER 55 gal. drum	WATER 1 gal. bottle
CLEAN ZONE				
K-26	K-26-1 K-26-2 K-26-3 K-26-4	-	-	-
K-28	K-28-1 K-28-2 K-28-3 K-28-4	K-28-5	-	-
I-31	I-31-1 I-31-2 I-31-3 I-31-4	-	-	-
COMPOSITE ZONE				
J-8	J-8-1 J-8-2/G-17-2 J-8-X1 J-8-X11 J-8-X111	J-8-3	J-8-4	J-8-5 J-8-6 J-8-7 J-8-8 J-8-9 J-8-10
G-17	G-17-1 G-17-2/J-8-2 G- X	-	G-17-3	G-17-4 G-17-5 G-17-6 G-17-7 G-17-8 G-17-9
I-19	I-19-1 I-19-2/I-23-2	-	I-19-3	I-19-4 I-19-5 I-19-6 I-19-7 I-19-8 I-19-9
I-23	I-23-1 I-23-2/I-19-2	-	I-23-3	I-23-4 I-23-5 I-23-6 I-23-7 I-23-8 I-23-9
HOT ZONE				
I-11	I-11-1 I-11-2 I-11-3	I-11-4	-	-

photocopies of the first page of each form for each collection set is presented in Attachment II. At the end of each collection day, all containers, including materials for disposal, were picked up by Clean Harbors and transported to its storage facility in Braintree, MA. The COC forms went with the Clean Harbors truck driver.

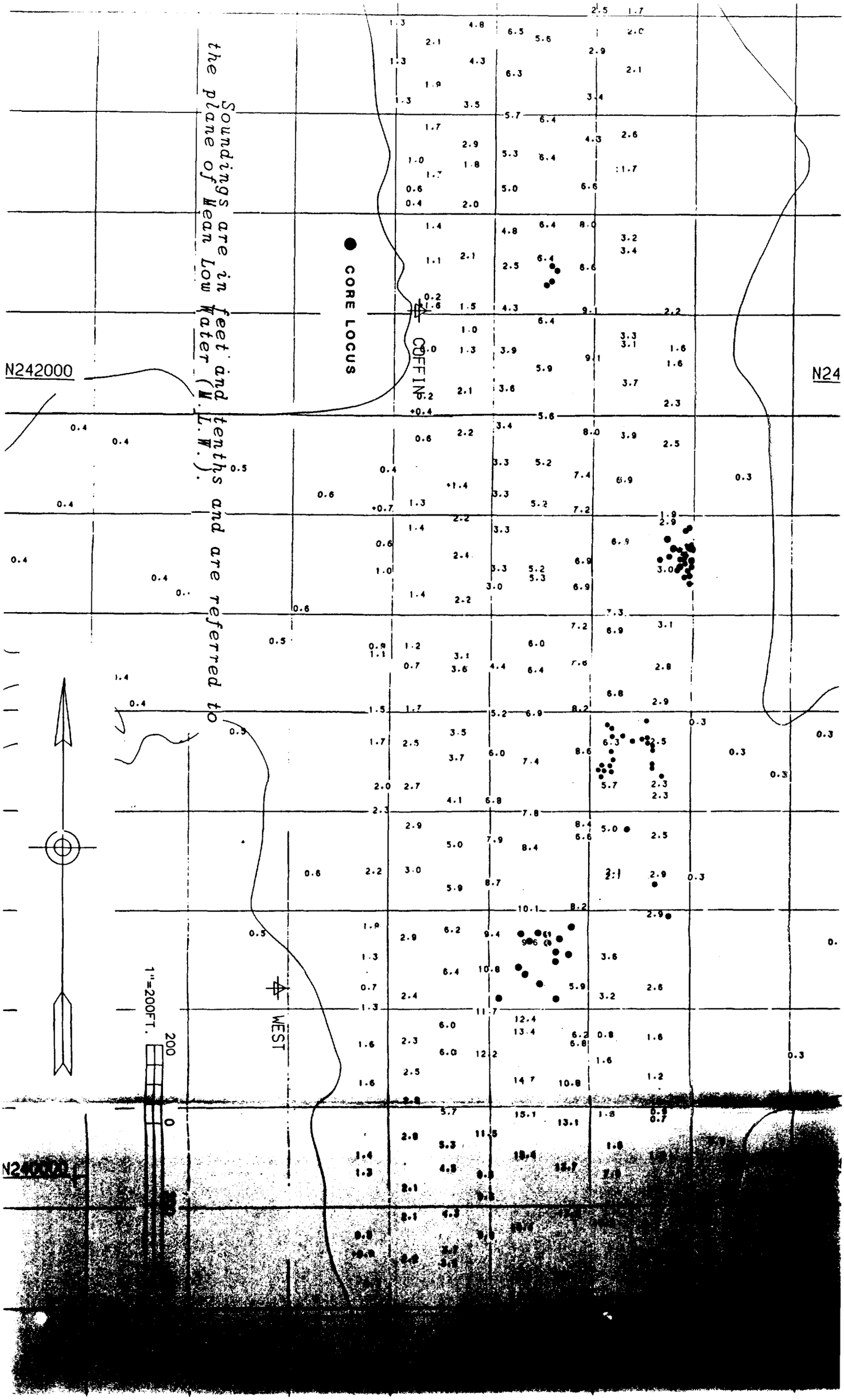
3.2 Field Effort Synopsis

Photocopies of the sampling team field log and survey crew field log with positioning coordinates are presented as Attachment III and IV, respectively. The approximate position of each sediment grab is shown on Figures 2a and 2b. Field efforts began on March 26 and were completed on April 8, 1986. The number of field days was seven.

March 26: Efforts to collect sediment in the "Clean Zone" grid I-31 failed because: a) sediments were coarse containing considerable amounts of shell hash; b) the box corer was not properly balanced; and c) positioning following a marker buoy was extremely difficult. Efforts during most of the day centered on refining collection techniques adequate for the unique situation.

March 27: Efforts to collect sediments from Grid I-31 failed as penetration continued to be inhibited by the coarse nature of the sediments. Penetration was more successful in Grid I-30 although it never reached 24 inches. All but one core came from Grid I-30. Based upon the positioning data (Attachment IV 1) core number 13 came from Grid H-30 and was used to complete the top 3 inches of barrel I-31-3 with the remainder going into barrel I-31-4. Fifteen cores were taken to fill the required 3 2/3 barrels.

March 28: The "Hot Spot" Grid I-11 within the Aerovox outfall area required ten cores to fill three 55 gallon barrels and one 30 gallon barrel (the survey crew marked positions for


Soundings are in feet and tenths and are referred to the plane of Mean Low Water (M.L.W.).
CORE LOCUS
COFFIN
WEST
N242000
N24
1"=200FT.
200
0

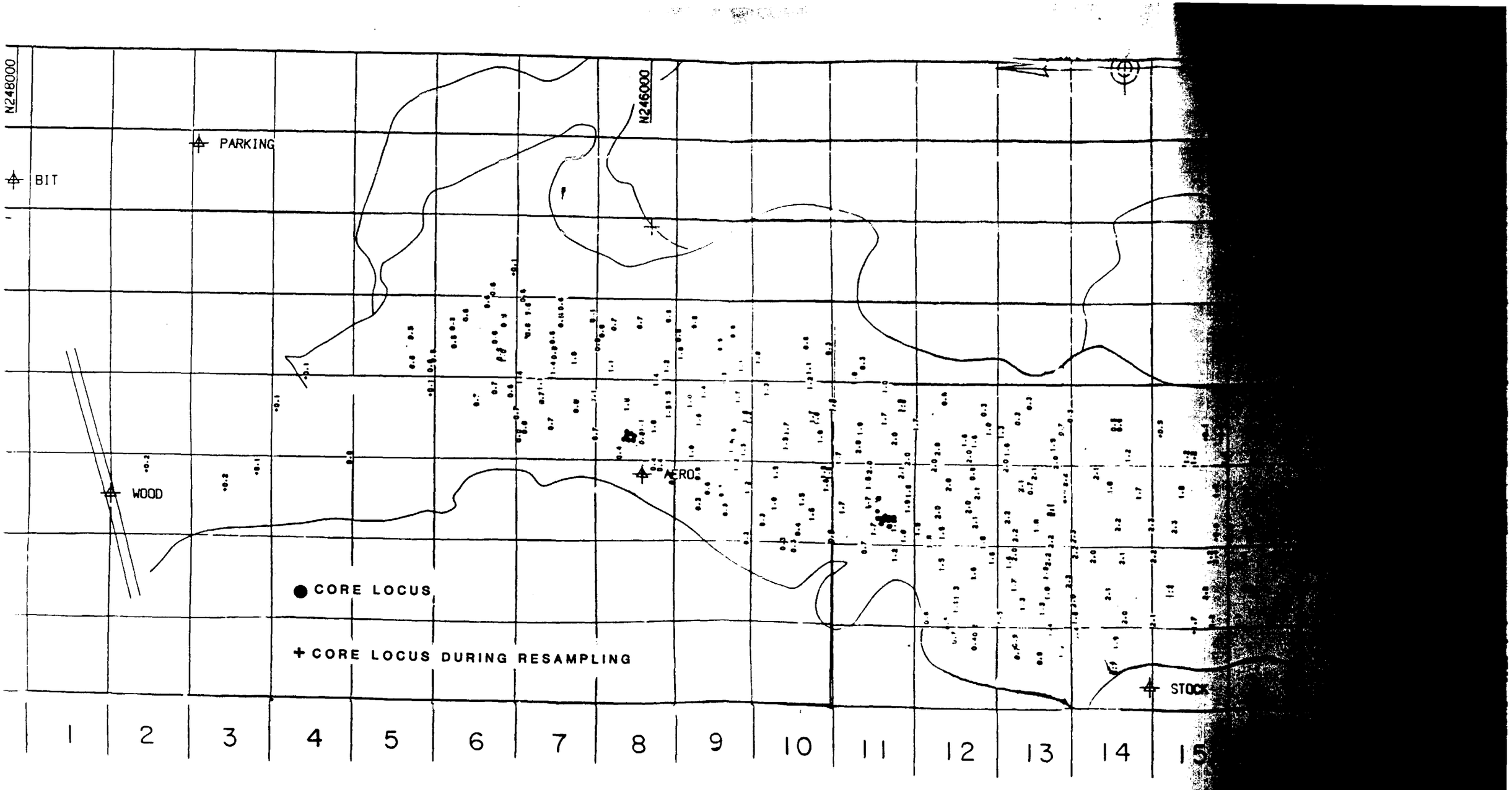


FIGURE 2a BOX CORING LOCATIONS WITHIN THE ACUSHNET RIVER CORPS OF ENGINEER UPPER SAMPLING GRID

eleven cores). Each core was filled to approximately the two foot level with black mud. An oily sheen appeared on the Acushnet River surface as water drained from the box corer -- presumably this indicated PCBs.

March 31: Grids J-8 and G-17 representing the "Composite Zone" were sampled. At J-8, four cores in compact black mud with 20-24 inch penetration were required to fill one and one-half 55 gallon barrels; two and a portion of a third core with 24-26 inch penetrations filled the 30 gallon barrel. As at Grid I-11, an oily sheen appeared on the surface of the Acushnet River as water drained from the box corer.

At G-17 the first two cores were used to fill the barrel already containing sediment from J-8; core penetration was 24-26 inches. The next four cores penetrated the loosely compacted black mud to maximum core depth (32 inches) and they were discarded. Maximum penetration continued but it was decided to slice off the bottom layers. Slicing was accomplished by carefully opening the box corer spade and quickly closing it shut as sediment fell out. The next three cores were so treated bringing the sediment layer to approximately 24 inches for each core. These last three cores filled the remaining barrel.

Analytical subsamples were taken from the three barrels filled at J-8 and G-17.

Approximately 15 minutes after the last core was taken at J-8, a 55 gallon barrel water sample was collected along with six one-gallon glass jug water samples. Then prior to sediment sampling at G-17 similar volumes of water were collected from that grid.

April 1: Grids I-19 and I-23 representing the "Composite Zone" were sampled. Five cores penetrating to 24 inches in the brownish colored mud containing sands were taken at I-19 to fill one and one half 55 gallon barrels. (It is interesting to note that approximately 40 adult-sized mud snails, Ilyannassa obsoleta, were observed on the surface of one box core sample).

At I-23 four cores penetrating 24-28 inches of the compact black mud filled one and one-half 55 gallon barrels.

Prior to sediment sampling at Grids I-19 and I-23, a 55 gallon barrel and six one-gallon jar water samples were taken.

April 2: Grid K-26 representing the "Clean Zone" was attempted for sampling but compact sediments and the relatively shallow depth which typically left much of the box corer exposed above the waters surface made sediment collection impractical. Consequently, sediment collections were taken in Grid J-26 near the western margin of K-26. A total of 26 cores were required to fill 3 2/3 55 gallon barrels (the survey crew marked 29 locations). The sediment was a compact sandy/mud. Penetration was still poor, varying between 3 and 24 inches with most cores at 10-14 inches.

April 3: Grid K-28 representing the "Clean Zone" was attempted for sampling. Again because of shallow water depths, approximately 2 feet, and sandy compact sediments, collection was impractical. Consequently, sediment collections were taken primarily in Grid J-28; but also in J-29 (3 cores penetrating 3, 10, and 10 inches) and J-30 (1 core penetrating 18 inches). A total of 21 cores were taken to fill three and 2/3 55 gallon barrels and one 30 gallon barrel.

April 8: Grids J-8 and G-17 were revisited to gather additional sediments for compositing. Heavy fog during operations at J-8 prevented precision positioning, although distances from a fixed point were possible. These distances for each core are provided in the field survey log (Attachment IV). The fog lifted enough for positioning during operations at G-17 but heavy rain began by the end of the collections.

Three 55 gallon barrels were obtained with nine cores at J-8. The majority of cores penetrated to 24 inches with the shallowest being 21 inches. An analytical subsample was taken from each barrel.

At G-17 one 55 gallon barrel was filled with four cores. Because of over penetration in the loose sediments, the first two cores were sliced. An analytical subsample was taken from the barrel.

Reconcilation of the field log and the survey log for grabs at I-11, I-19 and K-26 was not possible. The discrepancies probably occurred because of poor communications; the land based survey crew was unaware of some samples being discarded in the areas where several unsuccessful drops of the cover occurred. The number and exact location of the grabs is not critical to the sampling.

3.3 Compositing

The intent of the sediment collections at Grids J-8, G-17, I-19 and I-23 was to mix them together to provide a composite sample representing an average condition. The compository effort was conducted at the storage facility of Clean Harbors in Braintree, Massachusetts. Results from the barrel testing indicated that the following barrels should be composited to give the proper mix: G-17-X, J-8-X1, G-17-2/J-8-2, J-8-1, I-23-1, and I-23-2/I-14-2.

Clean Harbors personnel removed the barrels representing the aforementioned grids from cold storage. All seals were checked and found to be intact. Personnel then proceeded to break the seals and empty the barrel contents into a ten foot circular steel tub. During efforts to empty the first barrel, it was found that much of the contents were frozen and virtually impossible to remove. The decision among all concerned was to leave the barrels out of doors until the next morning, thereby giving the sediment an opportunity to thaw. The unsealed barrels were then resealed using serial numbered seals.

April 16: The barrels were checked to see that the seals were intact and they were found to be so. The barrels were again unsealed and the sediment emptied into the steel tub. After all six barrels were emptied into the tub, two Clean Harbor's personnel, outfitted in appropriate personnel protective gear, hand shoveled the mud in a manner to mix the tub's contents. During the mixing process, a third member of the Clean Harbor's mixing crew collected eight analytical subsamples for the Corps of Engineers Field Representative, who had them delivered to an EPA Lab for analysis.

The mixing process lasted for approximately one hour. Thereafter, new barrels were used to hold the composited sediment. Five barrels resulted from the effort. One barrel was lost as part of the process. The new barrels were sealed and labeled as follows:

Barrel	Seal Serial Number
Composite PCB #1	100403
Composite PCB #2	100404
Composite PCB #3	100405
Composite PCB #4	100406
Composite PCB #5	100407

The aforementioned six barrels used in the ccmposite were signed off the COC forms and a new COC form was prepared for the new composited samples. All samples were set for delivery to WES on April 23.

ATTACHMENT I

SITE SAFETY FOLLOW-UP REPORT
NEW BEDFORD SUPERFUND SITE

SITE SAFETY FOLLOW-UP REPORT FOR WORK PERFORMED
DURING PCB CONTAMINATED SEDIMENT COLLECTION ACTIVITIES
NEW BEDFORD SUPERFUND SITE (UPPER ACUSHNET RIVER ESTUARY)

HMM Document No. 85-944-15

Project Date: March 25 - April 16, 1986

Project Personnel:

HMM Associates, Inc.
John Lindsay, Project Manager
Paula J. Lapinskas, Site Safety Officer
Jospeh Delaney, Chemical Technician
David Black, Chemical Technician
John Wood, Chemical Technician (Alternates)

SAIC
David Benson, Barge Captain
Tom Chase, Boat Captain (East Passage)
Mark Silvia, Geological Technician
Gary Paquette, Geological Technician
Wilson Hom, Physical Oceanographer (Alternates)
John Scott, Physical Oceanographer

Army Corps of Engineers
David Lubane, Sediment Collector/Observer

Deviations from the General Health and Safety

Safety Plan	Deviations
Section 2.3 Personnel Protection (Pg. 2-4) "Coveralls".	During clean zone sediment sampling, it was discovered that the tyvek suits allow water to pass through (especially at the seams), therefore, during hot zone sampling, sampling personnel were required to double suit and tape seams on the arms and legs.
Section 2.3 Personnel Protection (Pg. 2-4) "Boots".	Disposable overboots were worn over the tyvek booties. This reduced the potential for tears in the suit and possible contamination of personnel.
Section 1.4 Work Description (Pg. 1-5). Sampling tasks.	See: Scope of Work Delivery Order #13 - Types of samples taken and sampling areas.
Section 1.4; Work Description (Pg. 1-6) "All contaminated sediment samples will be emptied into - cement mixer".	Contaminated samples were mixed in a 10 ft. diameter, round mixing tub with shovels.

HEALTH AND SAFETY PLAN
FOLLOW-UP REPORT (SUMMARY)

Training

General Health and Safety Training was given to all project personnel on March 25, the evening before the sampling activities began. On-site personnel received training on PCBs including: a brief history, potential health hazards, proper handling precautions, symptoms of exposure, and emergency and first aid procedures. Decontamination was reviewed in a step-by-step manner. Personal protective equipment (type and use) was reviewed and discussed. Sampling personnel suited-up in personnel protective equipment (except respirators) during clean zone sampling in order to acclimate themselves to the equipment and simulate decontamination procedures. General safety procedures (lifting techniques, accident prevention, drowning hazards, etc.) were discussed. (See Attachment V for copy of NEDSO Weekly Safety Meeting Summary and Personnel Training Records).

Medical Monitoring

All personnel assigned to onsite work using level C protective equipment at this project are active participants in a complete medical surveillance program dictated by the appropriate Division, pursuant to EPA 385-1-58. Requirements of the medical surveillance program are detailed in Section 3.2 of Site Safety Plan. Letters from an examining physician verifying fitness for work and results of medical laboratory analysis are included in Appendix E of the Site Safety Plan. In addition, certain blood testing and follow-up results are required. These include: blood levels of PCBs, lead and chromium. Letters from the examining physician detailing the results of this laboratory analysis are in Attachment VII.

They indicate no significant increases in blood levels of PCB or lead, or urine chromium levels.

Project Work

A summary of exposure hours by sampling day is given in Table 1.

March 26, 1986

The East Passage with sampling crew left the dock and headed for the clean zone sampling grid I-31 (see Cruise Report Figure 2b). Sampling personnel suited-up in modified Level C protective gear minus respirators (for details see Section 2.3 of Site Safety Plan) en route to the sampling area. Suit-up was required in order to enact the conditions anticipated in the "Hot Spot" sampling areas. Sampling personnel were transferred to the Barge. The Site Safety Officer assisted in the suiting-up of personnel. Sampling personnel were logged in at 11:47 a.m. The box core sampler did not function well and no samples were taken. The barge returned to the dock with sampling personnel aboard. A decontamination zone was set up (see diagram, pg. 3-7 of Site Safety Plan) and personnel practiced decontamination procedures. It was noted that many sampling personnel experienced tears in the booties of their suits. To avoid unnecessary contamination of work boots, disposable overboots were decided on for "Hot Zone" sampling. Personnel logged out at 14:55 p.m. Pilot run exposure time equaled approximately 3.0 hours.

March 27, 1986

The East Passage with sampling crew left the dock and headed for a second clean zone sampling grid I-30 (see Cruise Report Figure 2b). The Site Safety Officer was not present on

TABLE 1

SUMMARY OF EXPOSURE HOURS

3/26/86 - 11:47 AM to 14:55 PM (3.0 hours)

(C) - Partial suit-up. Tears in booties.

3/27/86 - 12:00 PM to 3:30 PM (3-1/2 hours)

(C) - Partial suit-up. Leaky suits. Clean water splashed into eyes of one sampler.

3/28/86 - 9:30 AM to 1:00 PM (3-1/2 hours)

(H) - Soak through suit of water on one sampler. No visible contamination.

3/31/86 - 10:30 AM to 2:50 PM (4.0 hours, 20 minutes)

(H) - Full suit-up. Ambient Air temperature high. Personnel experienced discomfort. No incidence.

4/1/86 - 9:40 AM to 13:40 PM (4.0 hours)

(H) - Full suit-up. No incidence.

4/2/86 - 9:55 AM to 12:30 PM (2-1/2 hours)

(C) - Partial suit-up. No incidence.

4/3/86 - 7:50 AM to 10:14 AM (2.0 hours, 20 minutes)

(C) - Partial suit-up. No incidence.

4/8/86 - 7:07 AM to 10:20 AM (3-1/2 hours)

(H) - Full suit-up. No incidence.

(C) - Clean Zone = Pilot Run
(H) - Hot Zone = Potential Exposure

this day. The Project Manager, John Lindsay, served this role. Project personnel suited-up in modified level C protective gear minus respirators and proceded to collect uncontaminated mud samples. Sampling personnel were logged in at 12:00 p.m. Four (4) 55-gallon drums were collected. The sampling in mud was a very messy task. Personnel and the sampling area (deck) were covered with mud. Many sampling personnel were soaked through with non-contaminated water and mud due to tears in the suits, leaky seams, and absorption through the tyvek material because of the constant water contact. One sampling personnel (Gary Paquette) splashed uncontaminated water under the goggles and into his eye. To avoid a reoccurrence of the situation, sampling personnel taped goggles to the tyvek suit hood and adjusted the face shields. Sampling personnel did not report the incident to the Project Manager/Site Safety Officer until well after the fact (9:00 p.m.). Section 3.1; Personnel Responsibilities, (Pg. 3-3) requires project personnel to report immediately all accidents and/or unsafe conditions to the Project Manager/Site Safety Officer. The Project Manager discussed this situation and the soak through problem with the Site Safety Officer later that evening. It was decided that sampling personnel should double suit and tape seams during "Hot Zone" sampling. Safety goggles and hard hats were taped to the tyvek hood to prevent splashing into the goggles. The Site Safety Officer gave a reprimand to all project personnel and discussed the importance of reporting all unsafe incidences to the Project Manager/Site Safety Officer. Project personnel were logged out at 3:30 p.m. Pilot run exposure time equal to approximately 3-1/2 hours.

March 28, 1986

The East Passage with sampling crew left the dock and headed for the "Hot Spot" sampling grid I-11 (see Cruise Report Figure 2a). Project personnel suited-up in modified Level C protective gear including air purifying respirators en route to

the "Hot Spot" sampling area. The Site Safety Officer assisted in the suiting-up and checked to ensure that all required safety protection equipment was being used. Double suits and disposable overboots were added to the required dress and the seams on the outside suit were taped up. Safety goggles and helmets were taped to the tyvek hood. Sampling personnel logged in at 9:30 a.m. Three 55-gallon drums and one 30-gallon drum of contaminated mud were collected. The sampling tasks were very messy, however, sampling personnel remained relatively clean washing up as much as possible between grabs. Near the end of the sampling activities, one sampling personnel (Gary Paquette) experienced a leaking of water through the sleeve of his suit (apparently at the tape line). He was moved through decontamination immediately and then he was instructed to flush the affected area of skin with soap and water for at least 15 minutes, and change his shirt.

There was no indication that any PCB contamination occurred, and all emergency procedures were followed to the letter. All other sampling personnel were reminded to wash their face, neck and hands before boarding the East Passage. Barge and equipment decontamination followed personnel decontamination. The Site Safety Officer acted as "clean person". Personnel were logged out at 1:00 p.m. Total exposure time equaled approximately 3-1/2 hours.

March 31, 1986

The East Passage with sampling crew and an Army Corps of Engineers Sediment Collector/Observer (David Lubianez) left the dock and headed for the "Hot Zone". Sampling grids G-17 and J-8 were sampled this day (see Cruise Report Figure 2a). A change in sampling personnel was made: Wilson Hom of SAIC for Gary Paquette, SAIC. The Site Safety Officer reviewed the site safety plan and NEDSO Safety Procedures with Wilson Hom. A medical review letter indicating Mr. Hom's fitness for the

project was submitted to the Project Manager. Personnel suited up in Level C personal protective equipment en route to the "Hot Zone" sampling area. The Site Safety Officer and the Corps observer assisted in the suiting-up. The Site Safety Officer checked to ensure that all required safety equipment was being used. Sampling personnel were logged in at 10:30 a.m. Sampling proceeded in the same fashion as on March 28, 1986, and was without incidence. Ambient air temperatures were higher than other sampling days (approximately 50°F and 5 mph wind speed). High air temperatures made wearing the protective clothing more uncomfortable than usual. Personnel appeared to tire more quickly, however, there was no danger of hyperthermia. Decontamination ran smoothly. Personnel logged out at 2:50 p.m. Total exposure time equaled approximately 4 hours 20 minutes.

April 1, 1986

The East Passage with sampling crew and Corps observer left the dock and headed for the Composite sampling area. Grids I-19 and I-23 were sampled this day (see Cruise Report Figure 2a). Sampling personnel suited up in modified Level C personal protective gear en route to the "Hot Zone" sampling area. The Site Safety Officer and the Corps Observer assisted in the suiting-up. The Site Safety Officer checked to ensure that all required safety equipment was being used. Sampling personnel logged in at 9:40 a.m. One 55-gallon drum of sediment was collected at each site in addition to a composite sample which represented both sites. A 55-gallon water sample and six (6) 1-gallon water samples were also taken at each site. After sampling, a composite subsample was taken from the 55-gallon composite drum. Sample collection proceeded without incidence. Personnel and equipment decontamination ran smoothly. Sampling personnel logged out at 13:40 p.m. Total exposure time equaled approximately 4.0 hours.

April 2, 1986

The East Passage with sampling crew left the dock and headed for clean zone sampling grid K-26 (see Cruise Report Figure 2b). The Site Safety Officer and the Project Manager were not present on this day. Sampling crew member Joseph Delaney served these functions. Sampling crew suited-up in modified Level C protective clothing (except respirators and neoprene gloves). Four (4) 55-gallon drums were collected. Sampling personnel logged in at 9:55 a.m. Sampling proceeded without incidence as described by Joseph Delaney. Personnel logged out at 12:30 p.m. Total exposure time equaled approximately 2-1/2 hours.

April 3, 1986

The East Passage with sampling crew left the dock and headed for clean zone sampling grid K-28. The Project Manager was present. Sampling personnel suited-up, and were logged in at 7:50 a.m. Sampling proceeded in the same fashion as April 1, 1986 and was without incidence. Personnel logged out at 10:14 a.m. Total exposure time equaled approximately 2 hours and 20 minutes.

April 8, 1986

Composite samples taken for the required testing in "Hot Zone" grids J-8/G-17 on March 31 did not contain high enough concentrations of PCBs, therefore, they were resampled on this day. The East Passage with sampling crew left dock and headed for "Hot Zone" sampling grids J-8 and G-17. The Site Safety Officer was not present this day. The Project Manager, Mr. Lindsay, served this function. Sampling personnel suited-up and were logged in at 7:07 a.m. Weather conditions this day were cool, cloudy and foggy. Poor visibility made positioning the barge and siting very difficult. Three 55-gallon samples were taken at J-8. The sampling barge moved

to sampling grid G-17 and filled an additional 55-gallon barrel. Composite subsamples were taken on each barrel. Sampling occurred without incidence, although weather conditions made positioning and other related work difficult. Sampling personnel decontaminated the barge and equipment. Personnel decontaminated themselves with the assistance of the Project Manager. Sampling personnel logged out at 10:20 a.m. Total exposure time equaled approximately 3-1/2 hours.

Health and Safety Review

Sampling in the "Hot Zone" was performed without difficulty except for a minor incidence when a water leak developed in the suit of a sampler during the sampling, however, no problems resulted for this incident. Sampling personnel performed their tasks safely and as neatly as possible in order to reduce the amount of contamination to themselves and the equipment. Pilot runs using safety equipment in the clean zones helped to identify potential problems with the safety equipment to be used during "Hot Zone" Sampling. This approach proved to be an invaluable exercise and contributed greatly to the overall safety of the project. There was no difficulty with the use of safety equipment except for complaints of minor discomfort, especially on the warmer days. Sampling personnel remained fully suited during all stages of the sampling activities. Decontamination occurred without incidence, and there were no indications of exposure to personnel. The sampling project ran smoothly and was completed safely.

Decontamination

Sampling personnel washed off sediment from the box corer and the sampling platform with water pumped from the "Hot Zone" area. The barge moved down to the lower regions of the river just above the I-195 Bridge (see Cruise Report Figure 1) and again the sampling crew washed down the barge. Following

wash-down, the Site Safety Officer who acted as the designated "clean person" set up a modified decontamination zone in the "warm" area of the sampling zone (see diagram Pg. 3-7 of the Site Safety Plan). The decontamination station included: two tubs containing Trisodium Phosphate Detergent (TSP) wash water, two small wash tubs for equipment and a waste disposal drum. Sampling personnel proceeded to decontaminate one at a time. They were assisted by the winch operator (relatively clean) and the clean person. (For details on step-by-step decontamination procedures, see Section 3.4 of Site Safety Plan). To avoid cross-contamination, safety equipment was placed in the small wash tubs (one for heavy contamination, one for light contamination), and personnel were decontaminated in the large wash tubs. Personnel leaving the decontamination zone were instructed to wash their face, neck and hands before boarding the East Passage (clean zone) for transport back to the dock. They were also instructed to shower and change upon return to their hotel or home.

Disposable equipment and clothing were placed in a waste disposal drum and sealed. At the dock, the waste drum was labeled appropriately before transport by the hazardous waste facility. After personnel and equipment were decontaminated, the barge surfaces and decontamination zone were rewashed with a detergent and secured. Decontamination occurred without indicence.

Prepared by: Paula J. Lapenotiere
Title: Site Safety Officer

Reviewed by: John A. Lindy
Title: Project Manager

Government Review: _____
Title:

ATTACHMENT II

CHAIN OF CUSTODY
NEW BEDFORD SUPERFUND SITE

GENERAL INSTRUCTIONS: FIELD SAMPLE
CHAIN-OF-CUSTODY RECORD

IMPORTANT: Read all instructions before completing this form.

This chain-of-custody record contains seven copies. Each copy has a preassigned number in the upper right hand corner. To insure that each copy is readable the record must be completed by pressing firmly with a ball point pen. These are the instructions for the sampler, shipper, storage or treatment facility, laboratory personnel or others who may have custody of field samples. The information required for each entry on these forms is included in these instructions.

Procedures for filling out and disposition of the copies are as follows:

- The first copy will be filled out by the sampler in the field. Project number, project name, and signature of the sampler will be entered in the appropriate boxes. As sampling collection is initiated the sampler will enter the following information in the spaces provided: station/grid number and location, date, time, a check as to whether the sample is a composite or grab, number of containers, type of containers, and type of preservative, if applicable. Difficulties with sampling procedures, losses of samples, or other problems will be noted in the remarks column. When the sampler relinquishes the samples the appropriate box will be filled in with the sampler's signature, name of agency/company, date and time. The person receiving the samples will then fill in the appropriate box indicating "received by" with his/her signature, name of agency/company, date and time. The sampler will then remove the last copy and the preceding carbon and retain the copy.

- A copy of the chain-of-custody record will be filed by each agency/ company as the tasks are completed. As the record proceeds, the appropriate copy and carbon paper that precedes will be removed going from back to front.

- When the sample has reached its final destination, the last company/agency to handle the samples will mail the remaining copy (copies) of the chain-of-custody record to: Mr. John Lindsay, HMM Associates, 336 Baker Avenue, Concord, MA 01742.

See Instructions on Reverse
Before Completing Form

CHAIN OF CUSTODY RECORD*
SEDIMENT SAMPLES

#1

Sediment 001
Copy 1 of 7

Project Number: 944-15
Project Name: New Bedford Harbor PCB's
Sampler (Signature): John A Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-31-1 ✓	3/27/86	1358 to 1410	3	✓	1	55 gal drum	None	collected w/box corer contains shell/mud
I-31-2 ✓	3/27/86	1414 to 1438	3	✓	1	55 gal barrel	None	" "
I-31-3 ✓	3/27/86	1438 to 1507	3	✓	1	55 gal barrel	None	" "
I-31-4 ✓	3/27/86	1512 to 1527	3	✓	1	55 gal barrel	None	only 2/3 of a barrel "
←			—	—	1	55 gal	—	Marked CONTAMINATED MATERIAL FOR DISPOSAL

Surface Runoff

DESIGNATED REPRESENTATIVE OF THE FEDERAL GOVERNMENT

1. Relinquished by (Signature):	Date	Time	Received by (Signature):	Date	Time	Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
John A Lindsay; Name of Agency/Company: HMM ASSOCIATES	3/27/86	1737	[signature]; Name of Agency/Company: Clean Harbors	3/27	1737	Ronald [signature]; Name of Agency/Company: Clean Harbors	4/21	10 AM	Judy McClintock; Name of Agency/Company:	4/21/86	15:15

5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:
Judy McClintock; Name of Agency/Company: Price Trucking	4/23/86	1400	Mark E [signature]; Name of Agency/Company: WES	4/23/86	1430	Name of Agency/Company			Clean Harbors Disposal of one Drum. Relinquished Drums I-31-1, I-31-2, I-31-3, I-31-4 to Price trucking [signature]

WORK ORDER 1001

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HMM 84/1630

See Instructions on Reverse Before Completing Form

CHAIN OF CUSTODY RECORD*

SEDIMENT SAMPLES

Sediment 001
Copy 1 of 7

Project Number: 944-15 Project Name: New Bedford Harbor Sampler (Signature): John A Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-11-1	3/24/86	0944 0955	3	Y	1	55 gal barrel	N/A	John A Lindsay placed in Cargo barrel
I-11-2	3/24/86	0955 1024	3	Y	1	55 gal barrel		placed in Cargo barrel
I-11-3	3/24/86	1032-1039	3	Y	1	55 gal barrel		placed in Cargo barrel
I-11-4	3/24/86	1039 1044	2	Y	1	30 gal barrel	one barrel	placed in Cargo barrel

Overpacked

Hotspot

1. Relinquished by (Signature)	Date	Time	2. Received by (Signature)	Date	Time	3. Relinquished by (Signature)	Date	Time	4. Received by (Signature)	Date	Time
John A Lindsay	3/24/86	1500	[illegible]	3/24/86	1500	[illegible]	3/24/86	1700	[illegible]	3/24/86	1700
Name of Agency/Company: HMM Associates			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors		
5. Relinquished by (Signature)	Date	Time	6. Received by (Signature)	Date	Time	7. Relinquished by (Signature)	Date	Time	8. Remarks: Received by Mark Zappi CWES 4/23/86 1400		
[illegible]	4/22/86	1305	[illegible]	4/21/86	1305	[illegible]	4/23/86	1400			
Name of Agency/Company: Clean Harbors			Name of Agency/Company: Bruce Tuckey			Name of Agency/Company: Bruce Tuckey					

1003

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See Instructions on Reverse
Before Completing Form

CHAIN OF CUSTODY RECORD*

SEDIMENT SAMPLES

Project Number: 944-

Project Name: New Bedford Harbor

Sampler (Signature): John Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-19-1	4/1/86	—	✓	✓	1	55 gal Drum	SC	
I-23-1	4/1/86	—	✓	✓	1	55 gal Drum	C	BARREL Composited w/5 others refer C of C Composite #5
I-19-2/I-23-2	4/1/86	—	✓	✓	1	55 gal Drum	C	BARREL Composited w/5 others refer C of C Composite #5 [illegible]/HMM Assoc.
								-3783

1. Relinquished by (Signature)	Date	Time	2. Received by (Signature)	Date	Time	3. Relinquished by (Signature)	Date	Time	4. Received by (Signature)	Date	Time
John Lindsay	4/1/86	3:15	[illegible] Russell	4/1/86	1621	[illegible] Russell	4/1/86	8:30	Ronald [illegible]	4/1/86	9:30
Name of Agency/Company: HMM Associates			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors		

5. Relinquished by (Signature)	Date	Time	6. Received by (Signature)	Date	Time	7. Relinquished by (Signature)	Date	Time	8. Remarks
Ronald [illegible]	4/21/86	13:15	Andy McClintock	4/21/86	13:15	Andy McClintock	4/23/86	11:00	Received by Mark Zappi WES 4/23/86 1400
Name of Agency/Company: Clean Harbors			Name of Agency/Company: Price Trucking			Name of Agency/Company: Price Trucking			

1005

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CHAIN OF CUSTODY RECORD*

SEDIMENT SAMPLES

Sediment 001
Copy 1 of 7

Project Number: 944-15

Project Name: NEW BEDFORD HARBOR

Sampler (Signature): Scott E. Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
K-26-1	4/2		✓		1	55 GAL. DRUM		
K-26-2	4/2		✓		1	55 GAL DRUM		
K-26-3	4/2		✓		1	55 GAL. DRUM		
K-26-4	4/2		✓		1	55 GAL DRUM		BARREL 2/3 FULL
								BOLTS SPRAYPAINTED TO PROTECT SEAL
								WORK ORDER 3862
								Surface Runoff

1. Relinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
Name of Agency/Company: HMM Assoc	4/2	7:30 PM	Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors	4/21/86	9 AM
5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks: Received by: Mark Zappi WES 4/23/86 1400		
Name of Agency/Company: Clean Harbors	4/21/86	13:10	Name of Agency/Company: Price Trucking	4/21/86	13:10	Name of Agency/Company: Price Trucking	4/23/86	14:00			

1006

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Before Completing Form

CHAIN OF CUSTODY RECORD*

SEDIMENT SAMPLES

Sediment 001
Copy 1 of 7

Project Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): John W Wood

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
G-17-X	4/8/86	—	✓	✓	1	55 gal Drum	C	BARREL Composited w/5 others refer C/C Composite 1-5
J-8-X1	4/8/86	—	✓	✓	1	55 gal Drum	C	BARREL Composited w/5 others refer C/C Composite 1-5 HMM Assoc
J-8 X11	4/8/86	—	✓	✓	1	55 gal Drum	SC	
J-8 X111	4/8/86	—	✓	✓	1	55 gal Drum	SC	

-4039

WORK CREW

1. Relinquished by (Signature) / Name of Agency/Company	Date	Time	2. Received by (Signature) / Name of Agency/Company	Date	Time	3. Relinquished by (Signature) / Name of Agency/Company	Date	Time	4. Received by (Signature) / Name of Agency/Company	Date	Time
John W Wood / HMM ASSOCIATES	4-8-86	4:25	[signature] / CLEAN HARBORS	4/8/86	[illegible]	[signature] / CLEAN HARBORS	4/8/86	[illegible]	[signature] / Clean Harbors	4/18/86	15:30

5. Relinquished by (Signature) / Name of Agency/Company	Date	Time	6. Received by (Signature) / Name of Agency/Company	Date	Time	7. Relinquished by (Signature) / Name of Agency/Company	Date	Time	8. Remarks
[signature] / Clean Harbors	4/21/86	13:05	Andy McClintock / [signature]	4/21/86	[illegible]	[signature] / [signature]	4/23/86		Received by: Mark Zappi WES 4/23/86 1400

1008

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Before Completing Form

CHAIN OF CUSTODY RECORD*

SEDIMENT SAMPLES

Sediment 001
Copy 1 of 7

Project Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): David Hills Black

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
K-28-1 ✓	4/3/86		✓	✓	1	55 gal Drum		only 2/3 full
K-28-2 ✓	4/3/86		✓	✓	1	55 gal Drum		full
K-28-3 ✓	4/3/86		✓	✓	1	55 gal Drum		full
K-28-4 ✓	4/3/86		✓	✓	1	55 gal Drum		full
K-28-5 ✓	4/3/86		—	✓	1	30 gal Drum		contains 1 box core grab 18 inches
								Surface Runoff
9685-			ORCL. WCR					

1. Relinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
David Hills Black; Name of Agency/Company: HMM Assoc	4/3/86	1630	K O Rein; Name of Agency/Company: Clean Harbors	4/3/86	1630	K O Rein; Name of Agency/Company: Clean Harbors	4/3/86	6 30 pm	Ronald D Demarz; Name of Agency/Company: Clean Harbors	4/3/86	6 PM

5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:
Ronald D Demarz; Name of Agency/Company: Clean Harbors.	4/21/86	1300	Andy McClintock; Name of Agency/Company: Price Trucking	4/21/86	1300	Andy McClintock; Name of Agency/Company: Price Trucking	4/23/86	1400	Received by: Mark Zappi WES 4/23/86 1400

~~Relinquished by Mark Zappi~~

1009 ~~Received~~

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CHAIN OF CUSTODY RECORD*
MATERIALS SAMPLES

#2

Materials 001
Copy 1 of 7

roject Number: 744-15

Project Name: New Bedford Harbor

Sampler (Signature): John A Lindsay

tation/Grid Number nd location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I - 11	3/28/86	1109	—	—	1	30 gal barrel	NA	Material for disposal

WORK ORDER -3685

1. Relinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
John A Lindsay	3/28/86	1558	[signature]	3/28/86	1558	[signature]	3/28/86	[illegible]	[signature]	3/28/86	1800
Name of Agency/Company: HMM Associates			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors		
5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:		
Name of Agency/Company			Name of Agency/Company			Name of Agency/Company					

1021

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CHAIN OF CUSTODY RECORD*
MATERIALS SAMPLES

Materials 001
Copy 1 of 7

Project Number: 774-15 Project Name: New Bedford Harbor Sampler (Signature): John Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
5-17 & I 8	3/4/86		—	—	1	55 gal Drum		Materials for Disposal

WORK ORDER -3737

1. Relinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
John Lindsay	3/5/86	1930	[signature]			[signature]			[signature]	3/5/86	2030
Name of Agency/Company: HMM Associates			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors		

5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:
Name of Agency/Company			Name of Agency/Company			Name of Agency/Company			

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CHAIN OF CUSTODY RECORD*
MATERIALS SAMPLES

Materials 001
Copy 1 of 7

roject Number: T44-15 | Project Name: New Bedford Harbor | Sampler (Signature): John Lindsay

tation/Grid Number nd location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-19/I-23	4/1/86	-	✓	-	1	55 gal Drum		Material for Disposal

-3783

1. Relinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
John Lindsay	4/1/86	5:15		4/2/86	5:17		4/2/86	5:30		4/2/86	5:30
Name of Agency/Company: HMM Associates			Name of Agency/Company: CLEAN HARBORS			Name of Agency/Company: CLEAN HARBORS			Name of Agency/Company: Clean Harbors		
5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:		
Name of Agency/Company			Name of Agency/Company			Name of Agency/Company					

1024

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CHAIN OF CUSTODY RECORD*
MATERIALS SAMPLES

Materials 001
Copy 1 of 7

roject Number: 944-15 | Project Name: NEW BEDFORD HARBOR | Sampler (Signature): Joseph E. [signature]

tation/Grid Number nd location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
K-26	4/2			—	1	55 GAL DRUM		WASTE MATERIAL - SUITS, GLOVES etc
								BOLTS SPRAY PAINTED TO PROTECT
								SEAL
								3862

. elinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
[signature]	4/2	7:30 P.M.	[signature]			[signature]			[signature]	8/9/8	[illegible]
Name of Agency/Company: HMM Assoc.			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors		

. elinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:
Name of Agency/Company			Name of Agency/Company			Name of Agency/Company			

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efore Completing Form

CHAIN OF CUSTODY RECORD*
MATERIALS SAMPLES

Materials 001
Copy 1 of 7

roject Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): John W Wood

tation/Grid Number nd location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-8 + G-17	4/8/86		√	—	1	55 gal Drum		MATERIALS FOR DISPOSAL

-4039

elinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
John W Wood	4-8-86	4:25		4/8/86	4:25		4/8/86	12:30		4/9/86	15:30
ame of Agency/Company: HMM ASSOCIATES			Name of Agency/Company:			Name of Agency/Company:			Name of Agency/Company: Clean Harbors		
5. elinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:		
ame of Agency/Company:			Name of Agency/Company:			Name of Agency/Company:					

1036

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See Instructions on Reverse Before Completing Form

CHAIN OF CUSTODY RECORD*
WATER SAMPLES

Water 001
Copy 1 of 4

Project Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): [signature]

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-23-7	4/1/86		Y	—	1	1gal bottle		placed in a single cooler
I-23-8	4/1/86		Y	—	1	1gal bottle		
I-23-9	4/1/86		Y	—	1	1gal bottle		
I-19-7	4/1/86		Y	—	1	1gal bottle		placed in a single cooler
I-19-8	4/1/86		Y	—	1	1gal bottle		
I-19-9	4/1/86		Y	—	1	1gal bottle		

WORK ORDER -3898

1. Relinquished by (Signature)	Date	Time	2. Received by (Signature)	Date	Time	3. Relinquished by (Signature)	Date	Time	4. Received by (Signature)	Date	Time
Name of Agency/Company: HMM Assoc	4/1/86	1630	Name of Agency/Company: Clean Harbors	4/3/86	1630	Name of Agency/Company: Clean Harbors	4/3/86	6:00 pm	Name of Agency/Company: Clean Harbors	4/3/86	6 pm
5. Relinquished by (Signature)	Date	Time	6. Received by (Signature)	Date	Time	7. Relinquished by (Signature)	Date	Time	8. Remarks: Received by Mark Zappi WES 4/23/86 1400		
Name of Agency/Company: Clean Harbors	4/21/86	13:00	Name of Agency/Company: Price Lucking	4/21/86	13:00	Name of Agency/Company: Price Lucking	4/23/86	1400			

1010

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See Instructions on Reverse
Before Completing Form

CHAIN OF CUSTODY RECORD*
WATER SAMPLES

Water 001
Copy 1 of 7

Project Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): John Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
J-8-4	3/31/86				1	55 gal	NA	
J-8-5	↓				1	1 gal bottle		placed in a single cooler
J-8-6	↓				1	1 gal bottle		
J-8-7	↓				1	1 gal bottle		WORK ORDER -3737
J-8-8	↓				1	1 gal bottle		placed in a single cooler
J-8-9	↓				1	1 gal bottle		
J-8-10	↓				1	1 gal bottle		

1. Relinquished by (Signature)	Date	Time	2. Received by (Signature)	Date	Time	3. Relinquished by (Signature)	Date	Time	4. Received by (Signature)	Date	Time
John Lindsay Name of Agency/Company: HMM Associates	3/31/86		Gerald [illegible] Name of Agency/Company: Clean Harbors			Gerald [illegible] Name of Agency/Company: Clean Harbors			Ronald [illegible] Name of Agency/Company: Clean Harbors	3/31/86	2200

5. Relinquished by (Signature)	Date	Time	6. Received by (Signature)	Date	Time	7. Relinquished by (Signature)	Date	Time	8. Remarks
Ronald [illegible] Name of Agency/Company: Clean Harbours	4/21/86	13:15	Andy McClintock Name of Agency/Company: Price Lurking	4/21/86		Andy McClintock Name of Agency/Company: Price Lurking	4/23/86	4:00	Received by Mark E. Zoni WCES 4/23/86 1400

1012

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See Instructions on Reverse
Before Completing Form

CHAIN OF CUSTODY RECORD*
WATER SAMPLES

Water 001
Copy 1 of 7

Project Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): John Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
G-17-3	3/31/86				1	55 gal drum		
G-17-4	↓				1 gal bottle			
G-17-5					1 gal bottle		placed	in a single cooler
G-17-6					1 gal bottle			
G-17-7					1 gal bottle			WORK ORDER -3737
G-17-8					1 gal bottle		placed	in a single cooler
G-17-9					1 gal bottle			

1. Relinquished by (Signature)	Date	Time	2. Received by (Signature)	Date	Time	3. Relinquished by (Signature)	Date	Time	4. Received by (Signature)	Date	Time
Name of Agency/Company: HMM Associates	3/31/86	1830	Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors			Name of Agency/Company: Clean Harbors	4/1/86	2000
5. Relinquished by (Signature)	Date	Time	6. Received by (Signature)	Date	Time	7. Relinquished by (Signature)	Date	Time	8. Remarks: Received by Mark Zappi WES 4/23/86 1400		
Name of Agency/Company: Clean Harbors	4/1/86	13:45	Name of Agency/Company: Price Lucking	4/4/86	15:00	Name of Agency/Company: Price Lucking	4/4/86	1400			

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* Copies filed with appropriate party as completed.
Original copy is returned to: John Lindsay, HMM Associates, 336 Baker Avenue, Concord, MA 01742

See Instructions on Reverse Before Completing Form

CHAIN OF CUSTODY RECORD*
WATER SAMPLES

Water 001
Copy 1 of 7

Project Number: 9441 15 | Project Name: New Bedford Harbor | Sampler (Signature): [signature]

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
I-19-3	4/1/86	-	✓	—	1	55 gal drum		
I-23-3	4/1/86	-	✓	—	1	55 gal drum		
I-19-4	4/1/86	—	✓	—	1	1 gal bottle		
I-19-5	4/1/86	—	✓	—	1	1 gal bottle		placed in one cooler
I-19-6	4/1/86	—	✓	—	1	1 gal bottle		
I-23-4	4/1/86	—	✓	—	1	1 gal bottle		
I-23-5	4/1/86	—	✓	—	1	1 gal bottle		placed in one cooler
I-23-6	4/1/86	—	✓	—	1	1 gal bottle		

1. Relinquished by (Signature): [signature]	Date: 4/1/86	Time: 1315	2. Received by (Signature): [signature]	Date: 4/1/86	Time: 1315	3. Relinquished by (Signature): [signature]	Date: 4/2/86	Time: 1930	4. Received by (Signature): [signature]	Date: 4/1/86	Time: 19:30
Name of Agency/Company: HMM ASSOCIATES			Name of Agency/Company: CLEAN HARBORS			Name of Agency/Company: CLEAN HARBORS			Name of Agency/Company: Clean Harbors		
5. Relinquished by (Signature): [signature]	Date: 4/21/86	Time: 13:15	6. Received by (Signature): [signature]	Date: 4/21/86	Time: 13:15	7. Relinquished by (Signature): [signature]	Date: 4/23/86	Time: 0800	8. Remarks: Received by Mark Zapi WES 4/23/86 1400		
Name of Agency/Company: Clean Harbors			Name of Agency/Company: [signature]			Name of Agency/Company: [signature]					

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See Instructions on Reverse Before Completing Form

CHAIN OF CUSTODY RECORD*

ANALYTICAL SUBSAMPLES

Analytical Subsample 001

Copy 3 of 7

Project Number: 944-15 | Project Name: New Bedford Harbor | Sampler (Signature): John A Lindsay

Station/Grid Number and location	Date	Time	Comp	Grab	Number of Containers	Type of Containers	Preservative	Remarks
C-17-10	4/3/92	—	✓	—	1	2.plac		Samples correspond to Barrel C-17-X
J-8-10	4/3/92	—	✓	—	1	2.plac		J-8-X1
J-8-11	4/3/92	—	✓	—	1	2.plac		J-8-X11
J-8-12	4/3/92	—	✓	—	1	2.plac		J-8-X111

1. Relinquished by (Signature):	Date	Time	2. Received by (Signature):	Date	Time	3. Relinquished by (Signature):	Date	Time	4. Received by (Signature):	Date	Time
Name of Agency/Company: HMM Associates	4/4/92	0930	Name of Agency/Company: B C of E	4/4/92	1030	Name of Agency/Company			Name of Agency/Company		
5. Relinquished by (Signature):	Date	Time	6. Received by (Signature):	Date	Time	7. Relinquished by (Signature):	Date	Time	8. Remarks:		
Name of Agency/Company			Name of Agency/Company			Name of Agency/Company					

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* Copies filed with appropriate party as completed.
Original copy is returned to: John Lindsay, HMM Associates, 336 Baker Avenue, Concord, MA 01742

CHAIN OF CUSTODY

2. Case Number 984-15

3. Date of Collection: April 16, 1986

1. Site Name and Location: New Bedford Harbor

4. Number of Samples: FIVE

5. Collector(s): JOHN LINDSAY
HMM ASSOCIATES
Address: 336 BAKER AVE
Concord, MA
Telephone #: 617 371 1692

Item Number	Sample Description		
	Field Number	Seal #	Laboratory Number
	Composite 1	100403	REMARKS
	Composite 2	100404	These five composites
	Composite 3	100405	represent sediments
	Composite 4	100406	from six sediment barrels
	Composite 5	100407	originally identified as
			G-17-X; T-8-X1;
			G-17-2/T-8-2; T-8-1;
			T-23-1; T-23-2/T-14-2.

Item No.	Relinquished By:	Received By:	Purpose of C. of C.
	Printed Name: JOHN LINDSAY	Printed Name: MATT QUINN	
	Signature: John Lindsay Date: 4/16/86	Signature: Matt Quinn Date: 4/16/86	
	Printed Name:	Printed Name:	
	Signature: Date:	Signature: Date:	
	Printed Name:	Printed Name:	
	Signature: Date:	Signature: Date:	
	Printed Name:	Printed Name:	
	Signature: Date:	Signature: Date:	

ATTACHMENT III

NEW BEDFORD SUPERFUND SITE
FIELD TEAM LOG

3/26/86 1130 Left Dock aboard Port Passage 7
1146 Made contact w/Survey team

SAMPLE Collection DAY No. 1

Depart Dock 1130

Personnel:
John Scott
Tom Chase
Gary Paquette
Mark Silva
Paula Capeuskas
Joe Delaney
John Ward
John Lindsay

Barge Operator Dave Benson
Corps Shore Survey Team Bob
Ceo

STATION (GRID)

GRAB # TIME REMARKS
- 1130 left dock
- 1147 made contact field survey team
setting STATION Grid I-31
Mark low water ledge & 2 white doors
- 1200 Marker Buoy placed - 10ft of water
- 1217 Barge Anchor was out - required to reposition 30ft
- 1248 Repositioned buoy
-

STN.	Barrel Grab		
I-31	- 1 - 1	1317	≈ 6 in penetration (shells)
	-2	1324	≈ 2 in " "
	-3	1330	Didn't trip - No Sample
	-4	1332	Didn't trip - " "
	-5	1335	Didn't trip - " "
	-6	1337	Didn't trip " "
	-7	1343	Water Shot
	-8	1347	Water Shot
	-9	1353	≈ 10 in penetration
	-10	1400	Didn't trip - No Sample

- 1403 Head South of 195 overpass to KNOWN Soft sediment

- 1412 TAKE A SHOT South of 195 overpass
  A few inches of penetration WAS Achieved
- 1420 TAKE A SHOT 100' EAST of the Revere Brass point
  A Perfect Sample! WELL 12" penetration Anyway.

- 1455 Decontamination complete
  EAST Passage debarking from Barge

- 1530 Tie up at Lindsey Marine
  Called Jeff - Customer Service at Clean Harbors - told him not to pull up Eby

  Called Randall - indicated that we could take whatever we could get from the Clean STATIONS - do not need from the 2ft ± 4 inch depth as STATED in the SAP. the reason being that this material is for capping out of it is clean on the upper most layers it should be clean deeper down.

Crew John Scott | DAVE Black EAST Passage Operator
Gary Paquette John Lindsay Tom Chase
Mark Silvia L W Bailey DAVE Benson
Joe Delaney

3/27/86

0607 left for the site aboard the Barge L.W. Bailey - Dave Benson & J. Lindsay
0620 arrived at the I 195 Bridge - about one foot too high for barge to get under returned to Lindbey Marine

0650 Arrived back at Lindbey
Met Crew
Crew spent rest of morning stenciling barrels adjusting box corer
1015 Al Randall arrived
1200 - Crew suited up
1223 - L W Bailey left dock
1225 - East Passage left Dock
1244 Barge going under 195 Bridge at least 1½ ft clearance
1246 going under Coggeshall Bridge - similar clearance

1250 East Passage approach East shore can see bottom shell covered

1253 Barge pulled East Passage free
SAMPLING AT GRID I-31

1259	1st Grab	complete tire
1305	2 "	No good
1313	3 "	No good / shell hash

suggested moving east shore

1316	4 "	No good
1319	5 Grab	top ½ of grab out of water

man standing at - no penetration
communicated w/ Randall on shore for advice
1326 preparing to experiment w/ grab in shallow water

1345	6 Grab	1 ft of sediment / keep
1349	7 Grab	good

noticed Port engine on East Passage leaking gas

1355	8 Grab	- only 4 inches / discarded

East Passage Anchored to check leak

1358	9 Grab	good
1403	10 Grab	good

1410	11th	Grab	Good filled barrel I-31-1
1417	12th	Grab	Good
1423	13	Grab	Good
1438	14	Grab	barely lapped
1445	15	"	Good nearly 2 ft
1500	16	Grab	good a lot of blue crabs being collected w/ samples also seeing Mercenaria having a hard time closing lid on 2nd full barrel I-31-2
1503	17	Grab	Good
1507	18	Grab	Good filled 3rd barrel I-31-3
1512	19	Grab	sample good used to top off the 3rd barrel - 2-3 inches
1516	20th	Grab	No good appears to be too far west of channel
1521	21st	Grab	Good
1527	22nd	Grab	Starting to RAIN. this made a 2/3 barrel I-31-4

1534 Heading IN - Survey Crew will be on over around 8AM on 3/28

1538 Passed under the I95 Bridge approx 1 ft clearance [illegible] and I95 then Coggeshall

1550 EAST Passage Tied up at Cove Bay Marina

1740 Don Horsbury arrived, loaded Signed of Chain of Custody The driver Jeff wasn't aware of this COC requirement

3/27/86

2130 John Scott called expressing concern of the passage of water through the protective suits and the potential for water to splash through the eye goggles even under the protection of the face shield. This problem apparently occurred to Gary Paquette who did not report the problem during the day.

I indicated concern for the passage of water through the suits and the potential for PCB's to do the same. John felt that the PCB's stay attached to sediment particles and would not go through the suits.

I called Paula following the discussion. Paula felt also that the PCB's would not go through the suits.

We all agreed that double suiting will be the protocol.

3/28/86

0400 Wake up call - J Lindsay & D. Benson 0430 (Lindberg watchdog leaves Alcoa)
0500 LW Bailey departs Lindberg Marine - Light Rain
0522 Passes under 195 Bridge & under clearance
High Tide is at 0938

0735 Bailey made its way up to Alcoa - barge struck bottom but can maneuver

0750 Radio contact made between Bailey & East Passage

0817 East Passage approaching Bailey - have not been able to contact Field Survey Crew

Paula for Repairs - 0830 - 0930 - Sampling crew suits up - double suit, seams taped.
0941 Barge moves into location - Grid I - 11-(1-3)
0943 Location sited by radio contact with ~~[illegible]~~ crew.

Time	Grab #	Comments
0944	1st grab	good - oily slime drains off grab sampler.
0949	2nd grab	- good - oil slick on water + full grab & thick, black mud. Fouled
1st drum Full - 0955	3rd grab	- good - Full grab - 1st 55 gal drum Full - excess in 2nd drum

10:02 - Chemical techs clean surfaces and seal drums. Geological techs clean grab and fix twisted wire.

Time	Grab #	Comments
10:09 -	4th grab	- good - Clean sand under oily mud, empty shell
10:14 -	5th grab	- good - Full grab - oily mud

Crew adheres to safety & wash down protocol.

2nd drum Full - 10:21 - 6th grab - good - 2nd 55 gal drum Full - excess in 3rd drum. Chemical techs clean surfaces and seal drum. Geotechs clean grab & fix wire.

Time	Grab #	Comments
10:32 -	7th grab	- good - Grab at original core hole - sited by Field survey crew.
10:35 -	8th grab	- good - Full grab.

3/28/86 I - 11 (1-3) / 30-gallon drum

P.J.R.	Time	Grab #	Comments
3rd drum Full	10:39		9th grab - good - Full grab - 3rd drum Full excess into 30 gallon drum. Chemical techs clean surfaces & seal drum. Geotechs prepare for next sample.
30-gal. Full	10:44		10th grab - good - Full grab - 30-gal. drum Full. Chemtech wash & seal drum. Geo-techs wash down deck & A-Frame. Sampling complete.

10:50 - Sampling complete. Barge heads down river to deeper waters. Wash up begins. East Passage Follows.

11:09 - East Passage ties -up to barge. Decontamination of Personnel etc.

1:01 - Decontamination of Personnel & equipment complete. Barge heads back to dock. Personnel on east passage except Project manager, site-safety officer, David B., Barge operator.

Sample Personnel: Mark Silvia, Gray Pockett, Joe Delaney, David Black, John Lindsay, Paula [illegible], David Benson.

1:10 - Barge [illegible].

Log-out: Paula J. [signature]

1500 Clean Harbors signs off on barge

ATTACHMENT IV

NEW BEDFORD SUPERFUND SITE
FIELD SURVEY LOG

ACUSHNET RIVER-NEW BEDFORD, MA-BOX CORE SAMPLES

				GRID	DATE SAMPLE TAKEN
P	1	240537.3035	759192.5705	I-30	MARCH 27, 1986
P	2	240497.7519	759148.2016	I-30	MARCH 27, 1986
P	3	240497.3853	759201.7933	I-30	MARCH 27, 1986
P	4	240576.2603	759182.6350	I-30	MARCH 27, 1986
P	5	240576.4730	759164.3190	I-30	MARCH 27, 1986
P	6	240577.2825	759179.6972	I-30	MARCH 27, 1986
P	7	240567.6016	759188.7450	I-30	MARCH 27, 1986
P	8	240557.1327	759198.4539	I-30	MARCH 27, 1986
P	9	240591.3710	759207.0565	I-30	MARCH 27, 1986
P	10	240599.6538	759203.0412	I-30	MARCH 27, 1986
P	11	240628.4483	759235.9458	I-30	MARCH 27, 1986
P	12	240582.8500	759116.1011	I-30	MARCH 27, 1986
P	13	240439.8914	759829.2002	H-30	MARCH 27, 1986
P	14	240529.2563	759223.1922	I-30	MARCH 27, 1986
P	15	240423.4101	759211.9265	I-30	MARCH 27, 1986
P	16	245282.6269	759118.4097	I-11	MARCH 28, 1986
P	17	245265.1847	759119.8945	I-11	MARCH 28, 1986
P	18	245257.1086	759126.5901	I-11	MARCH 28, 1986
P	19	245265.4783	759089.1652	I-11	MARCH 28, 1986
P	20	245256.0515	759120.0771	I-11	MARCH 28, 1986
P	21	245255.8860	759143.3848	I-11	MARCH 28, 1986
P	22	245266.7177	759088.0413	I-11	MARCH 28, 1986
P	23	245254.8721	759114.6527	I-11	MARCH 28, 1986
P	24	245274.7744	759110.6945	I-11	MARCH 28, 1986
P	25	245271.7042	759123.5747	I-11	MARCH 28, 1986
P	26	245262.7334	759129.6482	I-11	MARCH 28, 1986
P	27	246050.1382	759336.0697	J-8	MARCH 31, 1986
P	28	246050.6478	759325.4059	J-8	MARCH 31, 1986
P	29	246043.8459	759318.1164	J-8	MARCH 31, 1986
P	30	246039.1338	759350.9110	J-8	MARCH 31, 1986
P	31	246022.4012	759355.4404	J-8	MARCH 31, 1986
P	32	246036.3681	759355.3713	J-8	MARCH 31, 1986
P	33	246036.3681	759355.3713	J-8	MARCH 31, 1986
P	34	243706.0299	758724.1084	G-17	MARCH 31, 1986 x
P	35	243768.7621	758674.0201	G-17	MARCH 31, 1986
P	36	243790.6423	758671.7273	G-17	MARCH 31, 1986
P	37	243749.2321	758700.5424	G-17	MARCH 31, 1986
P	38	243738.4367	758703.3373	G-17	MARCH 31, 1986
P	39	243734.4950	758693.1735	G-17	MARCH 31, 1986
P	40	243752.6620	758705.3185	G-17	MARCH 31, 1986
P	41	243750.4702	758715.1881	G-17	MARCH 31, 1986
P	42	243739.6336	758731.1432	G-17	MARCH 31, 1986
P	43	243744.7306	758706.4602	G-17	MARCH 31, 1986
P	44	243284.2750	759109.9246	I-19	APRIL 1, 1986 x (?)
P	45	243377.1628	759107.8172	I-19	APRIL 1, 1986
P	46	243383.5635	759106.6620	I-19	APRIL 1, 1986
P	47	243219.8843	759077.9511	I-19	APRIL 1, 1986
P	48	243251.7075	759086.8271	I-19	APRIL 1, 1986
P	49	243402.7522	759143.2365	I-19	APRIL 1, 1986
P	50	242219.8621	758994.87[illegible]	H-23	APRIL 1, 1986 x
P	51	242216.5381	759147.2625	I-23	APRIL 1, 1986
P	52	242269.6556	759160.5688	I-23	APRIL 1, 1986
P	53	242231.6688	759180.4141	I-23	APRIL 1, 1986
P	54	242270.3797	759182.1893	I-23	APRIL 1, 1986
P	55	241561.2983	759500.4823	J-26	APRIL 2, 1986
P	56	241554.2125	759468.1139	J-26	APRIL 2, 1986
P	57	241580.9867	759582.0691	J-26	APRIL 2, 1986

	61	241578.9310	759565.1497	J-26	APRIL 2, 1986	+
	62	241566.6406	759548.0215	J-26	APRIL 2, 1986	
P	63	241567.3866	759544.5493	J-26	APRIL 2, 1986	
P	64	241562.1656	759552.0484	J-26	APRIL 2, 1986	
P	65	241560.5280	759555.0339	J-26	APRIL 2, 1986	
P	66	241562.4381	759551.5506	J-26	APRIL 2, 1986	
P	67	241572.5182	759551.8658	J-26	APRIL 2, 1986	
P	68	241576.9951	759547.8042	J-26	APRIL 2, 1986	
P	69	241583.4260	759550.6274	J-26	APRIL 2, 1986	
P	70	241595.2875	759543.3138	J-26	APRIL 2, 1986	
P	71	241623.2036	759556.8428	J-26	APRIL 2, 1986	+
P	72	241630.0186	759552.5145	J-26	APRIL 2, 1986	
P	73	241531.2286	759554.2640	J-26	APRIL 2, 1986	
P	74	241498.1912	759559.8481	J-26	APRIL 2, 1986	
P	75	241457.9494	759555.5039	J-26	APRIL 2, 1986	
P	76	241504.0627	759567.6934	J-26	APRIL 2, 1986	
P	77	241511.5418	759556.6214	J-26	APRIL 2, 1986	
P	78	241500.7508	759559.4035	J-26	APRIL 2, 1986	
P	79	241481.1004	759579.2615	J-26	APRIL 2, 1986	+
P	80	241481.7757	759566.2622	J-26	APRIL 2, 1986	+
P	81	241498.9784	759529.9611	J-26	APRIL 2, 1986	
P	82	241571.6314	759528.1611	J-26	APRIL 2, 1986	
P	83	241562.1122	759560.4473	J-26	APRIL 2, 1986	
P	84	241569.1150	759564.3152	J-26	APRIL 2, 1986	
P	85	241554.8779	759571.3861	J-26	APRIL 2, 1986	
P	86	241569.1529	759530.6930	J-26	APRIL 2, 1986	
P	87	241565.2880	759542.1238	J-26	APRIL 2, 1986	
P	88	241009.2556	759482.2881	J-28	APRIL 3, 1986	#
P	89	240849.2541	759395.2161	J-29	APRIL 3, 1986	3"
P	90	240737.9074	759406.9127	J-29	APRIL 3, 1986	10"
P	91	240700.9642	759456.4416	J-29	APRIL 3, 1986	10"
P	92	240627.0124	759498.6723	J-30	APRIL 3, 1986	18"
P	93	240892.5636	759475.4216	J-29	APRIL 3, 1986	# HMMM Records another #
P	94	240905.2179	759471.0143	J-29	APRIL 3, 1986	#
P	95	241088.7442	759316.7586	J-28	APRIL 3, 1986	2'
P	96	241106.9887	759290.1122	J-28	APRIL 3, 1986	#
P	97	241146.1949	759355.5111	J-28	APRIL 3, 1986	2'
P	98	241079.5627	759326.9478	J-28	APRIL 3, 1986	2'
P	99	241115.6932	759348.3665	J-28	APRIL 3, 1986	# = HMMM NO
P	100	241106.9466	759335.5075	J-28	APRIL 3, 1986	6"
P	101	241098.8196	759370.9602	J-28	APRIL 3, 1986	2'
P	102	241108.5420	759342.7561	J-28	APRIL 3, 1986	1'8"
P	103	241116.9824	759365.9405	J-28	APRIL 3, 1986	1'7" = HMMM NO
P	104	241125.2026	759363.8167	J-28	APRIL 3, 1986	?
P	105	241087.7522	759394.5844	J-28	APRIL 3, 1986	# = HMMM NO
P	106	241098.0338	759379.9371	J-28	APRIL 3, 1986	?
P	107	241136.4868	759418.5143	J-28	APRIL 3, 1986	1"
P	108	241033.6737	759434.6999	J-28	APRIL 3, 1986	6
P	109	241040.0717	759428.9337	J-28	APRIL 3, 1986	3
P	110	241069.6221	759420.8315	J-28	APRIL 3, 1986	4
P	111	241070.8400	759426.2339	J-28	APRIL 3, 1986	?
P	112	241081.7744	759427.8351	J-28	APRIL 3, 1986	?
P	113	241084.9405	759421.1911	J-28	APRIL 3, 1986	10"
P	114	241099.4594	759420.8637	J-28	APRIL 3, 1986	11"

NOTE: DUE TO HEAVY FOG, BOX CORE SAMPLES IN THE J-8 GRID, TAKEN ON APRIL 8, 1986, WERE TAKEN AT RANDOM WITH THE DISTANCE TAKEN FROM △ AERO AND A NATURAL RANGE TO CONTROL NORTH AND SOUTH. THE RANGE WAS ESTABLISHED ON MARCH 31, 1986. SEE R[illegible] 2967 P. 85.

DISTANCE T[illegible] SAMPLE

128	P 116		106 FEET		
129	P 117		90 FEET		
130	P 118		124 FEET		
131	P 119		93 FEET		
~~132~~	~~P 120~~		~~96 FEET~~		
133	P 121		115 FEET		
134	P 122		100 FEET		
135	P 123		110 FEET		
136	P 124		90 FEET		
137	P 125	243696.0409	758700.8318	G-17	APRIL 8, 1986
~~138~~	~~P 126~~	~~243733.5355~~	~~758704.6817~~	~~G-17~~	~~APRIL 8, 1986~~
139	P 127	243763.6612	758704.8377	G-17	APRIL 8, 1986
140	P 128	243808.8968	758705.7429	G-17	APRIL 8, 1986
141					
142				CORPS SAMPLES	
143				GRID	DATE SAMPLE TAKEN
~~144~~	~~P 129~~	~~245257.0963~~	~~759113.4128~~	~~I-11~~	~~MARCH 28, 1986~~
145	P 130	243743.7343	758706.5456	G-17	APRIL 8, 1986
146	P 131	246036.6124	~~759330.0386~~	J-8	MARCH 31, 1986
147	P 132	243743.7343	758706.5456	G-17	MARCH 31, 1986 WATER SAMP
148	P 133	~~243320.3345~~	~~759130.6920~~	I-19	~~APRIL 1, 1986~~
149	P 134	242281.3059	759145.3294	G-31	APRIL 1, 1986 WATER SAMP
~~150~~	~~P 135~~	~~241556.0996~~	~~759575.3354~~	~~K-26~~	~~APRIL 2, 1986~~
151	P 136	241074.6139	759628.7390	K-28	APRIL 3, 1986
152					
153		SAMPLES NOT RETRIEVED DUE TO:			
154		~~@ WATER TOO DEEP~~ Penetration too deep			
155		+ BOX COULD NOT RETRIEVE SAMPLE			
~~156~~		~~# MATERIAL TOO HARD~~			
		x WATER SAMPLE			

New Bedford Ma — 27 March 1986

Acushnet River

Location of Box Core Samples

Party [illegible] White

[illegible]

Acushnet River — 27 March 1986

Grid & Sample #	∡ Wanted to Corps Sample Taken	Dist To Corps Sample		∡ To Box Core Sample	Dist. To Box Core Sample
Note: Grid "I-31" Samples could not be retrieved by the Contractor. All Samples pertaining to the I-31 Grid were taken at random, within the "I-30" Grid as agreed to by Mr. Al Randall					
I-30 #1				348°-34'	897'
#2				349°-39'	810'
#3				350°-43'	878'
#4				346°-32'	921'
#5				345°-37'	910'
#6				346°-21'	920'
#7				347°-10'	918'
#8				348°-03'	916'
#9				347°-08'	948'
#10				346°-38'	952'
#11				347°-06'	995'
#12				342°-53'	887'
#13				343°-36'	920'
#14				353°-22'	911'
#15				354°-41'	827'

I-31 & I-30 Sample Area Completed

New Bedford, Ma. [illegible] 28 March [illegible]

EDM. @ Δ "Aero" (1985)

[illegible] on Δ "Coffin" (1985)

[illegible] to Box Core Samples & Refs

7°-54'-34" To Windmill

25°-23'-30" To St. Anthony's Church

Grid & Sample #	∡ To Corps Sample Taken	Dist. to Corps Sample		∡ To Box Core Samples	Dist. to Box Core Samples
I-11 – #16	[illegible]	7[illegible]		3[illegible]	[illegible]
#17					
#18				2[illegible]	7[illegible]
#19				[illegible]	76[illegible]
#20				[illegible]	7[illegible]
#21				[illegible]	[illegible]
#22				[illegible]	7[illegible]
#23				[illegible]	[illegible]
#24				[illegible]	[illegible]
#25				[illegible]	[illegible]
#26				[illegible]	7[illegible]

"I-11" Sample Area Completed

5 To 10 Kts S-E Wind

Acushnet River 31 March 1986

E.D.M. @ Δ "AERO" (1985)

[illegible] on Δ "Coffin" (1985)

∡s Rt to Box Core Samples & Refs

7°-54'-34" To Windmill

25°-23'-24" To St. Anthony's Church

Grid & Sample #	∡ To Corps Sample Taken	Dist. To Corps Sample		∡ To Box Core Samples	Dist. To Box Core Samples
#27	254°-12'	95'		247°-25'	104'
#28				245°-15'	94'
#29				248°-00'	85'
#30				254°-45'	116'
#31				263°-05'	119'
#32				268°-32'	110'
#33				256°-24'	120'

"J-8" Sample Area Completed

5 To 10 Kts S.E. Wind

New Bedford Ma. · Acushnet River · 31 March 1986

E.D.M. @ △ "Coffin" (1985)

00-00-00 on △ "Veranda" (1985)

∡'s Rt To Box Core Samples & Refs.

4° 48' 10" To School Cupola (Weather Vane on)

123° 18' 27" To [illegible] Church Spire

227° 18' 20" To Windmill

Grid # Sample #	∡ To Cups Sample	Dist. To Cups Sample		∡ To Box Core Sample	Dist To Box Core Sample
"G-17" - #34	231°23'	1573'	Water Sample →	231°55'	1534'
#35				230°18'	1601'
#36				230°16'	1623'
#37	No Samples Obtained	Too Deep		231°11'	1579'
#38				231°15'	1568'
#39				230°[illegible]	[illegible]
#40				231°[illegible]	[illegible]
#41				231°43'	1579'
#42				[illegible]	[illegible]
#43				[illegible]	[illegible]

"G-17" Sample Area Completed

[illegible] Wind

Acushnet River 1 April 1986

E.D.M. @ △ "Coffin" (1985)

00-00-00 on △ "Veranda" (1985)

∡'s Rt To Box Core Samples & Refs

4° 48' 12" To School Cupola (Weather Vane on)

123° [illegible] To St Anthony's Cross on Church Spire

[illegible] To Windmill

Grid # Sample #	∡ To Cups Sample	Dist. To Cups Sample		∡ To Box Core Sample	Dist To Box Core Sample
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]				[illegible]	[illegible]
[illegible]				[illegible]	[illegible]
				249°05'	[illegible]
				[illegible]	[illegible]
				[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Water Sample →	[illegible]	[illegible]
				318°50'	309'
				[illegible]°02'	333
				31[illegible]°03'	344'
				31[illegible]°54'	354'

"I-23" Sample Area Completed

15 to 20 Kts S.E Wind

New Bedford, Ma - Acushnet River - 2 April 1986

ELM @ Site X (85)

00-00-[illegible] [illegible] L Veranda [illegible]

35 R1 Te Son Cor [illegible]

68-32-20 [illegible]

K-26 -J-26 Note [illegible]

[illegible] in [illegible]

were taken @ random [illegible]

[illegible] 26 [illegible]

K-[illegible]	337-53	[illegible]			
#55			[illegible]	[illegible]	
#56				338-06	1905
#57			[illegible]	[illegible]	[illegible]
#58				[illegible]	[illegible]
#59				[illegible]	[illegible]
#60	[illegible]			337-[illegible]	19[illegible]
#61				[illegible]	1912
#62			[illegible]	337-22	[illegible]
#63			[illegible]	[illegible]	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]		Taken Core Sample	Dist. to Box Core [illegible]
[illegible]			1'8"	337-12	1951'
[illegible]				[illegible]	1951'
[illegible]				[illegible]	1951'
				[illegible]	1950'
				[illegible]	1952'
				[illegible]	[illegible]
	couldn't retrieve		[illegible]	[illegible]	[illegible]
			[illegible]		[illegible]
				337-42	1925'
				338-20	[illegible]
		[illegible]		[illegible]	1962'
			[illegible]	[illegible]	[illegible]
					[illegible]
					[illegible]
	Box didn't Trip	Sample			[illegible]4
					[illegible]

[illegible]

New Bedford, Ma - Acushnet River - 2 April 1986

Grid & Sample #	% Core Sample taken	[illegible] Core Sample		[illegible] Core Sample	[illegible] Core Sample
K-J-26 - #81				337-32	[illegible]
#82				336-27	1948'
#83				337-25	[illegible]
#84				[illegible]	19[illegible]
#85			[illegible]	337-[illegible]	[illegible]
#86				336-33	1947'
#87				336-59	1949'

K & J-26 [illegible]

[illegible] West wind

New Bedford, Ma [illegible] River - 3 April 86

[illegible]

[illegible]

[illegible] Samples [illegible]

[illegible]

[illegible] Samples could not be taken by the [illegible] Grid because of [illegible] Samples [illegible]

				[illegible]	[illegible] Core Sample
	[illegible]	[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]	1947'
			[illegible]	343-33	[illegible]
				[illegible]	[illegible]
				[illegible]	[illegible]
			"	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]
				[illegible]	[illegible]
			N[illegible]	[illegible]	[illegible]
	[illegible]		[illegible] WIND		

[illegible] 3 April 86

Grid #	[illegible]	[illegible]		[illegible]	[illegible]
Sample #					
#97					
98					
#99					
[illegible]					
[illegible]					
[illegible]					
[illegible]					
[illegible]					
[illegible]					
[illegible]					
[illegible]					
#10[illegible]					
[illegible]					
[illegible]					
#1[illegible]					
#112					
#113					
#114					

[illegible] 86

[illegible] End

[illegible] 2 April 1986

Note: Due to Heavy Fog Orientation for [illegible] [illegible] Δ [illegible] was not visible [illegible] [illegible] [illegible] in the [illegible] Grid, taken on this date, were [illegible] with the dist. from Δ [illegible] and a Natural Range to [illegible] Map [illegible] [illegible] established [illegible] [illegible] [illegible]

Party: [illegible]

[illegible]	[illegible] Sample	[illegible]			Dist. To Box Core Sample
I[illegible]	[illegible]	15'			
[illegible]					100'
116					106'

New Bedford Ma - Acushnet River - 8 April 1986

Grid # Sample #	Δ To Core Sample Taken	Dist. to Core Sample			Dist To Ex Core Sample
J-8 - #117					90'
#118					[illegible]'
#119					93'
#120					96'
#121					115'
#122					100'
#123					110'
#124					90'

Additional Samples in the "J-8" Grid completed

15-20 Kts SW winds Heavy Fog & [illegible]

New Bedford Ma Acushnet River - 8 April 86

Note: Heavy fog lifted to Light Fog enough to see sites for orientation of Δ for Additional Samples to be taken in the G-17 Grid.

E. Dill & L. Coffin (1985)

[illegible] on Δ "Veranda" (1980)

Δ's Rt To Exact Core Samples & Refs.

123 [illegible] Δ St. Anthonys Church Cross on Spire

222 [illegible] Δ [illegible]

[illegible]	Δ To Core Sample Taken	Dist. to Core Sample		Δ To Ex Core Sample	Dist. to Ex Core Sample
[illegible] 17	231°-23'	1573'			
[illegible]				231°-01'	1526'
[illegible]				231°-17'	1563'
[illegible]				231°-23'	1593'
#128				231°-33'	1638'

Additional Samples in the "G-17" Grid Completed

15 20 Kt [illegible] winds [illegible] Fog & Heavy Rain

ATTACHMENT V

HAZARDOUS MATERIALS HANDLING AND TRAINING

HMM REF NO. 999-

NEW BEDFORD HARBOR SUPERFUND
PROJECT TRAINING SIGN-IN

PERSONNEL NAME	SOCIAL SECURITY #	COMPANY
JOHN WOOD	202-46-2111	HMM
Joseph Delaney	011-58-5597	HMM
DAVID BLACK	563-47-5509	HMM
MARY PAQUETTE	036-36-3225	SAIC
Mark Silvia	038-38-3297	SAIC
THOMAS J. CHASE	038-48-7858	SAIC
JOHN SCOTT	121-38-7168	SAIC
JOHN CINOSKY	001-36-8692	HMM

New Employee Sign-In 3/16

Wilson Hum	111-32-7896	SAIC

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

A. Review all aspects of the General Health and Safety Plan for PCB contaminated sediment collection activities. Inform employees of their rights and responsibilities under this plan.

B. Review of the Army Corps of Engineers Accident Prevention plan including: safety policies, accident prevention, lifting, fall prevention and controls of pollution from the work.

C. Review all aspects of the work procedures for the project, and discuss the specific hazards involved in each procedure.

D. Identify the work site and the specific health hazards known to exist on this site. Inform employees of:

* The potential health hazards
* Routes of exposure
* Methods of detection and exposure symptoms
* Safety precautions/protective gear
* Emergency procedures/first aid

E. Review the location and proper use of safety and personal protective gear. Review the use, care, fitting of protective equipment and the necessity for such equipment, its limitations and effectiveness. All personnel will have the opportunity to use this equipment in a test area.

F. Advise employees of personal hygiene procedures and contamination reduction procedures. Differentiate between the three work zones (clean zone, contamination reduction zone, hot zone). Review the restrictions on activities within these work zones.

G. Review the decontamination procedures in a step-by-step manner. Discuss the procedures of entering and exiting the hot zone. Personnel will have the opportunity to participate in decontamination procedures in a test environment.

H. Training records will be kept on file at HMM Associates. This training is site specific and covers only work activities on the New Bedford Harbor Sediment Sampling project: HMM Ref. No. 944-15. Personnel are required to have a refresher course once a year and/or before work on any new project begins.

EMPLOYEE NAME: Wilson Ham
COMPANY OR AFFILIATION: SAIC
JOB DESCRIPTION: Geo Tech

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: Wilson Ham DATE: 3/31/88
PROJECT SUPERVISOR: Kimberly
PROJECT MANAGER:
TRAINER: Paul J. Fitzpatrick

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EMPLOYEE NAME: Mark Andrew Silvia
COMPANY OR AFFILIATION: Science Applications International Co.
JOB DESCRIPTION: Support vessel operator & Box Sampler Operator

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: _____ DATE: 25 March 1986
PROJECT SUPERVISOR: _____
PROJECT MANAGER: _____
TRAINER: _____

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TRAINING RECORD

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EMPLOYEE NAME: GARY RAQUETTE
COMPANY OR AFFILIATION: SITEC
JOB DESCRIPTION: GEO TECH

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: [signature] DATE: 3-25-86
PROJECT SUPERVISOR: [signature]
PROJECT MANAGER: [signature]
TRAINER: [signature]

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

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EMPLOYEE NAME: K. J. SCOTT
COMPANY OR AFFILIATION: SAIC
JOB DESCRIPTION: Geo Tech

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: K Scott DATE: 25 Mar 86
PROJECT SUPERVISOR:
PROJECT MANAGER:
TRAINER:

HMM Ref. No. 85-944-15

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

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EMPLOYEE NAME: Thomas J. Chase
COMPANY OR AFFILIATION: Science Applications Int'l Corp
JOB DESCRIPTION: Boat Captain

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: Thomas J. Chase DATE: Mar. 25 1986
PROJECT SUPERVISOR:
PROJECT MANAGER:
TRAINER:

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

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EMPLOYEE NAME: _____
COMPANY OR AFFILIATION: _____
JOB DESCRIPTION: _____

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: _____ DATE: _____
PROJECT SUPERVISOR: _____
PROJECT MANAGER: _____
TRAINER: _____

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

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H. Training records will be kept on file at HMM Associates. This training is site specific and covers only work activities on the New Bedford Harbor Sediment Sampling project: HMM Ref. No. 944-15. Personnel are required to have a refresher course once a year and/or before work on any new project begins.

EMPLOYEE NAME: Joseph Delaney
COMPANY OR AFFILIATION: HMM Assoc.
JOB DESCRIPTION: [illegible]

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: [signature] DATE: [illegible]
PROJECT SUPERVISOR: [signature]
PROJECT MANAGER: [signature]
TRAINER: [signature]

HMM Ref. No. 85-944-15

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

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EMPLOYEE NAME: [illegible]
COMPANY OR AFFILIATION: [illegible]
JOB DESCRIPTION: [illegible]

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: [illegible] DATE: 3-25-86
PROJECT SUPERVISOR: [illegible]
PROJECT MANAGER: [illegible]
TRAINER: [illegible]

NEW BEDFORD HARBOR PROJECT
TRAINING RECORD

A. Review all aspects of the General Health and Safety Plan for PCB contaminated sediment collection activities. Inform employees of their rights and responsibilities under this plan.

B. Review of the Army Corps of Engineers Accident Prevention plan including: safety policies, accident prevention, lifting, fall prevention and controls of pollution from the work.

C. Review all aspects of the work procedures for the project, and discuss the specific hazards involved in each procedure.

D. Identify the work site and the specific health hazards known to exist on this site. Inform employees of:

* The potential health hazards
* Routes of exposure
* Methods of detection and exposure symptoms
* Safety precautions/protective gear
* Emergency procedures/first aid

E. Review the location and proper use of safety and personal protective gear. Review the use, care, fitting of protective equipment and the necessity for such equipment, its limitations and effectiveness. All personnel will have the opportunity to use this equipment in a test area.

F. Advise employees of personal hygiene procedures and contamination reduction procedures. Differentiate between the three work zones (clean zone, contamination reduction zone, hot zone). Review the restrictions on activities within these work zones.

G. Review the decontamination procedures in a step-by-step manner. Discuss the procedures of entering and exiting the hot zone. Personnel will have the opportunity to participate in decontamination procedures in a test environment.

H. Training records will be kept on file at HMM Associates. This training is site specific and covers only work activities on the New Bedford Harbor Sediment Sampling project: HMM Ref. No. 944-15. Personnel are required to have a refresher course once a year and/or before work on any new project begins.

EMPLOYEE NAME: JOHN W WOOD
COMPANY OR AFFILIATION: HMM ASSOCIATES
JOB DESCRIPTION: CHEMICAL TECHNICIAN

"I have attended a four-hour training session explaining all aspects of Health and Safety on the New Bedford Superfund Site, Project: HMM Reference No. 944-15".

EMPLOYEE SIGNATURE: John W Wood DATE: 3-25-86
PROJECT SUPERVISOR: John Lindsay
PROJECT MANAGER: John Lindsay
TRAINER: Erik J. Kapel

WEEKLY SAFETY MEETING

NEDSO

Date held (PJL) 3/25/86

THRU: Area Engineer, ______________ Area

Time 1:00pm - 5:00pm

TO: Safety Office, NED

1. Weekly safety meeting was held this date for the following personnel:

Contract No. 944-15 Contractor HMM Associates

Conducted By Paula J. Lapinskas All personnel present (Contr) HMM Associates
(Sub) SAIC
(Govt) ______

Subjects discussed (Note, delete, or add):
EM 385-1-1, Section: ______

Accident Prevention Plan ✓ - including a section on limited perception due to the use of personnel protective gear

Individual Protective Equipment - ✓ Respirators fit-tested. (resp., goggles Face shield, etc.

Prevention of Falls - ✓

Back Injury, Safe Lifting Techniques - ✓

Fire Prevention - N/A

Sanitation, First Aid, Waste Disposal - ✓ + Decontamination procedures for PCB's; Personnel + Equipment.

Tripping Hazards - trash, hose, nails in lumber - ✓ - ropes + thresholds on barge.

Staging, Ladders, Concrete Forms, Safety Nets - N/A

Hand Tools, Portable Power Tools, Woodworking Machinery - N/A

Equipment Inspection & Maintenance (Zero Defects) - Barge inspection - box corer Chains + pu.

Hoisting Equipment - A-Frame - winch - box corer

Ropes, Hooks, Chains and Slings - ✓

Electrical Grounding, Temporary Wiring, GFCI - N/A

Lockouts for safe clearance procedures - electrical, pressure, moving parts - N/A

Welding, Cutting - N/A

Excavations - N/A

Loose Rock and Steep Slopes - N/A

Explosives - N/A

Water Safety - N/A

Toxic materials - hazards, MSDS, respiratory, ventilation, personal protection, proper handling procedures, Fit-test and equipment maintenance, history of the hazardous materials.

Other - (see attached training record forms for details on this training).

Prepared by Paula J. Lapinskas Title Site Safety Officer

2. Forwarded.

CF:

Signature ______________
Resident Engineer

NED Form 251

WEEKLY SAFETY MEETING

NEDSO

Date held 3/31/86

THRU: Area Engineer, _____ Area

Time 9:00am - 9:45am

TO: Safety Office, NED

1. Weekly safety meeting was held this date for the following personnel:

Contract No. 944-15 Contractor HMM Associates

Conducted By Paula J. Lapinskas All personnel present (Contr) HMM Associates
(Sub) SAIC
(Govt) DEQE Lab Assistant

Subjects discussed (Note, delete, or add):
EM 385-1-1, Section: _____

Accident Prevention Plan - ✓ - review limited perception due to safety equipment, and proper precautions during work.

Individual Protective Equipment - ✓ + respirators fit-tested. + modify safety (PE) personnel protective equipment C.E. - double suit

Prevention of Falls - ✓

Back Injury, Safe Lifting Techniques - ✓

Fire Prevention - N/A

Sanitation, First Aid, Waste Disposal - ✓ + Reviewed Decontamination procedures for PCB's; personnel & Equipm

Tripping Hazards - trash, hose, nails in lumber - ✓

Staging, Ladders, Concrete Forms, Safety Nets - N/A

Hand Tools, Portable Power Tools, Woodworking Machinery - N/A

Equipment Inspection & Maintenance (Zero Defects) - Barge inspection - box car

Hoisting Equipment - A-frame - winch - box corer chains & pulleys

Ropes, Hooks, Chains and Slings - ✓

Electrical Grounding, Temporary Wiring, GFCI -

Lockouts for safe clearance procedures - electrical, pressure, moving parts -

Welding, Cutting - N/A

Excavations - N/A

Loose Rock and Steep Slopes - N/A

Explosives - N/A

Water Safety - N/A

Toxic materials - hazards, MSDS, respiratory, ventilation - Reviewed this sec

Other - including personal protection, proper handling proced fit-tested respirators, protective equipment maintena

Prepared by Paula J. Lapinskas Title Site safe. officer

2. Forwarded.

Signature _____
Resident Engineer

CF:

ENG FL 791

WEEKLY SAFETY MEETING

NEDSO — Date held 4/18/86

THRU: Area Engineer, _____ Area — Time 0500

TO: Safety Office, NED — Field Time 88 Manhours

1. Weekly safety meeting was held this date for the following personnel:

Contract No. 944-15 Contractor HMM Associates

Conducted By J. LINDSAY All personnel present (Contr) HMM Associates
(Sub) SAIC
(Govt) _____

Subjects discussed (Note, delete, or add):
EM 385-1-1, Section: _____

Accident Prevention Plan ✓ + review limited perception due to safety equipment, and proper precautions during work.

Individual Protective Equipment - ✓ - respirators Fit-tested

Prevention of Falls - ✓

Back Injury, Safe Lifting Techniques - ✓

Fire Prevention - N/A

Sanitation, First Aid, Waste Disposal - +Review decontamination procedures for PCB's; personnel & equipment.

Tripping Hazards - trash, hose, nails in lumber - ✓ - ropes + thresholds on barge.

Staging, Ladders, Concrete Forms, Safety Nets - N/A

Hand Tools, Portable Power Tools, Woodworking Machinery - N/A

Equipment Inspection & Maintenance (Zero Defects) - Barge inspection - box core chains & pulleys.

Hoisting Equipment - A-Frame - winch - box-corer

Ropes, Hooks, Chains and Slings - ✓

Electrical Grounding, Temporary Wiring, GFCI - N/A

Lockouts for safe clearance procedures - electrical, pressure, moving parts - N/A

Welding, Cutting - N/A

Excavations - N/A

Loose Rock and Steep Slopes - N/A

Explosives - N/A

Water Safety - N/A

Toxic materials - hazards, MSDS, respiratory, ventilation + personal protech.

Other - proper handling procedures, Fit-test + equip. maintenance

Prepared by [signature] Title Project Mgr

2. Forwarded.

Signature _____
Resident Engineer

CF:

NED, [illegible] 281

ATTACHMENT VI

VESSEL CERTIFICATES OF INSPECTION

CERTIFICATE OF INSPECTION

(Self-propelled floating plant under 65' in length)

NAME AND/OR NUMBER	MAXIMUM NUMBER OF PASSENGERS (incl. crew)
B/V EAST PASSAGE	
DISTRICT	PROJECT
MAKE AND MODEL	HULL MATERIAL
Mirrocraft	Aluminum
PROPULSION: ☐ INBOARD ☒ OUTBOARD ☒ GAS ☐ DIESEL	TOTAL RATED H.P.: 230
LENGTH - BEAM - DRAFT: 2 x x	

INSPECTION RESULTS

(Check applicable items - indicate inapplicable items with N/A)

INSPECTION ITEMS			INSPECTION ITEMS		
NAME AND/OR NUMBER	PROPER SIZE, TYPE AND COLOR	✓	VENTILATION OF HULL AND BILGES	VENTILATORS FITTED WITH PROPER COWLS OR EQUIVALENT	✓
	PROPERLY DISPLAYED ON BOW AND STERN	N/A		ELECTRIC BILGE BLOWER(S) FULLY ENCLOSED	N/A
NAVIGATION LIGHTS	WHITE - PROPERLY DISPLAYED AND OPERATING	✓	FUEL SYSTEM	TANK(S) AND LINES SECURELY FASTENED IN PLACE	✓
	COLORED - ADEQUATELY SCREENED AND OPERATING	✓		FILLER AND VENT PIPES BONDED AND PROPERLY INSTALLED	✓
LIFE SAVING DEVICES	REQUIRED NUMBER ON BOARD	✓		SHUT OFF VALVES PROPERLY INSTALLED AND OPERATIVE	✓
	SATISFACTORY CONDITION	✓	ELECTRICAL INSTALLATION SATISFACTORY		✓
	READILY ACCESSIBLE	✓	MOORING TACKLE	SUITABLE ANCHOR(S)	✓
WHISTLE OR HORN ADEQUATE		✓		ANCHOR LINE/CHAIN PROPER SIZE AND IN GOOD CONDITION	✓
BELL ADEQUATE				MOORING LINES OF PROPER SIZE AND IN GOOD CONDITION	✓
CARBURETOR(S)	APPROVED FLAME ARRESTOR IN GOOD CONDITION AND PROPERLY INSTALLED		BILGES CLEAN AND FREE FROM FIRE HAZARDS		✓
	DRIP PAN(S) PROPERLY INSTALLED AND IN GOOD CONDITION		FIRST AID KIT	COMPLETE	✓
FIRE EXTINGUISHERS	APPROVED TYPE(S)	✓		ACCESSIBLE	
	PROPER SIZE(S)	✓			
	REQUIRED NUMBER	✓			
	SATISFACTORY CONDITION	✓			
	READILY ACCESSIBLE	✓			

REMARKS

This vessel meets the safety requirements of the U.S. Coast Guard and the Corps of Engineers

DATE INSPECTED	TITLE OF INSPECTOR	SIGNATURE OF INSPECTOR

SUG FORM

CERTIFICATE OF INSPECTION

(Self-propelled floating plant under 65' in length)

NAME AND/OR NUMBER	MAXIMUM NUMBER OF PASSENGERS (incl. crew)
Leonard W. Bailey RI 6528 J	
DISTRICT	**PROJECT**
MAKE AND MODEL	**HULL MATERIAL**
Custom Construction HMB	STEEL
PROPULSION ☒ INBOARD ☐ OUTBOARD ☐ GAS ☒ DIESEL	**TOTAL RATED H.P.** 220 / **LENGTH - BEAM - DRAFT** 26 x 10 x 3

INSPECTION RESULTS

(Check applicable items - indicate inapplicable items with N/A)

INSPECTION ITEMS			INSPECTION ITEMS		
NAME AND/OR NUMBER	PROPER SIZE, TYPE AND COLOR	✓	VENTILATION OF HULL AND BILGES	VENTILATORS FITTED WITH PROPER COWLS OR EQUIVALENT	✓
	PROPERLY DISPLAYED ON BOW AND STERN	✓		ELECTRIC BILGE BLOWER(S) FULLY ENCLOSED	✓
NAVIGATION LIGHTS	WHITE - PROPERLY DISPLAYED AND OPERATING	✓	FUEL SYSTEM	TANK(S) AND LINES SECURELY FASTENED IN PLACE	✓
	COLORED - ADEQUATELY SCREENED AND OPERATING	✓		FILLER AND VENT PIPES BONDED AND PROPERLY INSTALLED	✓
LIFE SAVING DEVICES	REQUIRED NUMBER ON BOARD	✓		SHUT OFF VALVES PROPERLY INSTALLED AND OPERATIVE	✓
	SATISFACTORY CONDITION	✓	ELECTRICAL INSTALLATION SATISFACTORY		✓
	READILY ACCESSIBLE	✓	MOORING TACKLE	SUITABLE ANCHOR(S)	✓
WHISTLE OR HORN ADEQUATE		✓		ANCHOR LINE/CHAIN PROPER SIZE AND IN GOOD CONDITION	✓
BELL ADEQUATE				MOORING LINES OF PROPER SIZE AND IN GOOD CONDITION	✓
CARBURETOR(S)	APPROVED FLAME ARRESTOR IN GOOD CONDITION AND PROPERLY INSTALLED	N/A	BILGES CLEAN AND FREE FROM FIRE HAZARDS		✓
	DRIP PAN(S) PROPERLY INSTALLED AND IN GOOD CONDITION	N/A	FIRST AID KIT	COMPLETE	
FIRE EXTINGUISHERS	APPROVED TYPE(S)	✓		ACCESSIBLE	
	PROPER SIZE(S)	✓			
	REQUIRED NUMBER	✓			
	SATISFACTORY CONDITION	✓			
	READILY ACCESSIBLE	✓			

REMARKS

This vessel meets the safety requirements of the U.S. Coast Guard and the Corps of Engineers

DATE INSPECTED	TITLE OF INSPECTOR	SIGNATURE OF INSPECTOR

Crew John Lindsay, Paula Kapuskas, Joe Delaney, DAVE Black, Wilson Horn, Mark Silva, Tom Chase

3/31/86 DAVE Benson Barge Operator

0706 Barge left Lamphere Marina
Sunny, calm, 50°F

0730 Made under both bridges
Made 195 Bridge by 5 inches

0850 Tried to proceed to J. 8 want around about ~~XXX~~ ft below Armory

0853 In contact w/ Light Armory. located just below Lu Bailey.

[illegible] 0910 - Sampling crew suits-up. Barge brought into location - J-8. Field survey crew sites the barge.
10:30 - Sampling crew prepares the bucket and sample drums.

Time	Grab #	depth	Comments
10:41	grab #1 - good -	24 inch depth -	thick black mud. Foul odor
10:45	grab #2 - good -	20 inch depth. -	Smooth, black mud
10:50	grab #3 - good -	24 inch depth -	
1st drum Full 10:55 -	grab #4 - good -	24 inch depth -	1st ~~drum~~ Filled. Mud appears sandy. Excess mud placed in 2nd drum. Chemtechs clean and seal sample drum. 1/2 Full 55-gal.
11:01 -	grab #5 - good -	26 inch depth -	
11:05 -	grab #6 - good -	24 inch depth -	~~mud sam~~ placed in 30-gal drum.
30-gal drum Full 11:09 -	Grab #7 - good -	24 inch depth -	Mud sa[illegible] placed in 30-gal drum. Mud appears [illegible] 30-gal drum full. Chemtechs clean & seal [illegible]

pjk

	Time	Grab#	Depth	Comments
½ composite	11:16			Sampling complete in J-8. Barge moves to G-17. / Cancel. Remain at J-8 for water sample.
55-gal water	11:25			55-gal drum: water sample taken at Grid J-8.
	11:27			Water sample complete. Chem techs clean and seal drum.
	11:33			Water samples collected in 1-gal jugs. Jugs rinsed, then filled.
+3 jugs Full +	11:35			3 Jugs water = 1 cooler. Chemtechs package and clean sample jugs.
2 jugs Full +	11:37			3 Jugs water = 1 cooler. Chemtechs package and clean sample jugs. Barge heads to G-17.
	11:40			Sampling personnel wash down sample area and themselves. Sampling process in very sloppy.
(G-17)	11:50			Barge moves into position at grid G-17. Field Survey crew sites the barge.
55-gal water	12:05			Barge sited by Field Survey crew. 55-gal water sample taken. Chem techs seal drum.
3 jugs Full +	12:08			3 Jugs water = 1 cooler. Chemtechs package and clean sample jugs.
3 jugs Full +	12:10			3 Jugs water = 1 cooler. Chemtechs package and clean sample jugs.
	12:19			Water samples off-loaded to East Passage.
+ Composite +	12:25	grab #8		Good + 20 inch depth - Smooth black mud. River weed on box corer
2nd 55-gal drum	12:29	grab #9		Good + 24 inch depth. 2nd 55-gal drum Full. Chem techs clean and seal drum.
	12:33	grab #10		- No Good + ≅ 32 inches - Full box corer. Sample dropped back.
	12:37	grab #11		- No Good - Full box corer. Sample dropped back.
	12:39	grab #12		- No Good. Box corer did not close.
	12:41	grab # 13		- No Good. Full Box Corer.

Time	Grab #	depth	Comments
12:44 -	grab #14 -		Good - Full Box corer, bottom mud sliced - off to 24 inch depth. Corer washed down. Sample removed.
12:49 -	grab #15 -		Good - Full Box corer, bottom mud sliced off to 24 inch depth. Corer washed down. Sample removed. Smooth, black mud.
3rd 55-gal drum. 12:53 -	grab #16 -		Good. Full Box corer. bottom mud sliced - off to 24 inch mark. 3rd drum Full. Drum cleaned & sealed

12:55 - Sampling crew washes down sample area and themselves. Barge proceeds down River to deeper water

[illegible] - [illegible] samples taken, [illegible] from each 55-gal drum.

1:20 - Decontamination of personnel begins.
2:50 - Decontamination of personnel Finished
3:39 - Barge docks at Pier (Wood(?) Farm) at New Bedford Post Office!!)
4:30 Crane off loads barrels
6:30 Clean Harbors [illegible] off Chain of Custody

Sampling Crew: John Lindsay, Joe Delaney, David Black, Mark Silvia, Wilson Horn, David Benson, Paula J. Lapinskas.
East Passage: Tom Chase, David Lubianez[illegible]

4/1/86

0730 Loaded Boards onto barge
0800 C.W. Bailey left dock
0825 Arrived at site (Low tide at 6:35)

Paula for Lapuka

0830 - Sample Personnel suit-up. East Passage moves to barge.

0951 - Sample crew ready. Barge moves into location Grid I-19. Field Survey Crew sites barge position.

55-gal water

0958 - 55-gal. water sample taken. Chemtechs rinse drum, fill it and seal.

Sealed 1 gal. Water

10:01 - 1-gal water samples taken. Jars rinsed and filled. 3 jars = 1 cooler. 2 coolers

10:05 - water sampling complete. East Passage pulls up to pick-up samples.

Time	Grab #	Depth	Comments
10:12 -	grab # 1 -	good - 24 inches -	Sandy, brown mud. Difficult to remove from core
10:18 -	grab # 2 -	good - 24 inches. -	
1st 55-gal drum Full 10:27 -	grab # 3 -	good - 24 inches -	1st 55-gal drum Full.
10:25 -	grab # 4 -	good - 24 inches -	Begin composite
10:32 -	grab # 5 -	good - 24 inches -	40 mud snails 1/2 composite drum complete.
1/2 composite 10:35 -	grab # 6 -	Not used -	Barge moves to New location I-23.
(I-23) 10:51 - 55-gal water	55-gal water Sample taken.		Drum rinsed and filled. Chemtechs seal it.
1 gal water 10:54 -	1-gal water samples taken.		Jars rinsed and filled. 3 jars = 1 cooler. 2 coolers.
10:57 -	East Passage pulls up to pick-up water samples		
11:05 -	grab # 7 -	good - 25 inches -	Thick black mud. Foul odor. -
composite 2nd 1/2 55-gal Full. 11:10 -	grab # 8 -	good - 25 inches. -	Original corps hole 55-gal drum Full. Excess into 3rd drum.
11:17 -	grab # 9 -	good - 26 inches. -	

→

4/1/86 RJ

Time grab # depth Comments

3rd 55-gal drum Full. 11:21 - grab # 10 - 24 inches - 3rd 55-gal drum Full. Chemtechs seal drums.

11:24 - Sampling personnel wash down equipment. Barge moves to K-36 to check depth. No sampling done.

12:03 - Core sample taken from each barrel

1240 Decon of Equipment + Personnel Begins

1340 Decontamination Completed

1350 East Passage departs from barge with sampling crew

1530 Barge Docks at Cassberg Marine

1715 Clean Harbors signed off on barrels

Sampling crew: John Lindsay, Joe Delaney, David Black, Mark Silvia, Wilson Hammond, David Benson, Paula J. Lapinskas, East Passage: Tom Chase, David Lubbers

4/2/86

Crew: Joe Delaney, David Black, Mark Silvia, Wilson Hom, David Benson, John Wood
East Passage: Tom Chase

Finfish

8:30 L.W. Bailey left dock
9:00 Arrived on site
9:30 East Passage arrived on site
9:55 Sample crew ready - moved to site on grid K-26

Time	Grab #	Depth	Comments
9:59	#1 - good	22"	Hard sandy mud
10:07	#2 - good	12"	
10:11	#3 - good	10"	
10:15	#4 - good	6"	
10:20	#5 - N.g.		
10:22	#6 - N.g.		
10:25	#7 - good	12"	
10:29	#8 - good	16"	#4 - 2/3 - 55gal. barrel full
10:37	#9 - good	12"	
10:43	#10 - good	12"	
10:48	#11 - good	14"	
10:50	#12 - good	10"	
10:54	#13 - good	12"	#2 - 55 gal. drum full
11:02	#14 - good	6"	
11:05	#15 - good	12"	
11:09	#16 - N.g.		
11:12	#17 - good	12"	
11:16	#18 - good	5"	
11:20	#19 - good	4"	
11:22	#20 - N.g.		
11:26	#21 - good	4"	
11:29	#22 - good	10"	
11:32	#23 - good	4"	
11:36	#24 - N.g.		
11:38	#25 - good	24"	#1 - 55gal. drum - full

TIME	GRAB #	DEPTH	COMMENTS
11:52	26 - good	18"	
11:57	27 - good	7"	
12:00 P.M.	28 - good	6"	
12:02	29 - good	3"	
12:05	30 - good	14"	
12:10	31 - good	12"	#3 55 gal. drum full

12:15 P.M. - MOVING TO GRID K-28 FOR TEST SAMPLE

1800 Barge made it under 195 Bridge
1830 Tied up at dock
1920 Clean Harbors signed off on barge

low tide 0932
high tide 1525

4/3/86

Crew J Lunday, John Wood, DAVE Black
Mark Silva, Wilson [illegible], Tom Chase
Barge Operator DAVE BENSON

0653 Barge left Cudahey Marine

0720 Made it under the bridges -
The Right side of the 195 Bridge going upstream is higher than the left side

0750 Crew Started / East Passage pulled away
Heading for Board K-28

0800 1st Grab 7 inches water depth 2 ft No good
Backing off

0805 2nd Grab 3 inches saved Barrel K-28-3

0808 3rd Grab 10 inches saved
0811 4th Grab 10 inches " 40-50 [illegible] [illegible]
0815 5th Grab 10 inches placed in 30 gal Drum [illegible]
0820 6 No good
0822 7 No good
0826 8 No good
0828 9 2 ft 4 in
0830 10 drop No close
0832 11 2 ft - strong sulfide smell
about 4 inches two fulls Barrel K-28-3
next key placed into K-28-4
0837 12 2 ft 4 inches
0840 13 no close
0841 14 2 ft 2 inches
0844 15 6 inches
0847 16 2 ft 1 in 1/2 full K-28-4 (300 ft [illegible])
1/2 for K-28-1 [illegible]
0852 17 moved [illegible] a [illegible] 1 ft 8 in

0854 18 1 ft 7 inches Filling K-28-1

0902 19 No good
0903 20 8 inches Filled K-28-1
2 inches going into K-28-2

0909 21 moved inshore top of sampler out of water
6 inches (some mud shells)

0916 22 3 inches top of sampler of water

0919 23 4 inches

0921 24 7 inches top foot of sampler out of water

0923 25 7 inches Triangular Plud "
0925 26 " " "
0926 27 10 inches "
0928 28 11 inches filled 2/3 barrel K-28-2

0933 Ready for Bridges
0940 Decon Begins

1014 Decon Complete

1024 Bailey Ties up at Lindberg Marine

1415 Talked w/ Al Randall - will hold sampling until Monday if necessary.

~~#~~ 1630 Clean Harbors signed off on barrels

~~0844~~ ~~78~~ ~~[illegible] K-78~~ 1

April 7, 1986

2200 HRS - Opened gate at Lindberg Marine
John Lindsay DAVE Benson Tom Chase
prepared to bring barge above the bridge
low water at approx 0059 hrs

Loaded 5 barrels onto barge

2245 Left Lindberg Marine Barge + East PASSAGE

2320 Barge able to pass under 195 Bridge
with less than ½ inch clearance

2350 East Passage Tied up at Lindberg Marine

April 8, 1986

0455 Opened gate at Lindbergs Marina (Tied up Watch Dog)
0515 EAST PASSAGE departed with crew
John Ward
Dave Black
Gary Pacquette
Mark Silva
(sampling crew)
John Lindsay
Dave Benson Barge Operator
Tom Chase EAST PASSAGE Operator

0600 Sampling Crew Suited
0640 EAST Passage picked up EDM MIRRORS from Coggeshall Bridge from Corps Surveyor Bob

0655 Surveyor indicated that because of fog he can not give us a range position - his bench mark is too far away. He can only give approximate distance

0707 Surveyor can give us a range - confident we can get in the grid.

0714 Survey gave okay on distance

Time	Grab	Depth	Barrel
0714	1st Grab	24"	J-8-XI (took notes to show position) an iridescent sheen on water
0719	2nd	24"	
0721	3rd	24"	Filled Barrel
0724	4	21"	Barrel J-8-XII
0730	5	22"	
0733	6	No good (probably tripped open)	
0735	7	24"	Filled Barrel
0739	8	24"	Barrel J-8-XIII
0742	9	24"	
0745	10	24"	Filled Barrel

0800 Taking composite subsample barrel J-8 XIII
0810 Finished composite / Composites double ziploc Bagged with blue tags on outside)

April 8, 1986

0812 STARTING to Take composite from Barrel J-8-XI
Rain has increased along w/wind

0816 Composite completed
0821 Taking Composite from Barrel J-8-XII
0829 Composite Completed
Proceeding to Seal Barrels

0833 Survey gave OK to set up position at G-17

Time	Grab	Depth	Barrel G-17-10
0837	1	20" (cut off 7 inches)	
0840	2	24" (cut off 10 inches)	
0845	3	24"	
0848	4	24"	Filled Barrel G-17-10

0854 Pushing composite cores into barrel
0859 Filling composite bag

0900 Survey suggested going back to J-8 and [illegible] because visibility has improved somewhat
It is raining fairly hard - and survey indicated that EDM does not work real well in these conditions - also because of the proximity to shore points we feel comfortable w/ location

0910 Decon of Barge Begins
1020 Decon of Barge + Personnel Completed

1325 Barge passes under bridges
1353 Barge transport Crosby Marine (transship)
1430 Crane off loaded barrels - Boat barge taken out of the water
1730 Clean Harbors picked up barrels

April 14 1986

0915: Al Randall called saying mixing of barrels will take place at Clean Harbors tomorrow 0800

I explained to Al the slight difference between the Lab sample #'s and the corresponding Barrel #'s which resulted from confusion in the field

As follows

LAB SAMPLE #		Barrel #
J-E-10	=	J-E-V
J-E-11	=	J-E-XII
J-E-12	=	J-E-XIII

April 15, 1986

Plane Clean Harbors Quincy, Ma

Alan Randal provided a list of those barrels collected previously in the Acushnet River which should be mixed for a composite sample the barrels included along w/ the estimated levels of PCB:

1)	G-17-2/J-8-2	460 ppm	
2)	J-8-1	1017 ppm	
3)	J-23-1	303 ppm	
4)	J-23-2/J-19-2	185 ppm	
5)	J-8-N (14)	2345 ppm	
6)	G-17-10	1508 ppm	904
7)	J-8-12 (11)	5289 ppm	1600

PCB Contaminated Samples Compositing

Date: April 15, 1986 - April 16, 1986
Time: 8:00am - 10:15am /

PJL

Location: Clean Harbors, Inc.
Braintree, MA

Log of Activities: HMM personnel: John Lindsay - PM
Paula Lapinski - SSO

8:00am HMM personnel and Corp representative (Alan Randall) arrive at Clean Harbor Hazardous Waste Facility. Clean Harbor and Corp review the mixing procedures: Number + type of barrels to be mixed, techniques for mixing, shipment, etc... / Clean Harbor personnel prepare the mixing site.

Change in work scope: site safety plan; section 1.4 inidicates that the sample mixing will occur in a cement mixer which will be decontaminated after mixing is done. Clean harbors and the corps decided to use a 10' diameter mixing tub and a backhoe for the mixing. The tub will be lined with polypropylene and should not require any decontamination. The backhoe will require decontamination. In addition, the EPA requested that eight (8) 802. jars of the composite be collected for their lab.

9:30am: Project personnel go to the mixing site. Hard hats, safety glasses / goggles and steel toe boots required. Sample drums are moved from the refigerated, storage

truck to the mixing area. Barrel Numbers are checked, and the barrels are inspected (eg.- seals, condition, etc.)

Composited Samples include: (6 barrels)

J-8-2 / G-17-2	I-23-2 / I-19-2
~~J-8-2~~ (PA)	J-8-XI
J-8-1	G-17-X
I-23-1	

10:01am: Seals broken of 1st barrels. Clean Harbor personnel suit up in protective clothing: tyvek suits, over booties, rubber (Neoprene) gloves, hard hats, and ~~respir~~ (PA) Air purifying respirators (organic vapor cartridges) with full face shield.

10:05am: First sample barrel lifted into 10ft. dia. mixing tub. Contents removed with a shovel. Removal of sediment from the drums was very difficult because the sample was frozen. Less than 1/3 of the sample sediment was removed. The rest would not budge. Sample mixing postponed until Wed., April 16, 1986 at 8:00am. Barrels will sit outside refrigerator truck and thaw. Drums resealed with clean Harbor seals.

I-23-2 / I-19-2 - Clean Harbor Seal # 100441 (PA)
J-8-2 / G-17-2 - clean Harbor seal ~~#~~ # 100447
I-31-3 - Clean Harbor seal # 100444
I-31-4 - Clean Harbor seal # 100445 (PA)

10:10am: out. (PA)

PCB Contaminated Sample Compositing

Date: April 16, 1986 (PJL)
Time: 7:00am - 12:30
Location: Clean Harbors, Inc.
Braintree, MA

Log of Activities: HMM Personnel: John Lindsay, PM
Paula J. Lapinskas, SSO

8:00am: HMM Personnel and corps representative (Alan Randall) arrive at Clean Harbor Hazardous Waste Facility. Crew goes directly to mixing location. Sample Barrels are brought over to mixing tub. Mixing personnel suited-up: tyvek suits, rain gear (over suits), over boots, hard hats, safety glasses, air purifying respirators, Neoprene gloves, Duct taped at seams.

8:50am: J-8-8 / G-17-8 Barrels unsealed and contents emptied into mixing tub. Observations: sample appeared to be in two layers; top layer was smooth and runny, bottom layer was a solid chunk. Mixing crew chopped up bottom layer and proceeded to empty 2nd barrel J-8-7. Barrel contents more homogeneous and chunky. 3rd barrel G-17-10 emptied. Top of barrel contained approximately 3in - 4in of water and a black slimy barrel contents very loose. 4th barrel: J-8-11 emptied. Contents in a solid core, surrounded by water and loose material. 5th barrel J-19-2/ I-23-2. Two inches of water on top with an oily slime just below it. Contents smooth and consistant. 6th barrel: I-23-1 emptied. 3in - 4in of water on top. Contents smooth, loose and consistant.

over →

9:30am: Mixing crew begins mixing composite by hand (with shovels and movement). By the emptying process, contents mixed together well.

Change in Scope:

① The backhoe will not be used in the mixing due to concern about PCB contamination and decontamination capabilities. Mixing will be done solely by shovel and mixing by hand. mud folded over from one side to the other, then back.

② Sample shoveled into new barrels, relabeled with same identification numbers in order to maintain chain of custody. Old barrels were too contaminated on the outside to be used again.

9:50 am: Mixing crew begins re-filling the drums with the composited samples. Eight (8 oz) samples are collected from various points around the mixing tub and put in the jars. Sample jars placed in plastic bags to reduce contamination on outside.

10:40 am: 5 full barrels of composited segment recovered from the mixing operation. 6th barrel loss in the emptying, mixing and surface area loss.

Crew cleans up mixing tub: removes plastic lining and places all contaminated materials in a waste drum. Residual water remains in tub. Tub squeegeed dry; waste placed in a 2nd waste drum. Speedy dry applied to surfaces and rubbed in, then shoveled up. Waste drums sealed. →

11:50: Chain of custody for the 6 compositing barrels is relinquished at clean harbors.
(See remarks on existing COC) New chain of custody for 5 composite samples begins at clean harbor.
Barrels labeled:
Composite # 1
Composite # 2
Composite # 3 = 6 sediment samples:
Composite # 4 J-8-2 / G-17-2 ; I-23-2 / I-18-2
Composite # 5 J-8-2 ; I-8-2T
I-23-1 ; G-17-2
John Lindsay initials it.
Comments in the "Remarks" column of Chain of custodys for 6 sediment sample reads:
" Barrel composited w/ 5 others. Re: COC composite 1-5 "
(ppk) (inspected)

18:15: Sample barrels sealed with Clean harbor seals:

	seal #
Composite PCB #1 -	# 100403
Composite PCB #2 -	# 100404
Composite PCB #3 -	# 100405
composite PCB #4 -	# 100406
Composite PCB #5 -	# 100407

New Chain of Custody for composited samples created for 5 composite sample barrels, Refers to original sediment barrels. John Lindsay relinquished custody to Clean Harbors. C.O.C will follow samples to WES.
Copy of C.O.C. taken by J.L.

12:30: Out.

ppk