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PROJECT FOR  
PERFORMANCE OF  
REMEDIAL RESPONSE ACTIVITIES AT  
UNCONTROLLED HAZARDOUS  
SUBSTANCE FACILITIES—ZONE 1

NUS CORPORATION  
SUPERFUND DIVISION

U.S. v. AVX Original  
Litigation Document

D-583-7-4-6  
Revision 2.0

**SITE INSPECTION  
ATLAS TACK CORPORATION  
FAIRHAVEN, MASSACHUSETTS**

TDD NO. F1-8403-01A  
NUS JOB NO. 3519  
EPA SITE NO. MAD 001026319  
CONTRACT NO. 68-01-6699

**FOR THE  
REGION I  
US EPA  
MA/CT/VT SITE RESPONSE SECTION**

August 31, 1984

**NUS CORPORATION  
SUPERFUND DIVISION**

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## CONTENTS

<u>SECTION</u>		<u>PAGE</u>
	NUS CORPORATION CUSTODY ASSIGNMENT	i
	NOTICE	ii
	CONTENTS	iii
	ILLUSTRATIONS	iv
	EXECUTIVE SUMMARY	es
1.0	INTRODUCTION	1-1
1.1	SUMMARY OF INVOLVEMENT	1-1
1.2	PURPOSE/OBJECTIVE	1-1
2.0	SITE DESCRIPTION	2-1
2.1	SITE LOCATION AND BOUNDARIES	2-1
2.2	TOPOGRAPHY AND SURFACE DRAINAGE	2-1
2.3	DEMOGRAPHY AND LAND USE	2-3
2.4	CLIMATOLOGY	2-3
2.5	GEOHYDROLOGY	2-4
2.6	WATER SUPPLY	2-4
3.0	SITE HISTORY	3-1
3.1	OWNERSHIP HISTORY	3-1
3.2	SITE HISTORY	3-1
4.0	WASTE TYPES AND QUANTITIES	4-1
4.1	WASTES PRESENT/QUANTITY	4-1
4.2	WASTE DISPOSITION	4-1
4.3	RECEPTORS	4-2
5.0	SITE INSPECTION	5-1
5.1	LOGISTICS AND SITE SET-UP	5-1
5.2	TECHNICAL APPROACH	5-1
5.3	RESULTS OF THE INSPECTION	5-6
6.0	CONCLUSIONS AND RECOMMENDATIONS	6-1
7.0	REFERENCES	7-1
 <u>APPENDICES</u>		
A	TECHNICAL DIRECTIVE DOCUMENT	
B	EPA SITE INSPECTION FORM	
C	MASS DEQE ANALYTICAL DATA	
D	GOLDBERG-ZOINO ASSOCIATES ANALYTICAL DATA	
E	HAZARDOUS SUBSTANCES LIST	

ILLUSTRATIONS

FIGURES

PAGE

1	LOCUS PLAN OF ATLAS TACK CORPORATION	2-2
2	SAMPLE LOCATIONS, ATLAS TACK CORPORATION	5-2

TABLES

1	INORGANIC ELEMENTS, EP TOXICITY - LAGOON SLUDGE SAMPLES	5-7
2	INORGANIC ELEMENTS ANALYSIS	5-9
3	VOLATILE ANALYSIS	5-10
4	PH AND CONDUCTIVITY	5-14

## EXECUTIVE SUMMARY

Atlas Tack Corporation has been involved with the manufacture of tacks and/or eyelets at its Fairhaven, Massachusetts location since 1865. Since the 1940's it has maintained a 100 x 100 foot lagoon on site for disposal of wastes associated with its manufacturing processes. The lagoon is within 500 feet of residential homes and contiguous with a coastal wetland area along Buzzards Bay. Concern has been raised by community residents about the lack of a secure fence around the lagoon and possible adverse health effects which may result from the exposure to disposed materials.

NUS/FIT conducted a site inspection on April 26, 1984 during which lagoon sludge, surface water, soil, sediment and groundwater samples were collected. Sample analyses included cyanide, inorganics and volatile organics. Five volatile organic compounds were identified in samples collected from the site with toluene detected at a concentration of 3,089,426 ppb in the marsh sediment south of the lagoon. The highest concentration of cyanide (37,200 ppm) was found in the lagoon sludge collected along the north side of the lagoon. Fifteen inorganic substances were identified among all samples. These compounds are consistent with those utilized in Atlas Tack's manufacturing processes.

Analytical data suggests there has been a migration of contaminants into the marsh twenty feet south of the lagoon. There also appears to be some migration of metals to the marsh 200 feet east of the lagoon.

Based upon the lagoon contents, its proximity to the marsh and analyses of samples collected from the site, it is concluded that the lagoon generates a continued environmental release to the marsh. Both surface and groundwater have been affected.

NUS/FIT has been informed by EPA that Atlas Tack Corporation has begun securing the lagoon to prevent direct contact by community members. Negotiations are being held between Atlas Tack Corporation and Massachusetts DEQE regarding clean-up of the lagoon.

Based upon results of the site inspection, NUS/FIT recommends the following actions:

- Secure the lagoon area and restrict access.
- Identify and sample private wells downgradient of the site.
- Conduct further sampling to determine the extent of contamination.

## 1.0 INTRODUCTION

### 1.1 Summary of Involvement

The NUS Field Investigation Team (NUS/FIT) was tasked by the Region I U.S. Environmental Protection Agency (EPA) to perform a site inspection of Atlas Tack Corporation in Fairhaven, Massachusetts under Technical Directive Document (TDD) Number F1-8403-01A (Appendix A).

This report is based on information collected from the NUS/FIT inspection, publications relevant to the geology and hydrology of the subject area and other existing information obtained from EPA and the state of Massachusetts.

### 1.2 Purpose/Objective

The purpose of this inspection was to analytically determine the contaminant levels on the site, to obtain photographic documentation of the site and to evaluate the likelihood of migration of contaminants and the potential impact to the surrounding population and the environment.

This evaluation is based on analysis of samples collected during the site inspection (EP Toxicity, volatile, inorganic and cyanide analysis), site observations and review of hydrogeologic and relevant information to ascertain the site's potential impact to human health and the environment.

## **2.0 SITE DESCRIPTION**

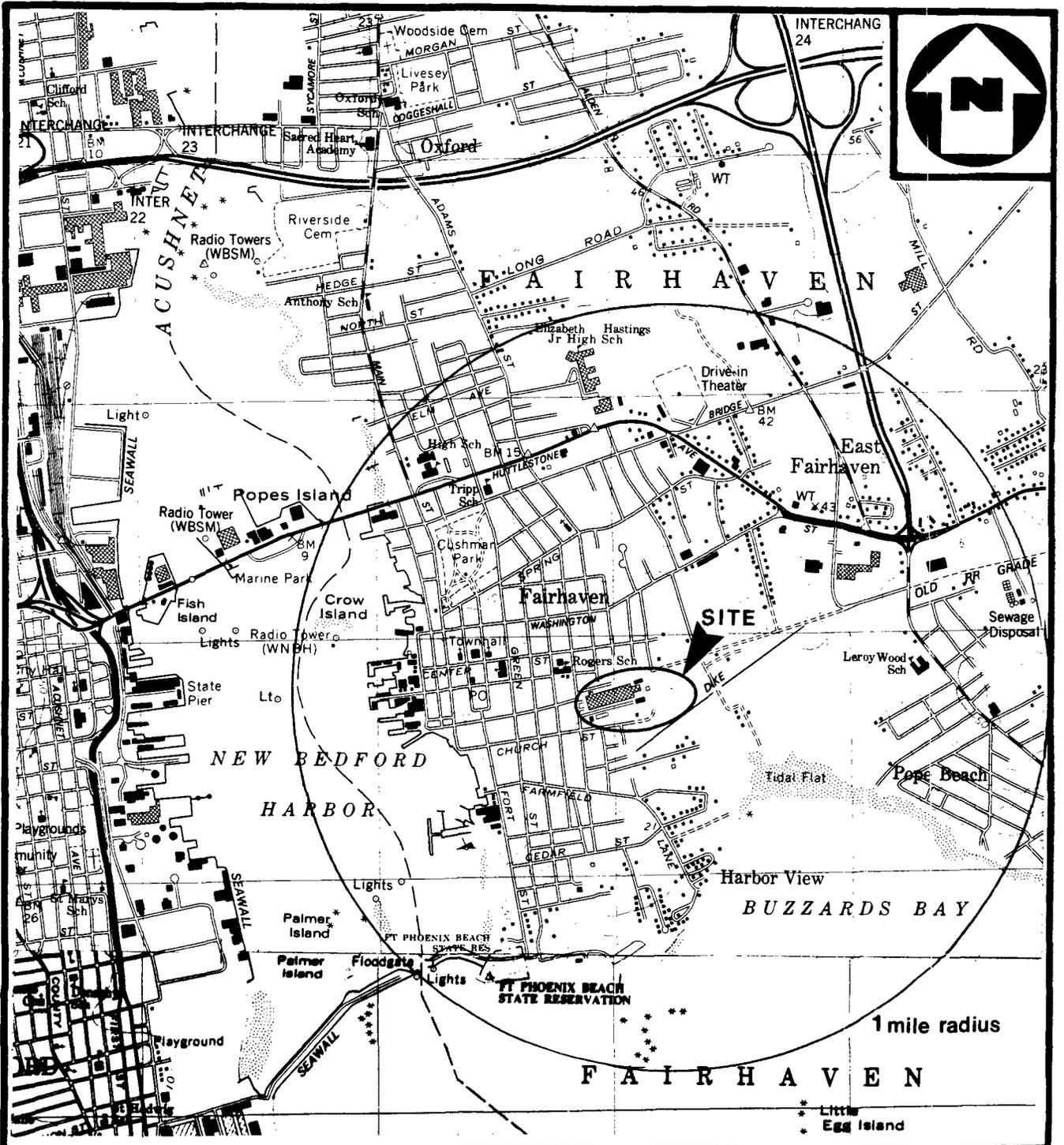
### **2.1 Site Location and Boundaries**

Atlas Tack Corporation is located at 83 Pleasant Street in the town of Fairhaven, Massachusetts at 41° 38' 05" north, 70° 53' 45" west (Figure 1). The facility is located approximately 0.6 miles south of the intersection of Route 6 and Green Street in Fairhaven. The facility is approximately 12 acres in area and includes several buildings and a 100 x 100 foot lagoon 200 feet east of the main building. The facility is bounded to the south and west by marsh and to the north and east by residential areas (1). The term "site" as it is used in this report refers to the lagoon and the surrounding area.

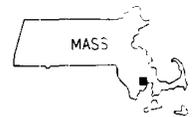
### **2.2 Topography and Surface Drainage**

The site is located on coastal lowland and is less than ten feet above mean sea level. Within a five mile radius, the elevation of the surrounding coastal area ranges from sea level to 80 feet. The slope of the site itself is less than 1%. A dike is located approximately 400 feet southeast of the lagoon. The marsh adjacent to the site leads to a tidal flat along Buzzards Bay, class SA coastal waters, 1500 feet from the site (1). The Inner New Bedford Harbor lies within a two mile radius of the site, the Outer New Bedford Harbor within three miles of the site. These waters are classified by the Commonwealth of Massachusetts as SB and SA coastal waters respectively (2). Nasketucket Bay lies within a five mile radius and is classified as SA coastal waters (2).

Class SA coastal waters are considered to be of the highest quality and aesthetic value. Uses include bathing, recreation, shellfishing and fish and wildlife habitats. Class SB coastal waters are also suitable for bathing, recreation and habitat purposes. Shellfishing in these water may be restricted. Industrial cooling is also an acceptable use. Discharges to class SA and SB coastal waters are allowed only via a connection with a municipal sewer system or where such a connection is not available or feasible. In case of the latter, the highest and best practical means of waste treatment is required (14).



BASE MAP IS A PORTION OF THE U.S.G.S. NEW BEDFORD NORTH & SOUTH QUADRANGLES 7.5'SERIES, 1979 & 1977 ]



**LOCUS PLAN**  
**ATLAS TACK CORPORATION**  
**FAIRHAVEN, MA**

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**FIGURE 1**

The site is in a low lying coastal area subject to tidal flooding from hurricane surges but afforded flood protection by a dike, which is approximately 15 feet high. The mean tidal level during a surge is 2 feet above mean sea level, the highest recorded tidal level is 12-14 feet (3).

### **2.3 Demography and Land Use**

Atlas Tack Corporation is located within the central section of Fairhaven. The total population of Fairhaven is 15,775 (4). The population of New Bedford, 2 miles west of the site, has not been included in population figures as it lies across the Acushnet River which provides a likely hydrogeologic discontinuity.

There are approximately 7,200 people living within a one mile radius of the site, most of whom reside in Fairhaven center. Within a two mile radius of the site there are approximately 12,780 people in residence in Fairhaven center and portions of North and East Fairhaven and Sciticut Neck. Within a three mile radius of the site, there are approximately 15,150 people. This area includes all of Fairhaven except for the southern tip of Sciticut Neck and West Island, and includes a less densely populated area of western Mattapoisett.

Land use in the area adjacent to the site is residential, commercial, recreational (swimming, fishing, boating) and industrial. Pope Beach is located 3000 feet southeast from the site.

### **2.4 Climatology**

This region receives an average of 44 inches of rainfall a year, with precipitation being distributed evenly over the seasons. Mean annual evapotranspiration is 20 inches, leaving a net precipitation of 24 inches (3). The one-year 24-hour maximum rainfall is 23 inches (5).

## **2.5 Geohydrology**

Buzzards Bay Basin is characterized as a low lying granitic upland of schist and gneiss with deposits of silt, sand and gravel lying immediately above granite in most areas (3, 6). The lagoon lies within a wetland area of tidal peat, silt, fine to medium sand and some gravel less than 30 feet thick (3).

The water table is near or above ground surface. The surficial aquifer is capable of producing only a few gallons per minute. Bedrock wells may yield from one to 150 gallons per minute with a median yield of eight gallons per minute (3). Due to the location of the lagoon in a tidal flat, groundwater is probably tidally influenced, producing gradient reversals which would reverse groundwater flow under specific tidal conditions in a localized area.

Surficial drainage from the site is southeast to Buzzards Bay. Insufficient data is available at this time to determine the direction of flow of groundwater. However, groundwater flow direction is most likely to be southeast, towards the wetland discharge area.

## **2.6 Water Supply**

Approximately 13,500 to 14,000 people or 85 to 90% of the population of Fairhaven are supplied with town water. All water supplies for Fairhaven are from sources north and upgradient of the site. The remaining 10 to 15% of the population supplied with drinking water from private wells is almost entirely from West Island, 5 miles from the site, and sections of North Fairhaven, 3 miles north and upgradient of the site. Within a one, two and three mile radius of the site there may be private wells for residential and/or summer homes along Buzzards Bay. According to the Fairhaven Water Commission, the number of wells is not known, but is estimated to be very small (11).

### **3.0 SITE HISTORY**

#### **3.1 Ownership History**

Atlas Tack Corporation has been at its present location since 1810 and was incorporated as Atlas Tack Corporation under Massachusetts law in 1891. Atlas Tack Corporation is now owned by Great Northern Industries, Boston, MA (7).

#### **3.2 Site History**

Throughout its manufacturing history, Atlas Tack Corporation has been involved in the production of cut and wire tacks, steel nails, rivets, bolts, nuts and screws. Discharges to the environment from these processes began in 1865 (7). Since the 1970's, manufacture has been limited to shoe, garment and industrial eyelets which are plated, painted or plain. Finishing operations include annealing, pickling, plating, enameling and cleaning (7).

During the 1940's a 100 x 100 foot lagoon was excavated for use as an acid neutralizing pond and received discharges from the manufacturing operations associated with the production of tacks. The lagoon is believed to be unlined. The plating and pickling operations were reportedly discontinued in 1974 (10). Discharges from the enameling and cleaning processes continued until 1978.

The lagoon and its contents have been a source of community concern since the mid 1970's. Numerous letters on file with Massachusetts Department of Environmental Quality Engineering (DEQE) from the Fairhaven Conservation Commission and town residents have expressed concern regarding the potential health effects and the safety hazard due to the lack of a secure fence around the lagoon. Community concern has resulted in soil sampling by Massachusetts DEQE at Rogers School, one block north of Atlas Tack Corporation on August 22, 1983 and groundwater sampling of a private residential well on Farmfield Lane, south of Atlas Tack Corporation on November 2, 1983 (8). The analytical results are

presented in Appendix C. The soil sample contained no significant contamination. The groundwater sample contained lead levels of 0.09 ppm exceeding the 0.05 ppm MCL domestic water supply standard (9).

Atlas Tack Corporation currently discharges wastewater under NPDES permit number MA 0002704. Prior to this, on June 4, 1974, the NPDES permit was issued with the requirement that Atlas Tack Corporation cease discharging into Buzzards Bay, and instead tie into the Fairhaven sewage system within 30 days. The town of Fairhaven opposed this connection and on February 23, 1976 proposed a connection with the Fairhaven Sewage Treatment Plant (STP) outfall. By August 10, 1976, compliance with the NPDES permit had not been met and an Administrative Order was issued requiring Atlas Tack Corporation to submit an engineering report on their proposed connection to the Fairhaven STP outfall along with their application for a re-issuance of their permit.

Compliance had still not been reached by June 22, 1978, on which date an Agreement for Judgement against Atlas Tack Corporation to eliminate discharges to Buzzards Bay was issued in Suffolk Superior Court (7). At this time, discharges to the lagoon by Atlas Tack Corporation were reportedly terminated, effecting compliance with their discharge permit.

During this time, Atlas Tack Corporation had been cited as a point source of pollution for direct discharge to Buzzards Bay in the Massachusetts DEQE Water Quality Management Plan 1976 and a Water Quality Area Management Plan prepared by the Southeast Regional Planning and Economic Development District, February, 1978 (2, 12).

Both reports recommended a tie-in to the Fairhaven STP, which was effected in 1978. The 1978 Area Management Plan also recommended further study of the lagoon to monitor the potential migration of contaminants to Pope Beach.

Existence of the lagoon was confirmed by an EPA surface impoundment assessment on June 22, 1979. Prior to this, the lagoon was not listed by Atlas Tack Corporation for use as a surface impoundment on their applications for permits to discharge.

On January 14, 1981 and November 19, 1982 Massachusetts DEQE issued a Notice of Violation of Hazardous Waste Regulations to Atlas Tack Corporation for "failure/refusal to remove lagoon contents from site" (8). On March 26, 1982 and June 9, 1982 lagoon sludge and surrounding soil samples were collected by Massachusetts DEQE. The samples were reported to contain volatile organics, cyanides, metals, PCBs, oil and grease (Appendix C).

On March 24, 1983 Goldberg-Zoino Associates (GZA), under contract to Atlas Tack Corporation to explore feasible options for lagoon closure, installed an observation well approximately twenty feet from the southeast corner of the lagoon. Both the well log and the GZA report noted a strong chemical odor during drilling at depths of four to fourteen feet (Appendix D). Groundwater, lagoon sludge and soil samples were collected on March 24, 1984 (10). Volatile organics, cyanides and metals were again identified (Appendix D).

While several priority pollutant compounds have been identified, the concentration of these substances has left open the question of whether or not the contents of the lagoon are an environmental and public health threat.

On October 7, 1983 in a meeting with Massachusetts DEQE and Town of Fairhaven representatives, Atlas Tack Corporation maintained that they did not have the \$150,000-\$200,000 necessary for lagoon closure.

NUS/FIT involvement with this site was initiated in March, 1983 when it was tasked by EPA to update the preliminary assessment and obtain lagoon samples.

#### 4.0 WASTE TYPES AND QUANTITIES

##### 4.1 Wastes Present/Quantity

Atlas Tack Corporation has reported discharging waste at its current facility for 119 years (7). Wastes discharged are assumed to be those associated with past manufacture of tacks and the associated processes. Waste quantities are unknown. Similarly, quantities of waste disposed of in the lagoon from the 1940's until 1978 are unknown. Previous analysis of the lagoon waste has identified acids, metals, paints, solvents and oils (8, 10).

The 1984 Application for Permit to Discharge Wastewater states that 400 gallons from the wash process and 100 gallons from the rinse process are generated daily. The following substances are identified in this waste stream:

<u>Pollutant</u>	<u>Maximum Daily Mass in Kilograms</u>
oils & grease	0.065
phosphorus	0.026
aluminum	0.053
iron	0.044
tin	0.018
copper	0.034
zinc	0.003

Quantities of sludge generated from the pretreatment and neutralization of the waste stream are unknown.

##### 4.2 Waste Disposition

The manner of waste disposition from 1865 until the excavation of the lagoon in the 1940's is unknown. With the creation of the lagoon, discharges to Buzzards Bay are presumed to have occurred via the outlet located at the southeast corner of the

lagoon. In addition to this, a 1972 NPDES Application lists 10,000 gallons/day discharge or loss to underground disposal. The exact nature of this underground disposal is unknown.

Since 1978, the liquid waste stream has been neutralized on-site and discharged to Fairhaven outfall no. 001 under NPDES permit MA 0002704 (7). The outfall runs along the north side of the main building and discharges into New Bedford Harbor, a class SB coastal water. Wastes from the cleaning processes are disposed of off site. Sludge from the neutralization process are temporarily stored on site in 55 gallon drums for off-site disposal (10).

While discharges to the lagoon ceased in 1978, the lagoon and its contents have remained on site.

#### **4.3 Receptors**

The lagoon is located less than 500 feet from residential homes and 1600 feet from Rogers School, an elementary school. The lagoon is surrounded by a combination of chicken wire and chain link fencing on three sides and is unlocked. The lack of security around the lagoon leaves open the possibility of direct contact by the general public.

Based upon drainage patterns in the area, it is possible for contaminants to migrate downgradient from the lagoon to Pope Beach and Buzzards Bay, via surficial and groundwater routes through the wetland. In addition, contamination of the surficial aquifer could occur. A small number of people within a three mile radius of the site may still be drawing water from this aquifer (11).

## 5.0 SITE INSPECTION

### 5.1 Logistics and Site Set-Up

Access arrangements to this site were made by G. Sotolongo, EPA Site Manager. Upon arrival at the facility, access to the site was obtained through Roland Levesque, General Manager for Atlas Tack Corporation.

The site inspection was conducted on April 26, 1984. At this time, NUS/FIT was accompanied by representatives of EPA Region I. The weather was sunny and clear with a temperature of 50-55° F and a light off-shore breeze blowing from the northwest.

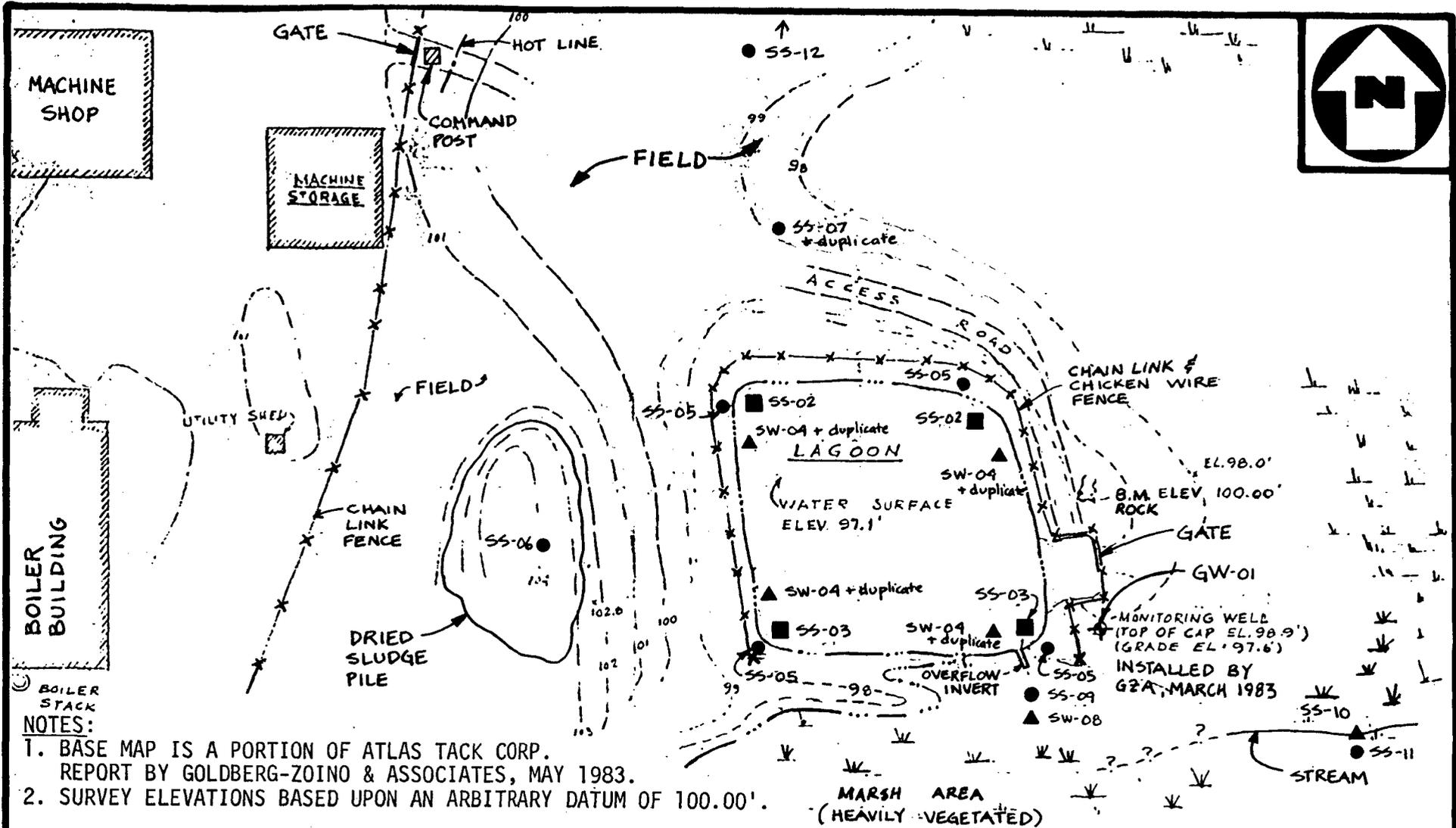
### 5.2 Technical Approach

An initial reconnaissance was conducted which included air characterization with a Foxboro Organic Vapor Analyzer (OVA)-128.

The following readings were obtained:

- Command Post, air in breathing zone - 0 ppm, background
- Air 6" above disturbed lagoon surface water - 60 ppm (methane equivalent) over background
- Air 6" above well casing opening - 140 ppm (methane equivalent) over background

Following reconnaissance, NUS/FIT proceeded to conduct environmental sampling. All sampling was conducted in accordance with NUS/FIT Standard Operating Guidelines. A total of seventeen samples were collected by NUS/FIT at this site. These included one groundwater, two sludge, six soil, two sediment and six surface water samples, including blanks and duplicates (Figure 2).

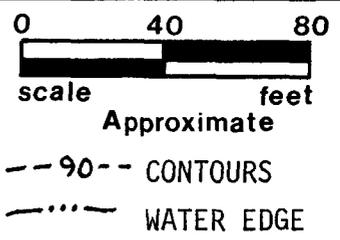


**NOTES:**

1. BASE MAP IS A PORTION OF ATLAS TACK CORP. REPORT BY GOLDBERG-ZOINO & ASSOCIATES, MAY 1983.
2. SURVEY ELEVATIONS BASED UPON AN ARBITRARY DATUM OF 100.00'.

**LEGEND:**

- SLUDGE SAMPLE
- SOIL/SEDIMENT SAMPLE
- ▲ SURFACE WATER SAMPLE
- ⊕ MONITORING WELL



**SAMPLE LOCATIONS**  
**ATLAS TACK CORPORATION**  
**FAIRHAVEN, MA**

**AUGUST 1984**



**FIGURE 2**

The following samples were collected:

- GW-01 - groundwater from monitoring well
- SS-02 - composite lagoon sludge, north side, influent
- SS-03 - composite lagoon sludge, south side, effluent
- SW-04 - composite lagoon surface water
- SW-04 dup - composite duplicate of SW-04
- SS-05 - composite soil from lagoon perimeter
- SS-06 - dried/sludge soil sample
- SS-07 - soil sample along access road
- SS-07 dup - duplicate of soil sample SS-07
- SW-08 - surface water from marsh S of lagoon
- SS-09 - sediment from same location as SW-08
- SW-10 - surface water from marsh E of lagoon
- SS-11 - sediment from same location as SW-10
- SS-12 - background soil sample
- SW-15 - water blank for GCA
- SW-16 - water blank for contract lab
- SS-17 - soil blank

As each sample was collected, jars and bottles were returned to the command post and decontaminated. Decontamination involved washing the outside of each jar and bottle with an alcanox detergent wash followed by a clean water rinse. After each sample was collected, sampling equipment was decontaminated with an alcanox detergent wash, water rinse, methanol rinse and final water rinse.

Based upon prior analytical data from Massachusetts DEQE and GZA (Appendices C and D) sample analysis for metals, volatiles and cyanide were selected. Samples were not analyzed for extractable organic pollutants as the nature of Atlas Tack Corporations manufacturing process precluded their use.

Two composite lagoon sludge samples were collected. Sludge sample SS-02 was a composite from the NW and NE corners of the lagoon, the presumed influent area.

Sludge sample SS-03 was a composite of the SE and SW corners of the lagoon, the effluent area in contact with the wetland. Sludge samples were collected with a glass jar clamped to a stainless steel pole and composited in a stainless steel bowl. Samples were analyzed for metals, EP Toxicity and cyanide. Volatile analysis could not be performed on the sludge samples due to a lack of availability of the analysis slots at the contract laboratory.

Four surface water samples were collected on site. Sample containers were submerged in water and allowed to fill slowly. A composite lagoon surface water sample SW-04 and its duplicate SW-04D were collected from the four corners of the lagoon in an effort to obtain a representative surface water sample. The composite and duplicate composite samples were mixed in a 2 1/2 gallon glass container from which aliquots were placed in the appropriate sample containers. Surface water sample SS-04 was analyzed for metals and cyanide. Volatile analysis could not be performed for the reason outlined above for sludge samples. A blank surface water sample, SW-15, was sent with SW-04 to the contract laboratory. The duplicate surface water sample SW-04D was analyzed by separate contract laboratories, along with a second surface water blank, SW-16. Analysis included volatiles, metals and cyanide.

Two additional surface water samples were collected from the wetland. Surface water sample SW-08 was collected from the marsh approximately 20 feet south of the lagoon to assess the migration of contaminants in the immediate vicinity of the lagoon. A sediment sample, SS-09, was taken at this same location. Surface water sample SW-10 and the accompanying sediment sample SS-11 were collected from the marsh approximately 200 feet east and 20 feet south of the lagoon in an effort to assess the migration of contaminants beyond the immediate lagoon area. No suitable location for background surface water and sediment samples within the adjacent marsh area could be found. A background sample from another marsh along Buzzards Bay was rejected due to the possibility of contamination from New Bedford Harbor. Marsh surface water and sediment samples were analyzed for metals and volatiles. Cyanide analysis could not be performed due to lack of availability of sample slots at the contract laboratory.

Sediment and soil samples were collected by digging a few inches beneath the surface and placing the soil into the appropriate sample container. Composite and duplicate samples were mixed in a stainless steel bowl prior to filling containers. In addition to the two sediment samples, five soil samples were collected.

Soil sample SS-05 was a composite soil sample collected from the four sides of the berm of the lagoon to assess contamination in soil in contact with the lagoon. Sample SS-06 was a dried sludge/soil sample collected from a pile approximately 40 feet west of the lagoon. It was suspected that this pile was dried lagoon sludge from past dredging operations. These samples were analyzed for metals, volatiles and cyanides. Soil sample SS-05 was also screened for PCBs.

Soil sample SS-07 and its duplicate SS-07D were collected along the access road to the lagoon to determine if any general on-site contamination existed. A background sample, SS-12, was collected along a dirt road in a residential area approximately 500 feet north of Atlas Tack Corporation. A potting soil blank, SS-17, was also sent with these samples for metals and volatile analysis. Soil sample SS-07 was also screened for PCBs.

One groundwater sample, GW-01, was collected from GZA's monitoring well near the southeast corner of the lagoon. This sample was analyzed for metals, volatiles and cyanide to help determine the extent of migration of contaminants in groundwater.

Prior to collecting the groundwater sample, the well was purged of four times the volume of standing water to until a levelling of pH and conductivity readings were obtained to ensure static water had been evacuated. The well volume was determined by measuring the depth of water in the well and the diameter of the casing, calculating the volume in cubic inches and converting to gallons. A well volume was then be bailed into a calibrated bucket using a stainless steel bailer. PH and conductivity readings were taken after each well volume was withdrawn. The well was allowed to recharge to static level before sample collection. The

stainless steel bailer was decontaminated with rinses of water, methanol and water, in that order, prior to sample collection. Water withdrawn from the well was poured back into the well upon completion of the sample collection.

Samples collected were divided among five separate contract laboratories as follows:

Inorganic and Cyanide Analysis, EP Toxicity (Lagoon Sludge and Lagoon Surface Water only)	GCA, Bedford, MA
Water/Volatile Analysis	Envirodyne, St. Louis, MO
Soil and Sediment/Volatile Analysis	Rockwell, Newbury Park, CA
Inorganic Analysis	Radian, Austin, TX
Cyanide Analysis	EPA Laboratory, Lexington, MA

All aqueous samples for volatile organic analysis were preserved prior to sample collection with mercuric chloride ( $\text{HgCl}_2$ ) to a final concentration of 15 ppm. Following collection and prior to shipping, cyanide samples were preserved with a 25% solution of sodium hydroxide to a pH <2. Metals samples were not preserved with nitric acid ( $\text{HNO}_3$ ) due to the suspected presence of cyanide. All samples were stored on ice following decontamination.

### 5.3 Results of the Inspection

At the time of collection, the lagoon sludge samples were deep blue in color. Results of metals, cyanide and EP Toxicity analysis of the lagoon sludge samples are presented in Table 1. The highest concentrations of cyanide were found in sludge samples SS-02 and SS-03, 21,200 ppm and 37,200 ppm respectively. For sludge sample SS-02, 9,500 ppm of cyanide was amenable to chlorine indicating that 11,700 ppm was free cyanide. Similar results could not be obtained for SS-03 due to matrix interference in the sample. The results of the EP Toxicity test on the sludge samples indicate that concentrations as established under RCRA were not exceeded.

TABLE 1

\*Lagoon Sludge Samples (ppm, ug/g, mg/l)  
 Laboratory: GCA

PRIORITY POLLUTANT INORGANIC ELEMENTS (ug/g)EP TOXICITY (mg/l) Maximum Concentration  
(100 times drinking  
water standards) (9)

Sample Station	SS-02	SS-03	SS-02	SS-03	
EPA I.D. Number	76576	76577	76576	76577	
Sample Location	lagoon sludge influent	lagoon sludge effluent	lagoon sludge influent	lagoon sludge effluent	
<u>(TASK 1)</u>					
Chromium	12.5	11.5	-	-	5.0
Barium	-	-	0.151	0.080	100
Beryllium	4.06	2.74	NA	NA	
Copper	1180	622	NA	NA	
Nickel	35.9	22.9	NA	NA	
Zinc	622	668	NA	NA	
<u>(TASK 2)</u>					
Arsenic	2.5	2.7	-	-	5.0
Antimony	3.0	2.2	NA	NA	
Mercury	0.15	0.14	-	-	0.20
Cadmium	6.06	2.87	0.036	0.031	1.0
Lead	52	42	0.08	0.16	5.0
<u>(TASK 3)</u>					
Cyanide, total	21200	37200	NA	NA	
Cyanide, amenable	9500	NR	NA	NA	

NR = Not reported due to matrix interference  
 - = Not detected  
 NA = Not analyzed for

\* Data is reported and has not been validated.

Ten of thirteen metals analyzed for were identified in both sludge samples. The highest concentrations of metals in sludge sample SS-02 were: copper (1180 ppm), cadmium (52 ppm), chromium (12.5 ppm), lead (52 ppm) and zinc (622 ppm). These were also the metals found in the highest concentrations in sludge sample SS-03: copper (622 ppm), cadmium (42 ppm), chromium (11.5 ppm), lead (42 ppm) and zinc (668 ppm). The presence of copper may account for the blue color of the lagoon sludge.

Volatile screening of the lagoon sludge indicated the presence of volatiles, but due to the large number and high concentration of compounds present, specific chromatographic peaks could not be identified.

A total of thirteen inorganic priority pollutants were identified in the lagoon surface water sample, SW-04D, (Table 2). Eight of the ten compounds identified in the lagoon sludge were also found in elevated concentrations in this surface water. Chromium and lead which were present in the lagoon sludge samples, were not present in the lagoon surface water. Five additional compounds identified in the surface water sample, SW-04D, included aluminum (918 ppb), iron (13,900 ppb) and manganese (300 ppb). These compounds were not analyzed for in the sludge due to contractual laboratory arrangements.

Cyanide analysis of the lagoon sludge surface water sample, SW-04D, indicated a 0.12 ppb concentration. This value is considered approximate because an initial chlorine test was positive, which would have lowered the cyanide levels (Table 2).

Volatile analysis of the lagoon surface water sample, SW-04D, did not identify any elevated concentrations (Table 3).

Comparison of surface water sample SW-04 and its blank SW-15 was suspect and so the analysis was discounted.

TABLE 2  
INORGANIC ELEMENTS ANALYSIS

PRIORITY POLLUTANT  
INORGANIC ELEMENTS

Sample Station EPA I.D. Number Sample Location	Water Samples (ppb, ug/l) Laboratory: Radian Corp.					Soil/Sediment Samples (ppm, mg/kg) Laboratory: Radian Corp.								Mean Regional ** Concentration in soil of SE Mass. (ppm)
	GW-01 76569 groundwater	SW-04D 76571 lagoon surface water	SW-08 76572 surface water south of lagoon	SW-10 76573 surface water east of lagoon	SW-16 76575 (Blank)	SS-05 76578 soil from lagoon berm	SS-06 76579 dried sludge	SS-07 76580 soil from access road	SS-07D 76581 duplicate	SS-09 76582 sediment south of lagoon	SS-11 76583 sediment east of lagoon	SS-12 76886 (Background)	SS-17 76587 (Blank)	
<b>(TASK 1)</b>														
Aluminum	J 185000	J 918	J 19700	J 480	J 450	J 2400	J 1500	J 10500	J 6600	J 1040	J 3500	J 3600	J 10500	30,000
Chromium	-	-	-	-	4	-	-	0.88	2.3	0.67	3.1	0.79	-	1-20
Barium	805	61	180	22	35	38	100	410	450	39	63	26	18	15-200
Beryllium	3500	20	180	1	3	30	29	265	290	31	59	35	6.1	2-15
Cobalt	-	-	-	-	-	0.37	-	4.1	-	-	-	-	-	<3
Copper	J 4300	J 210	J 3000	J 85	J 44	J 750	J 750	J 7400	J 6800	J 360	J 2040	J 410	J 4.9	<1-10
Iron	J 2080	J 13900	J 139000	J 960	J 1470	J 19900	J 19000	J 180000	J 170000	J 18000	J 34000	J 20000	J 3300	15,000
Nickel	8950	120	200	-	8	27	12	700	700	14	120	20	1.8	<5-5
Manganese	J 16000	J 300	J 500	J 15	J 35	J 90	J 24	J 920	J 1040	J 31	J 230	J 99	J 20	<2-150
Zinc	J 48000	J 730	J 1780	J 85	J 23	J 217	J 260	J 11000	J 9400	J 101	J 1100	J 220	J 6.3	<5-17
Vanadium	-	-	-	-	9	-	-	43	2.6	1.7	3.2	1.6	-	30-50
Silver	-	-	-	-	-	-	-	20	1.8	1.5	2.5	1.1	-	-
<b>(TASK 2)</b>														
Arsenic	82	-	15	-	-	6.0	9.5	19	21	4.5	12	16	5.8	6.5
Antimony	-	-	18	-	13	10	12	12	20	4.3	2.2	0.77	-	<1
Selenium	J 210	J 175	J 162	J 169	J 164	J 9.3	J 9.0	J 11.2	J 12	J 7.5	J 10	J 8.8	J 10.3	<0.1-0.1
Mercury	1.8	0.56	2.1	0.46	-	0.22	0.40	0.70	0.79	0.24	0.22	0.39	0.95	0.051
Tin	J 550	J 29	J 760	J 10	J 6	J 200	J 83	J 280	J 270	J 200	J 110	J 44	J 0.91	1.5
Cadmium	210	4.1	19	-	-	1.05	0.55	0.522	1.00	0.691	1.11	-	0.150	-
Lead	-	-	-	-	5.5	130	120	910	1340	74	190	130	4.7	10
<b>(TASK 3)</b>														
	ppm, mg/l	ppm, mg/l												
*Cyanide	J 1.04	J 0.12	NA	NA	NA	810	2900	NA	NA	NA	NA	NA	NA	NA
*Cyanide, amenable	J 0.54	J 0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

\* = Cyanide analysis performed by EPA Lexington Laboratory  
 \*\* = Mean concentrations for southeast Massachusetts as determined by U.S.G.S. (13)  
 - = Not detected  
 J = Sample results approximate based upon data validation  
 NA = Not analyzed for

TABLE 3  
VOLATILE ORGANIC ANALYSIS

Water Samples (ppb, ug/l)                      Soils/Sediment Samples (ppb/ug/kg)  
Laboratory: Envirodyne Engineers              Laboratory: Rockwell International

PRIORITY POLLUTANT  
VOLATILES

Sample Station EPA I.D. Number Sample Location	GW-01 76569 groundwater	SW-04D 76571 lagoon surface water	SW-08 76572 surface water south of lagoon	SW-10 76573 surface water east of lagoon	SW-16 76575 Blank	SS-05 76578 soil from lagoon berm	SS-06 76579 dried sludge	SS-07 76580 soil from access road	SS-07D 76581 duplicate	SS-09 76582 sediment south of lagoon	SS-11 76583 sediment east of lagoon	SS-12 76586 Background	SS-17 76587 Blank
benzene	J 411	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-trichloroethane	-	-	-	-	-	-	-	-	-	-	-	-	4 K
chloroform	J 64	-	-	-	-	-	-	-	-	-	-	-	1 K
ethylbenzene	-	-	-	-	-	-	-	-	-	J 36536	-	-	-
methylene chloride	J 2598	-	-	-	-	-	-	-	-	J 14778	-	-	-
toluene	J 173025	-	9510	2	-	-	-	-	1 K	J 3089426	-	-	-
trichloroethene	-	-	-	-	-	-	-	-	-	-	-	-	7 K

NON-PRIORITY POLLUTANT  
VOLATILES

acetone	-	-	-	-	-	-	-	-	-	J 42957	-	-	-
---------	---	---	---	---	---	---	---	---	---	---------	---	---	---

- = Not detected  
J = Sample results approximate based upon data validation  
K = Actual value, within the limitations of method, is less than the value given

The composite soil sample collected from the berm around the lagoon SS-05 identified seventeen inorganic compounds (Table 2). All compounds identified in the lagoon sludge and surface water were present in the soil with the exception of chromium, found only in the lagoon sludge. Additional compounds identified were arsenic, cobalt and antimony. The only compounds present in levels significantly over the background sample, SS-12, were copper (750 ppm), tin (200 ppm), and antimony (10 ppm). Cyanide was also detected at a level of 810 ppm (Table 2). No volatile compounds were identified (Table 3). Screening for PCBs tentatively identified Aroclor 1260 at less than 5 ppm.

The same blue color found in the lagoon sludge samples was also noted in the pile of dried material 40 feet west of the lagoon from which sample SS-06 was collected. Based upon this and the identification of similar inorganic compounds in the sample, the pile is believed to be dried lagoon sludge. The length of time it has been on site is unknown. Seventeen inorganic compounds were identified in this sample, including all those identified in the lagoon surface water and the lagoon sludge with the exception of chromium, which was not detected in this sample. Beryllium (29 ppm), arsenic (9.5 ppb), antimony (12 pm), mercury (0.40 ppm) and lead (120 ppm) were found in higher concentrations than in either of the lagoon sludge samples. Copper was identified in an equivalent concentration and nickel, zinc, cadmium and cyanide were found in lower concentrations. Cyanide was detected at 2900 ppm (Table 2). No volatile organics were detected (Table 3).

The highest concentrations of metals in soil were found in the sample, SS-07 and its duplicate, SS-07D, collected from the access road area. At the time of collection of these samples, visible pieces of metal, e.g., eyelets, were mixed with the soil, but were small enough to preclude their removal except by sifting and may account in part for the elevated concentrations of inorganics. However, this soil mixture was typical of the access road area. Analytical agreement was found between SS-07 and its duplicate. These samples contained nineteen inorganic priority pollutants, including all those identified in other soils and sludge samples with the addition of vanadium (43 ppm) and silver (20 ppm) (Table 2). Cyanide was not analyzed for in these samples. Aluminum, copper and zinc were found in the

approximate range of 6600-11000 ppm, above background levels in background sample SS-12. Barium, beryllium, nickel, manganese, tin and lead were identified in a range of 265-1340 ppm. Less than 1 ppm of toluene was identified in SS-07D only (Table 3). No other volatile organic compounds were detected. In-house screening for PCBs tentatively identified Aroclor 1242 and 1260 at a total concentration less than 10 ppm.

The background soil sample, SS-12, collected approximately 500 feet north of the site, contained seventeen metals (Table 2). Concentrations found in this sample were comparable to those found in the soil from the lagoon berm, SS-05, with the exception of antimony and tin, which were found in lower concentrations in SS-12 and cobalt which was not detected in SS-12.

Beryllium, copper, nickel, zinc, arsenic, selenium, mercury, tin and lead were found in elevated concentrations in the background sample, SS-12, in comparison to mean regional concentrations of these compounds in soil of southeastern Massachusetts (13, Table 2).

Groundwater sample GW-01 contained sixteen inorganic compounds (Table 2). All compounds previously identified in the lagoon sludge and surface water were found with the exception of chromium and lead, found in the lagoon sludge. In addition, 82 ppb of arsenic was detected. Concentrations for metals and cyanide in groundwater were higher than those detected in the lagoon surface water for all compounds except iron. Aluminum (185,000 ppb) and beryllium (3500 ppb) were detected at levels over 150 times greater than that found in the lagoon surface water. Manganese (16000 ppb), zinc (48000 ppb) and cadmium (210 ppb) were detected at concentrations 50 times greater than those found in the lagoon surface water. Cyanide concentrations (1.04 ppm) were eight times greater than lagoon surface water. Volatile organic analysis detected a total of 173,098 ppb of volatile contaminants (Table 3). The primary constituent was toluene (173,025 ppb), with methylene chloride, benzene and chloroform also detected.

Surface water sample SW-08 and sediment sample SS-09 were collected at the same location in the marsh approximately twenty feet south of the lagoon.

Fourteen metals were identified in the surface water at location SW-08 (Table 2). These were consistent with those identified in the lagoon surface water and groundwater, with the addition of antimony (18 ppb) which has been identified in the lagoon sludge. Volatile organic analysis detected 9510 ppb of toluene in this sample (Table 3). The sediment sample from this location, SS-09, contained the fourteen metals found in the surface water sample, SW-08, and four additional compounds, chromium (0.67 ppm), vanadium (1.7 ppm), silver (1.5 ppm) and lead (74 ppm) (Table 2). Volatile organic analysis detected a total concentration of 3,183,697 ppb of volatile compounds (Table 3). The primary constituent was toluene (3,089,426 ppb) with ethylbenzene (36,536 ppb), methylene chloride (14,778 ppb) and acetone (42,957 ppb) also identified. No analysis for cyanide was performed on this sample.

Surface water sample, SW-10, and sediment sample, SS-11, were collected from the marsh approximately 200 feet east of the lagoon. Ten metals were identified in the surface water sample (Table 2). The concentrations for all compounds in surface water sample, SW-10, were less than those in marsh surface water sample SW-08 except for selenium which was present in equivalent amounts. Toluene was detected at a level of 2 ppb, with no other volatile organics identified. The same eighteen metals were detected in sediment sample SS-11 as in sediment sample SS-09. With the exception of antimony, mercury and tin, concentrations of metals were greater in the marsh sediment east of the lagoon than south of it. Copper (2040 ppm), nickel (120 ppm), manganese (230 ppm) and zinc (1100 ppm) were detected at levels five times greater in SS-11, east of the lagoon, than found in SS-09, south of the lagoon. No volatile organics were detected at this sample location east of the lagoon (Table 3).

PH and conductivity readings were taken for all aqueous samples and are presented in Table 4. The lagoon surface water had the lowest pH, 2.8. The high conductivity of the groundwater may be influenced by salt water infiltration.

At the time of the site inspection it was noted that a 3 1/2 foot high chicken wire and/or chain link fence surrounded three sides of the lagoon and was unlocked. The

TABLE 4  
PH AND CONDUCTIVITY

<u>Sample Station</u>	<u>EPA I.D. Number</u>	<u>Sample Location</u>	<u>pH</u>	<u>Conductivity microhms/cm</u>
*GW-01	76569	groundwater	3.8	4800
SW-04D	76571	lagoon surface water	2.8	390
SW-08	76572	marsh surface water south of lagoon	6.0	220
SW-10	76573	marsh surface water east of lagoon	7	680

\* reading taken at time of sample collection

fourth and south side of the lagoon is contiguous with the marsh area. The surface water in the lagoon was approximately one foot deep. When probed at the NW corner, the lagoon sludge was approximately 3 1/2 feet deep. The lagoon lies outside the locked chain link fence surrounding the main facility in an open, flat, marshland area. The dried sludge pile west of the lagoon is completely unrestricted. At the time of the inspection by NUS/FIT, residents were observed walking in the sampling area.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

Atlas Tack Corporation has generated and disposed of hazardous substances associated with its manufacturing operations for 119 years. The nature of waste disposal up until the 1940's is unknown. The lagoon maintained by Atlas Tack Corporation has been the recipient of hazardous waste since its inception in the 1940's until 1978.

The compounds identified during this inspection are consistent with those used in Atlas Tack Corporation's manufacturing processes. Compounds used for electroplating, annealing, solvents and paint have been detected.

The highest of levels of volatile and/or cyanide contamination were identified in lagoon sludge, groundwater and marsh sediment south of the lagoon. Analysis indicated 50% of the cyanide present in the lagoon sludge and groundwater is free cyanide. Detection of contaminants outside of the lagoon may represent migration of contaminants, however the possibility of direct discharge into the marsh cannot be discounted without further investigation.

The lagoon constitutes a continued release to the environment via both surface and groundwater routes. Due to the proximity of private residences to the lagoon, and the unrestricted access in the area, direct contact with contaminants by members of the community is possible.

The access road area may have been used as a disposal area. This possibility is supported by the presence of small pieces of metal in the soil and the sandy nature of the soil compared to the surrounding soil. PCB contamination was also found in this area.

The dried sludge pile maintained on site also exhibited concentrations of metals and cyanide and constitutes an additional source for surface water contamination as well as an area of direct contact with contaminated soil.

The majority of all town residents in this area supplied with town water from an area north and upgradient of the site. However, one well is known to exist downgradient of the site and others, particularly those associated with summer homes, may also exist.

The main receptor of a migration of contaminants will be Buzzards Bay 1500 feet south of the lagoon. The marsh adjacent to Atlas Tack Corporation is part of a coastal wetland area along Buzzards Bay. This water is classified as SA coastal water with designated uses of marine fishing, shellfishing and recreation. Pope Beach is located 3000 feet away along the bay. Pope Beach has been documented in the past as a receptor of the waste stream from Atlas Tack Corporation (12).

Based upon these findings, NUS/FIT offers the following recommendations:

- Install a secure fence to prevent direct contact by residents of the community with the lagoon and the adjacent dried sludge pile.
- Research and identify private groundwater wells downgradient of the site and a selected upgradient well and sample for metals, PCB's and volatiles.
- Perform additional sampling to determine the extent of migration of contaminants from the Atlas Tack Corporation to the surrounding marsh. In conjunction with this, further information regarding the past disposal practices by Atlas Tack Corporation is needed to determine if there are other areas of contamination not sampled by this inspection. Subsurface soil sampling is also recommended in the road access area due to its possible use as a disposal area. This sampling will help determine if any additional on-site area requires restricted access.
- Evaluation of the environmental impact of continued leaching of contaminants from the site to determine if removal of lagoon contents and dried sludge pile are required.

- Perform an air monitoring survey for on site air characterization and the determination of airborne contaminant migration off-site due to the presence of volatile organics and cyanide.

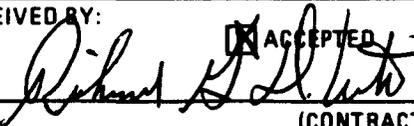
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4. Telecon with Fairhaven Town Clerk, June 13, 1984.
5. Uncontrolled Hazardous Waste Site Ranking System, User's Manual, June 1982.
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Southeastern Regional Planning and Economic Development District,  
February, 1978.
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Conterminous United States, U.S. Geological Survey Professional Paper 1270,  
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14. Rules and Regulations for the Establishment of Minimum Water Quality  
Standards and for the Protection of the Quality and Value of Water  
Resources, Commonwealth of Massachusetts, Water Resources Commission,  
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**APPENDIX A**  
**TECHNICAL DIRECTIVE DOCUMENT**

1. COST CENTER:		<b>REM/FIT ZONE CONTRACT TECHNICAL DIRECTIVE DOCUMENT (TDD)</b>			2. NO. :	
ACCOUNT NO.:					F1-8403-01A	
3. PRIORITY:		4. ESTIMATE OF TECHNICAL HOURS:	5. EPA SITE ID:	6. COMPLETION DATE:	7. REFERENCE INFO.:	
<input checked="" type="checkbox"/> HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW		350	MAD001026319		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> ATTACHED <input type="checkbox"/> PICK UP	
		4A. ESTIMATE OF SUBCONTRACT COST:	5A. EPA SITE NAME:			
		\$210	<u>Atlas Tack Co.</u> <u>Fairhaven, MA</u>	<u>7-20-84</u>		
8. GENERAL TASK DESCRIPTION: <u>Perform site inspection as specified by EPA site manager. Obtain photos and samples from lagoon and surrounding area. Submit final report.</u>						
9. SPECIFIC ELEMENTS:					10. INTERIM DEADLINES:	
<u>1. Develop sampling plan</u> <u>2. Take site photos including lagoon and fencing</u> <u>3. Obtain samples from lagoon and surrounding area and deliver to NCLP.</u> <u>4. Perform in-house screening for PCB's volatiles and metals.</u> <u>5. Validate data from NCL.</u> <u>6. Prepare final report for the site inspection.</u>					<hr/>	
11. DESIRED REPORT FORM: FORMAL REPORT <input checked="" type="checkbox"/> LETTER REPORT <input type="checkbox"/> FORMAL BRIEFING <input type="checkbox"/>						
OTHER (SPECIFY): <u>SI forms, final reports with photographs</u>						
12. COMMENTS: <u>EPA contact is Gerry Sotolongo, 223-1951. EPA is to accompany FIT during sampling.</u>						
13. AUTHORIZING RPO: <u></u> (SIGNATURE) Donald R. Smith					14. DATE: <u>5-11-84</u>	
15. RECEIVED BY: <u></u> (CONTRACTOR RPM SIGNATURE) Richard G. DiNitto					16. DATE: <u>5-15-84</u>	

**/ APPENDIX B**

**APPENDIX B**  
**EPA SITE INSPECTION FORM**



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 1 - SITE LOCATION AND INSPECTION INFORMATION**

I. IDENTIFICATION	
01 STATE MA	02 SITE NUMBER MAD001026319

**II. SITE NAME AND LOCATION**

01 SITE NAME (Legal, common, or descriptive name of site) <b>Atlas Tack Corporation</b>		02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER <b>83 Pleasant Street</b>			
03 CITY <b>Fairhaven</b>		04 STATE <b>MA</b>	05 ZIP CODE <b>02719</b>	06 COUNTY <b>Bristol</b>	07 COUNTY CODE <b>005</b>
09 COORDINATES LATITUDE <b>41 38 05.0</b>		LONGITUDE <b>070 53 45.0</b>		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER	

**III. INSPECTION INFORMATION**

01 DATE OF INSPECTION <b>4 26 84</b> <small>MONTH DAY YEAR</small>	02 SITE STATUS <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION <b>1865</b>   <b>1</b> <b>Currently active</b> UNKNOWN <small>BEGINNING YEAR ENDING YEAR</small>
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR <b>NUS Corporation</b> <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR <small>(Name of firm)</small> <input type="checkbox"/> E. STATE <input type="checkbox"/> F. STATE CONTRACTOR <input type="checkbox"/> G. OTHER <small>(Name of firm)</small> <small>(Specify)</small>		

05 CHIEF INSPECTOR <b>Barbara Felitti</b>	06 TITLE <b>Environmental Technician</b>	07 ORGANIZATION <b>NUS</b>	08 TELEPHONE NO. <b>(617) 275-2970</b>
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
<b>Dennis Dumont</b>	<b>Chemist</b>	<b>NUS</b>	<b>(617) 275-2970</b>
<b>Valerie Tillinghast</b>	<b>Chemist</b>	<b>NUS</b>	<b>(617) 275-2970</b>
<b>Colin Young</b>	<b>Public Health Specialist</b>	<b>NUS</b>	<b>(617) 275-2970</b>
<b>Gerry Sotolongo</b>	<b>EPA Region I Site Manger</b>	<b>EPA/Boston</b>	<b>(617) 223-1951</b>
<b>Phillip Thurman</b>	<b>EPA Region I Enforcement Representative</b>	<b>EPA/Boston</b>	<b>(617) 275-2970</b>
13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
<b>Roland Levesque</b>	<b>General Manager</b>	<b>Atlas Tack Corp. 83 Pleasant St., Fairhaven, MA</b>	<b>(617) 997-9491</b>
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION <b>0930</b>	19 WEATHER CONDITIONS <b>Clear, 50° F</b>
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**IV. INFORMATION AVAILABLE FROM**

01 CONTACT <b>Don Smith</b>	02 OF (Agency/Organization) <b>EPA/Boston Region I</b>	03 TELEPHONE NO. <b>(617) 223-1941</b>
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM <b>Barbara Felitti</b>	05 AGENCY <b>NUS</b>	06 ORGANIZATION <b>FIT</b>
	07 TELEPHONE NO. <b>(617) 275-2970</b>	08 DATE <b>6 20 84</b> <small>MONTH DAY YEAR</small>



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 2 - WASTE INFORMATION**

**I. IDENTIFICATION**

01 STATE 02 SITE NUMBER  
MA MAD001026319

**II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS**

<b>01 PHYSICAL STATES</b> <i>Check all that apply</i> <input checked="" type="checkbox"/> A SOLID <input type="checkbox"/> B POWDER, FINES <input checked="" type="checkbox"/> C SLUDGE <input type="checkbox"/> D OTHER _____ <small>Specify:</small>	<b>02 WASTE QUANTITY AT SITE</b> <small>Measures of waste quantities must be independent</small> TONS <u>unknown</u> CUBIC YARDS <u>unknown</u> NO OF DRUMS <u>unknown</u>	<b>03 WASTE CHARACTERISTICS</b> <i>Check all that apply</i> <input checked="" type="checkbox"/> A TOXIC <input type="checkbox"/> B CORROSIVE <input type="checkbox"/> C RADIOACTIVE <input checked="" type="checkbox"/> D PERSISTENT <input checked="" type="checkbox"/> E SOLUBLE <input type="checkbox"/> F INFECTIOUS <input checked="" type="checkbox"/> G FLAMMABLE <input type="checkbox"/> H IGNITABLE <input type="checkbox"/> I HIGHLY VOLATILE <input type="checkbox"/> J EXPLOSIVE <input type="checkbox"/> K REACTIVE <input type="checkbox"/> L INCOMPATIBLE <input type="checkbox"/> M NOT APPLICABLE
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**III. WASTE TYPE**

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	unknown		
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	unknown		
IOC	INORGANIC CHEMICALS	unknown		
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown		

**IV. HAZARDOUS SUBSTANCES** *See Appendix for most frequently cited CAS Numbers*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	toluene	108-88-3	SI, sediment	3089426	ppb
SOL	methylene chloride		sediment, groundwater	14778	ppb
SOL	benzene	71-43-2	groundwater	411	ppb
SOL	chloroform	67-66-3	groundwater	64	ppb
SOL	acetone		sediment	42957	ppb
LOC	cyanide		SI, soil, groundwater	37200	ppm
SOL	ethylbenzene	100-41-4	sediment	36536	ppb
MES	beryllium	7440-41-7	SI } metals sediment } found soil } in all surface water } these groundwater } media	290	ppm
MES	nickel	7440-02-0		700	ppm
MES	copper			180000	ppm
MES	zinc			11000	ppm
MES	mercury			2.1	ppb
MES	lead			1340	ppm
MES	cadmium			210	ppb
MES	arsenic		21	ppm	
OCC	polychlorinated biphenyls	1336-36-3	soil	3.03	ppm

**V. FEEDSTOCKS** *See Appendix for CAS Numbers*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

**VI. SOURCES OF INFORMATION** *Cite specific references, e.g. State Reg. Sample Analysis Reports*

- 1) Analytical Results, Radian Corp, May 16, 1984
- 2) Analytical Results, Envirodyne, May 2, 1984
- 3) Analytical Results, Rockwell International, May 4, 1984
- 4) Analytical Results, GCA, May 22, 1984
- 5) Analytical Results, EPA Lexington Laboratory, May 5, 1984
- 6) Analytical Results, NUS/FIT, June 28, 1984



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MA	MAD001026319

II. HAZARDOUS CONDITIONS AND INCIDENTS

01  A GROUNDWATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED: unknown  
02  OBSERVED (DATE 4-26-84)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Groundwater sample collected on site exhibited volatile and inorganic contamination.

01  B SURFACE WATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED: unknown  
02  OBSERVED (DATE 4-26-84)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Marsh south of the lagoon is contiguous with the lagoon and exhibits volatile & inorganic contamination. Lagoon surface water contained cyanide and inorganic contamination.

01  C CONTAMINATION OF AIR  
03 POPULATION POTENTIALLY AFFECTED: unknown  
02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Analysis showed toluene in sediment surface water south of lagoon (9510 ppb) and cyanide in lagoon surface water (0.12 ppm). Waste may become airborne if disturbed.

01  D FIRE/EXPLOSIVE CONDITIONS  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_  
02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

01  E DIRECT CONTACT  
03 POPULATION POTENTIALLY AFFECTED: unknown  
02  OBSERVED (DATE 4-26-84)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Lagoon lacks a secure fence. Lagoon sludge is contaminated with cyanide and inorganic substances. Soil contamination on site.

01  F CONTAMINATION OF SOIL  
03 AREA POTENTIALLY AFFECTED: unknown  
(Acres)  
02  OBSERVED (DATE 4-26-84)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Soil samples from on-site indicated above background levels of metals as well as presence of cyanide and PCB's.

01  G DRINKING WATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED: unknown  
02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

One well is known to exist downgradient of site. Total number of downgradient wells is unknown, though known to be small.

01  H WORKER EXPOSURE/INJURY  
03 WORKERS POTENTIALLY AFFECTED: \_\_\_\_\_  
02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

01  I POPULATION EXPOSURE/INJURY  
03 POPULATION POTENTIALLY AFFECTED: unknown  
02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

See Direct Contact above. Additional population may be affected by migration of contaminants to Pope Beach, along Buzzards Bay.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION  
01 STATE 02 SITE NUMBER  
MA MAD001026319

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01  J. DAMAGE TO FLORA 02  OBSERVED (DATE 4-26-84)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Sediment sample south of the lagoon contained 3089426 ppb toluene. This area and marsh east of the lagoon contained some above background concentrations of metals.

01  K. DAMAGE TO FAUNA 02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION *(include names of species)*

Aquatic life in marsh/wetland and bay areas may be affected by contaminants already present in marsh and further leaching of contaminants from lagoon.

01  L. CONTAMINATION OF FOOD CHAIN 02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

See Damage to Fauna above. Buzzards Bay, a recreational and commercial fishing area may be affected by a migration of contaminants.

01  M. UNSTABLE CONTAINMENT OF WASTES 02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
*(Spills, Runoff, Standing liquids, Leaking drums)*  
03 POPULATION POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION

South side of lagoon is contiguous with the adjacent marsh.

01  N. DAMAGE TO OFFSITE PROPERTY 02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

Contaminants may migrate to Buzzards Bay area.

01  O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

01  P. ILLEGAL/UNAUTHORIZED DUMPING 02  OBSERVED (DATE \_\_\_\_\_)  POTENTIAL  ALLEGED  
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

In the past Atlas Tack Corp. has engaged in underground disposal of 10,000 gal/day of wastes. The nature of wastes disposed of and method and area of disposal are unknown.

III. TOTAL POPULATION POTENTIALLY AFFECTED: unknown

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references, e.g. state files, sample analysis reports)*

1. EPA/Boston NPDES files, Atlas Tack Corp., MA 0002704.
2. Site Inspection NUS/FIT 4-26-84 and analytical results.



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION  
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION**

I. IDENTIFICATION	
01 STATE <b>MA</b>	02 SITE NUMBER <b>MAD001026319</b>

**II. PERMIT INFORMATION**

01 TYPE OF PERMIT ISSUED <small>(Check all that apply)</small>	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input checked="" type="checkbox"/> A NPDES	<b>MA0002704</b>			
<input type="checkbox"/> B UIC				
<input type="checkbox"/> C AIR				
<input checked="" type="checkbox"/> D RCRA	<b>MAD001026319</b>			
<input type="checkbox"/> E RCRA INTERIM STATUS				
<input type="checkbox"/> F SPCC PLAN				
<input type="checkbox"/> G STATE <small>Specify</small>				
<input type="checkbox"/> H LOCAL <small>Specify</small>				
<input type="checkbox"/> I OTHER <small>Specify</small>				
<input type="checkbox"/> J NONE				

**III. SITE DESCRIPTION**

01 STORAGE/ DISPOSAL <small>(Check all that apply)</small>	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT <small>(Check all that apply)</small>	05 OTHER
<input checked="" type="checkbox"/> A SURFACE IMPOUNDMENT	<u>unknown</u>	_____	<input type="checkbox"/> A INCENERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE  6
<input checked="" type="checkbox"/> B PILES	<u>unknown</u>	_____	<input type="checkbox"/> B UNDERGROUND INJECTION	
<input type="checkbox"/> C DRUMS, ABOVE GROUND	_____	_____	<input type="checkbox"/> C CHEMICAL PHYSICAL	06 AREA OF SITE  <u>12.0</u> (Acres) approximate
<input type="checkbox"/> D TANK, ABOVE GROUND	_____	_____	<input type="checkbox"/> D BIOLOGICAL	
<input type="checkbox"/> E TANK, BELOW GROUND	_____	_____	<input type="checkbox"/> E WASTE OIL PROCESSING	
<input type="checkbox"/> F LANDFILL	_____	_____	<input type="checkbox"/> F SOLVENT RECOVERY	
<input type="checkbox"/> G LANDFARM	_____	_____	<input type="checkbox"/> G OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H OPEN DUMP	_____	_____	<input checked="" type="checkbox"/> H OTHER <u>none</u> <small>(Specify)</small>	
<input type="checkbox"/> I OTHER <small>(Specify)</small>	_____	_____		

07 COMMENTS

Storage/disposal information given here is confined to the lagoon and surrounding area. From 1940's to 1978 the lagoon received wastes generated by eyelet manufacturing and finishing processes.

**IV. CONTAINMENT**

01 CONTAINMENT OF WASTES (Check one)

A. ADEQUATE, SECURE       B. MODERATE       C. INADEQUATE, POOR       D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The lagoon is surrounded on three sides by a three foot high fence, chicken wire in most places. There is no lock. The fourth side has no fence and is bounded by marshland. Contaminated soil areas and dried lagoon sludge pile are unfenced.

**V. ACCESSIBILITY**

01 WASTE EASILY ACCESSIBLE.  YES  NO

02 COMMENTS

Homes are located approximately 500 feet from the site, Rogers Elementary School approximately 2000 feet.

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g. state files, sample analysis, reports)

1. NUS/FIT Inspection of 4/26/84.



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA**

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MA	MAD001026319

**II. DRINKING WATER SUPPLY**

01 TYPE OF DRINKING SUPPLY <i>Check as appropriate:</i>		02 STATUS			03 DISTANCE TO SITE	
	SURFACE	WELL	ENDANGERED	AFFECTED	MONITORED	
COMMUNITY	A. <input type="checkbox"/>	B. <input checked="" type="checkbox"/>	A. <input type="checkbox"/>	B. <input type="checkbox"/>	C. <input type="checkbox"/>	A. <u>&gt; 1.5</u> (mi)
NON-COMMUNITY	C. <input type="checkbox"/>	D. <input checked="" type="checkbox"/>	D. <input checked="" type="checkbox"/>	E. <input type="checkbox"/>	F. <input type="checkbox"/>	B. <u>.5</u> (mi)

**III. GROUNDWATER**

01 GROUNDWATER USE IN VICINITY *Check one:*

A ONLY SOURCE FOR DRINKING     B DRINKING *Other sources available:* COMMERCIAL, INDUSTRIAL, IRRIGATION *No other water sources available!*     C COMMERCIAL, INDUSTRIAL, IRRIGATION *Limited other sources available!*     D NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER unknown    03 DISTANCE TO NEAREST DRINKING WATER WELL unknown (mi)

04 DEPTH TO GROUNDWATER unknown (ft)    05 DIRECTION OF GROUNDWATER FLOW unknown    06 DEPTH TO AQUIFER OF CONCERN 0 - 14 (ft)    07 POTENTIAL YIELD OF AQUIFER NA (gpd)    08 SOLE SOURCE AQUIFER  YES  NO

09 DESCRIPTION OF WELLS *(including usage, depth, and location relative to population and buildings):*

Summer homes along Buzzards Bay .5 miles from site may still use private wells. Majority of residents in this area are on town water, not affected by this site.

10 RECHARGE AREA <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	COMMENTS	11 DISCHARGE AREA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	COMMENTS
			Site is adjacent to tidal flat along Buzzards Bay.

**IV. SURFACE WATER**

01 SURFACE WATER USE *Check one:*

A RESERVOIR, RECREATION DRINKING WATER SOURCE     B IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES     C COMMERCIAL, INDUSTRIAL     D NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
<u>Buzzards Bay</u>	-	<u>.3</u> (mi)
_____	-	_____ (mi)
_____	-	_____ (mi)

**V. DEMOGRAPHIC AND PROPERTY INFORMATION**

01 TOTAL POPULATION WITHIN			02 DISTANCE TO NEAREST POPULATION	
ONE (1) MILE OF SITE A. <u>7,200</u> NO OF PERSONS	TWO (2) MILES OF SITE B. <u>12,780</u> NO OF PERSONS	THREE (3) MILES OF SITE C. <u>15,150</u> NO OF PERSONS	<u>.03</u> (mi)	
03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE <u>3,363</u>			04 DISTANCE TO NEAREST OFF-SITE BUILDING <u>.03</u> (mi)	

05 POPULATION WITHIN VICINITY OF SITE *(Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)*

The site is located within the central area of the town of Fairhaven. A two mile radius around the site includes parts of East and North Fairhaven. A three mile radius includes almost all of Fairhaven, population 15,775, and small sections of Acushnet and Mattapoisett.



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA**

**I. IDENTIFICATION**  
01 STATE | 02 SITE NUMBER  
MA | MAD001026319

**VI. ENVIRONMENTAL INFORMATION**

01 PERMEABILITY OF UNSATURATED ZONE *Check one:* unknown  
 A  $10^{-9} - 10^{-8}$  cm/sec     B  $10^{-4} - 10^{-9}$  cm/sec     C  $10^{-4} - 10^{-3}$  cm/sec     D GREATER THAN  $10^{-3}$  cm/sec

02 PERMEABILITY OF BEDROCK *Check one:* unknown  
 A IMPERMEABLE Less than  $10^{-9}$  cm/sec.     B RELATIVELY IMPERMEABLE  $10^{-4} - 10^{-9}$  cm/sec.     C RELATIVELY PERMEABLE  $10^{-2} - 10^{-4}$  cm/sec.     D VERY PERMEABLE Greater than  $10^{-2}$  cm/sec.

03 DEPTH TO BEDROCK <u>unknown</u> (ft)	04 DEPTH OF CONTAMINATED SOIL ZONE <u>unknown</u> (ft)	05 SOIL pH <u>unknown</u>
--	---	------------------------------

06 NET PRECIPITATION <u>24</u> (in)	07 ONE YEAR 24 HOUR RAINFALL <u>23</u> (in)	08 SLOPE SITE SLOPE <u>&lt; 1</u> %	DIRECTION OF SITE SLOPE <u>SE</u>	TERRAIN AVERAGE SLOPE <u>1</u> %
--	--	---	--------------------------------------	-------------------------------------

09 FLOOD POTENTIAL coastal dike 10  
300 ft from site  
 SITE IS IN 1 YEAR FLOODPLAIN     SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS <small>.5 acre minimum</small> ESTUARINE <u>adjacent-0</u> (mi)	OTHER B _____ (mi)	12 DISTANCE TO CRITICAL HABITAT <small>of endangered species.</small> _____ ENDANGERED SPECIES: _____
---	-----------------------	---

13 LAND USE IN VICINITY

DISTANCE TO: COMMERCIAL/INDUSTRIAL A <u>unknown</u> (mi)	RESIDENTIAL AREAS, NATIONAL STATE PARKS, FORESTS, OR WILDLIFE RESERVES B <u>.03</u> (mi)	AGRICULTURAL LANDS PRIME AG LAND    AG LAND C <u>unknown</u> (mi)    D <u>unknown</u> (mi)
--	--	--

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is situated in a residential area, adjacent to a wetland area leading to Buzzards Bay. Surficial drainage from the site is SE to Buzzards Bay. The area within a one mile radius is coastal lowland. The site has a slope of < 1%.

**VII. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis reports)

1. U.S.G.S. Topographic Map, New Bedford, North, Mass Quadrangle 1979.
2. HRS Users Manual.
3. NUS/FIT inspection on 4/26/84.



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 6 - SAMPLE AND FIELD INFORMATION**

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MA	MAD001026319

**II. SAMPLES TAKEN**

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	1	Volatiles: Envirodyne, St. Louis MO / Cyanide: EPA Inorganics: Radian, Austin, TX / Lexington, MA	5/84
SURFACE WATER	6	Volatiles: Envirodyne, St. Louis MO / Cyanide: EPA Inorganics: Radian, Austin, TX / Lexington, MA	6/84
WASTE		← Inorganics & Cyanide: ↑ GCA, Bedford, MA	
AIR			
RUNOFF			
SPILL			
SOIL/sediment	8	Volatiles: Rockwell, Newbury Park, CA / Cyanide: EPA Inorganics: Radian, Austin, TX / Lexington, MA	6/84
VEGETATION			
OTHER sludge	2	GCA, Bedford, MA	6/84

**III. FIELD MEASUREMENTS TAKEN**

01 TYPE	02 COMMENTS
PH 2.8	Lagoon surface water
PH 3.6	Groundwater

**IV. PHOTOGRAPHS AND MAPS**

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>NUS Corporation</u> <small>Name of organization or individual</small>
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS <u>NUS Corporation</u>

**V. OTHER FIELD DATA COLLECTED** (Provide narrative description)

Air monitoring with OVA - 128:

- 1.) 0ppm Breathing zone command post
- 2.) 60ppm 6" above disturbed lagoon surface water
- 3.) 140 ppm 6" above well casing opening

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g. state files, sample analysis reports)

1. NUS/FIT inspection on 4/26/84.



**POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 7 - OWNER INFORMATION**

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MA	MAD001026319

II. CURRENT OWNER(S)				PARENT COMPANY <small>(If applicable)</small>			
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
Atlas Tack Corporation				Great Northern Industries			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE
P.O. Box 31				266 Beacon Street			
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
Fairhaven		MA	02719	Boston		MA	02116
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) <small>(List most recent first)</small>				IV. REALTY OWNER(S) <small>(If applicable, list most recent first)</small>			
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE

**V. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis reports)

1. EPA/Boston RCRA files.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MA	MAD001026319

II. CURRENT OPERATOR <small>(Provide if different from owner)</small>				OPERATOR'S PARENT COMPANY <small>(if applicable)</small>			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
Roland Levesque, General Manager							
03 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			04 SIC CODE	12 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			13 SIC CODE
83 Pleasant Street							
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
Fairhaven		MA	02719				
08 YEARS OF OPERATION		09 NAME OF OWNER					
unknown		Atlas Tack Corporation					
III. PREVIOUS OPERATOR(S) <small>(List most recent first; provide only if different from owner)</small>				PREVIOUS OPERATORS' PARENT COMPANIES <small>(if applicable)</small>			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
unknown							
03 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			04 SIC CODE	12 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			04 SIC CODE	12 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			04 SIC CODE	12 STREET ADDRESS <small>(P.O. Box, RFD #, etc.)</small>			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION <small>(Cite specific references, e.g., state files, sample analysis, reports)</small>	
1. EPA/Boston NPDES files, Atlas Tack Corp., MA 0002704.	



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER  
MA | MAD001026319

II. ON-SITE GENERATOR

01 NAME Atlas Tack Corporation		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD # etc.) 83 Pleasant Street		04 SIC CODE	
05 CITY Fairhaven	06 STATE MA	07 ZIP CODE 02719	

III. OFF-SITE GENERATOR(S)

01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	

IV. TRANSPORTER(S)

01 NAME unknown		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD # etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

1.) NUS/FIT site inspection 4-26-84.



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER  
MA MAD001026319

II. PAST RESPONSE ACTIVITIES

01  A. WATER SUPPLY CLOSED 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  B. TEMPORARY WATER SUPPLY PROVIDED 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  C. PERMANENT WATER SUPPLY PROVIDED 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  D. SPILLED MATERIAL REMOVED 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  E. CONTAMINATED SOIL REMOVED 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  F. WASTE REPACKAGED 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  G. WASTE DISPOSED ELSEWHERE 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  H. ON SITE BURIAL 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  I. IN SITU CHEMICAL TREATMENT 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  J. IN SITU BIOLOGICAL TREATMENT 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  K. IN SITU PHYSICAL TREATMENT 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  L. ENCAPSULATION 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  M. EMERGENCY WASTE TREATMENT 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  N. CUTOFF WALLS 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  O. EMERGENCY DIKING/SURFACE WATER DIVERSION 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  P. CUTOFF TRENCHES/SUMP 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_

01  Q. SUBSURFACE CUTOFF WALL 02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_  
04 DESCRIPTION \_\_\_\_\_



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER  
MA | MAD001026319

II PAST RESPONSE ACTIVITIES (Continued)

01  R. BARRIER WALLS CONSTRUCTED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  S. CAPPING/COVERING  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  T. BULK TANKAGE REPAIRED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  U. GROUT CURTAIN CONSTRUCTED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  V. BOTTOM SEALED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  W. GAS CONTROL  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  X. FIRE CONTROL  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  Y. LEACHATE TREATMENT  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  Z. AREA EVACUATED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  1. ACCESS TO SITE RESTRICTED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  2. POPULATION RELOCATED  
04 DESCRIPTION  
02 DATE \_\_\_\_\_ 03 AGENCY \_\_\_\_\_

01  3. OTHER REMEDIAL ACTIVITIES  
04 DESCRIPTION  
02 DATE 1978 03 AGENCY \_\_\_\_\_

Discharges to Buzzards Bay and lagoon ceased; connection made to Fairhaven Sewage Treatment Plant Outfall # 001.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

1. EPA/Boston, NPDES files, Atlas Tack Corporation, MA0002704



POTENTIAL HAZARDOUS WASTE SITE  
SITE INSPECTION REPORT  
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MA	MAD001026319

II. ENFORCEMENT INFORMATION

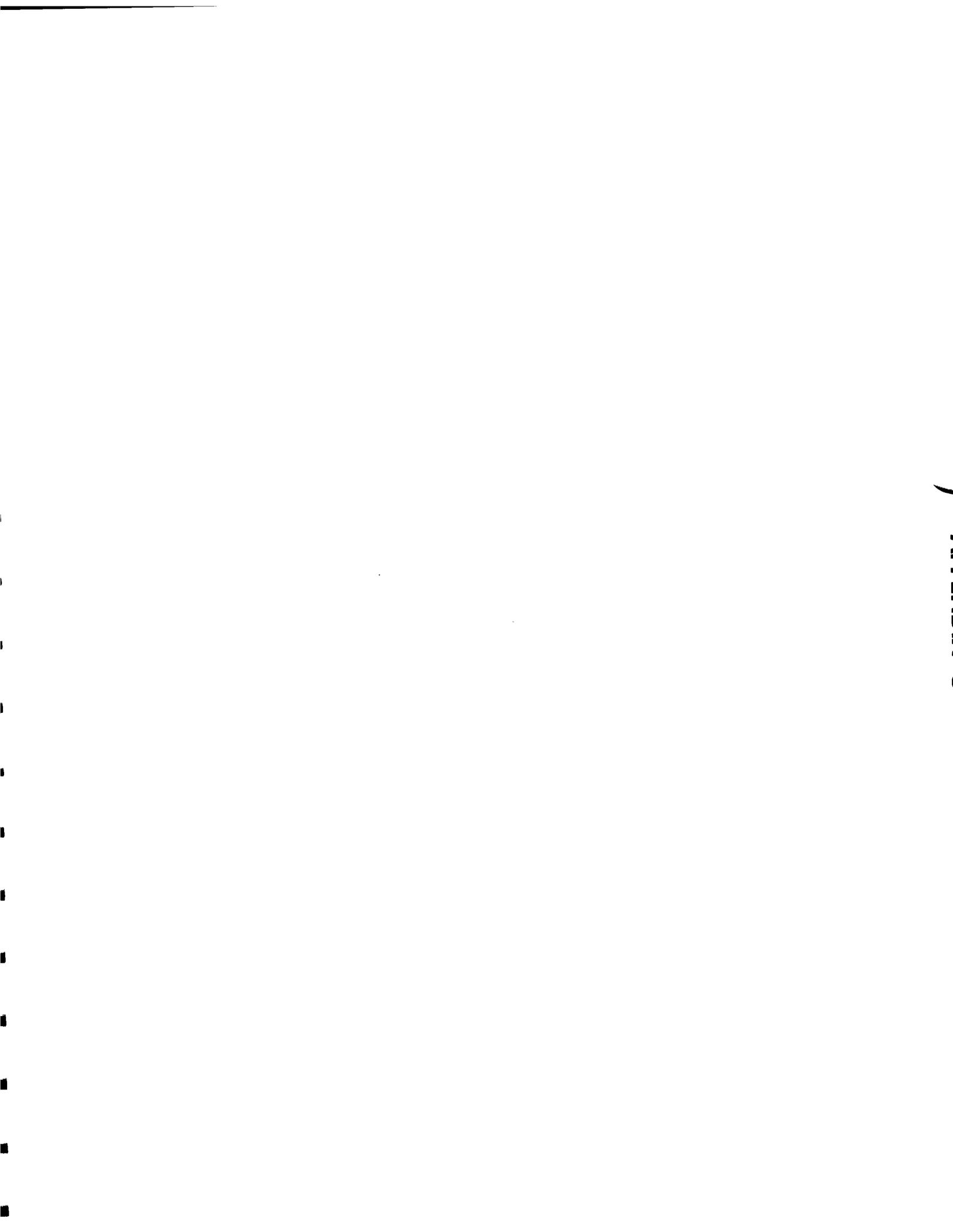
01 PAST REGULATORY ENFORCEMENT ACTION  YES  NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

- June 4, 1974 - NPDES Permit MA 0002704 issued with requirement to cease direct discharge to Buzzards Bay and tie in to Fairhaven Sewage Treatment System within 30 days.
- Aug. 10, 1976 - Administrative Order issued requiring compliance with NPDES Permit MA 0002704 to cease direct discharge to Buzzards Bay.
- June 6, 1978 - Agreement for Judgement issued in Suffolk Superior Court to cease direct discharge to Buzzards Bay.
- Jan. 14, 1981 and Nov. 19, 1982 - Notice of Violation of Hazardous Waste Regulations issued by Mass. DEQE for "failure/refusal to remove lagoon contents from site."
- March 26, 1982 and June 9, 1982 - Sampling of lagoon sludge and surrounding soil by Mass. DEQE/Lakeville.

III. SOURCES OF INFORMATION (Cite specific references, e.g., State files, laboratory reports)

1. EPA/Boston RCRA and NPDES files, Atlas Tack Corp.
2. Mass. DEQE/Lakeville files, Atlas Tack Corp.



**APPENDIX C**  
**MASS DEQE ANALYTICAL DATA**

*The Commonwealth of Massachusetts*  
*Executive Office of Environmental Affairs*  
*Department of Environmental Quality Engineering*

*Southeast Region*

*Lakeville Hospital, Lakeville, Massachusetts 02346*

*947-1231, Ext. 680-684*

ANTHONY D. CORTESE Sc.D.  
Commissioner

PAUL T. ANDERSON  
Regional Environmental Engineer

**COPY**

February 7, 1984

The Honorable Edward M. Kennedy  
John F. Kennedy Federal Building  
Boston, Massachusetts 02203

RE: FAIRHAVEN--Rogers School  
Soil Analytical Results

ATTENTION: Ms. Kathy Anderson

Dear Senator Kennedy:

As a result of concerns raised by your constituents, as conveyed to this Department, soil samples were taken at the Rogers School playground area by an engineer from this office on August 22, 1983.

Enclosed for your information are the analytical results of that sampling program. Based on these results and on observations during the sampling, this office has determined that there is no basis to suspect that the schoolyard somehow constitutes a source of adverse environmental contaminants.

Please feel free to address any questions regarding this matter to this office.

Very truly yours,

For the Commissioner

\_\_\_\_\_  
Robert E. Donovan  
Deputy Regional Environmental Engineer

D/MFC/re

Enclosure

cc: Yee Cho, DEQE

Board of Health  
Town Hall  
Fairhaven, MA 02719

Milton K. Delano, PE  
Hazardous Waste Coordinator  
Town Hall  
Fairhaven, MA 02719

THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

SOIL ANALYSIS

RECEIVED

JAN 30 1984

S.E. SOUTHEAST REGION

JAN 8 1984

SOURCE A Rogers School, Soil Sample

CITY/TOWN FAIRHAVEN

SOURCE B

COLLECTOR M. CONWAY

SOURCE C

SOURCE D

SOURCE E

SOURCE F

*gmp*

	A	B	C	D	E	F
SAMPLE NUMBER	010645					
DATE OF COLLECTION	8.22.83					
DATE OF RECEIPT	8.26.83					
DATE ANALYZED						
Cadmium	0.4					
Chromium	8.0					
Copper	20.					
Lead	100.					
Zinc	40.					
Nickel	5.0					
PCB	0.0					
Cyanide	0.0					
VOLATILE ORGANICS	NONE DETECTED					

*Total metals*

REMARKS Results are expressed in micrograms per gram (ppm) dry weight basis.

THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

SPECIAL ANALYSIS

HAZARDOUS WASTE SOIL SAMPLE

E.P. TOXICITY

SOURCE A	<b>Rogers School, Soil Sample, Composites (#1-5)</b>	CITY/TOWN	<u>FAIRHAVEN</u>
SOURCE B	<b>(Chem Lab. #010645)</b>	COLLECTOR	<u>MFC</u>
SOURCE C			
SOURCE D			
SOURCE E			
SOURCE F			

	A	B	C	D	E	F
SAMPLE NUMBER	R97148					
DATE OF COLLECTION	8/22/83					
DATE OF RECEIPT	9/23/83 (from Chem. Lab.)					
DATE ANALYZED	9/26/83					
TOTAL CYANIDES	0.00					
ARSENIC	0.003					
BARIUM	0.19					
CADMIUM	0.00					
CHROMIUM	0.00					
LEAD	0.00					
MERCURY	0.0000					
SELENIUM	0.001					
SILVER	0.00					

REMARKS **EP Toxicity Test analyzed in accordance with Federal Register, Vol. #45, No. 98, May 19, 1980. (mg/L)**



*The Commonwealth of Massachusetts*  
*Executive Office of Environmental Affairs*  
*Department of Environmental Quality Engineering*

ANTHONY D. CORTESE Sc. D  
Commissioner

PAUL T. ANDERSON  
Regional Environmental Engineer

*Southeast Region*

*Lakeville Hospital, Lakeville, Massachusetts 02346*

*947-1231, Ext. 680-684*

December 29, 1983



Mr. Al Texiera  
80 Farmfield Lane  
Fairhaven, Massachusetts 02719

RE: FAIRHAVEN--Private Well Analysis

Dear Mr. Texiera:

Based on information supplied by you to this office in a telephone conversation on October 28, 1983, it was determined that your sole source of household drinking water is a shallow well on your property on Farmfield Lane. Due to the relative proximity of your property to the Atlas Tack Corporation, a site presently under investigation by the Department of the Attorney General for alleged violation of environmental regulations, it was determined that sampling and comprehensive analyses of your well was justified.

On November 2, 1983, an engineer from this office took samples from your private well and had them delivered to the Department's Lawrence Experiment Station. Enclosed are copies of the analytical results from those samples.

The constituent concentrations detected in the samples are well within standards, limits and guidelines as established by the Federal Environmental Protection Agency for drinking water supplies.

If you have any questions regarding these analytical results, please feel free to call Mr. Michael F. Conway of this office.

Very truly yours,

For the Commissioner

---

Christopher Tilden, Chief  
Hazardous Materials and Solid Wastes Section

T/MFC/pt

Enclosure

cc: Milton K. Delano, P.E.  
Hazardous Waste Coordinator  
Town Hall  
Fairhaven, MA 02719

cc: Board of Health  
40 Centre Street  
Fairhaven, MA 02719



THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

SE CT  
CT

SPECIAL ANALYSIS

RECEIVED  
NOV 15 1983  
EASTERN REGION

SOURCE A Texiera - 90 Farmfield - Fairhaven  
SOURCE B  
SOURCE C  
SOURCE D  
SOURCE E  
SOURCE F

CITY/TOWN FAIRHAVEN - SPECIAL  
COLLECTOR Yo Name

A B C D E F

	A	B	C	D	E	F
SAMPLE NUMBER	R97502					
DATE OF COLLECTION						
DATE OF RECEIPT	11/2/83					
DATE ANALYZED						
ARSENIC	0.002					
BARIUM	0.06					
CADMIUM	0.00					
CHROMIUM	0.00					
LEAD	0.09					
MERCURY	0.0003					
SELENIUM	0.005					
SILVER	0.00					
COPPER	0.63					
ZINC	0.06					

REMARKS

So. No. 21000

THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

SERIAL ANALYSIS

SOURCE A **Texieva - 80 Farnfield Fairhaven**  
 SOURCE B  
 SOURCE C  
 SOURCE D  
 SOURCE E  
 SOURCE F

CITY/TOWN FAIRHAVEN  
 COLLECTOR PACKURD

	A	B	C	D	E	F
SAMPLE NUMBER	197502					
DATE OF COLLECTION						
DATE OF RECEIPT	11/2/83					
DATE ANALYZED	11/14/83					
ARSENIC	0.002					
BARIUM	0.03					
CADMIUM	0.00					
CHROMIUM	0.02					
LEAD	0.08					
MERCURY	0.0003					
SELENIUM	0.005					
SILVER	0.00					
COPPER	0.03					
ZINC	0.61					

REMARKS



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THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

SPECIAL ANALYSIS

SOURCE A	Atlas Tack - Lagoon Sludge - near outlet	CITY/TOWN	Fairhaven
SOURCE B	" " " " - middle of lagoon COLLECTOR		G. Monte
SOURCE C	" " " " - near inlet		
SOURCE D			
SOURCE E			
SOURCE F			

\* (A) Outlet pipe  
 B Center of lagoon  
 C inlet

SAMPLE NUMBER	006743	006744	006745	MD Limit		
DATE OF COLLECTION	6/9/82					
DATE OF RECEIPT	6/11/82					
DATE ANALYZED	Various Dates					
Cyanides *	640	120	53			
Oil & Grease *	280	270	76			
Iron	500	153	87		[300] ✓	
Copper	22	0.80	0.17		25	
Lead	2.9	1.0	0.64	5.0		
Zinc	23	11	1.4		500	
Cadmium	0.42	0.10	0.07	1.0		
Chromium	0.56	0.04	0.02	5.0		
Nickel	6.2	1.8	2.4		1.3 ✓	
TP-Toxicity Test Performed on metals in accordance with the Fed. Reg., 45,						
No. 98, May 19, 1980. (mg/l) = ppm						

MARKS \* mg/kg = ppm

APPENDIX C

APPENDIX D









RECEIVED

MAY - 8 1982

The Commonwealth of Massachusetts  
Department of Environmental Quality Engineering

D.E.Q.E. SOUTHEAST REGION

Special Analysis

FAIRHAVEN

Collector: Anderson

Source A Atlas Tack, Lagoon Sample 1A

Source B " " " " 1B

Source C

Source D

Source E

Source F

	A	B	C	D	E	F
Sample No.	006275	006276				
Date of Collection	3/26/82	----->				
Date of Receipt	4/9/82	----->				
CYANIDE	16					
OIL & GREASE		4.2				

REMARKS:

EP Toxicity Test performed in accordance with the Federal Register Vol., 45, No. 98. May 19, 1980. Mg/L.

The Commonwealth of Massachusetts  
 Department of Environmental Quality Engineering

RECEIVED

1-5 1982

01.01 E. SOUTHEAST R.

Special Analysis

FAIRHAVEN

Collectors: Anderson

- Source A Atlas Tack, No. 3, 1 of 2 samples, sludge
- Source B " " " " " "
- Source C " " No. 4, Soil
- Source D " " No. 5, Soil
- Source E " " No. 6, Soil near pipe
- Source F " " No. 1, Sludge from Lagoon

	A	B	C	D	E	F
Sample No.	006278	006278A	006279	006280	006281	006274
Date of Collection	3/26/82					
Date of Receipt	4/2/82					
LEAD	0.21	0.21	1.8	0.02	0.10	0.53
ZINC	150	38	100	0.48	24	8.4
CADMIUM	1.1	0.26	0.18	0.00	0.01	0.16
CHROMIUM	0.02	0.01	0.04	0.00	0.00	0.06
NICKEL	54	6.8	2.1	0.17	0.00	1.9
COPPER	0.33	1.9	115	0.35	1.4	1.5
ARSENIC	0.00	0.00	0.00	0.00	0.00	0.00

REMARKS:

EP Toxicity Test performed in accordance with the Federal Register Vol., 45, No. 98. May 19, 1980. Mg/L



**APPENDIX D**

**GOLDBERG-ZOINO ASSOCIATES ANALYTICAL DATA**

# GUILD DRILLING CO., INC.

100 WATER STREET EAST PROVIDENCE, R I

TO Goldberg-Zoino & Assoc. ADDRESS Providence, R.I.  
 PROJECT NAME Atlas Pack Monitor Well LOCATION Fairhaven, Mass.  
 REPORT SENT TO above PROJ NO \_\_\_\_\_  
 SAMPLES SENT TO " OUR JOB NO. 83-283

SHEET 1 OF 1  
 DATE \_\_\_\_\_  
 HOLE NO. B-1  
 LINE & STA. \_\_\_\_\_  
 OFFSET \_\_\_\_\_  
 SURF. ELEV. \_\_\_\_\_

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BAR	Date	Time
At <u>-4'</u> after <u>Comp.</u> Hours	Type					
At _____ after _____ Hours	Size, D	<u>3 3/4"</u>	<u>3"</u>	COMPLETE <u>3/24/83</u>		
	hammer Wt		<u>140#</u>	TOTAL HRS. _____		
	Hammer Fall		<u>30"</u>	BORING FOREMAN <u>D. Serowik</u>		
				INSPECTOR _____		
				SOILS ENGR. _____		

## LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE		
				From	To	To				No	Pen	Re
		0'-1'6"	D	3	5	4		1'	Br. organic silty fine SAND	1	18"	18"
								4'	Miscellaneous FILL - coarse Gravel			
		4'-5'6"	D	15	28	32			Multicolored fine to med. SAND, some coarse gravel (very strong odor)	2	18"	18"
		9'-10'6"	D	14	24	28				3	18"	18"
		13'6"-13'9"	D	120/3"				13'9"	Refusal - Bottom of Boring 13'9"	4	3"	
									Installed Observation Well at 13'6" (13") 5' Screen - 10' Solid Plug & Cap Bentonite - Cement 1 Bag of Ottawa Sand			

GROUND SURFACE TO 13'9" USED H/S/A CASING. THEN \_\_\_\_\_

Sample Type  
 D: Dry C-Cored W: Washed  
 UP: Undisturbed Piston  
 TP: Test Pit A: Auger V: Vane Test  
 UT: Undisturbed Thinwall

Proportions Used  
 trace 0 to 10%  
 little 10 to 20%  
 some 20 to 35%  
 and 35 to 50%

140lb Wt. x 30" fall on 2 O.D. Sampler  
 Cohesionless Density Cohesive Consistency  
 0-10 Loose 0-4 Soft 30 + hard  
 10-30 Med. Dense 4-8 M/Stiff  
 30-50 Dense 8-15 Stiff  
 50 + Very Dense 15-30 V-Stiff

SUMMARY  
 Earth Boring, 13'  
 Rock Coring  
 Samples \_\_\_\_\_

HOLE NO B-1

# R. I. Analytical Laboratories, Inc.



SPECIALIZING IN ENVIRONMENTAL ANALYSIS

231 ELM STREET  
WARWICK R.I. 02886

PHONE (401) 467-2452

## CERTIFICATE OF ANALYSIS

REPORT TO <u>Goldberg Zoino &amp; Assoc., Inc.</u> <u>255 South Main St.</u> <u>Providence, RI 02903</u> <u>Mr. Michael Powers</u>	DATE RECEIVED <u>3/28/83</u> DATE REPORTED <u>4/20/83</u> PURCHASE ORDER NO. _____ RETAIL INV. NO. <u>7862</u>
SAMPLE DESCRIPTION <u>Three (3) samples collected from Atlas Tack Corp. lagoon area</u>	

As requested, subject samples have been analyzed by our laboratory with the following results:

<u>PARAMETER</u>	<u>WATER</u>	<u>SOIL</u>	<u>SEDIMENT</u>
pH	3.6	--	--
Specific Conductance	7,020 $\mu$ mhos/cm	--	--
Arsenic	<0.01 mg/l	<0.01 mg/l	<0.01 mg/l
Barium	<0.5 "	1.2 "	0.5 "
Cadmium	0.650 "	0.560 "	0.083 "
Chromium (total)	0.25 "	0.35 "	<0.05 "
Lead	<0.05 "	4.20 "	0.84 "
Mercury	0.0010 "	<0.0005 "	<0.0005 "
Selenium	<0.01 "	<0.01 "	<0.01 "
Silver	0.03 "	0.02 "	0.02 "
Aluminum	206 "	4.0 "	12.2 "
Copper	2.60 "	4.24 "	0.68 "
Nickel	17.6 "	0.90 "	2.42 "
Zinc	102 "	3.80 "	14.4 "
Cyanide (total)	1.7 "	0.12 "	0.46 "
Cyanide (amenable)	1.7 "	0.02 "	0.35 "
Polychlorinated Biphenyl (PCBs)	<1 ppb	--	--

continue to Page -2-

Anthony E. Perrotti

Certificate of Analysis  
 Goldberg & Zoino & Assoc., Inc.  
 Atlas Tack Corp. lagoon area samples  
 April 20, 1983

<u>PARAMETER</u>	<u>WATER</u>	<u>SOIL</u>	<u>SEDIMENT</u>
Volatile Organic Compounds:			
methylene chloride	ND	14 ppb	ND
1,1-dichloroethylene	5 ppb	ND	ND
chloroform	7 ppb	ND	ND
1,1,1-trichloroethane	8 ppb	ND	ND
trichloroethylene	5 ppb	ND	ND
benzene	49 ppb	ND	ND
toluene	87,100 ppb	ND	7,180 ppb
ethylbenzene	170 ppb	ND	590 ppb
xylenes	900 ppb	ND	3,840 ppb

A list of other volatile organic compounds tested for and their detection limits is attached.

Water = Monitoring Well  
 Soil = Composite from periphery of lagoon  
 Sediment = Composite from bottom of lagoon

- Notes:
1. Metal analysis performed on filtered extract in accordance with the EP Toxicity extraction procedure. The water sample was passed through a 0.45  $\mu$  filter prior to analysis for metals.
  2. Cyanide (total and amenable) analysis performed on filtered extract in accordance with the EP Toxicity extraction procedure. The water sample was passed through a 0.45  $\mu$  filter prior to analysis for cyanide.

Methodology: Standard Methods for the Examination of Water and Wastewater, 15th edition, 1980, and Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods U.S. EPA, SW-846, 1980.

EP Toxicity for Cyanide as stated in the Federal Register Vol. 45, No. 229 Page 78548, Tues., Nov. 25, 1980.



**APPENDIX E**  
**HAZARDOUS SUBSTANCES LIST**

**ORGANICS ANALYSIS DATA SHEET**

**VOLATILES**

(2V)	107-02-8	acrolein
(3V)	107-13-1	acrylonitrile
(4V)	71-43-2	benzene
(6V)	56-23-5	carbon tetrachloride
(7V)	108-90-7	chlorobenzene
(10V)	107-06-2	1,2-dichloroethane
(11V)	71-55-6	1,1,1-trichloroethane
(13V)	75-34-3	1,1-dichloroethane
(14V)	79-00-5	1,1,2-trichloroethane
(15V)	79-34-5	1,1,2,2-tetrachloroethane
(16V)	75-00-3	chloroethane
(19V)	110-73-8	2-chloroethylvinyl ether
(23V)	67-66-3	chloroform
(29V)	75-35-4	1,1-dichloroethane
(30V)	156-60-5	trans-1,2-dichloroethane
(32V)	78-87-5	1,2-dichloropropane
(33V)	10061-02-6	trans-1,3-dichloropropene
	10061-01-05	cis-1,3-dichloropropene
(38V)	100-41-4	ethylbenzene
(44V)	75-09-2	methylene chloride
(45V)	74-87-3	chloromethane
(46V)	74-83-9	bromomethane
(47V)	75-25-2	bromoform
(48V)	75-27-4	bromodichloromethane
(49V)	75-69-4	fluorotrichloromethane
(50V)	75-71-8	dichlorodifluoromethane
(51V)	124-48-1	chlorodibromomethane
(85V)	127-18-4	tetrachloroethene
(86V)	108-88-3	toluene
(87V)	79-01-6	trichloroethane
(88V)	75-01-4	vinyl chloride

4/82

**Non-Priority Pollutant Hazardous Substances List Compounds**

**VOLATILES**

CAS #	
67-64-1	acetone
78-93-3	2-butanone
75-15-0	carbendisulfide
519-78-6	2-hexanone
108-10-1	4-methyl-2-pentanone
100-42-5	styrene
108-05-4	vinyl acetate
95-47-6	o-xylene

## INORGANICS ANALYSIS DATA SHEET

### TASK 1 (Elements to be Identified and Measured)

1. Aluminum
2. Chromium
3. Barium
4. Beryllium
5. Cobalt
6. Copper
7. Iron
8. Nickel
9. Manganese

10. Zinc
11. Boron
12. Vanadium
13. Silver

### TASK 2 (Elements to be Identified and Measured)

1. Arsenic
2. Antimony
3. Selenium
4. Thallium

5. Mercury
6. Tin
7. Cadmium
8. Lead

### TASK 3 (Elements to be Identified and Measured)

1. Cyanide