report. hw360010. 1996-05-08
Field Sampling Summary Report.
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Metro North Raiload
HARMON LAGOON REMEDIATION

SUMMARY REPORT ON FIELD SAMPLING AND ANALYSIS PROGRAM

May 8, 1996

Hill International, Inc.
One Levitt Parkway
Willingboro, NJ 08046

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HARMON LAGOON REMEDIATION

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1.0 INTRODUCTION

The Harmon Lagoon was a wastewater storage facility component of the Old Wastewater Treatment Plant located at Metro-North's Croton Harmon railroad maintenance and repair facility. In 1980, the lagoon was found to be contaminated with polychlorinated biphenyl's (PCBs).

The method of remediation was specified by the New York State Department of Environmental Conservation (NYSDEC) in its Record of Decision (ROD) in September 1992. The remedial actions included the following:

- Removal and off-site treatment of the PCB-containing sludge;
- Removal and on-site treatment of standing water in the lagoon;
- Excavation of contaminated soil and on-site and off-site disposal depending on the PCB concentrations.

In the final remedial design a Field Sampling and Analysis Plan was included. This plan is intended to measure the effectiveness of the selected remedy. It covers the following:

- Lagoon surface water;
- Air (on-site and off-site);
- Zone A soil delineation;
- Zone A1 soils disposal;
- Disposal of spent activated carbon;
- Leaking sludge hauling containers;
- Decontamination of site equipment; and
- Decontamination of sludge hauling containers.

The execution of the Field Sampling and Analysis Plan was overseen by the Construction Manager, Hill International, Inc. The distribution of sampling and analytical responsibilities were as follows:

Hill International, Inc.	Lagoon Surface Water, Air Monitoring, Leaking Liquid From Sludge Hauling Containers
ERM-Northeast	Zone A Soil Delineation
Ogden Remediation Services Corp.	A1 Soil Disposal, Decontamination of Site Equipment
Chemical Waste Management	Decontamination of Sludge Hauling Containers
Metro-North Railroad	Disposal of Spent Activated Carbon, Decontamination Wash Waters, and Well Development Waters

2.0 SAMPLING AND ANALYTICAL METHODOLOGY

2.1 Sampling Procedure

Samples were collected, contained and stored according to the USEPA "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40CFR Part 136).

2.2 Laboratory Protocols and Methodology

With two exceptions, the laboratories which conducted all analytical work were certified by the NYSDOH under the Environmental Laboratory Analytical Program (ELAP) and approved by the NYSDEC.

All analyses were reported in the New York State's Analytical Services Protocol (ASP) Category B deliverable data packages.

Treated and untreated lagoon water samples were analyzed in accordance with standard 40 CFR 136 methodologies.

Chemical Waste Management's Laboratory, which is located in Texas, is not an NYSDOH ELAP laboratory. However, based on extensive review of their established protocols on PCB wipe sampling (Method CWM 86-33) and for PCB analysis (USEPA Method 8081), they were given approval to conduct post-use PCB Wipe-Testing of the sludge containers at the Texas laboratory. As an additional means of quality control, five (5) percent of all roll-off boxes were PCB Wipe-Tested in duplicate at CWM's Texas laboratory, and at CWM's laboratory in Model City, NY which is a NYSDOH ELAP laboratory.

Air sampling was performed in accordance with NIOSH methodologies. Analysis of air samples were performed by an American Industrial Hygiene Association (AIHA) accredited laboratory using NIOSH methods 0600, 5503, 1500, 1501, and 1003.

2.3 Quality Assurance/Quality Control

The Quality Assurance/Quality Control (QA/QC) program developed for this project was intended to ensure the accuracy of all analytical results obtained by the Construction Manager. Details of this QA/QC program are provided in the Field Sampling and Analytical Plan. The QA/QC program includes laboratory protocols, proper decontamination measures for the sampling equipment, the collection and analysis of QA/QC samples and proper site and laboratory documentation.

2.4 Documentation

The comprehensive analytical reports are too voluminous to be appended here, therefore, these reports are being held in dedicated project files. In this report they will be referred to by their respective file numbers. Other reports are in the custody of Metro-North and ERM-Northeast, and will be referenced accordingly. A listing of these files is presented in Appendix 1.

3.0 LAGOON SURFACE WATER SAMPLING AND ANALYSIS

3.1 Background

Surface water from the lagoon and pond had to be removed prior to the excavation of the sludge. Discharge of this water to Metro-North's sanitary sewer outfall was dependent on whether or not it satisfied MNR's State Pollutant Discharge Elimination System (SPDES) permit No. NY-0006866. Hence, the need for testing and treatment.

3.2 Objectives

3.2.1 Pre-Treatment

Prior to treatment of the lagoon surface water, sampling and analysis was conducted to establish baseline characteristics which, along with discharge limits set during the remedial design, was used to design the water treatment plant.

3.2.2 Post Treatment

Seven batches of wastewater comprising 127,400 gallons were treated. Sampling and analysis was carried out to determine if the treatment was successful in reducing the level of contamination to the limit set by the project objectives.

3.3 Analytical Parameters

The analytical parameters were based on the contamination reduction goals set by the project remediation design. These parameters are as follows:

- Total Suspended Solids
- Oil and Grease
- Settleable Solids
- pH
- Total PCBs (Aroclor 1254 & 1260)
- Benzene
- Cadmium
- Copper
- Lead
- Nickel
- Zinc
- Magnesium
- 2-Methylnapthalene

At the request of the Treatment System Design Engineer, ERM-Northeast, dissolved metals was added to the list of analytical parameters for Batch 6.

3.4 Sampling and Analytical Methodology

3.4.1 Lagoon Water Sampling and Analysis

Prior to the treatment of the lagoon surface water, baseline grab samples were taken by Hill International using a long handle dipper. Upon completion of each batch of treated lagoon surface water, grab samples were also taken by Hill International using a disposable siphon made from tygon tubing.

Analysis of the lagoon water samples were conducted by IEA of Whippany, New Jersey.

3.4.2 Decontamination

The sampling equipment used at the site were a long handle dipper which was provided and decontaminated by the IEA representative prior to site use. In addition to the dipper, new tygon tubing was used to siphon samples.

3.4.3 Sample Containers

Sample container sizes, material, and color are given in Table 3-1. All bottles were certified clean by the laboratory and delivered in a sealed cooler.

3.4.4 Field and Trip Blanks

Field blanks were collected during each sampling event to evaluate the possibility of sampling contamination due to improper cleaning of sampling equipment. Field blanks comprised the water collected during rinsing of the decontaminated sampling equipment with laboratory supplied de-ionized water. During each sampling event, field blanks were collected for PCB, 2-methylnapthalene, benzene, and total metals analyses.

A trip blank for benzene analysis was collected during each sampling event to evaluate the possibility of sampling contamination due to improper handling and storage during transport to and from the site.

TABLE 3-1: SAMPLE CONTAINER DESCRIPTION

Analytical Parameter	Matrix	Container Material	Container Size	No. of Containers
Benzene	Aqueous	Glass (C)	40 ml	2
PCB	Aqueous	Glass (A)	1 l	2
2 - Methylnapthalene	Aqueous	Glass (A)	1 l	2
Oil & Grease	Aqueous	Glass (C)	1 l	2
Settleable Solids	Aqueous	Plastic	1 l	1
pH	Aqueous	Plastic	100 ml	1
Metal, Cd, Cu, Pb, Ni, Zn, Mg	Aqueous	Plastic	500 ml	1
Total Suspended Solids	Aqueous	Plastic	500 ml	1

(C) - Clear (A) - Amber

3.4.5 Duplicate Samples

During each event a duplicate sample was collected for PCB analysis only.

3.4.6 Matrix Spike/Matrix Spike Duplicate Samples

During each event matrix spike and matrix spike duplicate samples were collected for PCB analysis only.

3.4.7 Sample Preservation

Immediately after all sampling events, samples were placed in insulated coolers and maintained at approximately 4°C. The laboratory provided temperature blanks in each cooler to ensure that 4°C was maintained. Upon delivery at the laboratory, samples were placed in a refrigerator and maintained at 4°C until analyzed.

Chemical preservatives were used in some samples. Benzene was preserved with hydrochloric acid, metals with nitric acid, and oils and grease with sulfuric acid.

Holding times were adhered to because the Laboratory was obligated to a 72-hour turn-around-time.

TABLE 3-2: LAGOON SURFACE WATER PRE-TREATMENT ANALYTICAL RESULTS

Sampling Date: 6/9/95

Parameter	Sampling I.D.	Project Limit	Pre-Treatment Results
Total Suspended Solids	MNR-TSS-1	45 mg/l	107 mg/l
Oil & Grease	MNR-OG-1	15 mg/l	3.8 mg/l
Settleable Solids	MNR-SS-1	0.1 ml/l	<0.1 ml/l
pH	MNR-PH-1	6-9 (Range)	7.59
Total PCBs[1]	MNR-PCB-1	.3 µg/l (nd)	0.61 µg/l
Benzene	MNR-B-1	6 µg/l	Non-detected
Cadmium	MNR-CU-1	3.7 µg/l	0.24 µg/l
Copper	MNR-CU-1	60 µg/l	17.6 µg/l
Lead	MNR-CU-1	8.6 µg/l	13.1 µg/l
Nickel	MNR-CU-1	7.1 µg/l	1.0 µg/l
Zinc	MNR-CU-1	80 µg/l	97.7 µg/l
Magnesium	MNR-CU-1	35 mg/l	54.1 mg/l
2-Methylnaphthalene	MNR-M-1	50 mg/l	Non-detected

3.5 Analytical Results

The analysis of the pre-treatment lagoon surface water showed elevated levels of PCBs, metals, and total suspended solids. Based on prior studies this was not unexpected. Table 3-2 shows the summary results. Detailed analytical results can be found in project file M306-01-01/9179-3.5.9.1.

In Table 3-3 the analysis of post-treatment lagoon water show that, except for, Batch 7, magnesium exceeded the limit of 35 mg/l. Lead exceeded its limits in Batches 1,2,& 4 (13.1 ug/l vs. 8.6 ug/l) as did Zinc in Batch 4 (197 µg/l vs. 80 µg/l) and Total Suspended Solids (TSS) in Batch 6 (74 mg/l vs. 45 mg/l). The exceedance of TSS may have been attributed to the sudden bloom of insect larvae and algae in the uncovered storage tank.

In Batch 5 the concentrations of Oils and Grease and Benzene were 160 mg/l and 12 µg/l respectively both exceeding their respective project limits of 15 mg/l and 6 µg/l. Laboratory error was suspected for the latter exceedance. Unbeknownst to the laboratory, these parameters were re-tested under different sample id's (MNR-B-R and MNR-OG-R) and were found to be non-detect and 5.8 mg/l respectively, significantly lower than the discharge limits. A detailed laboratory report on the re-test can be found in project file M306-01-01/9179-3.5.9.1.

The concentrations of pollutants in Batch 7 were all unusually low and below the project discharge limits because of collection of rain water from a significant rainstorm preceding sampling.

The analysis for dissolved metals done on Batch 6 was intended to determine whether or not filtration alone would reduce lead and magnesium concentrations to levels below the project limit. The results showed an overall reduction in the concentration of metal. Lead concentration was reduced to 1.6 µg/l, lower than the project limit of 8.6 µg/l. The reduction in the concentration of magnesium was still not enough (65.6 mg/l vs. 35.0 mg/l) to take it to or below the project limit. More details can be found in project file M306-01-01/9179-3.5.9.1.

TABLE 3-3: LAGOON SURFACE WATER ANALYTICAL RESULTS

Parameter	Limit	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5	Batch 6	Batch 7
Total Suspended Solids	45 mg/l	24 mg/l	1b mg/l	38 mg/l	40 mg/l	30 mg/l*	74 mg/l	3.0 mg/l
Oil & Grease	15 mg/l	< 5.6 mg/l	<5.6 mg/l	<5.5 mg/l	<5.6 mg/l	5.8 mg/l	<5.9 mg/l	<5.7 mg/l
Settleable Solids	0.1 ml/l	< 0.1 ml/l	<0.1 ml/l	<0.1 ml/l	<0.1 ml/l	<0.1 ml/l	<0.1 ml/l	<0.1 ml/l
pH	6-9 (Range)	8.9	8.46	7.6	7.66	7.74	7.89	8.74
Total PCBs[1]	.3 ug/l (nd)	0.18 ug/l	Non-detected	0.24 ug/l	Non-detected	Non-detected	Non-detected	Non-detected
Benzene	6 ug/l	Non-detected	Non-detected	Non-detected	Non-detected	Non-detected	Non-detected	Non-detected
Cadmium	2.7 ug/l	0.245 ug/l	0.24 ug/l	<0.24 ug/l	<0.245 ug/l	0.24 ug/l	0.24 ug/l	0.24 ug/l
Copper	60 ug/l	<25 ug/l	14.7 ug/l	9.91 ug/l	4.99 ug/l	3.7 ug/l	0.95 ug/l	2.8 ug/l
Lead	8.6 ug/l	39.9 ug/l	10.2 ug/l	6.57 ug/l	18.3 ug/l	1.6 ug/l	1.6 ug/l	1.6 ug/l
Nickel	7.1 ug/l	3.19 ug/l	3.2 ug/l	<1.04 ug/l	<1.04 ug/l	1.6 ug/l	0.57 ug/l	1.0 ug/l
Zinc	80 ug/l	23.7 ug/l	23.7 ug/l	48.7 ug/l	197 ug/l	13.4 ug/l	4.0 ug/l	3.7 ug/l
Magnesium	35 mg/l	54.9 mg/l	55.8 mg/l	112 mg/l	104 mg/l	84.9 mg/l	66.3 mg/l	30.0 mg/l
2-Methylnaphthalene	50 mg/l	Non-detected	Non-detected	Non-detected	Non-detected	Non-detected	Non-detected	Non-detected
Volume Treated (gal.)		**26,700**	**15,500**	**27,300**	**19,000**	**30,200**	**4,700**	**4,000**
Sampling Date		**8/2/95**	**8/4/95**	**8/10/95**	**8/14/95**	**8/31/95**	**9/28/95**	**10/3095**

* Re-test Results

3.6 Further Confirmatory Testing

All the treated lagoon surface water, i.e. Batches 1 to 7, were quarantined in the empty MNR North Equalization Tank until a secondary treatment process was designed to reduce the excessive levels of lead and magnesium. Consolidating the seven batches of treated lagoon surface water resulted in acceptable levels of TSS and Zinc (30.79 mg/l and 51.37 mg/l), both of which had exceeded the project limit on one occasion. The computed composited pollutants concentrations are shown in Table 3-4.

TABLE 3-4: LAGOON SURFACE WATER POST-TREATMENT COMPOSITE CONCENTRATIONS

Parameter	SPDES Limit	Treated Lagoon Water (127,400 gal)	Treated Lagoon Water & Stormwater (398,950 gal)
Total Suspended Solids	45 mg/l	30.79 mg/l	9.69 mg/l
Oil & Grease	15 mg/l	5.68 mg/l	1.79 mg/l
Settleable Solids	0.1 ml/l	0.10 ml/l	0.03 ml/l
pH	6-9 (Range)	8.06	7.33
Total PCBs1	.3 *g/l (nd)	0.09 *g/l	0.03 *g/l
Benzene	6 *g/l	not detected	not detected
Cadmium	3.7 *g/l	0.24 *g/l	0.07 *g/l
Copper	60 *g/l	10.96 *g/l	3.44 *g/l
Lead	8.6 *g/l	14.30 *g/l	4.50 *g/l
Nickel	7.1 *g/l	1.87 *g/l	0.59 *g/l
Zinc	80 *g/l	51.37 *g/l	16.17 *g/l
Magnesium	35 mg/l	81.43 mg/l	25.62 mg/l
2-Methylnaphthalene	50 *g/l	not detected	not detected

4.0 ZONE A SOILS - DELINEATION

4.1 Background

Some of the soil on the site was contaminated with PCB's ranging from greater or equal to 0.5 mg/kg to less than 50 mg/kg. Soil having PCB concentrations greater than or equal to 10 mg/kg but less than 50 mg/kg was designated Zone A1, while soil having PCB concentrations greater than or equal to 0.5 mg/kg but less than 10 mg/kg was designated Zone A2.

4.2 Objectives

Since different methods of remediation were to be employed for the two categories of soils, sampling and analysis were necessary to achieve delineation at the site.

4.3 Sampling and Analytical Methodology

4.3.1 Zone A Soil Sampling and Analysis

Using stainless steel trowels, one composite soil sample was taken from each of the five sludge drying beds by Eric Arnesen of ERM on March 10, 1995. Each composite sample was formed by collecting four grab samples within each bed. Analysis of the samples were carried out by E3I Laboratory of Somerville, Massachusetts.

4.3.2 Decontamination

Each soil sample was taken by a new separate stainless steel trowel which did not require decontamination.

4.3.3 Sample Containers

Glass sample bottles were provided and certified clean by the laboratory.

4.3.4 Duplicate Samples

One duplicate sample for PCB analysis was taken during this event.

4.3.5 Sample Preservation

Immediately after all sampling events, samples were placed in insulated coolers and maintained at approximately 4°C. Upon delivery at the laboratory, samples were placed in a refrigerator and maintained at 4°C until analyzed.

4.4 Analytical Results

Analytical results are presented in ERM Memorandum to MNR dated April 17, 1995. Three samples (ZA2-7-PL, SDB-A, and SDB-E) exceeded the Zone A PCB surface clean-up level of 0.5 mg/l.

The detailed analytical reports are on file at ERM-Northeast, Woodbury, New York.

5.0 A1 SOIL - DISPOSAL

5.1 Background

Zone A1 soils which contain PCBs at concentrations less than 50 mg/kg and greater than 10 mg/kg were remediated through off-site disposal at a RCRA-permitted non-hazardous facility.

5.2 Objective

The purpose of sampling and analyzing the A1 soil was to assure the disposal facility that the soil satisfied its criteria for acceptance.

5.3 Analytical Parameters

The parameters required by the selected disposal facility to determine waste classification and disposal method were Full TCLP, PCB, and Flash Point.

5.4 Sampling and Analytical Methodology

5.4.1 A1 Soil Sampling and Analysis

Discrete soil samples were taken by Rick Lorfing of ORSC from several locations in the stockpile by stainless steel trowels and composited into one sample.

Laboratory Resources of Teterboro, New Jersey conducted the analysis of the A1 soils.

5.4.2 Decontamination

Soil samples were taken by new stainless steel trowels which did not require decontamination.

5.4.3 Sample Containers

Glass sample bottles were provided and certified clean by the laboratory.

5.4.4 Field and Trip Blanks

The Disposal Facility selected by the Contractor did not require field and trip blanks for this sampling event.

5.4.5 Sample Preservation

Immediately after all sampling events, samples were placed in insulated coolers and maintained at approximately 4°C. Upon delivery at the laboratory, samples were placed in a refrigerator and maintained at 4°C until analyzed.

5.5 Analytical Results

Sampling conducted by ORSC on 3/21/95 detected a PCB concentration of 63ppm. Due to the apparent conflict with the results obtained during the RI and RD phases of the project (PCB concentrations were expected to be below 50 ppm). Metro North initiated a second round of sampling consisting of ten (10) individual samples randomly dispersed throughout the 'A1' Soil zone. PCB concentrations in the ten (10) individual samples ranged from 0.6 to 13.2 ppm. The results of this round of testing were forwarded to the NYSDEC on April 19, 1995 in MNR correspondence MNE-0004. Analytical reports can be found in File # M306-01-01/1979-3.5.7.1.

The disposal facility, BFI Waste Systems and the NYSDEC reviewed the results and agreed that the waste was suitable for landfilling (see Appendix 2).

6.0 DISPOSAL OF SPENT ACTIVATED CARBON

6.1 Background

A wastewater treatment plant consisting primarily of filtration and activated carbon adsorption units was used to treat the lagoon surface water. At the conclusion of water treatment, the spent activated carbon had to be removed from its vessel and disposed of at an approved facility.

6.2 Objective

Owing to the concentration of PCBs and metals in the lagoon surface water that was treated, it was necessary to analyze the spent carbon to determine the appropriate method of disposal.

6.3 Analytical Parameters

The parameters required by the selected disposal facility to determine waste classification and disposal method were Full TCLP, PCB, and Flash Point.

6.4 Sampling and Analytical Methodology

6.4.1 Spent Activated Carbon Sampling and Analysis

One grab sample was taken from each of the three activated carbon vessels by Henry Flavin of American Environmental Technologies, Inc. (AET) using stainless steel trowels. AET is a sub-contractor to Waste Technology Systems hired by Metro-North Railroad to dispose of the spent activated carbon. Analysis of the samples was done by York Analytical Laboratories, Connecticut.

6.4.2 Decontamination

Spent activated carbon samples were taken by stainless steel trowels which were decontaminated prior to use.

6.4.3 Sample Containers

Glass sample bottles were certified clean by the supplier.

6.4.4 Field and Trip Blanks

The Disposal Facility selected by MNR did not require field and trip blanks for this sampling event.

6.4.5 Sample Preservation

Immediately after all sampling events, samples were placed in insulated coolers and maintained at approximately 4°C. Upon delivery at the laboratory, samples were placed in a refrigerator and maintained at 4°C until analyzed.

6.5 Analytical Results

PCB's were below the detection limit. The Flash Point of the spent activated carbon soils was >160°F. And, neither volatiles nor semi-volatiles nor metals were detected during the Full TCLP analysis.

The comprehensive analytical report is on file at Metro North Railroad's Department of Environmental Protection and Safety.

The disposal facility, BFI Waste Systems and the NYSDEC reviewed the results and agreed that the waste was suitable for landfilling.

7.0 SITE EQUIPMENT DECONTAMINATION

7.1 Background

Section 01715 "Decontamination Plan and Requirement" Parts 3.02, 3.03, and 3.04 of the Specification for the Harmon Lagoon Remediation require that all equipment, containers, and tools in contact with sludge be decontaminated prior to departure from the site.

7.2 Objectives

To verify that all equipment, tools and containers previously in contact with the sludge was decontaminated, the Contractor was required to wipe test all of the foregoing equipment.

7.3 Sampling and Analytical Methodology

7.3.1 Wipe Sampling

Samples were obtained by placing a 10 cm x 10 cm square template over the selected area and wiping it thoroughly with a piece of hexane impregnated cotton swab saturated with hexane.

Wipe samples were taken by the Contractor's engineers and witnessed by Hill International.

Equipment wipe sampled were as follows:

- Two Tracked Hydraulic Excavators;
- One Bulldozer;
- One Tracked Front-End Loader;
- Vacuum Tanker;
- Water Treatment Plant Components; and
- Lagoon Surface Water Pumps.

Sludge hauling containers (roll-offs) which were contaminated during loading were also wipe sampled. Wipe samples were also taken of those roll-offs which were unloaded following the stop-work order of June 23,1995 and found to be damaged or defective requiring their return to the supplier, Transmodal Corporation.

Wipe samples were taken of part of the dike and floor of Metro-North's equalization tank containment area decontaminated

following a spill (with no release to the environment) of untreated lagoon surface water on August 18, 1995.

7.3.2 Sample Analysis

American Environmental Network laboratories of Cherry Hill, New Jersey and of Columbia, Maryland were responsible for testing the wipe samples for PCBs.

7.3.3 Sample Container

The container used to collect and store the wipe sample was an amber glass 40 ml septum bottle.

7.4 Analytical Results

The results of all the wipe tests conducted by ORSC are presented in Table 7-1. They indicate that decontamination was successfully carried out in accordance with contract specifications and subsequent revision in which the clean-up level was raised from 1mg/100cm^2 to 10 mg/100cm^2. Refer to Files 9179-3.3.3 (HIO-0271) and 9179-3.14.2-01715 Decon Plan for the background related to this revision. This change to a cleanup level of 10 ug PCBs/100 cm^2 is consistent with 40CFR 761.125(c)(4).

Table 7-1 EQUIPMENT PCB WIPE TEST RESULTS

Sample Number	Date Sampled	Desc. or Numb. Cont., Car, Equip.	Final Lab Results
1	5/23/95	95294	null
2	5/26/95	94272	null
1A	6/1/95	95294	null
2A	6/1/95	94272	null
3	6/1/95	94296	null
1B	6/6/95	95294	non-detect
2B	6/6/95	94272	non-detect
3A	6/6/95	94296	non-detect
4	6/5/95	94244	non-detect
5	6/5/95	94245	non-detect
6	6/5/95	94230	non-detect
7	6/5/95	95154	non-detect
9	6/28/95	TTWX 991576	Fail
10	6/28/95	TTWX 983472	non-detect
9A	6/30/95	TTWX 991576	non-detect
11	7/8/95	94204	non-detect
12	7/8/95	95318	non-detect
13	7/8/95	94244	non-detect
14	7/8/95	93094	non-detect
15	7/8/95	95267	non-detect
16	7/8/95	95306	non-detect
17	7/11/95	94226	non-detect
18	7/11/95	94180	non-detect
19	7/11/95	94297	non-detect
20	7/13/95	94248	non-detect
21	7/13/95	95319	non-detect
22	7/19/95	95315	non-detect
23	7/19/95	94060	non-detect
24	7/19/95	95262	non-detect
25	7/19/95	95316	non-detect
26	7/19/95	95159	non-detect
27	7/19/95	94223	non-detect
28	7/20/95	95157	non-detect
29	7/20/95	94232	non-detect
30	7/20/95	94269	non-detect
31	7/20/95	94246	non-detect
32	7/20/95	95294	non-detect
33	7/20/95	94081	non-detect
34	7/20/95	94229	non-detect
35	7/21/95	95297	non-detect
36	7/21/95	94178	non-detect
37	7/21/95	94054	non-detect
38	7/21/95	94161	non-detect
39	7/21/95	94238	non-detect
40	7/21/95	94165	non-detect
41	7/21/95	95314	non-detect
42	7/21/95	94295	non-detect
43	7/27/95	95312	non-detect
44	7/27/95	94272	non-detect
45	7/27/95	95271	non-detect
46	7/27/95	95310	non-detect
47	7/27/95	95308	non-detect
48	8/1/95	95261	non-detect
49	8/1/95	95285	non-detect
50	8/1/95	95259	non-detect
51	8/1/95	94066	non-detect
52	8/1/95	94243	non-detect
53	8/1/95	95309	non-detect
54	8/1/95	95301	non-detect
55	8/7/95	95264	non-detect
56	8/14/95	955 Loader (Cab)	non-detect
57	8/14/95	955 Loader (Bucket)	non-detect
58	8/14/95	955 Loader (Track)	non-detect
59	8/15/95	330 Excavator (Bucket)	non-detect
60	8/15/95	330 Excavator (Track)	non-detect
61	8/15/95	330 Excavator (Cab)	non-detect
62	8/15/95	3" Dia. Sub. Pump	non-detect
63	8/15/95	4" Dia. Sub. Pump	non-detect
64	8/21/95	MNR Dike Wall	non-detect
65	8/21/95	MNR Dike Floor	non-detect
66	8/21/95	4" Dia. Hose	non-detect
67	8/21/95	4" Dia. Hose	non-detect
68	8/21/95	4" Dia. Hose	non-detect
69	8/21/95	4" Dia. Hose	non-detect
70	8/21/95	4" Dia. Hose	non-detect
71	9/1/95	D5H LGP Dozer (Track)	non-detect
72	9/1/95	D5H LGP Dozer (Blade)	non-detect
73	9/1/95	D5H LGP Dozer (Cab)	non-detect
74	9/11/95	330 Excavator (Track)	non-detect
75	9/11/95	331 Excavator (Bucket)	non-detect
76	9/11/95	332 Excavator (Cab)	non-detect
77	9/27/95	94039 (Floor)	non-detect
78	9/27/95	94039 (Side)	non-detect
79	9/27/95	95324 (Floor)	non-detect
80	9/27/95	95324 (Side)	non-detect
81	10/11/95	330 Excavator (Bucket)	non-detect
82	10/11/95	330 Excavator (Track)	non-detect
83	10/11/95	330 Excavator (Cab)	non-detect
84	10/11/95	D4H Dozer (Blade)	non-detect
85	10/11/95	D4H Dozer (Track)	non-detect
86	10/11/95	D4H Dozer (Cab)	non-detect
87	11/22/95	Bed of Truck	non-detect
88	11/27/95	Cannister (by flow meter)	non-detect
89	11/27/95	Cannister (middle)	non-detect
90	11/27/95	Cannister (by bag filter)	non-detect
91	11/27/95	Bag Filter 1 of 4	non-detect
92	11/27/95	Bag Filter 2 of 4	non-detect
93	11/27/95	Bag Filter 3 of 4	non-detect

8.0 SLUDGE CONTAINERS POST-USE DECONTAMINATION

Verification that no levels of PCBs above 10 mg/100 cm^2 remained after sludge containers (roll-offs) had been unloaded was the responsibility of Chemical Waste Management (CWM), the incineration facility. Please refer to Specification for the Incineration of Harmon Lagoon Sludge. Part 1 Sections 1.01 paragraph A.4, 1.04 paragraph D, and 1.08 provide a detailed scope of work as it relates to sampling and testing of roll-offs by CWM.

The approved CWM procedures for PCB wipe-test analysis and interpretation of results can located in Project File #M306-01-01/9179-3.5.12.

Validation of the wipe-test results was the responsibility of ERM Northeast and these reports are on file at their Woodbury office.

9.0 AIR MONITORING

9.1 Background

During construction the site had the potential to generate amounts of PCB contaminated dust and VOCs.

Airborne dust was used as a surrogate indicator of potential risk to PCB exposure because of the known level of PCB contamination of soil on site. Airways and skin are potential pathways to contamination of humans.

9.2 Objective

Air monitoring was conducted to evaluate the risk of exposure to the site workers and neighboring communities from PCBs and volatile organic compounds resulting from the excavation and handling of the PCB contaminated soil and sludge. The measured concentration of PCBs, VOCs, and meteorological conditions dictated the level of protection for site workers, and other prescribed corrective action for the neighboring community, pursuant to the Health and Safety Plan (specification 01517) and the Community Air Monitoring Plan (specification 01520).

9.3 Analytical Parameters

Air monitoring samples were analyzed for PCBs (Aroclor 1254 & 1260), tetrachloroethylene, toluene, xylene, ethylbenzene and respirable dust. Twice daily ambient temperature, wind speed and direction, relative humidity, atmospheric pressure, and precipitation were measured and recorded.

9.4 Sampling and Analytical Methodology

9.4.1 Exclusion Zone Air Monitoring

Real time air monitoring for respirable particulates, VOCs, explosive gases, carbon monoxide, and hydrogen sulfide was conducted during site work. This provided direct readings in the field. Real time air monitoring was performed using a respirable particulate monitor, a photoionization detector (PID) and a four-gas combustible gas indicator (CGI). During elevated reading of VOCs, draeger tubes for tetrachloroethylene, toluene, xylene, and ethylbenzene were used to obtain a direct reading.

Personal air samplings was conducted only during the excavation and handling of PCB soils and sludge. Selected employees (based on greatest potential for exposure) were each fitted with a sampling pump for the duration of his exposure. The pumps collected air samples from the breathing zone of the site workers. One pump was calibrated for respirable particulates only and the other for PCB and VOCs.

The project's Health and Safety Plan (HASP) provides comprehensive details of the air monitoring activities.

9.4.2 Community Air Sampling

Real time air monitoring for dust and VOCs was conducted four times daily at four pre-determined upwind and downwind locations (see Figure 9-1) immediately outside the perimeter fence until the cap was completed. Readings were taken at 5, 10, 15, and 20 feet above grade. For this activity, a respirable particulate meter and photo-ionization detector (PID) were used.

Stationary sampling of air migrating off-site was carried out prior to and during construction activities related to remediation of the site. Sampling pumps for respirable dust, PCB, and VOCs were installed at the designated monitoring stations for at least an 8-hour period daily. One pump was calibrated only for respirable dust and the other for PCB and VOCs.

The project's Community Air Monitoring Program (CAMP) provides comprehensive details of the air monitoring activities.

9.4.3 Sample Media

Air samples for each parameter were collected on a separate medium using different air flow rates. Each sample medium was changed once a day except for some occasions, where at the discretion of the Site Safety Officer, there were no changes of the media.

Appendix 4 provides details of the media, methods of collection, and methods of analysis.

9.4.4 Field Blanks

Field blanks were prepared for PCB and VOC analyses.

9.4.5 Sample Identification

Air samples from one or more individuals are identified by the prefix SET-1, SET-2, SET-3, etc. The parameters are identified as follows:

A - Particulate
B - Volatile Organic Compounds (Toluene, Xylene, Ethylbenzene, and Perchloroethylene)
C - Polychlorinated Biphenyls (PCB)

Air samples from each of the four CAMP stations are identified by the prefix LOC-1, LOC -2, LOC -3, LOC-4. The parameters are identified as above.

9.4.6 Analysis of Air Samples

The samples were analyzed within 48 hours by Clayton Laboratories of Edison, New Jersey and Novi, Michigan both AIHA approved laboratories.

9.5 Analytical Results

9.5.1 Personal Air

Real time air monitoring on site was reported in the daily log of the hazardous material (hazmat) inspector, Derek Braithwaite and the Site Safety Officer, Alex Zdzralka.

During personal monitoring action levels neither attained nor exceeded the action levels for the prescribed level of protection. A summary of the personal air sample analytical results and the corresponding action levels are presented in Appendix 6. Further analytical details can be found in File #M306-01-01/9179-3.5.5.

Level 'C' VOC action levels were attained and exceeded on only three occasions during sludge handling. Since the workers in the exclusion zone and down wind areas were already in Level 'C' there was no need to test for the project specific VOCs.

9.5.2 Community Air

The records of the real time air monitoring are too lengthy to be presented here. These records are stored in Project File M306-01-01/1979-3.5.5.2. The corresponding daily meteorological records are also stored in this file.

During stationary monitoring the action levels were neither attained nor exceeded. A summary of the community stationary air sample analytical results and the corresponding action levels are presented in Appendix 7. The action levels shown in Appendix 7 represent the difference between downwind and upwind readings.

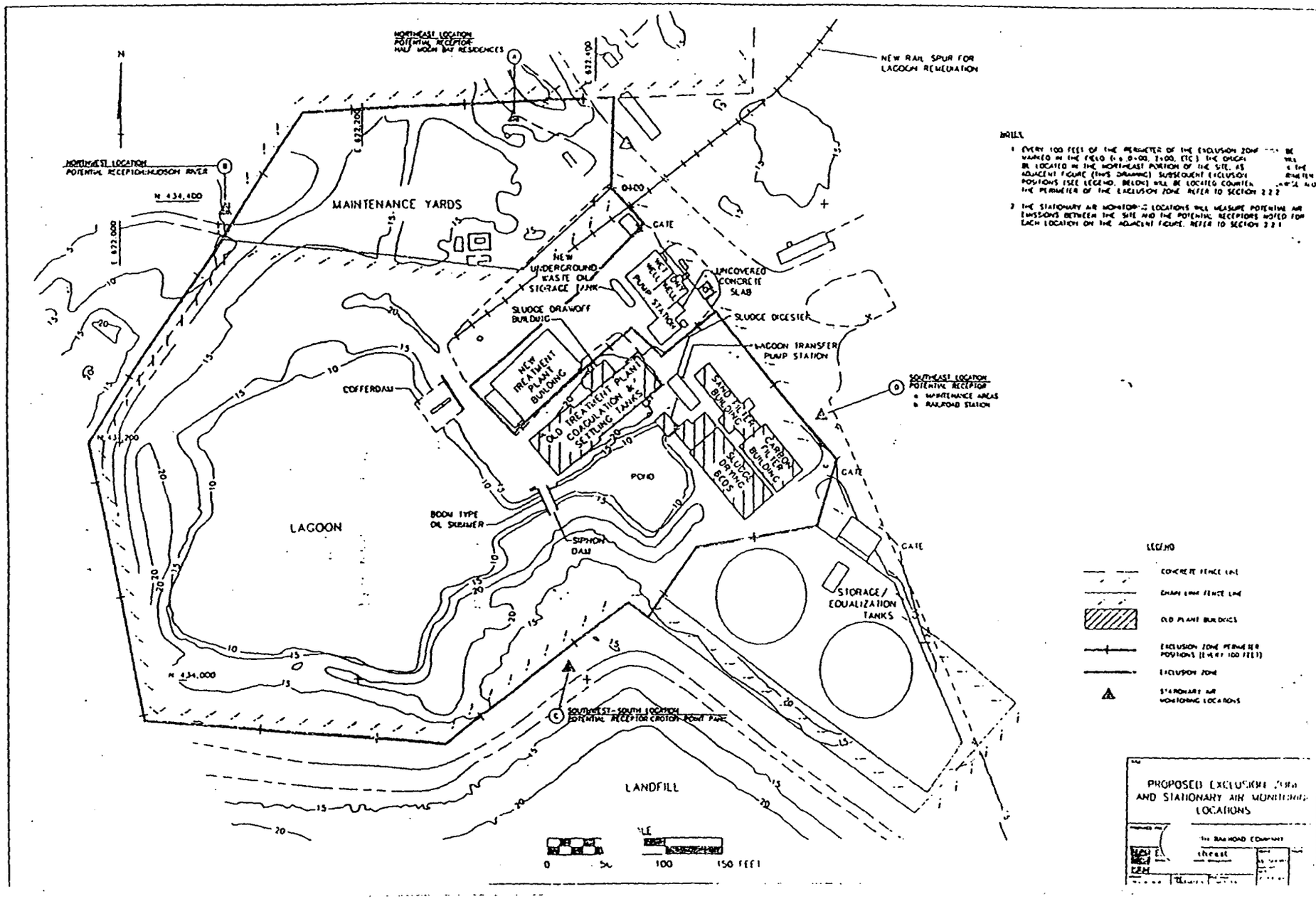
NORTHEAST LOCATION
POTENTIAL RECEPTOR
HALF MOON BAY RESIDENCES
NEW RAIL SPUR FOR
LAGOON REMEDIATION
NORTHWEST LOCATION
POTENTIAL RECEPTOR-HUDSON RIVER
N 434,600
E 822,000
MAINTENANCE YARDS
GATE
NEW
UNDERGROUND
WASTE OIL
STORAGE TANK
SLUDGE DRAWOFF
BUILDING
UNCOVERED
CONCRETE
SLAB
SLUDGE DIGESTER
LAGOON TRANSFER
PUMP STATION
NEW
TREATMENT
PLANT
BUILDING
COFFERDAM
OLD TREATMENT PLANT
COAGULATION &
SETTLING TANKS
SAND FILTER
BUILDING
CARBON
FILTER
BUILDING
SLUDGE
DRYING
BEDS
POND
SOUTHEAST LOCATION
POTENTIAL RECEPTOR
a MAINTENANCE AREAS
b RAILROAD STATION
LAGOON
BOOM TYPE
OIL SKIMMER
SIPHON
DAM
STORAGE/
EQUALIZATION
TANKS
N 434,000
SOUTHWEST-SOUTH LOCATION
POTENTIAL RECEPTOR CROTON POINT PARK
LANDFILL
0
50
100
150 FEET
LEGEND
CONCRETE FENCE LINE
CHAIN LINK FENCE LINE
OLD PLANT BUILDINGS
EXCLUSION ZONE PERIMETER
POSITIONS (EVERY 100 FEET)
EXCLUSION ZONE
STATIONARY AIR
MONITORING LOCATIONS
PROPOSED EXCLUSION ZONE
AND STATIONARY AIR MONITORING
LOCATIONS

Figure 9-1

10.0 LEAKING ROLL-OFFS

10.1 Background

During the month of June 1995, a number of roll-offs loaded with solidified sludge and staged on site awaiting transport were found to be leaking a petroleum-like liquid. A stop-work order was issued by the Construction Manager on June 23, 1995 to allow for a solution to the leaks to be found. Work resumed on July 5, 1995 using additional preventive measures to resolve the leaking.

10.2 Objective

Leaking liquids were sampled and analyzed to quantify and assess potential hazards and reporting requirements.

10.3 Sampling and Analytical Methodology

10.3.1 Sampling and Analysis of Leaking Liquid

Samples of the liquid that leaked from the roll-offs were taken from accumulations inside three representative roll-offs on site (NTNU 94238, 95277 and 95314) by Derek Braithwaite of Hill International using a peristaltic pump.

Analysis of the leaking liquid was conducted by IEA of Whippany, New Jersey.

10.3.2 Decontamination

Decontamination of the sampling equipment was unnecessary because dedicated tygon tubing was used for each sample taken.

10.3.3 Sample Containers

One liter amber glass bottles were used for the PCB samples, and one liter clear glass bottles were used for the Petroleum Hydrocarbon samples. All bottles were certified clean by the laboratory and delivered in a sealed cooler.

10.3.4 Field Blanks

Field blanks were collected during each sampling event to evaluate the possibility of sampling contamination due to

improper handling. Field blanks comprised the water collected during rinsing of the decontaminated sampling equipment with laboratory supplied de-ionized water. During the sampling event, field blanks were collected for PCB and Total Petroleum Hydrocarbons analyses.

10.3.5 Sample Preservation

Immediately after all sampling events, samples were placed in insulated coolers and maintained at approximately 4°C. The laboratory provided temperature blanks in each cooler to ensure that 4°C is maintained. Upon delivery at the laboratory, samples were placed in a refrigerator and maintained at 4°C until analyzed.

Holding times were adhered to because the Laboratory was obligated to a 72-hour turn-around-time.

10.4 Analytical Results

The analytical results are tabulated in Table 10-1 following.

TABLE 10-1 ANALYSIS OF LEAKING LIQUID

Sample I.D.	Date of Sampling	PCB (*g/kg)	TPH (mg/l)	Container I.D.
94238	6/30/95	100,000	970,000	NTNU 94238
95277	6/30/95	280,000	780,000	NTNU 95277
95314	6/30/95	220,000	790,000	NTNU 95314

10.5 Assessment of Analytical Results

The TPH results of 720,000 - 970,000 mg/l confirmed that the liquid was largely petroleum. PCB levels of 100,000 - 280,000 µg/kg was not unexpected given the levels of PCBs previously reported in the sludge and the solubility of PCB in petroleum. Due to the wide range in PCB concentrations, each leaking roll-off was considered to be a separate incident. Based on the maximum observed quantity of fluid leaked (approximately 1 gal/roll-off) none of the roll-off leaks exceeded mandated reportable quantities.

Complete details of the analysis are in Project File (M306-01-01/1979-3.5.9.1)

Offsite handling of roll-off boxes, including leak assessment, containment and reporting was addressed by the contractor (ORSC). A copy of applicable reports are provided in Appendix 7.

smw/rpts-jad/fsap2

APPENDIX 1

LIST OF REFERENCED PROJECT FILES

M306-01-01/9179-3.5.5.3	CAMP Analytical Results
M306-01-01/9179-3.5.5.2	CAMP Field Data
M306-01-01/9179-3.5.7.1	TSDF Records - RCRA Profile-Analytical
M306-01-01/9179-3.5.9.1	Lagoon Surface Water - Analytical Results
M306-01-01/9179-3.5.12	CWM PCB Wipe Test
M306-01-01/9179-3.14.2-01715	Decon-Wipe Test Results
M306-01-01/9179-3.5.5	Personal Monitoring Results

APPENDIX 2

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York 14203-2999
(716) 851-7220

Michael D. Zagata
Commissioner

July 13, 1995

Mr. David Hanson
BFI Waste Systems
P.O. Box 344 LPO
Niagara Falls, New York 14304-0344

Dear Mr. Hanson:

METRO-NORTH RIAL
CROTON-ON-HUDSON, NY
APPLICATION #2480

The Department has reviewed the above referenced applications for Treatment or Disposal of An Industrial Waste Stream (Form 47-19-7). Based on the data provided, these materials are acceptable for disposal at the BFI Niagara Recycling Landfill.

In the event that significant changes in the information presented on an application occurs, you shall immediately notify this Department in writing. Such changes shall include, but are not limited to changes in: process, facility name or address, waste composition and/or hauler.

Enclosed is a copy of the approved application. If you have any questions, please contact this office at 716/851-7220.

Very truly yours,

Yavuz Erk

Yavuz Erk, P.E.
Environmental Engineer II

YE:lej

Enclosure

Approval Group
Browning-Ferris Industries

WASTE APPROVAL FORM

Date	: 07/13/95
BFI Location	: Niagara Recycling
BFI Initiator	: Hanson, Dave
Generator	: Metro North Railroad
Generator Location	: Croton-on-Hudson, NY
WCD Number	: AB54563
BFI Number	: 233715

#2480

WASTE DESCRIPTION: Soil , PCB/s

SAFETY PRECAUTIONS: Avoid Skin and Eye Contact.

RECOMMENDED MANAGEMENT: Direct Burial

Facility... Niagara Recycling

COMMENTS:

Approved for one time only disposal. This BFI Waste Code Number is only valid for soils from "Zone A" as identified in the EPA letters with PCB concentrations of less than 50 ppm.

The following items were received by the Corporate Waste Approval Group:
a. PCB Contaminated Materials Questionnaire dated March 21, 1995.
b. Letters from the EPA dated February 14, 1992 and February 2, 1993.
c. Letters from the generator dated March 20, April 19, May 8, and June 26, 1995.
d. Site Background
e. Analytical data from Laboratory Resources, Inc. and York Analytical Laboratories, Inc.
d. Site Map

The above is a recommendation of BFI Corporate Waste Approval Group. It must be understood that management of the waste for treatment and/or disposal at the designated facility must be in compliance with the facility's permit and applicable federal, state, and local regulations. The waste approval is based upon a review of the information provided by the generator and is contingent upon the receipt at the treatment and/or disposal facility of a waste material essentially equivalent in chemical composition and physical properties to that as defined above.

This waste stream has been assigned BFI Waste Code: NY/132/960713/233715

Corporate Waste Approval Group

Diana L. Hanna Henk

Diana L. Hanna Henk
Senior Technical Representative

APPENDIX 3

NOT USED

APPENDIX 4

TABLE 2-1

STATIONARY AIR MONITORING
SAMPLING METHODOLOGIES, SAMPLING MEDIA
AND
ANALYTICAL PROCEDURES AND PARAMETERS

Substance: Respirable Particulate

NIOSH Method: #0600
Sampling Media: 37 mm PVC matched weight filters with 10 mm cyclone
Maximum Flow Rate and Volume: 1.7 liters/minute & 800 liters
Number of Samples per Monitoring Station per Day: One Sample[1]
Analytical Procedures: Gravimetric
Analytical Parameter: Respirable Particulate

Substance: Polychlorinated Biphenyls (PCBs)

NIOSH Method: #5503
Sampling Media: 13 mm glass fiber filter plus florisil tube
Maximum Flow Rate and Volume: 0.2 liters/minute and 50 liters
Number of Samples per Monitoring Station per Day: Two Samples[1]
Analytical Procedures: Gas Chromatography
Analytical Parameter: PCBs

Substance: Volatile Organic Compounds (VOCs)

NIOSH Methods: #1500, 1501 and 1003
Sampling Media: Charcoal Tube
Maximum Flow Rate and Volume: 0.15 liters/minute and 40 liters[2]
Number of Samples per Monitoring Station per Day: Two Samples[1][2]
Analytical Procedures: Gas Chromatography
Analytical Parameters: toluene, xylene, ethylbenzene and tetrachloroethylene

Note:

1. There will be four stationary air monitoring sites. As a result, a total of four respirable particulate, eight PCB and eight VOC stationary air monitoring samples will be collected for each day of stationary air monitoring sampling.

2. NIOSH requires charcoal tubes to be changed every hour to ensure that the sorbent tube does not become overloaded. It is not anticipated that overloading will occur, therefore, only two samples will be collected per eight hour day. If overloading is found, eight samples will be collected daily (i.e., approximately one sample per hour) from each stationary area air monitoring site.

APPENDIX 5

PERSONAL STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID *Action Level*	SAMPLING DATE	PCB (µg/m3) *250*	ETHYL-BENZENE (ppm) *50*	PERCHLORO-ETHYLENE (µg/m3) *52,000*	TOLUENE (ppm) *50*	XYLENE (ppm) *50*	PARTICULATE (µg/m3) *2,500*
SET-1 SB1-92	07/17/95		<0.01	<900	<0.01	<0.02	
SET-2 SB1-94	07/17/95		<0.01	<800	<0.01	<0.02	
SET-1 SC1-93	07/17/95	<0.5					
SET-2 SC1-95	07/17/95	<0.3					
SET-1 SA1-82	06/26/95						<200
SET-2 SA1-87	06/26/95						<200
SET-1 SB1-83	06/26/95		0.009	700	<0.01	0.03	
SET-2 SB1-88	06/26/95		<0.009	700	<0.01	<0.02	
SET-1 SC1-85	06/26/95	<4.0					
SET-2 SC1-90	06/26/95	<4.0					
SET-1 SA1-72	06/21/95						<100
SET-2 SA1-77	06/21/95						<100
SET-1 SB1-73	06/21/95		<0.01	<100	<0.01	0.03	
SET-1 SB2-74	06/21/95		<0.02	<100	<0.02	<0.03	
SET-2 SB1-78	06/21/95		<0.01	200	<0.01	0.065	
SET-2 SB2-79	06/21/95		<0.02	<100	<0.02	<0.03	
SET-1 SC1-75	06/21/95	<6.0					
SET-2 SC1-76	06/21/95	<8.0					
SET-1 SC1-80	06/21/95	<6.0					
SET-2 SC1-80	06/21/95	<8.0					
SET-1 SA1-66	06/15/95						<70
SET-2 SA1-71	06/15/95						280
SET-1 SA1-56	06/06/95						NULL
SET-2 SA1-61	06/06/95						NULL
SET-1 SB1-57	06/06/95		<0.03	<300	<0.04	<0.03	
SET-2 SB1-62	06/06/95		<0.03	<300	<0.04	<0.03	
SET-1 SC1-59	06/06/95	<0.2					
SET-2 SC1-64	06/06/95	<0.2					
SET-1 SA1-46	06/05/95						160

PERSONAL STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID *Action Level*	SAMPLING DATE	PCB (µg/m3) *250*	ETHYL-BENZENE (ppm) *50*	PERCHLORO-ETHYLENE (µg/m3) *52,000*	TOLUENE (ppm) *50*	XYLENE (ppm) *50*	PARTICULATE (µg/m3) *2,500*
SET-2 SA1-51	06/05/95						100
SET-1 SB1-47	06/05/95		<0.05	<400	<0.05	<0.05	
SET-1 SB2-48	06/05/95		<0.2	<2000	<0.2	<0.2	
SET-2 SB1-52	06/05/95		<0.05	<500	<0.06	<0.05	
SET-2 SB2-53	06/05/95		<0.1	<1000	<0.1	<0.1	
SET-1 SC1-49	06/05/95	<0.3					
SET-2 SC1-50	06/05/95	<1.0					
SET-1 SC1-54	06/05/95	<0.4					
SET-2 SC1-55	06/05/95	<0.8					
SET-1 SA1-36	06/02/95						<60
SET-2 SA1-41	06/02/95						<60
SET-1 SB1-37	06/02/95		<0.06	<600	<0.07	<0.06	
SET-1 SB2-38	06/02/95		<0.05	<500	<0.06	<0.05	
SET-2 SB1-42	06/02/95		<0.06	<600	<0.07	<0.06	
SET-2 SB2-43	06/02/95		<0.05	<500	<0.06	<0.05	
SET-1 SC1-39	06/02/95		<0.4				
SET-2 SC1-40	06/02/95		<0.4				
SET-1 SC1-44	06/02/95		<0.4				
SET-2 SC1-45	06/02/95		<0.4				
SET-1 SA1-26	06/01/95						<200
SET-2 SA1-31	06/01/95						<100
SET-1 SB1-27	06/01/95		<0.08	<700	<0.09	<0.08	
SET-2 SB1-32	06/01/95		<06	<600	<0.07	<0.06	
SET-1 SC1-29	06/01/95	<0.6					
SET-2 SC1-34	06/01/95	<0.4					
SET-1 SA1-16	05/31/95						<80
SET-2 SA1-21	05/31/95						<70
SET-1 SB1-17	05/31/95		<0.05	<500	<0.06	<0.05	
SET-1 SB2-18	05/31/95		<0.1	<100	<0.2	<0.01	

PERSONAL STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID *Action Level*	SAMPLING DATE	PCB (µg/m3) *250*	ETHYL-BENZENE (ppm) *50*	PERCHLORO-ETHYLENE (µg/m3) *52,000*	TOLUENE (ppm) *50*	XYLENE (ppm) *50*	PARTICULATE (µg/m3) *2,500*
SET-2 SB1-22	05/31/95		<0.06	<600	<0.07	<0.06	
SET-2 SB2-23	05/31/95		<0.09	<800	<0.1	<0.09	
SET-1 SC1-19	05/31/95	<0.4					
SET-2 SC1-20	05/31/95	<0.1					
SET-1 SC1-24	05/31/95	<0.4					
SET-2 SC1-25	05/31/95	<0.6					
SET-1 SA1-10	04/17/95						<50
SET-2 SA1-13	04/17/95		<0.05	<500	<0.06	<0.05	<50
SET-1 SB1-11	04/17/95		<0.05	<500	<0.06	<0.05	
SET-2 SB1-14	04/17/95						
SET-1 SC1-12	04/17/95	<0.7					
SET-2 SC1-15	04/17/95	<0.7					

APPENDIX 6

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-1 SA1-416	10/20/95						140
LOC-2 SA1-421	10/20/95						<70
LOC-3 SA1-426	10/20/95						70
LOC-4 SA1-431	10/20/95						<70
LOC-1 SB1-417	10/20/95		<0.06	<0.1	<0.06	<0.1	
LOC-1 SB2-418	10/20/95		<0.06	<0.1	<0.06	<0.1	
LOC-2 SB1-422	10/20/95		<0.07	<0.1	<0.07	<0.1	
LOC-2 SB2-423	10/20/95		<0.06	<0.1	<0.06	<0.1	
LOC-3 SB1-427	10/20/95		<0.07	<0.1	<0.07	<0.1	
LOC-3 SB2-428	10/20/95		<0.06	<0.1	<0.06	<0.1	
LOC-4 SB1-432	10/20/95		<0.06	<0.1	<0.06	<0.1	
LOC-4 SB2-433	10/20/95		<0.06	<0.1	<0.06	<0.1	
LOC-1 SC1-419	10/20/95	<7					
LOC-1 SC2-420	10/20/95	<7					
LOC-2 SC1-424	10/20/95	<8					
LOC-2 SC2-425	10/20/95	<7					
LOC-3 SC1-429	10/20/95	<7					
LOC-3 SC2-430	10/20/95	<7					
LOC-4 SC1-434	10/20/95	<7					
LOC-4 SC2-435	10/20/95	<7					
LOC-1 SA1-396	10/19/95						<70
LOC-2 SA1-401	10/19/95						<80
LOC-3 SA1-406	10/19/95						<70
LOC-4 SA1-411	10/19/95						<70
LOC-1 SB1-397	10/19/95		<0.06	<0.1	<0.06	<0.1	
LOC-1 SB2-398	10/19/95		<0.07	<0.1	<0.07	<0.1	
LOC-2 SB1-402	10/19/95		<0.06	<0.1	<0.06	<0.1	

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID *Action Level* *(Downwind-Upwind)*	SAMPLING DATE	PCB (µg/m3) *1.0*	ETHYL-BENZENE (ppm) *25*	PERCHLORO-ETHYLENE (µg/m3) *81,000*	TOLUENE (ppm) *25*	XYLENE (ppm) *25*	PARTICULATE (µg/m3) *150*
LOC-2 SB2-403	10/19/95		<0.07	<0.1	<0.07	<0.1	
LOC-3 SB1-407	10/19/95		<0.06	<0.1	<0.06	<0.1	
LOC-3 SB2-408	10/19/95		<0.06	<0.1	<0.06	<0.1	
LOC-4 SB1-412	10/19/95		<0.06	<0.1	<0.06	<0.1	
LOC-4 SB2-413	10/19/95		<0.06	<0.1	<0.06	<0.1	
LOC-1 SC1-399	10/19/95	<6					
LOC-1 SC2-400	10/19/95	<8					
LOC-2 SC1-404	10/19/95	<7					
LOC-2 SC2-405	10/19/95	<8					
LOC-3 SC1-409	10/19/95	<7					
LOC-3 SC2-410	10/19/95	<7					
LOC-4 SC1-414	10/19/95	<7					
LOC-4 SC2-415	10/19/95	<7					
LOC-1 SA1-376	09/15/95						No Data
LOC-2 SA1-381	09/15/95						No Data
LOC-3 SA1-386	09/15/95						No Data
LOC-4 SA1-391	09/15/95						No Data
LOC-1 SB1-377	09/15/95		<0.06	<0.1	<0.06	<0.1	
LOC-1 SB2-378	09/15/95		<0.08	<0.2	<0.08	<0.2	
LOC-2 SB1-382	09/15/95		<0.06	<0.1	<0.06	<0.1	
LOC-2 SB2-383	09/15/95		<0.08	<0.2	<0.08	<0.2	
LOC-3 SB1-387	09/15/95		<0.06	<0.1	<0.06	<0.1	
LOC-3 SB2-388	09/15/95		<0.08	<0.2	<0.08	<0.2	
LOC-4 SB1-392	09/15/95		<0.05	<0.1	<0.05	<0.1	
LOC-4 SB2-393	09/15/95		<0.07	<0.1	<0.07	<0.1	
LOC-1 SC1-379	09/15/95	<7					
LOC-1 SC2-380	09/15/95	<9					

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-2 SC1-384	09/15/95	<6					
LOC-2 SC2-385	09/15/95	<8					
LOC-3 SC1-389	09/15/95	<6					
LOC-3 SC2-390	09/15/95	<8					
LOC-4 SC1-394	09/15/95	<6					
LOC-4 SC2-395	09/15/95	<8					
LOC-1 SA1-360	06/15/95						<60
LOC-2 SA1-365	06/15/95						<60
LOC-3 SA1-370	06/15/95						<60
LOC-4 SA1-375	06/15/95						<60
LOC-1 SA1-340	06/06/95						No Data
LOC-2 SA1-345	06/06/95						No Data
LOC-3 SA1-350	06/06/95						No Data
LOC-4 SA1-355	06/06/95						No Data
LOC-1 SB1-341	06/06/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-342	06/06/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB1-346	06/06/95		<0.3	<0.6	<0.3	<0.3	
LOC-2 SB2-347	06/06/95		<0.3	<0.6	<0.3	<0.3	
LOC-3 SB1-351	06/06/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB2-352	06/06/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB1-356	06/06/95		<0.3	<0.6	<0.3	<0.3	
LOC-4 SB2-357	06/06/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SC1-343	06/06/95	<0.2					
LOC-2 SC1-348	06/06/95	<0.2					
LOC-3 SC1-353	06/06/95	<0.2					
LOC-4 SC1-358	06/06/95	<0.2					
LOC-1 SA1-320	06/05/95						<70

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-2 SA1-325	06/05/95						80
LOC-3 SA1-330	06/05/95						<70
LOC-4 SA1-335	06/05/95						<70
LOC-1 SB1-321	06/05/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-322	06/05/95		<0.3	<0.7	<0.3	<0.3	
LOC-2 SB1-326	06/05/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-327	06/05/95		<0.3	<0.7	<0.3	<0.3	
LOC-3 SB1-331	06/05/95		<0.3	<0.6	<0.3	<0.3	
LOC-3 SB2-332	06/05/95		<0.3	<0.7	<0.3	<0.3	
LOC-4 SB1-336	06/05/95		<0.2	<0.6	<0.2	<0.2	
LOC-4 SB2-337	06/05/95		<0.3	<0.7	<0.3	<0.3	
LOC-1 SC1-323	06/05/95	<0.4					
LOC-1 SC2-324	06/05/95	<0.5					
LOC-2 SC1-328	06/05/95	<0.4					
LOC-2 SC2-329	06/05/95	<0.5					
LOC-3 SC1-333	06/05/95	<0.4					
LOC-2 SC2-334	06/05/95	<0.5					
LOC-4 SC1-338	06/05/95	<0.4					
LOC-4 SC2-339	06/05/95	<0.5					
LOC-1 SA1-300	06/02/95						<90
LOC-2 SA1-305	06/02/95						<90
LOC-3 SA1-310	06/02/95						<100
LOC-4 SA1-315	06/02/95						<90
LOC-1 SB1-301	06/02/95		<0.3	<0.6	<0.3	<0.3	
LOC-1 SB2-302	06/02/95		<0.7	<2	<0.7	<0.7	
LOC-2 SB1-306	06/02/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-307	06/02/95		<0.7	<2	<0.7	<0.7	

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-3 SB1-311	06/02/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB2-312	06/02/95		<1	<2	<1	<1	
LOC-4 SB1-316	06/02/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB2-317	06/02/95		<0.9	<2	<0.9	<0.9	
LOC-1 SC1-303	06/02/95	<0.4					
LOC-1 SC2-304	06/02/95	<1					
LOC-2 SC1-308	06/02/95	<0.4					
LOC-2 SC2-309	06/02/95	<1					
LOC-3 SC1-313	06/02/95	<0.4					
LOC-3 SC2-314	06/02/95	<2					
LOC-4 SC1-318	06/02/95	<0.4					
LOC-4 SC2-319	06/02/95	<1					
LOC-1 SA1-280	06/01/95						<60
LOC-2 SA1-285	06/01/95						<70
LOC-3 SA1-290	06/01/95						<60
LOC-4 SA1-295	06/01/95						<60
LOC-1 SB1-281	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-282	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB1-286	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-287	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB1-291	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB2-292	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB1-296	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB2-297	06/01/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SC1-283	06/01/95	<0.4					
LOC-1 SC2-284	06/01/95	<0.4					
LOC-2 SC1-288	06/01/95	<0.4					

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-2 SC2-289	06/01/95	<0.4					
LOC-3 SC1-293	06/01/95	<0.4					
LOC-3 SC2-294	06/01/95	<0.4					
LOC-4 SC1-298	06/01/95	<0.4					
LOC-4 SC2-299	06/01/95	<0.4					
LOC-1 SA1-260	05/31/95						<60
LOC-2 SA1-265	05/31/95						<60
LOC-3 SA1-270	05/31/95						<60
LOC-4 SA1-275	05/31/95						<60
LOC-1 SB1-261	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-262	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB1-266	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-267	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB1-271	05/31/95		<0.2	<0.6	<0.2	<0.2	
LOC-3 SB2-272	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB1-276	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB2-277	05/31/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SC1-263	05/31/95	<0.4					
LOC-1 SC2-264	05/31/95	<0.4					
LOC-2 SC1-268	05/31/95	<0.4					
LOC-2 SC2-269	05/31/95	<0.4					
LOC-3 SC1-273	05/31/95	<0.4					
LOC-3 SC2-274	05/31/95	<0.4					
LOC-4 SC1-278	05/31/95	<0.4					
LOC-4 SC2-279	05/31/95	<0.4					
LOC-1 SA1-220	04/17/95						<60
LOC-2 SA1-225	04/17/95						<60

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-3 SA1-230	04/17/95						<60
LOC-4 SA1-235	04/17/95						<60
LOC-1 SB1-221	04/17/95		<0.3	<0.6	<0.3	<0.3	
LOC-1 SB2-222	04/17/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB1-226	04/17/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-227	04/17/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB1-231	04/17/95		<0.3	<0.6	<0.3	<0.3	
LOC-3 SB2-232	04/17/95		<0.3	<0.5	<0.2	<0.3	
LOC-4 SB1-236	04/17/95		<0.2	<0.6	<0.3	<0.3	
LOC-4 SB2-237	04/17/95		<0.3	<0.5	<0.2	<0.2	
LOC-1 SC1-223	04/17/95	<0.8					
LOC-1 SC2-224	04/17/95	<0.7					
LOC-2 SC1-228	04/17/95	<0.8					
LOC-2 SC2-229	04/17/95	<0.8					
LOC-3 SC1-233	04/17/95	,0.8					
LOC-3 SC2-234	04/17/95	<0.7					
LOC-4 SC1-238	04/17/95	<0.8					
LOC-4 SC2-239	04/17/95	<0.7					
LOC-1 SA1-180	04/11/95						<60
LOC-2 SA1-185	04/11/95						<60
LOC-3 SA1-190	04/11/95						<60
LOC-4 SA1-195	04/11/95						<60
LOC-1 SB1-181	04/11/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-182	04/11/95		<0.3	<0.6	<0.3	<0.3	
LOC-2 SB1-186	04/11/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SA1-187	04/11/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB1-191	04/11/95		<0.3	<0.6	<0.3	<0.3	

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID *Action Level* *(Downwind-Upwind)*	SAMPLING DATE	PCB (µg/m3) *1.0*	ETHYL-BENZENE (ppm) *25*	PERCHLORO-ETHYLENE (µg/m3) *81,000*	TOLUENE (ppm) *25*	XYLENE (ppm) *25*	PARTICULATE (µg/m3) *150*
LOC-3 SB2-192	04/11/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB1-196	04/11/95		<0.3	<0.6	<0.3	<0.3	
LOC-4 SB2-197	04/11/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SC1-183	04/11/95	<0.8					
LOC-1 SC2-184	04/11/95	<0.8					
LOC-2 SC1-188	04/11/95	<0.8					
LOC-2 SC2-189	04/11/95	<0.8					
LOC-3 SC1-193	04/11/95	<0.8					
LOC-3 SC2-194	04/11/95	<0.8					
LOC-4 SC1-198	04/11/95	<0.8					
LOC-4 SC2-199	04/11/95	<0.8					
LOC-1 SA1-160	03/27/95						<60
LOC-2 SA1-165	03/27/95						<60
LOC-3 SA1-170	03/27/95						<60
LOC-4 SA1-175	03/27/95						<60
LOC-1 SB1-161	03/27/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-163	03/27/95		<0.3	<0.6	<0.3	<0.3	
LOC-2 SB1-166	03/27/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-167	03/27/95		<0.3	<0.6	<0.3	<0.3	
LOC-3 SB1-171	03/27/95		<0.3	<0.6	<0.3	<0.3	
LOC-3 SB2-172	03/27/95		<0.2	<0.6	<0.2	<0.2	
LOC-4 SB1-176	03/27/95		<0.2	<0.6	<0.2	<0.2	
LOC-4 SB2-177	03/27/95		<0.3	<0.6	<0.3	<0.3	
LOC-1 SC1-163	03/27/95	<0.4					
LOC-2 SC2 164	03/27/95	<0.4					
LOC-2 SC1-168	03/27/95	<0.4					
LOC-2 SC2-169	03/27/95	<0.4					

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-3 SC1-173	03/27/95	<0.4					
LOC-3 SC2-174	03/27/95	<0.4					
LOC-4 SC1-178	03/27/95	<0.4					
LOC-4 SC2-179	03/27/95	<0.4					
LOC-1 SA1-140	03/14/95						<60
LOC-2 SA1-145	03/14/95						<60
LOC-3 SA1-150	03/14/95						<60
LOC-4 SA1-155	03/14/95						<60
LOC-1 SB1-141	03/14/95		<0.3	<0.6	<0.3	<0.3	
LOC-1 SB2-142	03/14/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB1-146	03/14/95		<0.3	<0.6	<0.3	<0.3	
LOC-2 SB2-147	03/14/95		<0.2	<0.6	<0.2	<0.2	
LOC-3 SB1-151	03/14/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB2-152	03/14/95		<0.3	<0.6	<0.3	<0.3	
LOC-4 SB1-156	03/14/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB2-157	03/14/95		<0.3	<0.6	<0.3	<0.3	
LOC-1 SC1-143	03/14/95	<0.4					
LOC-1 SC2-144	03/14/95	<0.4					
LOC-2 SC1-148	03/14/95	<0.4					
LOC-2 SC2-149	03/14/95	<0.4					
LOC-3 SC1-153	03/14/95	<0.4					
LOC-3 SC2-154	03/14/95	<0.4					
LOC-4 SC1-158	03/14/95	<0.4					
LOC-4 SC2-159	03/14/95	<0.4					
LOC-1 SA1-120	03/10/95						<60
LOC-2 SA1-125	03/10/95						<60
LOC-3 SA1-130	03/10/95						<60

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID *Action Level* *(Downwind-Upwind)*	SAMPLING DATE	PCB (µg/m3) *1.0*	ETHYL-BENZENE (ppm) *25*	PERCHLORO-ETHYLENE (µg/m3) *81,000*	TOLUENE (ppm) *25*	XYLENE (ppm) *25*	PARTICULATE (µg/m3) *150*
LOC-4 SA1-135	03/10/95						<60
LOC-1 SB1-121	03/10/95		<0.2	<0.5	<0.2	<0.2	
LOC-1 SB2-122	03/10/95		<0.3	<0.6	<0.3	<0.3	
LOC-2 SB1-126	03/10/95		<0.2	<0.5	<0.2	<0.2	
LOC-2 SB2-127	03/10/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB1-131	03/10/95		<0.2	<0.5	<0.2	<0.2	
LOC-3 SB2-132	03/10/95		<0.3	<0.6	<0.3	<0.3	
LOC-4 SB1-136	03/10/95		<0.2	<0.5	<0.2	<0.2	
LOC-4 SB2-137	03/10/95		<0.3	<0.6	<0.3	<0.3	
LOC-1 SC1-123	03/10/95	<0.4					
LOC-1 SC2-124	03/10/95	<0.4					
LOC-2 SC1-128	03/10/95	<0.4					
LOC-2 SC2-129	03/10/95	<0.4					
LOC-3 SC1-133	03/10/95	<0.4					
LOC-3 SC2-134	03/10/95	<0.4					
LOC-4 SC1-138	03/10/95	<0.4					
LOC-4 SC2-139	03/10/95	<0.4					
LOC-1 SA1-100	03/18/95						<80
LOC-2 SA1-105	03/18/95						<80
LOC-3 SA1-110	03/18/95						200
LOC-4 SA1-115	03/18/95						<80
LOC-1 SB1-101	03/18/95			<0.6		<0.3	
LOC-1 SB2-102	03/18/95			<1.0		<0.6	
LOC-2 SB1-106	03/18/95			<0.6		<0.3	
LOC-2 SB2-107	03/18/95			<1.0		<0.5	
LOC-3 SB1-111	03/18/95			<0.6		<0.2	
LOC-3 SB2-112	03/18/95			<1.0		<0.6	

COMMUNITY STATIONARY AIR MONITORING TEST RESULTS

SAMPLE ID	SAMPLING DATE	PCB (µg/m3)	ETHYL-BENZENE (ppm)	PERCHLORO-ETHYLENE (µg/m3)	TOLUENE (ppm)	XYLENE (ppm)	PARTICULATE (µg/m3)
Action Level (Downwind-Upwind)		*1.0*	*25*	*81,000*	*25*	*25*	*150*
LOC-4 SB1-116	03/18/95			<0.6		<0.3	
LOC-4 SB2-117	03/18/95			<1.0		<0.5	
LOC-1 SC1-103	03/18/95	<0.4					
LOC-1 SC2-104	03/18/95	<0.9					
LOC-2 SC1-108	03/18/95	<0.4					
LOC-2 SC2-109	03/18/95	<0.9					
LOC-3 SC1-113	03/18/95	<0.4					
LOC-3 SC2-114	03/18/95	<1.0					
LOC-4 SC1-118	03/18/95	<0.4					
LOC-4 SC2-119	03/18/95	<0.9					

APPENDIX 7

SUMMARY OF ACTIONS TAKEN IN BEHALF OF M&T TRANSPORT, INC.
AT CHEM-RAIL TRANSPORT, INC., BEAUMONT, TEXAS SITE

On June 20, 1995, several flatcars with containers of PCB contaminated material arrived at the Chem-Rail Transport, Inc., transfer station at Beaumont, Texas.

Upon examination of the containers it was discovered that most of them were leaking liquid from their seams.

Drip buckets were placed under the leaks, the interested parties were notified and 24 hour surveillance was set in place.

An agreement for actions to be taken and the charges to be made therefor was entered into between M&T and Chem-Rail.

The following day an Environmental Engineer from Chem Rail home office was dispatched to Beaumont to implement a remediation plan.

The leaks were stopped and as additional flatcars arrived with the same material and the same type leaks similar action was taken.

As per the remediation plan swipe tests were run on each container and each flatcar involved with the leaking. The samples were picked up by an EPA approved laboratory for analysis.

The results of the tests indicated that none of the leaks involved PCB's at or above actionable limits.

The remediation plan then concentrated on cleaning of the containers and flatcars, keeping unauthorized personnel away from the area, using a backhoe to dig out contaminated soil, lifting containers by crane to assure the flatcars and the bottoms of the containers were free from contamination, and making them ready for shipment to their ultimate destination.

The same plan has been implemented for each flatcar on which leaking containers were found subsequent to the first shipment.

Chem-Rail Transport, Inc.

By: Bill Morrison

Bill Morrison, Director of Operations

Chemical Waste Management, Inc.

P.O. Box 2563
Port Arthur, Texas 77643-2563
409/736-2821

DATE: June 27, 1995

TO: Dean LaFleur OGDEAN REMEDIATION SERVICES

FROM: Carl Harbert

SUBJECT: Leaking Box

The box that we found leaking in June 23,1995 was tested and found to be rain water. The water was found coming from the outside channel of the box. At this time none of the boxes have had any PCB spills to this date.

FAX #(409) 736-4155