



ENVIRO SCIENCES INC.

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(201) 366-6256

A-3.9
SDMS Document



115531

April 17, 1986

Mr. Charles Dolan
USEPA, ERD
26 Federal Plaza
Room 747, SICB
New York, NY 10278

Re: Island Chemical Company, U.S. Virgin Islands

Dear Mr. Dolan:

As per our telephone conversation, I am sending the enclosed information concerning Enviro-Sciences, Inc. work at the Island Chemical Company site in St. Croix, U.S.V.I. I trust that this package will be helpful in your understanding of the activities which have occurred on the site during the prior one and one-half years.

As we discussed, I wish to meet with you concerning this matter. If possible, I would prefer to schedule this meeting for Thursday morning, April 24th.

If you have any questions, contact me at 201/366-6256.

Very truly yours,

ENVIRO-SCIENCES, INC.

Paula Omland for

Alan L. Kyles, Ph.D.
Vice President

ALK/po (AK-86143)

Enclosures: Project Summary with attachments

cc: R. Milos
F. Curtis
R. Willis
I. Arshen

SENT VIA FEDERAL EXPRESS ON 4/17/86.

100086

Project Summary for Island Chemical Company, Inc.

(Berlex) St. Croix, Virgin Islands

Included herein is a succinct summary for the environmental cleanup of Island Chemical Company (ICC), St. Croix, Virgin Islands. Documentation for all activities are included as attachments.

Enviro-Sciences, Inc. initiated a site evaluation in September, 1984 and continued the investigation into October. Contamination was found at several locations and a preliminary cleanup plan was developed and delivered to Mr. Conrad Simon, USEPA Region II, New York during December, 1984. (See Attachment A).

Mr. Simon assigned Mr. Robert Harris as the project officer. After numerous telephone discussions and information requests by Mr. Harris, an addendum to the original report was submitted in April, 1985 (Attachment B).

Follow-up conversations with Mr. Harris indicated that the proposed program was satisfactory. I requested a letter of approval from him; however, he stated that the USEPA would not issue a letter. He did state that I should send him a letter stating our intent to cleanup (Attachment C).

During the approval period, Mr. Harris requested copies of hazardous waste manifests for materials sent from the facility by ICC in 1982 (Attachment D). Between June and August, 1985 several tasks were performed at the ICC site. Tasks performed by dates are summarized below:

I. June 6 - 15, 1985

Toluene Contamination (Driver)

Soil from eight (8) of a total of 14 drums of toluene-contaminated soil was put on drying trays and placed in the drying oven. Temperature reached approximately 42 degrees C and continued to increase as moisture was lost. Two (2) 20-gallon plastic-lined paper barrels which were one-half full of soil and water were placed in the dryer intact in an attempt to evaporate the water before placing the soil on trays. Exhaust from the vent was monitored with a Flame Ionization Detector (FID) for emission of Toluene.

Pyridine Contamination (Laboratory Pit)

All liquid waste to the laboratory pit was rerouted; non-contact cooling water to the gut and laboratory rinse water to a stainless steel container. All laboratory wastes (reagents, solvents, etc.) were collected in 55-gallon drums along with first and second rinses.

Portable toilets were provided to replace the office facilities since it was suspected that the septic tank might be in the laboratory pit.

Concrete was broken in an area outlined by test holes which exhibited high ppm emissions during a boring program in October, 1984. Soil was excavated and placed around the opened pit. The sidewalls and floor of the excavation were examined with the FID for organic emissions. Readings along two sidewalls were in the 700-900 ppm range. These walls were excavated and rechecked. Finally, a pit was excavated which did not elucidate a ppm reading on the FID. This pit measures 30 x 30 feet and 9 feet deep.

Excavation revealed that a previous owner laid macadam over the entire area about two (2) feet below the present level of the concrete. A later owner covered the macadam with about one and one-half feet of soil and poured concrete to the present level.

The laboratory wastes flowed into a pit which was about 8-9 feet deep. The bottom three (3) feet were filled with cobble. When liquid filled the pit, it would flow into a four (4) inch PVC pipe and drain to another cobble-filled pit near the rear fence. This pit was investigated during October (see progress report).

Drain Lines

Two (2) storm drain lines were excavated to replace the existing lines which were deteriorated and caving in at several locations. Both lines were constructed of 55-gallon drums which were welded. Excavation revealed one line contained a sludgy material with an oily texture. This material was collected and placed in 55-gallon, open top drums (13 total) and stored until analysis indicated the constituents. Drums from the drain line were placed in a container for later disposal. No sludge or residue was present in the second drain line. The barrels from this line were placed in a container for later disposal.

One line was replaced with 10 inch PVC pipe.

The excavation and replacement of each line was discussed with Public Works as to the need for an "Earth Change" permit. After review and inspection, Public Works did not require a permit for replacement.

Process Pit

During this field visit (June 6-15) samples were taken from various areas and sent to stateside laboratories for analysis. These laboratories are Industrial Corrosion Management, Inc. (ICM), Randolph, New Jersey and York Laboratories, Inc. (York), Monroe, Connecticut. Duplicates of most samples were sent to each laboratory as a quality control procedure.

The following samples were taken:

<u>Location</u>	<u>Type</u>	<u>No.</u>	<u>Analysis</u>	<u>Comments</u>
Dryer	Soil	4	Toluene	Two (2) samples to each laboratory
Laboratory Pit	Soil	8	Pyridine	Four (4) samples to each laboratory
	Liquid	2	Volatile Organics	ICM only
Drain Lines	Soil	4	Volatile Organics	Two (2) samples to each laboratory
Process Pit	Sludge	9	Priority Pollutants Plus 40	ICM only; all samples composited to one sample

II - June 31 - July 3

The site was revisited and soil samples were taken from the dryer (4) and the laboratory pit (8). The samples were divided evenly between the laboratories. The remaining six (6) barrels of toluene-contaminated soil was loaded onto trays and placed in the dryer. In addition, liquid samples from the process pit were taken for Priority Pollutants plus 40 analysis. However, they were lost in shipment and had to be retaken at a later date.

III - July 16 - 19

The site was revisited and four (4) samples each were taken from the dryer and the laboratory pit. Two (2) samples of each were sent to each laboratory. Priority Pollutants plus 40 water samples were retaken from the process pit.

IV - August 6 - 9

Additional sampling of the laboratory pit and dryer was conducted.

Analytical sheets for the first three (3) site sampling periods are in Attachment E which was a request of Conservation and Cultural Affairs.

Analytical sheets for the August visit are in Attachment F.

Numerous samples between June and August were duplicated and sent to another laboratory, York Laboratories Division. These results are in Attachment G.

During September, the site was visited and samples of all waste streams (contaminated areas) were collected for shipment to Chemical Waste Management. This data is required by them before they can accept wastes for disposal. The material profile sheets for each waste stream are in Attachment H.

On September 17, the site was visited by Mr. Louis Diguardia, USEPA Region II. He collected samples and discussed the site activities with Mr. Raymond Hays.

After Chemical Waste Management accepted the waste streams for disposal, the site was visited during early October to drum all materials for shipment and disposal. Attempts were made to dispose of washed drums locally through a verbal request to Austin Moorehead. He suggested I call USEPA Region II. The answer from Region II was to send a letter. Action time would have been 2-3 weeks. This was not pursued due to costs. In addition, as per the request of Mr. Bob Milos (Berlex), permission was sought by letter (handwritten, Attachment I) to evaporate, process pit water instead of shipping off island. Mr. Moorehead responded to the letter verbally that this would require considerable time for approval.

At this same time, 192 drums of hazardous waste were packed, loaded and manifested to Chemical Waste Management for disposal (Attachment J).

For U.S. Customs to release the drum shipment in Lake Charles, Louisiana a letter with supportive documents was sent to Mr. Carl Becnell (Attachment K), customs broker retained by ICC.

On November 6, results of the sampling by the USEPA (Louis Diguardia) was requested (Attachment L). At this date (April 16, 1986) the report is not available.

After a meeting with Berlex in Wayne, it was decided that I return to the site and sample the gut for volatile organics and metals (Attachment M). Analyses indicate the presence of heavy metals at several locations. A subsequent EP Tox test indicates that the leachable fraction is well below USEPA standards (data sheet not available for this submission). In addition, volatile organics were not detected.

It was decided that I return on March 13 to take split samples with USEPA Region II personnel. The results of this sampling are not available at this time.

Correspondence concerning the extent of site cleanup was forwarded to Mr. Simon, USEPA (Attachment N).

(AK-86134)

ATTACHMENT . A

100091

PROGRESS REPORT

ISLAND CHEMICAL COMPANY, INC. (BERLEX)ST. CROIX, VIRGIN ISLANDS

~~edit this section &~~
make 4 copies of
whole pkg. + ~~what~~
sheets I gave to Al w/
corrections (by 1 pm)
12-20-84

Enviro-Sciences, Inc.
19 Copeland Road
Denville, New Jersey 07834
(201) 366-6256
December, 1984

100092



INTRODUCTION

Enviro-Sciences, Inc. (ESI) was contracted by Berlex Laboratories, Inc. (Berlex) to conduct an environmental study of their Island Chemical Company, Inc. (ICC) facility in St. Croix, Virgin Islands. Berlex sold the facility to Virgin Island Chemical Company, Inc. (VICC) in September, 1984. Under the contractual agreement between Berlex and VICC, ESI is responsible for certifying that the facility is environmentally clean and free of chemical contamination.

The following discussion is a summary of the ESI site investigations and their results.

SITE HISTORY

Berlex acquired the nine year old facility in St. Croix when it purchased Cooper Laboratories (Cooper) in 1980. At the time of purchase the facility was in a non-operational mode. Both Cooper and the original owner were in the pharmaceuticals area of the chemical industry. Exact manufacturing processes used by the original owner cannot be documented at this time. Cooper produced quinidine. Neither owner was fully operational during this time.

Berlex revamped the facility and operated for about two of its four years of ownership. The facility produced primarily quinidine from quinine. Production was discontinued when the methodologies used produced a more expensive product than newer methods used elsewhere in the industry. The plant did not operate for more than a year prior to purchase by VICC.

SITE EVALUATION

Mr. Irving Cohen of ESI initiated the evaluation program on September 11, 1984 and was replaced by Dr. Alan Kyles on September 13. The initial phase continued through September 20, 1984. A second phase was undertaken from October 23 through October 31, 1984.

The entire property was walked and scrutinized for visible surface contamination. A backhoe was utilized to open trenches in areas where contamination might be expected. Most trenches were excavated to a depth of six feet. A portable Flame Ionization Detector (FID) was used to sense volatile organic compounds on the ground surface and faces of open trenches. (The FID has a detection range of 1 to 1,000 ppm.) As the program progressed a drilling rig capable of boring concrete and split-spoon sampling for soil was brought to the site.

Soil samples were taken from all trenched areas showing volatile organic contamination and from bore holes at various depths. All trenches were backfilled after investigations were completed.

Trench and boring locations are shown in Figures 1 and 2.

RESULTS

The site evaluation procedures detected four areas of contamination. These are:

- 1) along trench number 4, under concrete slab number 3;
- 2) between tanks numbered 8 and 9;
- 3) along trench number 9; and
- 4) under the concrete surfaced loading dock.

The contaminated area located along trench 4 is shown in Figure 3. The contaminant had a distinct odor of toluene and exceeded a 280 ppm reading on the FID. However, gas chromatography sample analysis (Sample numbers S4 through S4-4) did not detect the presence of toluene or indicated levels of <0.2 ppm. These analyses were conducted by two separate Berlex laboratories. (See Appendices A and B, respectively.) The time lag between sample taking and analysis (3 weeks) may account for the difference between field readings and laboratory analytical results.

A three- to four-foot wide section was removed from slab 3 to determine the extent of contamination. Inspection with the FID indicated that contamination was limited to this area and does not extend or penetrate the soil under slabs 2 and 4. Depth of contamination was restricted to the first two to three feet of soil.

All contaminated soil (approximately 4 cubic yards) was placed in 55 gallon drums and stored in the warehouse for eventual disposal. The pit was backfilled with clean soil.

The entire area between and in front of Tanks 8 and 9 was contaminated with toluene which escaped from Tank 8 during cleaning. Laboratory analysis indicated that Tank 8 contained a 1.4 percent solution of toluene and water and the surrounding soil and gravel mixture contained 694 ppm of toluene. (See Appendix A, Samples Tank 8 and Tank 8-1.) Due to rain the prior evening and impending for later in the day, the area was cleaned. Soil and gravel was removed down to a depth of about one foot. At this depth a hard clay layer is present. All material including water was placed in 55 gallon drums and removed to the warehouse for later disposal. Sample analysis of the clay soil indicated the absence of toluene (see Appendix B, Sample Tank 8-2).

100094



When opening trench 9 behind the loading dock, a 4-inch PVC line was broken (Figure 2). Immediate odor indicated the presence of pyridine and the FID recorded in excess of 1,000 ppm when the broken pipe was probed. This pipe was dry, indicating no recent usage. Surface water settling in the open cut had a reading of 280 ppm. Further excavation and line tracing lead to a pit near the fence containing stones and covered with tin sheeting. Vapor emissions from the pit approached 800 ppm. Further excavation was discontinued for about 4 weeks until the return visit in October. Surface samples (Figure 2) were taken in the eroded trench which drains to the dry river bed and the excavated trench (sample numbers D-1 through D-5; see Appendix A). Samples D-3 and D-4 were absent of pyridine; however, pyridine was present in D-1 (920 ppm), D-2 (507 ppm) and D-5 (3,014 ppm). Quinidine gluconate and a quinine sulfate were present in these samples, also. A strong pyridine odor was prevalent during the excavation and sampling period.

Upon the return visit in October the pyridine odor was not noticeable. Probing the pit and PVC pipe did not elicit a response on the FID. The pit was excavated without detection of organic vapors especially pyridine.

The presence of pyridine in the above discussed area lead to additional investigations; either the drain line was broken under the concrete, or another source of pyridine contamination was present. Discussions with personnel who have been at the facility for a number of years revealed the past history for the loading dock area. Originally, laboratory drains exited from the building and wastes flowed directly to an open pit. Occasionally, during the rainy season the pit would fill with water and overflow by a swale to the dry river bed beyond the fence. Later, the pit was filled and the area concreted for use as a loading dock. It was uncertain how the laboratory drain was rerouted to the pit near the fence.

A total of 40 borings were made in the loading dock area; 22 during September and 18 during October. Most borings were at least 6-feet deep with a few being 8-feet deep. Table 1 shows the FID readings for all samples taken during September. Soil texture indicates that contaminants are confined to sandy-clay material which was apparently used for fill. Samples taken from the dense clay below the sand were relatively free of contamination.

Figure 4 depicts profiles for several boring area series and the profiles are shown in Figure 5. As can be seen the crossing of A-A1 and B-B1 show an underground depression of contaminated material which is approximately 6-feet deep. Profile C-C1 exhibits the same down dip effect.

100095



Several samples were analyzed and the results are presented in Appendix B (samples H-22 1'A and H-21 3'B) and Appendix C (samples 1'B-20, 4'B-4, 3'B-13, and 4'B-21). Very low levels of several contaminants were recorded. These contaminants were pyridine, toluene, fluorethyne, 2-methyl propanol, pentane, and 2-methyl-1-heptene. Again it appears that the volatile aspects of the soil samples had been lost.

The rapid volatility is shown with data in Table 2. FID readings for the bore holes in September show rather high concentrations. Upon returning in October none of these holes exhibited volatiles using the FID. Probing the bore hole and loosing the side walls would result in a small FID response. Apparently exposure to air allows for oxidation or escape of the contaminants.

The additional borings made in October further delineated the contamination and provided information on the laboratory drain routing under the concrete. Ideas were confirmed using fluorescein dye. Apparently the laboratory wastes flow into a pit filled with stone near borings 20 and 20A. Once the pit fills, liquid overflows to a "tank" near boring 16. This "tank" maybe the septic tank which services restrooms in the office portion of the facility. Once this fills then flow continues out to the pit near the fence.

Samples were selected from these new borings and immediately analyzed. The results are presented in Appendix D. Analyses shows the presence of at least 690 ppb toluene; 43,000 ppb pyridine; 64,000 diphenyl methanone; and 600 total xylene. Additional materials were present at lower concentrations. Oil and grease analysis indicated concentrations up to 1,500 ppm.

In summary, the loading dock area contains a varied mixture of materials, all of which have been used by Berlex and probably other owners. A list of chemicals used by Berlex is presented in Table 3. The contamination appears to be concentrated in the original pit area presently filled with sand. The underlying clay material has probably prevented downward percolation since the FID reading for clay samples are low. Also, the materials are highly volatile.

PROPOSED CLEANUP PROCEDURES

ESI is proposing to clean the contaminated soil on site instead of soil removed to a certified landfill which is probably located on the mainland. We have considered numerous alternatives including on-island incineration at the Hess Refinery. On-site decontamination appears not only feasible but cost effective.



The contaminated areas around Tank 8 and at the end of slab 3 have been cleaned up and the material is stored on site in 55 gallon drums. ESI proposes to decontaminate the soil using air drying equipment and ovens on site. Drummed-contaminated soil would be emptied onto pans and placed in the ovens. By raising the temperature toluene can be evaporated leaving non-toluene contaminated soil. This soil would be analyzed before returning it to the site. VICC officers will allow the use of equipment on site for soil decontamination. ESI will probably require a temporary air emission permit from the EPA.

ESI proposes to treat the contaminated area behind the loading dock while the soil is in place. This method will involve the following sequence:

- 1) All laboratory waste flows will be rerouted to a self contained unit thus preventing new contaminants and liquid from entering the area.
- 2) Portable toilets will be available to prevent the discharge of wastes and water to the area.
- 3) A shelter will be constructed over the area to prevent rainfall and runoff from entering the area.
- 4) All overlying concrete will be removed to expose the contaminated soil, laboratory drains, pit, and septic tank.
- 5) A berm will be constructed around the exposed soil to prevent inflow of water from rainfall.

These preliminary steps will allow for vaporization of volatile materials to the atmosphere. Periodically, the soil will be turned using a backhoe to expose underlying soil layers. Samples will be taken every 4-5 days to determine the rate of volatile release and confirm the success of the methodology employed.

Discussions with Dr. Medhat Reiser of Nepara, Inc. (914-782-8171) indicate that pyridine will disappear upon exposure to air. He stated that although it is on the hazardous materials list it is biodegradable in about 21 days if exposed to air and not in contact with water. The above precautions and methodology should allow for the biodegradation of pyridine. Also, other volatiles should disappear using this method. If this method is successful, the area will be rehabilitated to its prior condition. Acceptable methods for laboratory waste and septic discharges will be incorporated in the new design.

ESI realizes that this method of treatment will require a temporary air emissions permit. Also, a temporary discharge permit maybe required if unexpected heavy rainfall should flood the pit area. Both permits will be requested from the EPA prior to initiation of the treatment method.



ESI held a meeting with Mr. Alfred Williams and Mr. Austin McCorehead of the Department of Conservation and Cultural Affairs, St. Croix (809-773-0565). The contents of this report were discussed in its entirety and they consider the proposed methods to be suitable for the situation at the facility. They suggested that all work be coordinated through EPA Region II.

100098



TABLE 1

FID READINGS (ppm) FOR ISLAND CHEMICAL COMPANY (BERLEX) ^{1/}

Boring No.	1 Foot Depth			3 Feet Depth			4 Feet Depth			6 Feet Depth			8 Feet Depth		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1	-	10	10	10	0	10	20	20	15						
2	10	10	0	10	40	60	10	0	10						
3	0	0	0	0	10	0	45	25	40						
4	-	-	-	20	80	15	100	120	90						
5	110	30	110	15	45	-	-	15	10						
6	55	150	30	10	210	200	45	60	45						
7	60	110	110	160	45	150	80	0	0						
8	90	10	10	10	20	15	0	0	0						
9	200	10	10	55	0	0	0	0	0						
10	0	0	0	0	-	10	0	0	0						
11	0	0	0	10	10	30	10	10	10	0	0	0			
12	10	0	25	20	20	10	40	15	20	0	0	0			
13	100	100	100	140	250	90	100	100	300	30	25	150			
14	100	80	80	45	100	60	65	100	100	40	25	55			
15	10	-	-	10	20	0	10	15	40	0	0	0			
16	45	10	10	300	300	110	320	160	200	10	10	10	10	10	10
17	30	35	40	40	20	30	10	10	10	-	-	-			
18	-	10	30	80	45	45	40	15	45	-	-	15			
19*	20	65	X	X	X	X	-	20	15	-	-	-			
20**	300	200	100	SP	SP	SP	SP	SP	SP						
21***	110	n/a	n/a	120	310	100	130	1000	680						
22	15	15	10	0	35	30	0	0	0						

^{1/} Sampled during September.

* X = No Sample

**SP = Septic Pit

***At the 4 Feet Depth, Letter B should read 1000 plus.

100099

TABLE 2

FID READING FOR BORINGS

<u>Boring</u>	<u>pdm</u>
1	60
2	35
3	-
4	40
5	-
6	-
7	270
8	40
9	550
10	0
11	0
12	350
13	200
14	280
15	240
16	1000+
17	110
18	110
19	130
20	750
21	650
22	45

TABLE 3

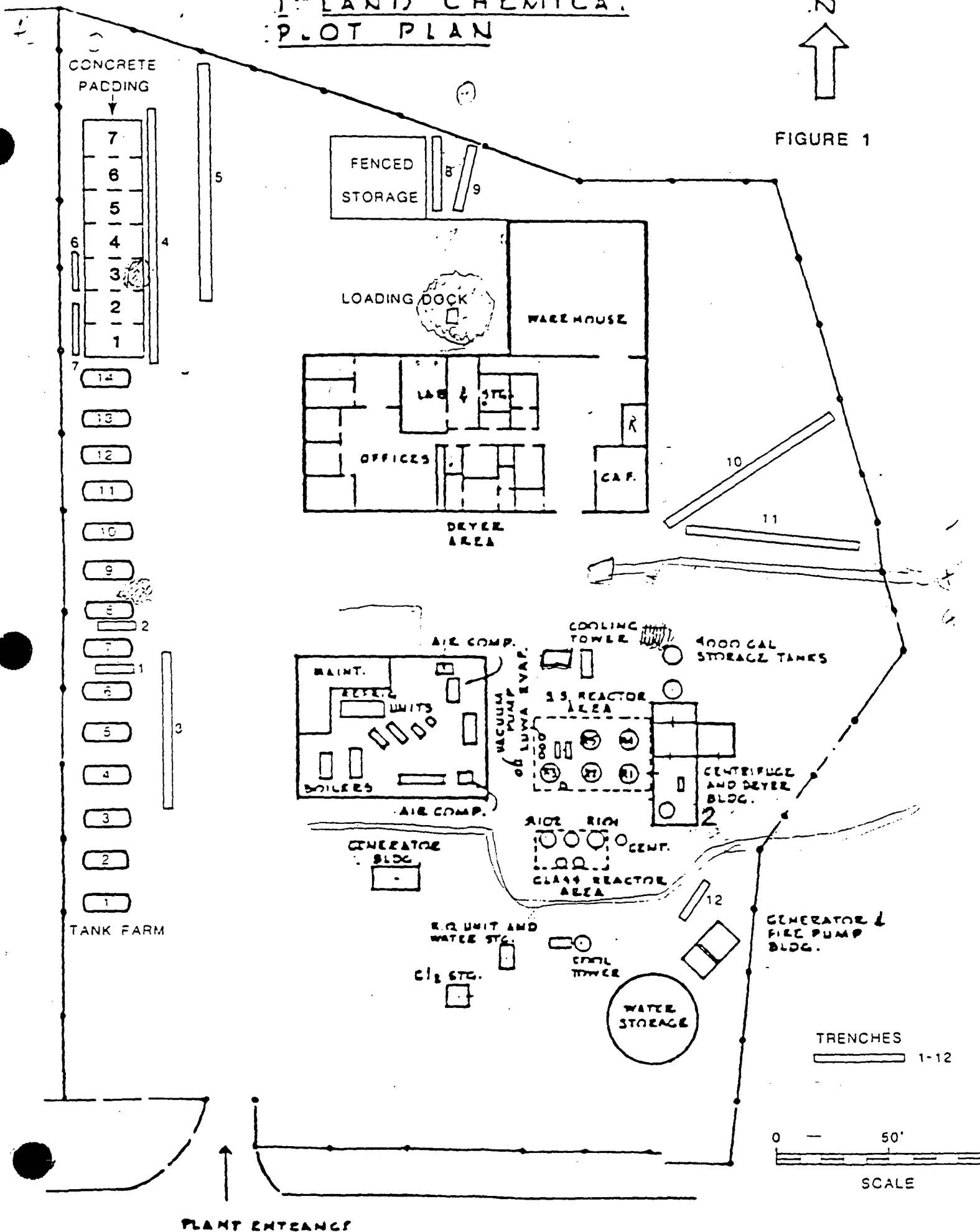
Inventory Items which have been at
ISLAND CHEMICAL COMPANY, INC. (BERLEX)

Quinine Sulfate	Sodium Hypochlorite Solution
Quinidinone	Sodium Bicarbonate
Quinidine Base	Magnesium Sulfate
Quinidine Gluconate	Flourenone
Quinact	Potassium-t-Butoxide
Quinine Bisulfate	Acetone
THF (tetrahydrofuran)	Calcium Hypochloride (H-T-H)
Toluene	Tetaric Acid
Pyridine (Karl Fisher Reagent)	Variquat
Isopropanol	Acetic Acid
Sodium Chloride	Soda Ash
Ethyl Alcohol	Gluconofin
Benzylphenone	Carbon Black
Chloroform	Kenite 700
Methylene Chloride	Potassium Iodo Platinate
Cinchona Bark	Butylated Hydroxy Toluene
20% Dibah in Toluene	Ethylene Glycol
Sodium Hydroxide (caustic soda) pellets and solution	Methanol
Glucono- Δ -Lactone	Charcoal
Liquid Ammonia	Castor Wax
Muriatic Acid	
Sulfate Acid	

ISLAND CHEMICAL PLOT PLAN



FIGURE 1



100102

100103

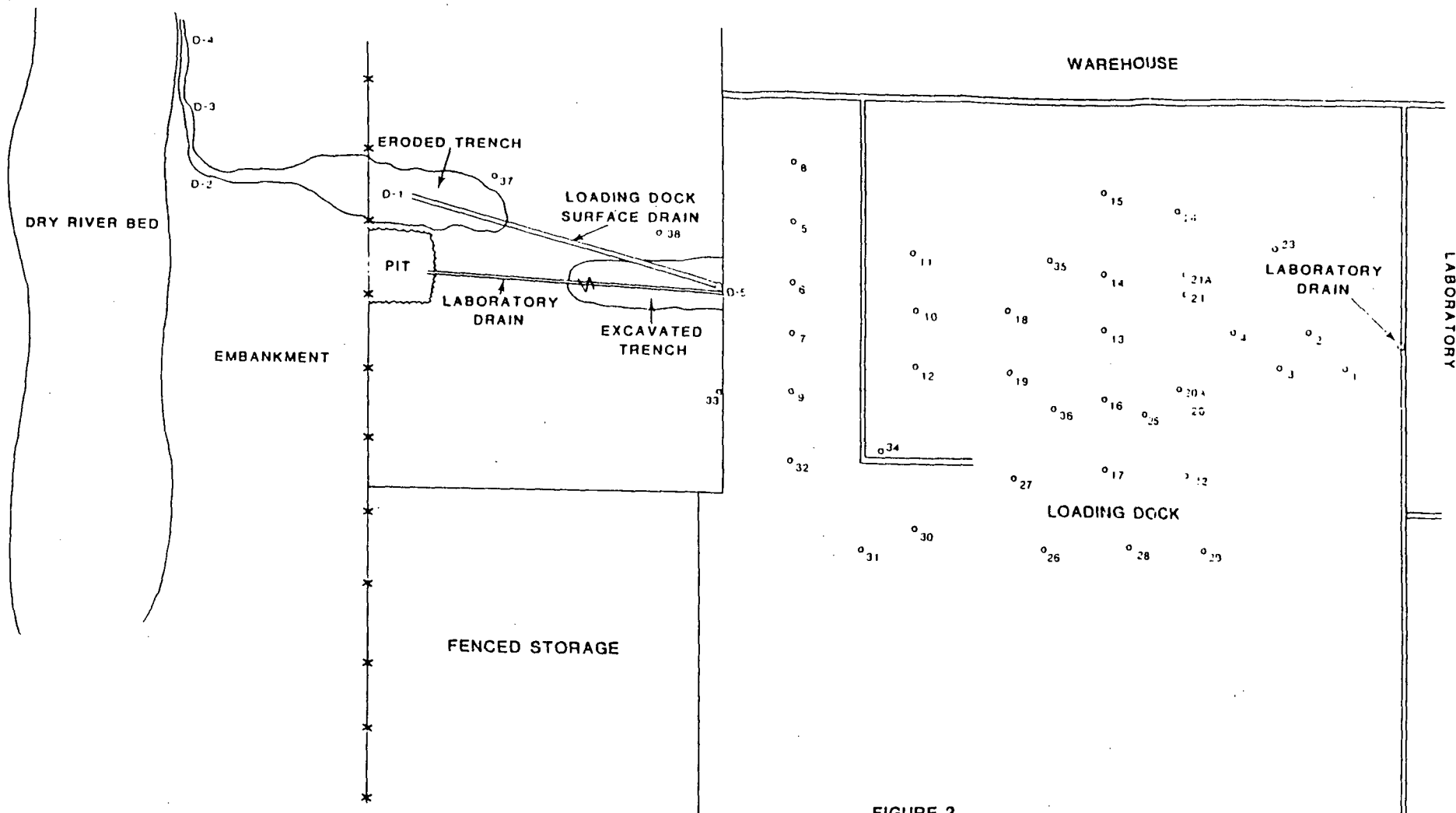
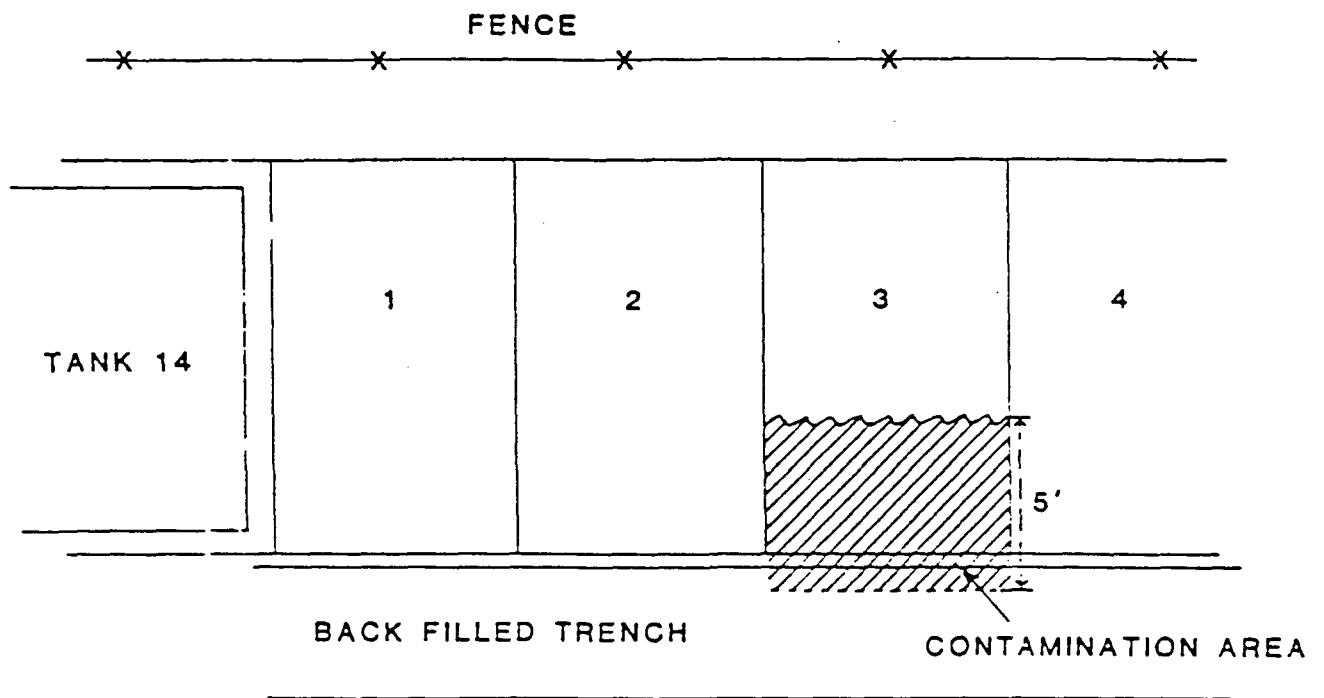


FIGURE 2

° BORING LOCATIONS
SCALE : 1" = 8'

FIGURE 3



PROFILE A - A'

BORING NUMBER

	16	14	13	15	17
0					
1	10	100	100	45	35
2					
3	20	100	250	300	40
DEPTH 4	40	100	300	320	10
5					
6	0	55	150	10	0
7					
8				10	

PROFILE B - B'

BORING NUMBER

	10	18	13	4	2
0					
1	0	30	100	0	10
2					
DEPTH 3	0	80	250	60	60
4	0	45	300	120	10
5					
6		0	150		

PROFILE C - C'

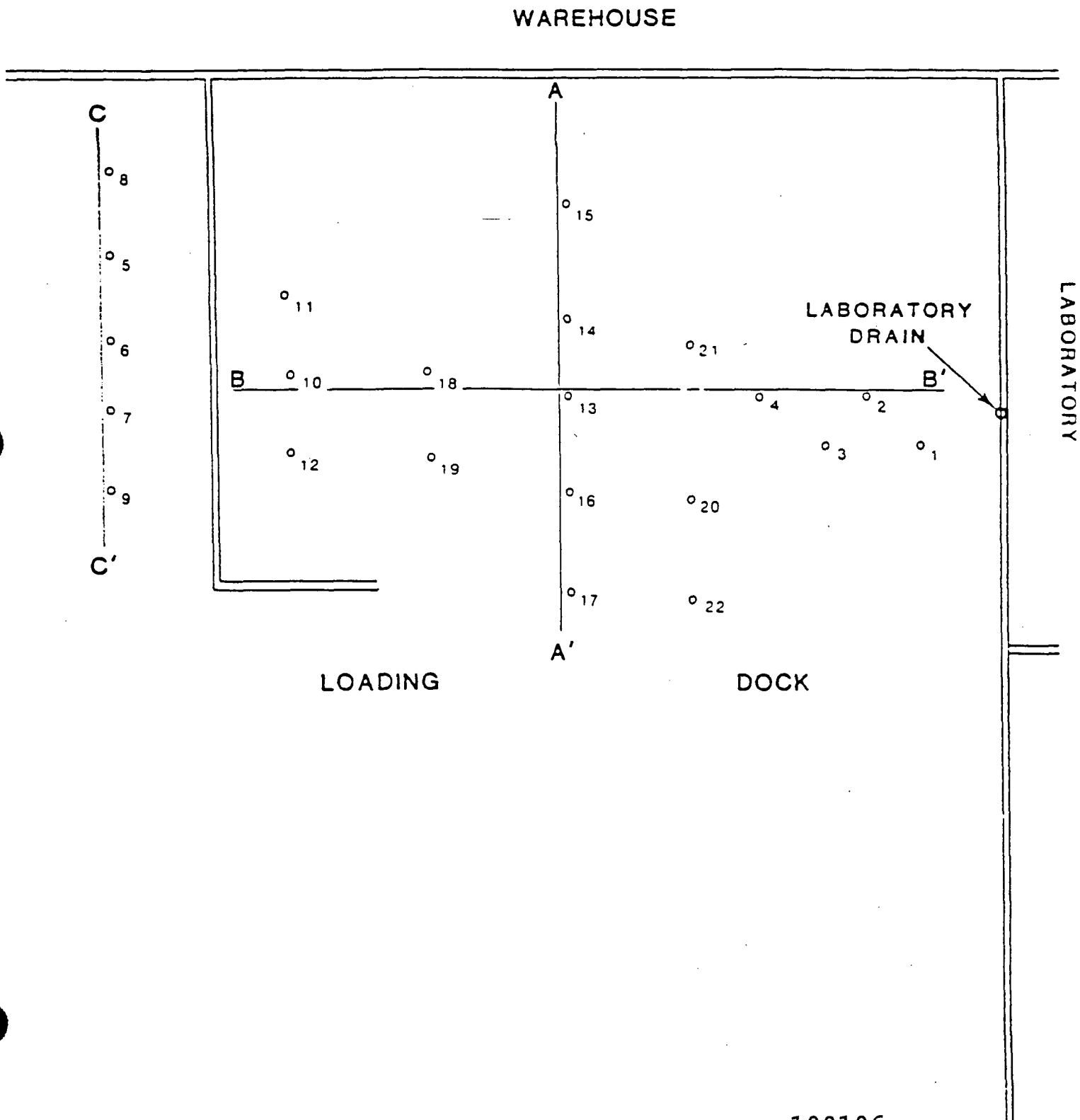
BORING NUMBER

	8	2	5	1	9
0					
1	90	110	150	110	200
DEPTH 2					
3	20	45	210	160	55
4	0	15	65	80	0

1/ SEE FIGURE 3

FIGURE 5

PROFILE LOCATIONS



APPENDIX A

100107





Laboratories Inc.

Memorandum

To: J. Beck
From: D.W. McKennon
Date: October 15, 1984
Subject: ISLAND CHEMICAL ENVIRONMENTAL SAMPLES

On 9/17/84, we received several samples from Irv Cohen of Enviro Sciences Inc. for analysis for various organic components.

We agreed to examine the samples for volatile organics via GC techniques, and then for nonvolatile organics like quinidine using HPLC techniques. Our investigation is complete, and data is attached.

DISCUSSION

I. GC ANALYSIS

Quantitable amounts of toluene were found in samples T8-1 and Tank-8. Also, quantitable amounts of pyridine were found in samples D-1, D-2, and D-5.

Qualitatively, the chromatograms were examined for additional peaks. Samples S4-2, D-5, T8-1, and T8-2 contain an unknown peak eluting between the pyridine and toluene peak. Tank-8 had an unidentifiable peak which eluted shortly after toluene.

II. HPLC

Quantitable amounts of quinidine and/or quinine were found in D-1, D-2, D-5, T8-1, Tank-8, Tank-4, and Tank-9.

Qualitatively, the HPLC chromatograms in many cases have some unidentified early eluting peaks which are not related to quinidine, quinine, or any of the other cinchona alkaloids.

DEPOSITION OF SAMPLES

On October 10, 1984, all samples were given to Al Kyles who is a representative of Enviro Sciences Inc.

Note: Due to the extreme rush to analyze these samples, limited precautions were taken to protect either GC or LC columns. Total replacement cost for columns is approximately \$960.


D.W. McKennon

DWM/hms
Attachment

100108

cc: R. Willis
R. Wohl
R. Milos
I. Cohen/Enviro Sciences Inc

<u>SAMPLE IDENTIFICATION</u>	<u>G.C. ANALYSIS*</u>		<u>L.C. ANALYSIS**</u>	
	<u>TOLUENE</u>	<u>PYRIDINE</u>	<u>QUINIDINE GLUCONATE</u>	<u>QUININE SULFATE</u>
S4-1	N/D	N/D	N/D	N/D
S4-2	N/D	N/D	N/D	N/D
S4-3	N/D	N/D	N/D	N/D
S4-4	N/D	N/D	N/D	N/D
S4-surface	N/D	N/D	N/D	N/D
D-1	N/D	920 ppm	452 ppm	82 ppm
D-2	N/D	507 ppm	96 ppm	N/D
D-3	N/D	N/D	N/D	N/D
D-4	N/D	N/D	N/D	N/D
D-5	N/D	3014 ppm	170 ppm	N/D
T8-1	694 ppm	N/D	274 ppm	101 ppm
T8-2	N/D	N/D	47 ppm	N/D
Tank-8	13,880 ppm	N/D	4050 ppm	1521 ppm
Tank-4	-	-	8227 ppm	2594 ppm
Tank-9	-	-	N/D	354 ppm
Tank-7	-	-	N/D	N/D
#4 Sample	-	-	N/D	N/D
#4-High Conc.	-	-	N/D	N/D

N/D = None Detected

*G.C. Reference Bk. 83-9, pp. 75-79, EGO

**L.C. Reference Bk. 83-11, pp. 22-30, MSM

APPENDIX B

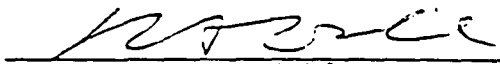
100110



To: W. C. Lumma
From: R. A. Wohl
Date: October 22, 1984
Subject: Soil Samples from Island Chemical Company

cc: A. Kyles/Enviro Sciences
D. W. McKennon*
R. Milos*
A. Rudzik*

Enclosed please find our Analytical Report (G. Rudd to W. B. Caldwell, dated October 19, 1984) on the three soil samples S4-1, 1' H-22 and 3' H-21. These three soil samples originating from Island Chemical Company were received from A. Kyles of Enviro Sciences, Inc. on Oct. 12, 1984.


R. A. Wohl

RAW:cj
Enclosure*

To: Dr. W. B. Caldwell

cc: W. Lumma
R. Wohl

From: G. Rudd

Date: October 19, 1984

Subject: Analysis of Soil Samples from Island Chemical by
Headspace Gas Chromatography

Three soil samples received 10/15/84 from the Island Chemical site were examined by headspace gas chromatography for the presence of toluene and pyridine. The results are listed in the table below. Chromatograms of the three samples are attached. The large peaks observed at the beginning of each chromatographic run are artifacts of the headspace experiment.

<u>Sample</u>	<u>Toluene, ppm</u>	<u>Pyridine, ppm</u>
S4-1	<0.2	<0.2
H-22 1'A	none detected ¹	none detected
H-21 3'B	none detected	1.2

(1) Limit of detection ca. 0.1 ppm

Quantitation was performed by standard addition (1ppm) to the sample and comparison to the unspiked sample.

Chromatography Conditions

A. Toluene

Column: 6' x 2mm glass packed with 80/100 Carbopack C/
0.1% SP-1000
Temperatures: Injector - 250°C Detector - 275°C
Oven - 1 min @ 100°C; 200°C @ 16°C/min
Carrier: Nitrogen, 22 ml/min
Detector: FID

B. Pyridine

Column: 4' x 2mm glass packed with 60/80 Carbopack B/
4% Carbowax 20M/0.8% KOH

Temperatures: Injector - 250°C Detector - 275°C
Oven - 130°C isothermal
Carrier: Helium, 30 ml/min
Detector: FID

Assay Procedure

5.0 grams of sample were placed in a 50 ml serum bottle that was sealed with a Teflon lined septum. The sealed serum bottle containing the sample was equilibrated at 90°C for 1-1.5 hours. With a previously heated gas tight syringe, 0.5 ml of the headspace volume from the serum bottle was withdrawn and quickly injected into the gas chromatograph.

Reference

McNeal, T. and Breder, C.V., JAOAC, 65, 184-187 (1982).

Notebook Reference

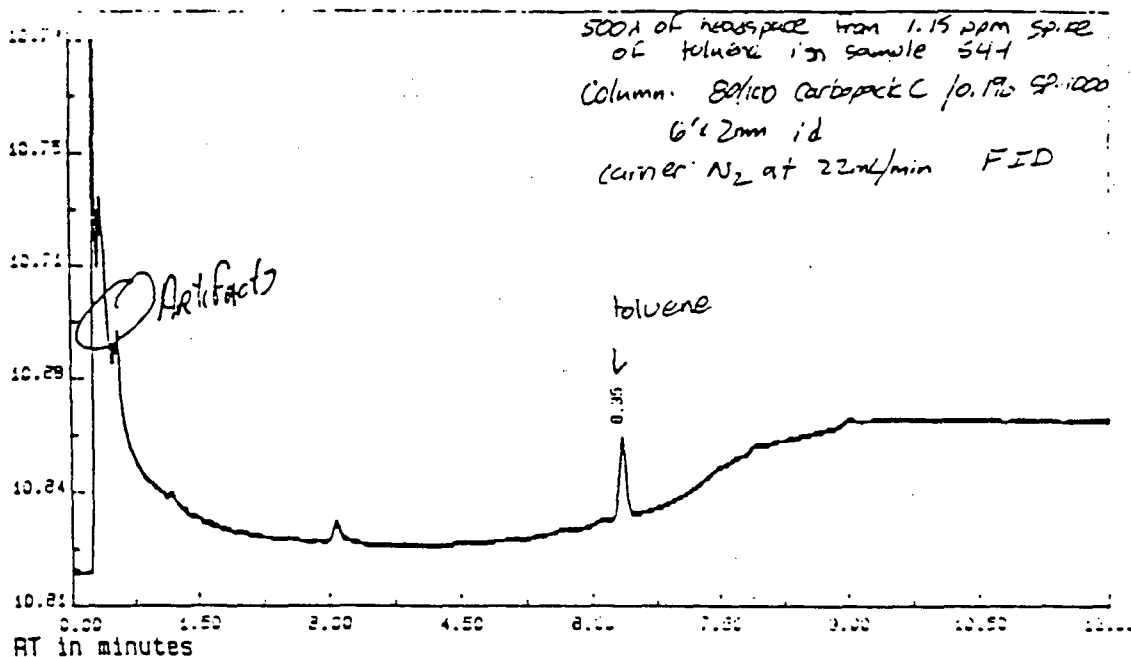
GIR-1-143-146



G. I. Rudd

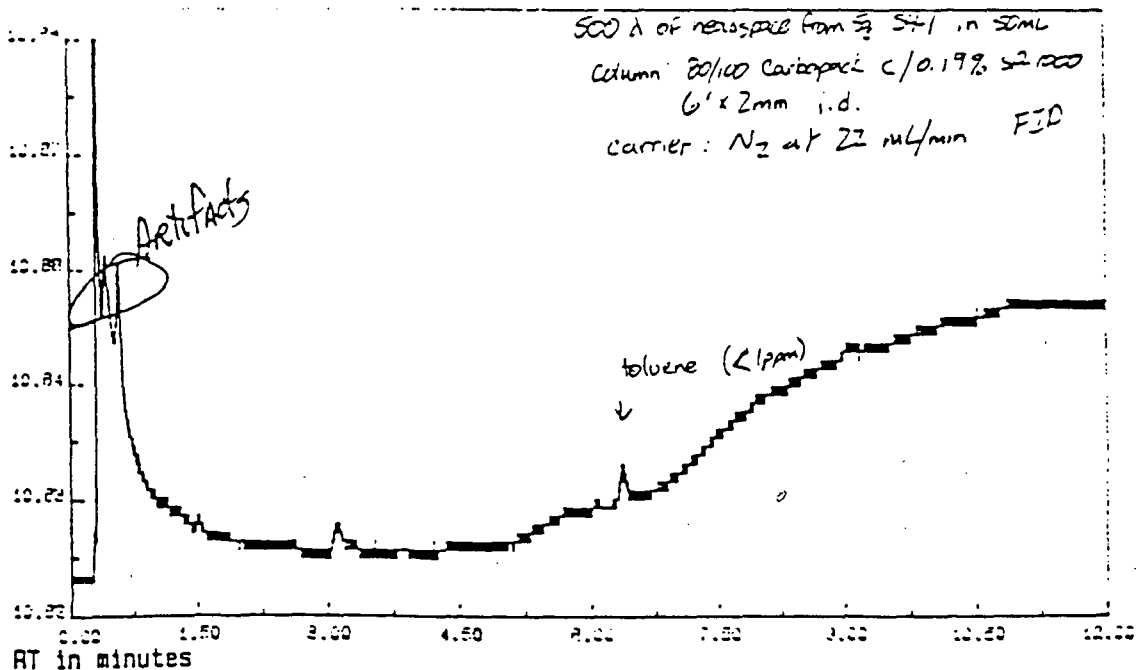
To:
From:
Date:
Subject:

AMPLITUDE/1000 (Enlarged x 2.0)



SAMPLE: 1.15PPM SPIK INJECTED AT 18: 47: 15 ON OCT 17, 1984
Meth: STD39 Raw: R39247 Proc: P39247

AMPLITUDE/1000 (Enlarged x 2.0)



SAMPLE: S4-1#2
Meth: STD39

INJECTED AT 19: 31: 42 ON OCT 17, 1984
Raw: R39249 Proc: P39249

100114

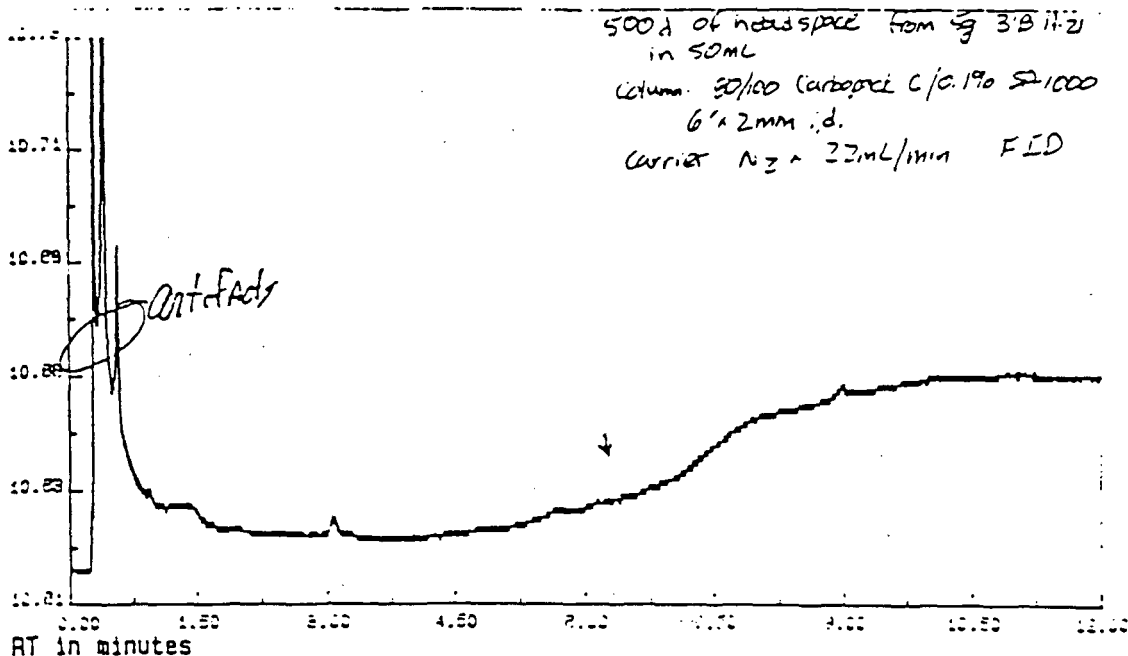
To:

From:

Date:

Subject:

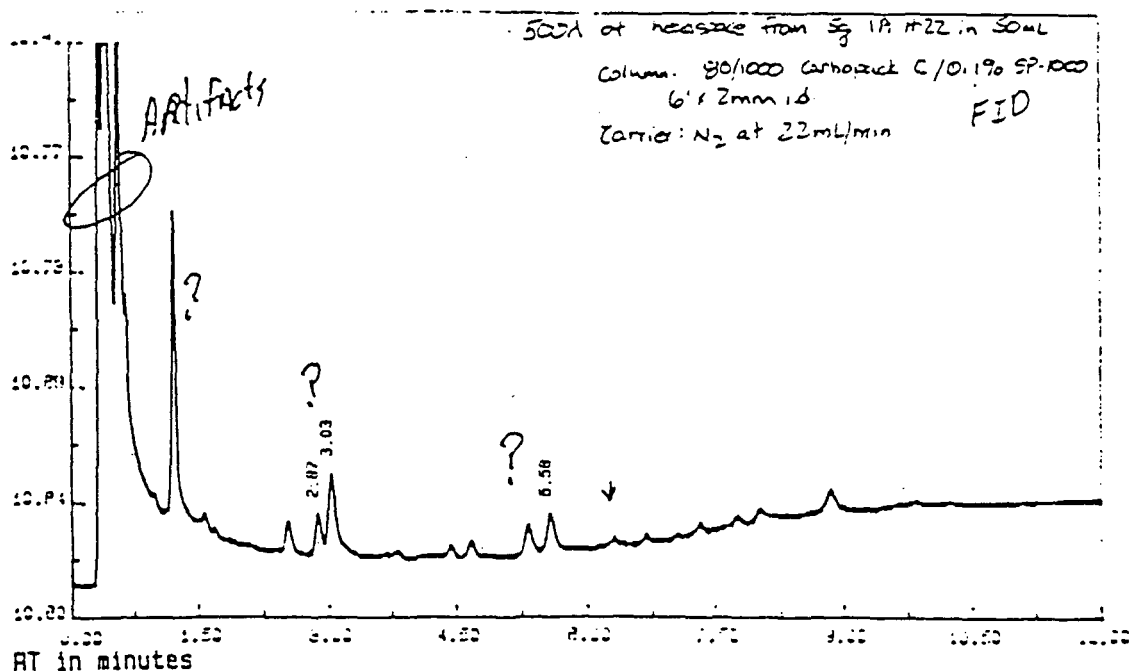
AMPLITUDE/1000 (Enlarged x 2.0)



SAMPLE: 3'B H21#2
 Meth: STD39

INJECTED AT 19:08:50 ON OCT 17, 1984
 Raw: R39248 Proc: P39248

AMPLITUDE/1000 (Enlarged x 2.0)



SAMPLE: 1A H-22
 Meth: STD39

INJECTED AT 16:41:55 ON OCT 17, 1984
 Raw: R39242 Proc: P39242

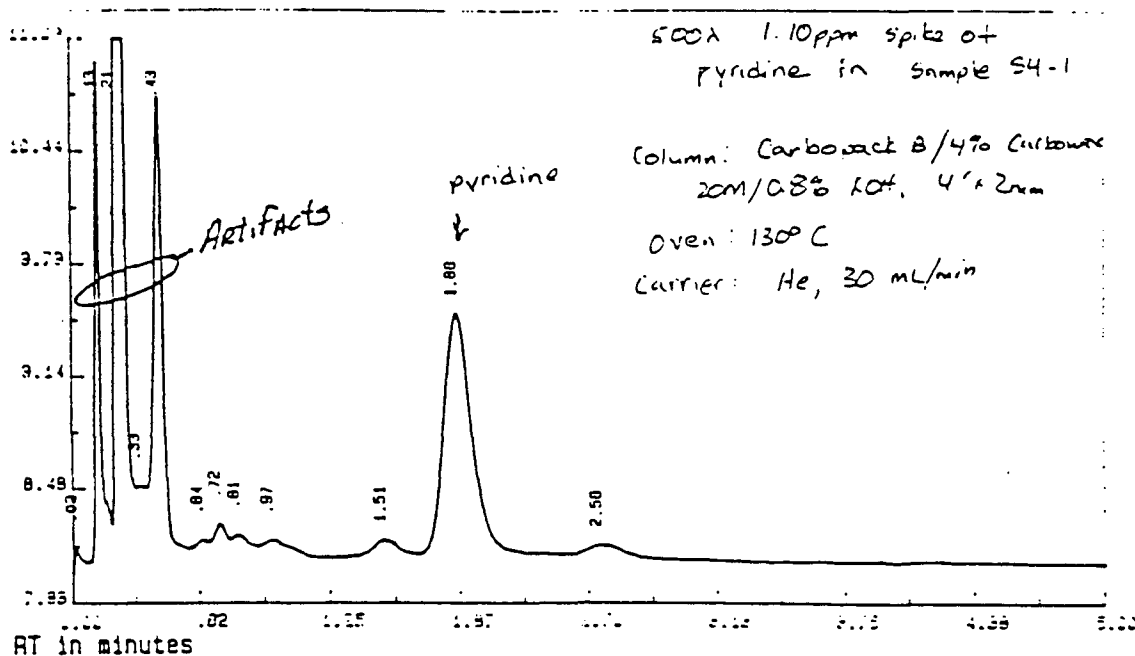
To:

From:

Date:

Subject:

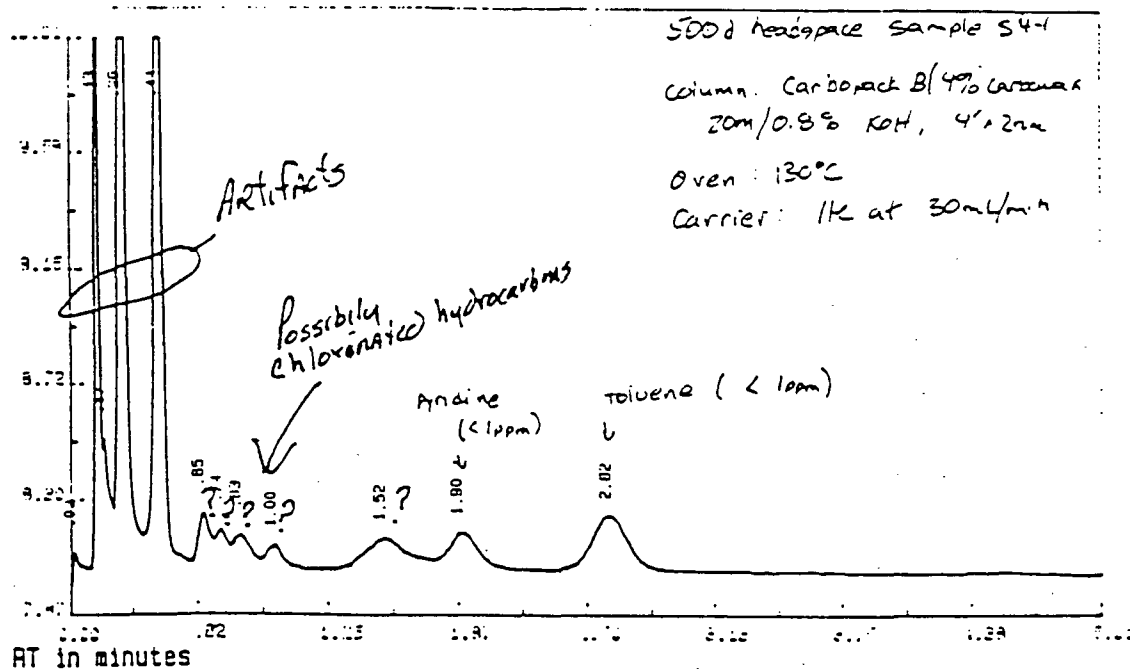
AMPLITUDE/1000 (Enlarged x 3.0)



SAMPLE:
Meth: GC42

INJECTED AT 9:08:35 ON OCT 19, 1984
Raw: R42867 Proc: P42867

AMPLITUDE/1000 (Enlarged x 3.0)



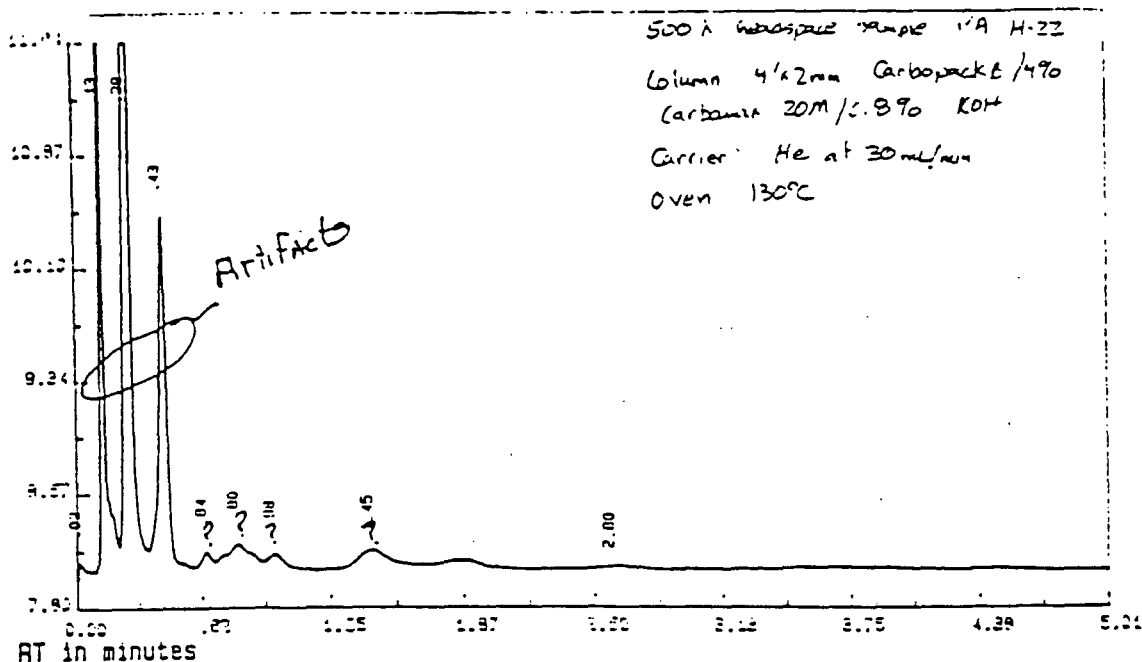
SAMPLE:
Meth: GC42

INJECTED AT 8:35:00 ON OCT 19, 1984
Raw: R42862 Proc: P42862

100116

To:
From:
Date:
Subject:

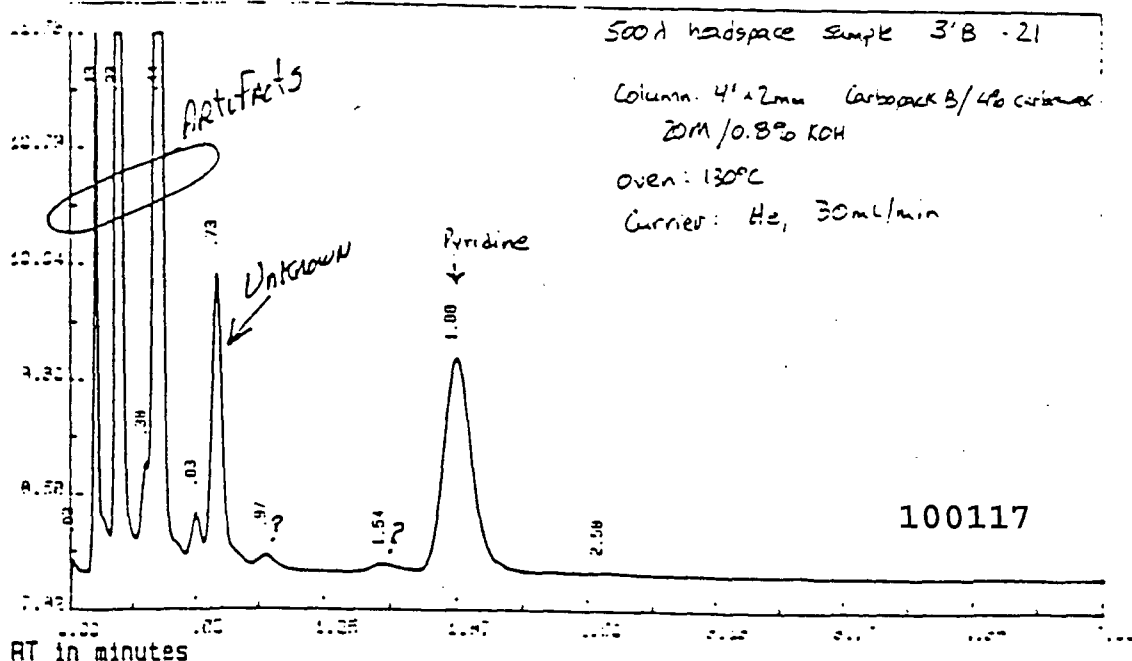
AMPLITUDE/1000 (Enlarged x 3.0)



SAMPLE:
Meth: GC42

INJECTED AT 8:41:40 ON OCT 19, 1984
Raw: R42863 Proc: P42863

AMPLITUDE/1000 (Enlarged x 3.0)



SAMPLE:
Meth: GC42

INJECTED AT 8:47:45 ON OCT 19, 1984
Raw: R42864 Proc: P42864

100117

APPENDIX C

100118



(G. M. H. file)



ENVIRO SCIENCES INC.

CHAIN OF CUSTODY RECORD

19 COPELAND RD., DENVILLE, NEW JERSEY 07834

Installation: <i>BERLEX LABS, INC.</i> <i>ISLAND CHEMICAL Co. INC.</i> <i>ST. CROIX, VIRGIN ISLANDS</i>		Samplers: (Signature) <i>Alan L. Kyle</i>				
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
1'B 20		18-19 Sept			X	1
4'B 4		"			X	1
3'B 13		"			X	1
4'B 21		"			X	1
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.) <i>Alan L. Kyle</i>		Date/Time	Rec'd for Laboratory by: <i>E. J. A.</i>		Date/Time <i>9/27/84 11:20p</i>	
Method of Shipment: <i>Delivered to Lab</i>						100119



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10 RANDOLPH, NEW JERSEY 07869 201 584 0330

State Certified Drinking Water/Wastewater Laboratory
J.D. 14136

HEADSPACE

Report Date: October 9, 1984

Lab. # 34624

VOLATILE ORGANICS BY PURGE AND TRAP GC/MS

Compounds detected in parts per million (milligrams/kilograms Dry Wgt. Basis)

SAMPLE SOURCE: ENVIRO SCIENCES

SAMPLE ID: 1' B Hole #20

SAMPLE DATE: Sept. 18-19, 1984

TAKEN BY: Alan L. Kyler AT LAB DATE: 9/27/84

CHLOROMETHANE.....	_____	1,2-DICHLOROPROPANE.....	_____
BROMOMETHANE.....	_____	c-1,3-DICHLOROPROPENE.....	_____
DICHLORODIFLUOROMETHANE.....	_____	t-1,3-DICHLOROPROPENE.....	_____
VINYL CHLORIDE.....	_____	TCE (TRICHLOROETHYLENE).....	_____
CHLOROETHANE.....	_____	DIBROMOCHLOROMETHANE.....	_____
METHYLENE CHLORIDE.....	_____	BENZENE.....	_____
ACETONE.....	_____	DIISOPROPYL ETHER.....	_____
TRICHLOROFLUOROMETHANE.....	_____	2-CHLOROETHYL VINYL ETHER.....	_____
1,1-DICHLOROETHYLENE.....	_____	HEXANE.....	_____
1,1-DICHLOROETHANE.....	_____	BROMOFORM.....	_____
t-1,2-DICHLOROETHYLENE.....	_____	1,1,2,2-TETRACHLOROETHANE.....	_____
CHLOROFORM.....	_____	PCE (TETRACHLOROETHYLENE).....	_____
FREON 113.....	_____	HEPTANE.....	_____
1,2-DICHLOROETHANE.....	_____	TOLUENE.....	<u>0.16</u>
t-BUTYL METHYL ETHER.....	_____	CHLOROBENZENE.....	_____
1,1,1-TRICHLOROETHANE.....	_____	ETHYLBENZENE.....	_____
CARBON TETRACHLORIDE.....	_____		
BROMODICHLOROMETHANE.....	_____		

For the above listed volatile pollutants, nothing detected at 0.01ppmsensitivity level.

X Other peaks detected. Fluorethyne * 0.45; 2-methylpropanol 0.20; pentane 0.01;

LT = Less than, GT=Greater than, ND=Not detected.

*NOTE: Possibly from plastic bag.

100120



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10 RANDOLPH, NEW JERSEY 07869 201 584 0330

State Certified Drinking Water/Wastewater Laboratory
1.1. 1412

HEADSPACE

Report Date: October 9, 1984

Lab. # 34625

VOLATILE ORGANICS BY PURGE AND TRAP GC/MS

Compounds detected in parts per million (milligrams/kilograms) Dry Wgt. Basis

SAMPLE SOURCE: ENVIRO SCIENCES

SAMPLE ID: 4' B Hole #4

SAMPLE DATE: Sept. 18-19, 1984

TAKEN BY: Alan L. Kyler AT LAB DATE: 9/27/84

CHLOROMETHANE.....
BROMOMETHANE.....
DICHLORODIFLUOROMETHANE.....
VINYL CHLORIDE.....
CHLOROETHANE.....
METHYLENE CHLORIDE.....
ACETONE.....
TRICHLOROFLUOROMETHANE.....
1,1-DICHLOROETHYLENE.....
1,1-DICHLOROETHANE.....
t-1,2-DICHLOROETHYLENE.....
CHLOROFORM.....
FREON 115.....
1,2-DICHLOROETHANE.....
t-BUTYL METHYL ETHER.....
1,1,1-TRICHLOROETHANE.....
CARBON TETRACHLORIDE.....
BROMODICHLOROMETHANE.....

1,2-DICHLOROPROPANE.....
c-1,3-DICHLOROPROPENE.....
t-1,3-DICHLOROPROPENE.....
TCE (TRICHLOROETHYLENE).....
DIBROMOCHLOROMETHANE.....
BENZENE.....
DIISOPROPYL ETHER.....
2-CHLOROETHYL VINYL ETHER.....
HEXANE.....
BROMOFORM.....
1,1,2,2-TETRACHLOROETHANE.....
PCE (TETRACHLOROETHYLENE).....
HEPTANE.....
TOLUENE.....
CHLOROBENZENE.....
ETHYLBENZENE.....

X For the above listed volatile pollutants, nothing detected at 0.01ppm sensitivity level.

X Other peaks detected. fluorethyne *0.38; 2-methyl propanol 0.16

LT = Less than, GT=Greater than, ND=Not detected. *NOTE: Possibly from plastic bag.

100121



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10 RANDOLPH NEW JERSEY 07869 201 584 0330

State Certified drinking water/wastewater Laboratory
100122

HEADSPACE

Report Date: October 9, 1984

Lab. # 34626

VOLATILE ORGANICS BY PURGE AND TRAP GC/MS

Compounds detected in parts per million (milligrams/kilograms) Dry Wgt. Basis

SAMPLE SOURCE: ENVIRO SCIENCES

SAMPLE ID: 3' B-Hole #13

SAMPLE DATE: Sept. 18-19, 1984

TAKEN BY: Alan L. Kyler AT LAB DATE: 9/27/84

CHLOROMETHANE.....	_____	1,2-DICHLOROPROPANE.....	_____
BROMOMETHANE.....	_____	c-1,3-DICHLOROPROPENE.....	_____
DICHLORODIFLUOROMETHANE.....	_____	t-1,3-DICHLOROPROPENE.....	_____
VINYL CHLORIDE.....	_____	TCE (TRICHLOROETHYLENE).....	_____
CHLOROETHANE.....	_____	DIBROMOCHLOROMETHANE.....	_____
METHYLENE CHLORIDE.....	_____	BENZENE.....	_____
ACETONE.....	_____	DIISOPROPYL ETHER.....	_____
TRICHLOROFLUOROMETHANE.....	_____	2-CHLOROETHYL VINYL ETHER.....	_____
1,1-DICHLOROETHYLENE.....	_____	HEXANE.....	_____
1,1-DICHLOROETHANE.....	_____	BROMOFORM.....	_____
t-1,2-DICHLOROETHYLENE.....	_____	1,1,2,2-TETRACHLOROETHANE.....	_____
CHLOROFORM.....	_____	PCE (TETRACHLOROETHYLENE).....	_____
FREON 113.....	_____	HEPTANE.....	_____
1,2-DICHLOROETHANE.....	_____	TOLUENE.....	_____
t-BUTYL METHYL ETHER.....	_____	CHLOROBENZENE.....	_____
1,1,1-TRICHLOROETHANE.....	_____	ETHYLBENZENE.....	_____
CARBON TETRACHLORIDE.....	_____		
BROMODICHLOROMETHANE.....	_____		

X For the above listed volatile pollutants, nothing detected at 0.01ppm sensitivity level.

X Other peaks detected. fluorethylene * 0.31; 2-methyl propanol 0.16

LT = Less than, GT=Greater than, ND=Not detected.

*NOTE: Possibly from plastic bag

100122



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10 RANDOLPH, NEW JERSEY 07869 201 584 0330

State Certified drinking water/wastewater Laboratory
J.E. 14116

HEADSPACE

Report Date: October 9, 1984

Lab. # 34627

VOLATILE ORGANICS BY PURGE AND TRAP GC/MS

Compounds detected in parts per million (milligrams/kilograms) Dry Wgt. Basis

SAMPLE SOURCE: ENVIRO SCIENCES

SAMPLE ID: 41 B Hole 21

SAMPLE DATE: Sept. 18-19, 1984

TAKEN BY: Alan L. Kyler AT LAB DATE: 9/27/84

CHLOROMETHANE.....
BROMOMETHANE.....
DICHLORODIFLUOROMETHANE.....
VINYL CHLORIDE.....
CHLOROETHANE.....
METHYLENE CHLORIDE.....
ACETONE.....
TRICHLOROFLUOROMETHANE.....
1,1-DICHLOROETHYLENE.....
1,1-DICHLOROETHANE.....
t-1,2-DICHLOROETHYLENE.....
CHLOROFORM.....
FREON 113.....
1,2-DICHLOROETHANE.....
t-BUTYL METHYL ETHER.....
1,1,1-TRICHLOROETHANE.....
CARBON TETRACHLORIDE.....
BROMODICHLOROMETHANE.....

1,2-DICHLOROPROPANE.....
c-1,3-DICHLOROPROPENE.....
t-1,3-DICHLOROPROPENE.....
TCE (TRICHLOROETHYLENE).....
DIBROMOCHLOROMETHANE.....
BENZENE.....
DIISOPROPYL ETHER.....
2-CHLOROETHYL VINYL ETHER.....
HEXANE.....
BROMOFORM.....
1,1,2,2-TETRACHLOROETHANE.....
PCE (TETRACHLOROETHYLENE).....
HEPTANE.....
TOLUENE.....
CHLOROBENZENE.....
ETHYLBENZENE.....

X For the above listed volatile pollutants, nothing detected at 0.01 ppm sensitivity level.

X Other peaks detected. fluorethyne* 0.06; 2-methyl propanol 0.47, 2-methyl-1-heptene 0.21;

pyridine 0.02

LT = Less than, GT=Greater than, ND=Not detected.

NOTE: *Possibly from plastic bag.

100123

APPENDIX D

100124



November 12, 1984

30850-145
ENVIRO-SCIENCES, INC.
19 Copeland Road
Denville, New Jersey 07834

Attention: Mr. Irv Cohen

PURPOSE

Nine (9) soil samples were submitted to York Laboratories for determination of toluene and pyridine on a quantitative basis. Other compounds found in the samples were also indentified and are reported on a semi-quantitative basis. The samples were also analyzed for oil and grease.

METHODOLOGIES

The samples were analyzed for toluene using the dynamic headspace Gas Chromatograph/Mass Spectrometry method in accordance with Chemical Analysis of Sediments and Elutriate Testing, EPA 1979. A Tekmar Model LSC-3 Purge and Trap interfaced with an HP 5995C GC/MS/DS were used for the analysis.

The samples were analyzed for pyridine and oil and grease in accordance with EPA/CE-81-1 Procedures for Handling and Chemical Analysis of Sediments and Water Samples, May 1981. An HP 5995C GC/MS/DS was used for the pyridine analysis.

RESULTS

The results are listed in the following tables.

Prepared by: Gail D Sprio
Gail D. Sprio
Senior Chemist

Approved by: Jeffrey C. Curran
Jeffrey C. Curran
Chief Chemist

GDS/JCC/mz

100125

TABLE 1
 ENVIRO-SCIENCES, INC.
TOLUENE AND PYRIDINE RESULTS

<u>Sample Identification</u>	<u>Toluene ug/kg (ppb)</u>	<u>Pyridine ug/kg (ppb)</u>
20 Septic (Auger)	540	<1,000
20 A-2'	690	<1,000
21 A-2'	15	<1,000
21 A-4'	43	<1,000
25 - 2'	210	13,000
27 - 2'	16	26,000
32 - 2'	15	43,000
35 - 4'	8	<1,000
36 - 2'	7	<1,000

100126

TABLE 2
ENVIRO-SCIENCES, INC.

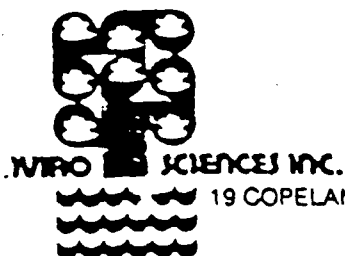
<u>Sample Identification</u>	<u>Compounds Found</u>	<u>Concentration*</u> <u>(ug/kg)</u>
20 Septic (Auger)	1,1-methylene bis-benzene	8,400
	diphenyl methanone	64,000
	methylene chloride	<5 (1.5)
	chloroform	12
	benzene	<5 (0.5)
20 A - 2'	methylene chloride	<5 (2.3)
	chloroform	5
	benzene	<5 (0.9)
	ethyl benzene	68
	total xylenes	600
21 A - 2'	methylene chloride	<5 (2.4)
	chloroform	<5 (3.8)
	trichloroethylene	<5 (0.8)
	benzene	<5 (0.6)
	tetrachloroethylene	<5 (0.9)
	ethyl benzene	7
21 A - 4'	methylene chloride	<5 (2.2)
	chloroform	<5 (2.6)
	benzene	<5 (0.4)
25 - 2'	methylene chloride	<5 (1.7)
	chloroform	5
	benzene	<5 (0.4)
27 - 2'	methylene chloride	<5 (2.2)
	chloroform	19
	benzene	<5 (0.6)
32 - 2'	methylene chloride	<5 (4.4)
	chloroform	<5 (4.2)
	1,1,1-trichloroethane	<5 (0.8)
	benzene	<5 (0.8)
35 - 4'	methylene chloride	<5 (2.4)
	chloroform	13
	1,1,1-trichloroethane	11
	benzene	<5 (0.4)
36 - 2'	methylene chloride	<5 (1.6)
	chloroform	<5 (1.4)
	benzene	<5 (0.2)

*Results are reported on a semi-quantitative basis.

100127

ATTACHMENT B

100128



19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

Mr. Robert Harris
USEPA Region II
26 Federal Plaza
New York, NY 10007

Dear Mr. Harris:

Enclosed is the addendum to the progress report submitted to Mr. Conrad Simon in December. I hope that the information therein will answer the questions and concerns expressed by you during our numerous telephone conversations.

Please review this information as soon as you can. If you have any question, please contact me at 201-366-6256.

I sincerely appreciate your help during the past several months.

Very truly yours,

ENVIRO-SCIENCES, INC.

Alan Kyles, Ph.D.
Vice President

AK/po

Enclosure

100129



ENVIRO SCIENCES INC.

19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

April 2, 1985

Mr. Conrad Simon
USEPA Region II
26 Federal Plaza
New York, NY 10007

Reference: Island Chemical Company, Inc., St. Croix Virgin Islands

Dear Mr. Simon:

Enclosed is an addendum to the progress report submitted to you in December for Island Chemical Company, Inc. (Berlex), St. Croix, Virgin Islands. Enviro Sciences, Inc. (ESI) has prepared this addendum as the result of numerous telephone conversations with Mr. Robert Harris of your office. The enclosure addresses questions which were raised by Mr. Harris in his efforts to fully understand ESI's efforts to cleanup toluene and pyridine spills at the facility.

It is our hope that the addendum will help your staff to grant ESI the necessary permits to pursue the cleanup in an orderly and timely manner.

If you have any questions concerning the addendum or desire a meeting with ESI, please contact me immediately.

Very truly yours,

ENVIRO-SCIENCES, INC.

Alan L. Kyles, Ph.D.
Vice President

ALK/po

Enclosure

cc: Mr. Robert Harris, USEPA Region II
Mr. Robert Milos, Berlex
Mr. Frank Curtis, Berlex

100130

ADDENDUM TO
PROGRESS REPORT

ISLAND CHEMICAL COMPANY, INC. (BERLEX)

ST. CROIX, VIRGIN ISLANDS

Enviro-Sciences, Inc.
19 Copeland Road
Denville, New Jersey 07834
(201) 366-6256
April 4, 1985

100131



ADDENDUM
PROGRESS REPORT

Island Chemical Company, Inc. (Berlex)
St. Croix, Virgin Islands

Progress Report Summary

The Progress Report for Island Chemical Company, Inc. (Berlex) located in St. Croix, Virgin Islands denoted the finding of soil contamination and proposed to cleanup the contamination on-site instead of exportation off-island to a certified landfill. Proposed cleanup methodology includes the air drying of toluene laden soil which is presently stored at the facility in drums and degradation of pyridine laden soil while in place by exposure to ambient air through soil manipulation and prevention of soil saturation by rainfall.

Background Information

The facility is located on the island's south side and near the west end (Figure 1) at Latitude 17 42'26" and Longitude 64 47'25". It is situated approximately 6.1 miles equidistant from the two major towns: Frederiksted to the west and Christiansted to the east. Facility access is via Route 66 which traverses the island east and west. As seen in Figure 2, it is about 0.5 miles north of Alexander Hamilton Airport.

Elevation is approximately 40 feet mean sea level. An intermittent stream which originates near the north side of the island and empties into the Caribbean Sea on the south side borders the north side of the property. Flow occurs generally during the wet season (September through December) and only during heavy runoff (Table 1). The lower portion of the drainage lying beyond the facility is flowing and is utilized as sewage outfall.

Wind direction is from the east and southeast (trade winds) with velocities ranging from 5-15 miles per hour.

Closest residences are located about 0.1 miles east of and upwind of the facility.

As shown in Figure 3, the facility is situated on soils of the Coamo Series. These are gently sloping, well drained soils which occur as alluvial fans and terraces. They formed in sediments derived from volcanic and limestone rocks. They range in texture from clay to sand. The upper layer is typically grayish-brown clay loam which is underlain by numerous layers of yellowish-brown clay and clay loam. Permeability is slow to moderate, and the shrink-swell potential is



moderate. These soils are commonly associated with San Anton, Glynn and Fraternidad soils.

Potable water for distribution is supplied from both ground water (30 percent) and desalted water (70 percent). However, the island is very dependent on storage (cisterns) to cope with water demands. Most private dwellings have their own roof/cistern systems for water supply. There are eight major well fields on St. Croix and they are located as shown in Figure 4. The quality is generally poor due to mineralization and oil contamination from pump lubrication. These contaminants are often pumped into the supply system.

The location of the three closest well fields in relation to the facility are shown in Figure 5. The three fields contain 14 of the 37 total well field wells.

Field Study Results

The original field investigation detected contamination in four locations (Figure 6):

- 1) along trench number 4, under concrete slab number 3;
- 2) between tanks numbered 8 and 9;
- 3) along trench number 9; and
- 4) under the concrete surfaced loading dock.

Analysis indicated that areas 1 and 2 above were primarily contaminated with toluene. As stated earlier, the toluene contaminated areas were cleaned and the contaminated soil placed in drums (25) and stored in the facility's warehouse. The pyridine contamination is still in place.

Based upon analytical results (see Progress Report) the pounds of contamination were calculated as follows:

Soil in Drums

<u>Contamination Concentration</u>		<u>Soil (Tons)</u>
10,000 ppm	x	4.5 Tons = 99 lbs.
1,000 ppm	x	9.0 Tons = 198 lbs.

Soil Under Concrete Pad (60' x 35-foot area)

<u>Contamination Concentration</u>		<u>Soil (Tons)</u>
9000 ppb	x	6,000 tons = 119 lbs. Pyridine
300 ppb	x	6,000 tons = 4 lbs. Toluene

Cleanup Procedures

ESI proposes to clean the contaminated soil using the following



methodology:

Toluene contaminated soil will be placed on trays in a dryer which is at the facility. The location is shown in Figure 7. Prior to beginning the drying operation, calculations will be made using the fan speed, oven temperature, and stack diameter to insure that emission rates for toluene do not exceed 200 ppm TLV. This concentration in air is not flammable. If calculations show that this control rate is marginal, then a carbon pot will be added to insure this limit will not be exceeded. In addition, soils with low and high toluene concentration may be mixed so that the drying operation is uniform. All emptied drums will be washed with a non-phosphate detergent, rinsed with tap water and air dried. Drum washings will be collected and later evaporated in the dryer. These same drums will be used to containerize the air-dried soil until laboratory analysis indicates that it is free of toluene or has very low concentrations. During the drying operation, samples of dried soil will be taken and sent to a certified state-side laboratory for toluene analysis. If the soil is found to be free of toluene or at very low levels (acceptable level to be determined later), it will be distributed on site.

During the handling of contaminated soil, protective clothing and an appropriate breathing apparatus will be used by all personnel (the breathing apparatus used is discussed later).

The pyridine contaminated area will require rerouting existing laboratory discharges to a self-contained unit (probably 250-500 gallon stainless steel vessel) and providing portable toilets in place of existing restroom facilities. These changes will eliminate sources of water which are presently entering the contaminated area and would prevent the degradation of pyridine.

The pyridine contaminated area will be prepared as follows:

1. A structure will be built over the area which will be exposed to prevent soil saturation from rainfall.
2. The concrete will be cut and removed using a backhoe. The concrete will be hauled to a landfill, or used to stabilize the bank along the dry river bed. The Department of Public Works will be contacted for permission to do the latter.
3. The soil will be tilled using a backhoe at 2 - 3 day intervals. Soil turning will allow exposure of the contaminated soil to ambient air.

The release of pyridine and minor amounts of toluene to the ambient air cannot be controlled. However, the interval between the soil turning can be lengthened to decrease the release rate.

Samples will be taken at the beginning of the cleanup operation and continue at weekly intervals until acceptable pyridine contamination levels are reached. It is expected that this level will approach a very low level rather quickly, since half-life is about seven days.

During all phases of cleanup, workers will be provided protective clothing and a breathing apparatus.

As mentioned earlier, sampling will occur on a weekly basis beginning when the area is fully exposed. Samples will be taken at 3 to 4 locations from three different levels: surface, mid-depth and bottom. In addition, one sample will be taken from the clay layer underlaying the contaminated area. All samples will be sent state-side to a certified laboratory for analysis.

When the pyridine level has decreased to zero or an acceptable level, the area will be restored and resurfaced according to the owner's requirements. The existing septic system will be used as is, replaced in the same location or relocated elsewhere on the property. All laboratory effluent will be containerized until plans are made by the owner for disposal. Disposal procedures under consideration include sewerage, pretreatment and sewerage, or disposal in accordance with St. Croix Island authoratative guidelines.

Safety Procedures

To ensure the health of all personnel involved in the cleanup procedures, disposable protective clothing, including shoe coverings and hats will be provided. The breathing apparatus will be NIOSH approved masks with filters for organic vapors, acid gases and dust. The Scott part numbers and descriptions are listed below:

Respirator (half face)	TC-23C-174
Cartridge	642-0A
Dust Filter	642-F
Dust Filter Holder	642-FR

Monitoring

The program will be monitored by weekly sampling and analysis. Samples will be taken by ESI personnel or qualified persons presently on site.

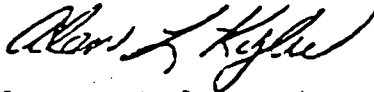
Project Timing

The cleanup of pyridine using the above described degradation procedures requires that water is prevented from entering the exposed area. This will be facilitated by rerouting of laboratory effluent, supplying portable toilets, and construction of an overhead shelter. This concept is further enhanced by conducting cleanup operations during May and June when rainfall is minimal. It is expected that the pyridine contamination can be cleaned in 30 - 45 days. The drying of

We would appreciate your timely review of this request and a determination as to the disposal location of each item listed above. I will contact you next week as to your progress. If you have any question, please call me collect at 919/499-5182.

Very truly yours,

ENVIRO-SCIENCES, INC.



Alan L. Kyles, PhD.
Vice President

AK/po (AK-85225)

cc: Mr. Greg Rhymers
Dept. Conservation & Cultural Affairs
P.O. Box 4399
St. Thomas, U.S.V.I. 00801





INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

Data Sheet 1

NJDEP Certified Drinking Water/
Wastewater Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 42882

CLIENT: ENVIRO SCIENCES, INC

SAMPLE SOURCE: ICC (BERLEX). PROJECT

SAMPLE ID: Drain Line #1

SAMPLE DATE: 6/7/85

SAMPLED BY: A. Kyles

AT LAB DATE: 6/18/85

SOIL SAMPLE
LABORATORY ANALYSIS
REPORT

Identification of Black Soil:

<u>Parameter</u>	<u>Result</u>
Benzene -----	<u>0.10</u>
Toluene -----	<u>235</u>
Ethylbenzene -----	<u>0.25</u>
M-Xylene -----	<u>0.33</u>
O,P-Xylene -----	<u>0.27</u>

Sample has "Toluene like" or solvent odor.

UNKNOWN PEAKS

R.T. 6.89 at 40 mg/kg

R.T. 30.81 at 2 mg/kg

All results reported in mg/kg.

We thank you for this opportunity to serve you. If you have any questions,
please do not hesitate to call.

INDUSTRIAL CORROSION MANAGEMENT, INC.

Edwin Tichenor
Vice President

ET/jmg

cl.

Less Than

100137



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RAMBOLPH, NEW JERSEY 07049 201-584-0330

SOIL SAMPLE

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: July 31, 1985

LAB # 42881

CLIENT: ENVIRO SCIENCE - ICC (Berlex)

SAMPLE ID: Drain Line #2

SAMPLE DATE: 6/7/85

SAMPLED BY: A. Kyles

AT LAB DATE: 6/18/85

VOLATILE ORGANICS BY PURGE AND TRAP
By GC BTX/HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE	X
BROMOMETHANE	X
VINYL CHLORIDE	X
CHLOROETHANE	X
METHYLENE CHLORIDE	1,240
ACETONE	X
1,1-DICHLOROETHYLENE	X
1,1-DICHLOROETHANE **	X
t-1,2-DICHLOROETHYLENE	X
CHLOROFORM	68
1,2-DICHLOROETHANE	X
t-BUTYL METHYL ETHER	X
1,1,1-TRICHLOROETHANE	X
CARBON TETRACHLORIDE	10
BROMODICHLOROMETHANE	X
1,2-DICHLOROPROPANE	X

*[c-1,3-DICHLOROPROPENE	X
t-1,3-DICHLOROPROPENE	X
TCE (TRICHLOROETHYLENE)	X
*[1,1,2-TRICHLOROETHANE	X
DIBROMOCHLOROMETHANE	X
BENZENE	X
DIISOPROPYL ETHER	X
2-CHLOROETHYL VINYL ETHER	X
BROMOFORM	X
1,1,2,2-TETRACHLOROETHANE	X
PCE (TETRACHLOROETHYLENE)	X
TOLUENE	5,600
CHLOROBENZENE	X
ETHYLBENZENE	9
M-XYLENE	X
*[O-XYLENE	X
P-XYLENE	X

*Compounds co-elute (could be either material).

LT=Less Than, GT=Greater Than
dwb=Dry Weight Basis. X=Not Detected

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of:

X Unknown peaks detected (retention time, estimated amount): Xylenes ---18; 10 unknown hydrocarbon peaks ranging from 2 to 10 mg/kg.

NOTE: Compound Identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichenor, Vice President

100138

Data Sheet 2



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-384-0330

SOIL SAMPLE

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: July 31, 1985

LAB # 42889

SAMPLE ID: Dryer

CLIENT: ENVIRO SCIENCE ICC (Berlex)

SAMPLE DATE: 6/14/85

SAMPLED BY: A. Kylea

AT LAB DATE: 6/18/85

VOLATILE ORGANICS BY PURGE AND TRAP
By GC BTEX/HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE	X
BROMOMETHANE	X
VINYL CHLORIDE	X
CHLOROETHANE	X
METHYLENE CHLORIDE	X
ACETONE	X
1,1-DICHLOROETHYLENE	X
1,1-DICHLOROETHANE **	X
t-1,2-DICHLOROETHYLENE	4.0
CHLOROFORM	340
1,2-DICHLOROETHANE	4.2
t-BUTYL METHYL ETHER	X
1,1,1-TRICHLOROETHANE	X
CARBON TETRACHLORIDE	X
BROMODICHLOROMETHANE	X
1,2-DICHLOROPROPANE	X

*Compounds co-elute (could be either material).

LT=Less Than, GT=Greater Than
dwb=Dry Weight Basis. X=Not Detected

*[c-1,3-DICHLOROPROPENE	X
t-1,3-DICHLOROPROPENE	
TCE (TRICHLOROETHYLENE)	X
*[1,1,2-TRICHLOROETHANE	X
DIBROMOCHLOROMETHANE	
BENZENE	6.6
DIISOPROPYL ETHER	X
2-CHLOROETHYL VINYL ETHER	X
BROMOFORM	X
1,1,2,2-TETRACHLOROETHANE	X
PCE (TETRACHLOROETHYLENE	X
TOLUENE	4,000
CHLOROBENZENE	X
ETHYLBENZENE	16.1
M-XYLENE	17.7
*[O-XYLENE	15.1
P-XYLENE	

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of: 1 mg/kg dwb.

Unknown peaks detected (retention time, estimated amount):

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichenor, Vice President

100139

Data Sheet 3



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 43747

CLIENT: ENVIRO SCIENCES, INC. - ICC (BERLEX) PROJECT

SAMPLE ID: Dryer

SAMPLE DATE: 7/1/85

SAMPLED BY: Enviro Sciences

AT LAB DATE: 7/11/85

VOLATILE ORGANICS BY PURGE AND TRAP
GAS CHROMATOGRAPHY / HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE-----	X	1,2-DICHLOROPROPANE-----	X
BROMOMETHANE-----	X	*c-1,3-DICHLOROPROPENE-----	X
VINYL CHLORIDE-----	X	t-1,3-DICHLOROPROPENE-----	X
CHLOROETHANE-----	X	TCE (TRICHLOROETHYLENE)-----	X
METHYLENE CHLORIDE-----	X	*1,1,2-TRICHLOROETHANE-----	X
ACETONE-----	7	DIBROMOCHLOROMETHANE-----	X
1,1-DICHLOROETHYLENE-----	X	BENZENE-----	X
1,1-DICHLOROETHANE **-----	X	DIISOPROPYL ETHER-----	X
t-1,2-DICHLOROETHYLENE-----	X	2-CHLOROETHYL VINYL ETHER-----	X
CHLOROFORM-----	X	BROMOFORM-----	X
1,2-DICHLOROETHANE-----	X	1,1,2,2-TETRACHLOROETHANE-----	X
t-BUTYL METHYL ETHER-----	X	PCE (TETRACHLOROETHYLENE)-----	X
1,1,1-TRICHLOROETHANE-----	X	TOLUENE-----	0.41
CARBON TETRACHLORIDE-----	X	CHLOROBENZENE-----	X
BROMODICHLOROMETHANE-----	X	ETHYLBENZENE-----	X

*Compounds co-elute (could be either material).

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

LT=Less Than dwb=Dry Weight Basis.

GT=Greater Than X=Not Detected

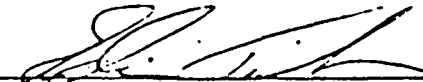
For the above listed Volatile Pollutants, nothing detected at a sensitivity level of _____ mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) numerous other hydrocarbon peaks, 0.02 to 0.1 mg/kg

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

ET/

INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor, Vice President



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 43752

CLIENT: ENVIRO SCIENCES, INC. - ICC (BERLEX) PROJECT

SAMPLE ID: Dryer

SAMPLE DATE: 7/1/85

SAMPLED BY: Enviro Sciences

AT LAB DATE: 7/11/85

VOLATILE ORGANICS BY PURGE AND TRAP
GAS CHROMATOGRAPHY / HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE	X
BROMOMETHANE	X
VINYL CHLORIDE	X
CHLOROETHANE	X
METHYLENE CHLORIDE	X
ACETONE	2.0
1,1-DICHLOROETHYLENE	X
1,1-DICHLOROETHANE **	X
t-1,2-DICHLOROETHYLENE	X
CHLOROFORM	X
1,2-DICHLOROETHANE	X
t-BUTYL METHYL ETHER	X
1,1,1-TRICHLOROETHANE	X
CARBON TETRACHLORIDE	X
BROMODICHLOROMETHANE	X

*Compounds co-elute (could be either material).

LT=Less Than dwb=Dry Weight Basis.

GT=Greater Than X=Not Detected

1,2-DICHLOROPROPANE	X
*[c-1,3-DICHLOROPROPENE	X
t-1,3-DICHLOROPROPENE	X
TCE (TRICHLOROETHYLENE)	X
*[1,1,2-TRICHLOROETHANE	X
DIBROMOCHLOROMETHANE	X
BENZENE	X
DIISOPROPYL ETHER	X
2-CHLOROETHYL VINYL ETHER	X
BROMOFORM	X
1,1,2,2-TETRACHLOROETHANE	X
PCE (TETRACHLOROETHYLENE)	X
TOLUENE	1.5
CHLOROBENZENE	X
ETHYLBENZENE	X

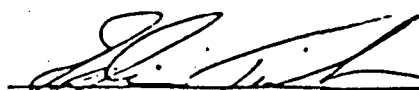
**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of _____ mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) 34.07 @ 15 mg/kg

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor, Vice President

100141

Sheet 5

toluene ladened soils will be ongoing during this time period.

Summary

Over 6,000 tons (estimated) of soil has to be cleansed of about 245 pounds of hazardous materials (125 lbs. of toluene; 120 lbs. of pyridine). ESI proposes to clean the soil on site since proper equipment is available, the materials are conducive to on site cleanup, and the total amount is rather small (245 lbs.). Release of these materials to ambient air will not have an adverse effect on nearby residence (0.1 miles away) since the release rate will be low, 5 - 15 mile per hour winds are normally present, and nearby residents are upwind from the facility. Safety precautions will be employed during all phases of the operation.

It is the contention of Berlex and ESI that the above described cleanup procedures are the most cost effective and efficient methods which can be utilized.

Literature Sources Consulted

Black, Crow, and Eidsness, Inc. 1976. A Water Management Plan for St. Croix, U.S. Virgin Islands. Project No. 540-72-51.

Department of Conservation and Cultural Affairs. 1983. Comprehensive Water Resources Management Plan for the U.S. Virgin Islands.

Environmental Research and Technology, Inc. 1984. The Land Treatability of Appendix VIII Constituents Present in Petroleum Industry Wastes. API Publication 4379. Washington, D.C.

1983. Land Treatment Practices in the Petroleum Industry. American Petroleum Institute, Washington, D.C.

Soil Conservation Service. 1970. Soil Survey; Virgin Islands of the United States. USDA. Washington, D.C.



TABLE I TEMPERATURE AND PRECIPITATION
[Data from Alexander Hamilton Field, St. Croix]

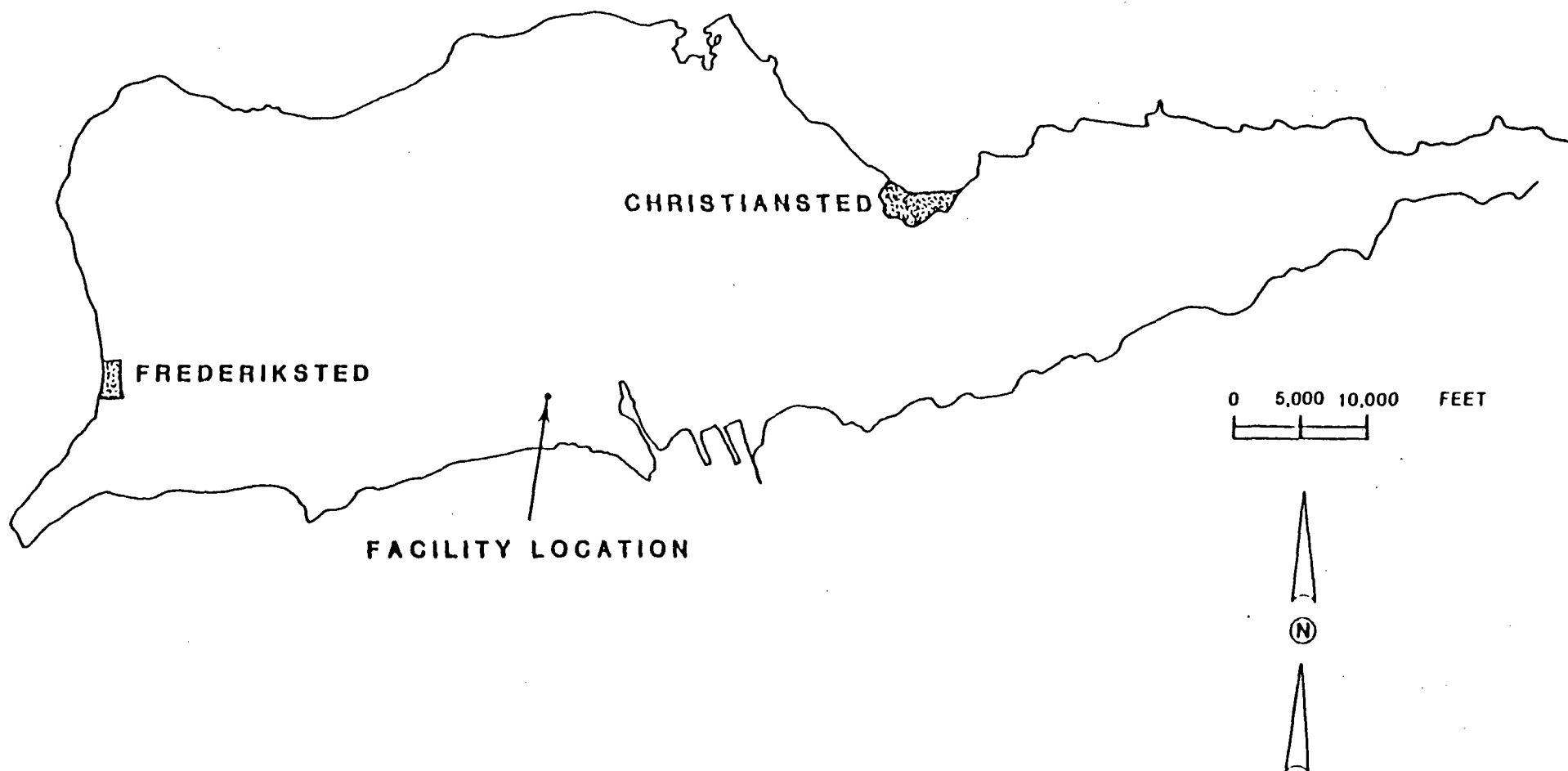
Month	Temperature				Precipitation			Average number of days with more than one-tenth of an inch of rainfall
	Average daily maximum	Average daily minimum	Average maximum	Average minimum	Average total	One year in 10 will have--		
						Less than--	More than--	
	<u>°F.</u>	<u>°F.</u>	<u>°F.</u>	<u>°F.</u>	<u>In.</u>	<u>In.</u>	<u>In.</u>	
January----	83	70	86	65	2.23	0.50	7.2	5
February----	83	70	86	66	2.19	.44	5.8	6
March-----	84	71	86	66	1.73	.40	4.6	4
April-----	86	73	88	68	2.83	.55	7.6	6
May-----	86	74	89	70	4.31	.60	8.2	8
June-----	88	76	90	71	3.10	.58	6.0	9
July-----	88	76	90	71	3.51	.80	6.6	8
August-----	89	76	91	72	4.58	1.20	8.8	9
September---	88	75	91	71	6.65	2.20	11.0	10
October----	88	75	90	70	5.45	1.60	10.2	8
November---	86	73	89	68	4.65	1.20	9.0	9
December---	84	72	¹ 87	² 67	3.34	1.00	8.6	9
Year-----	86	73	¹ 92	² 64	44.57	34.00	53.8	91

¹Average annual highest temperature.

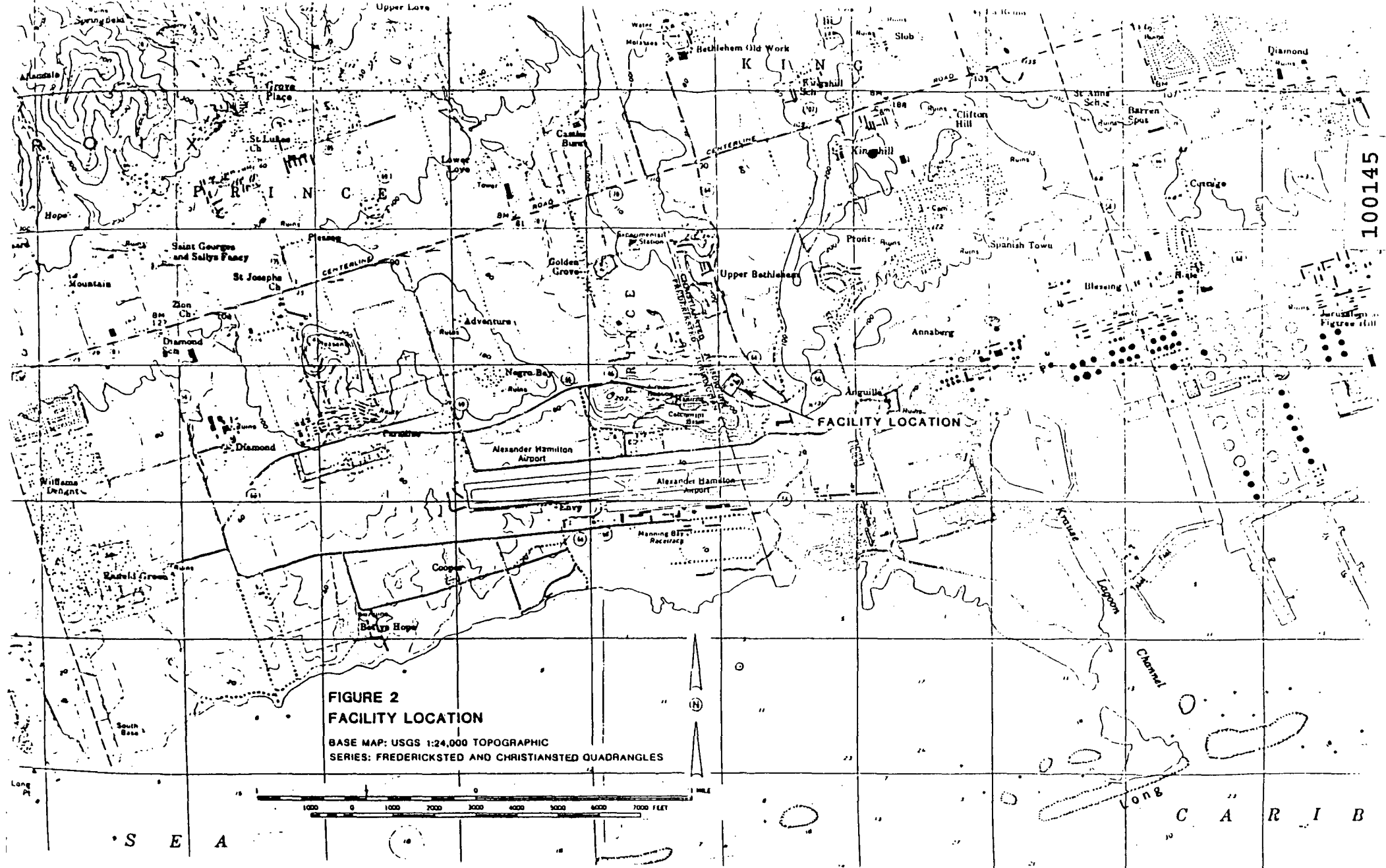
²Average annual lowest temperature.

FIGURE 1

FACILITY LOCATION MAP



SOURCE: COMPREHENSIVE WATER RESOURCES
MANAGEMENT PLAN FOR THE UNITED
STATES VIRGIN ISLANDS, 1983.



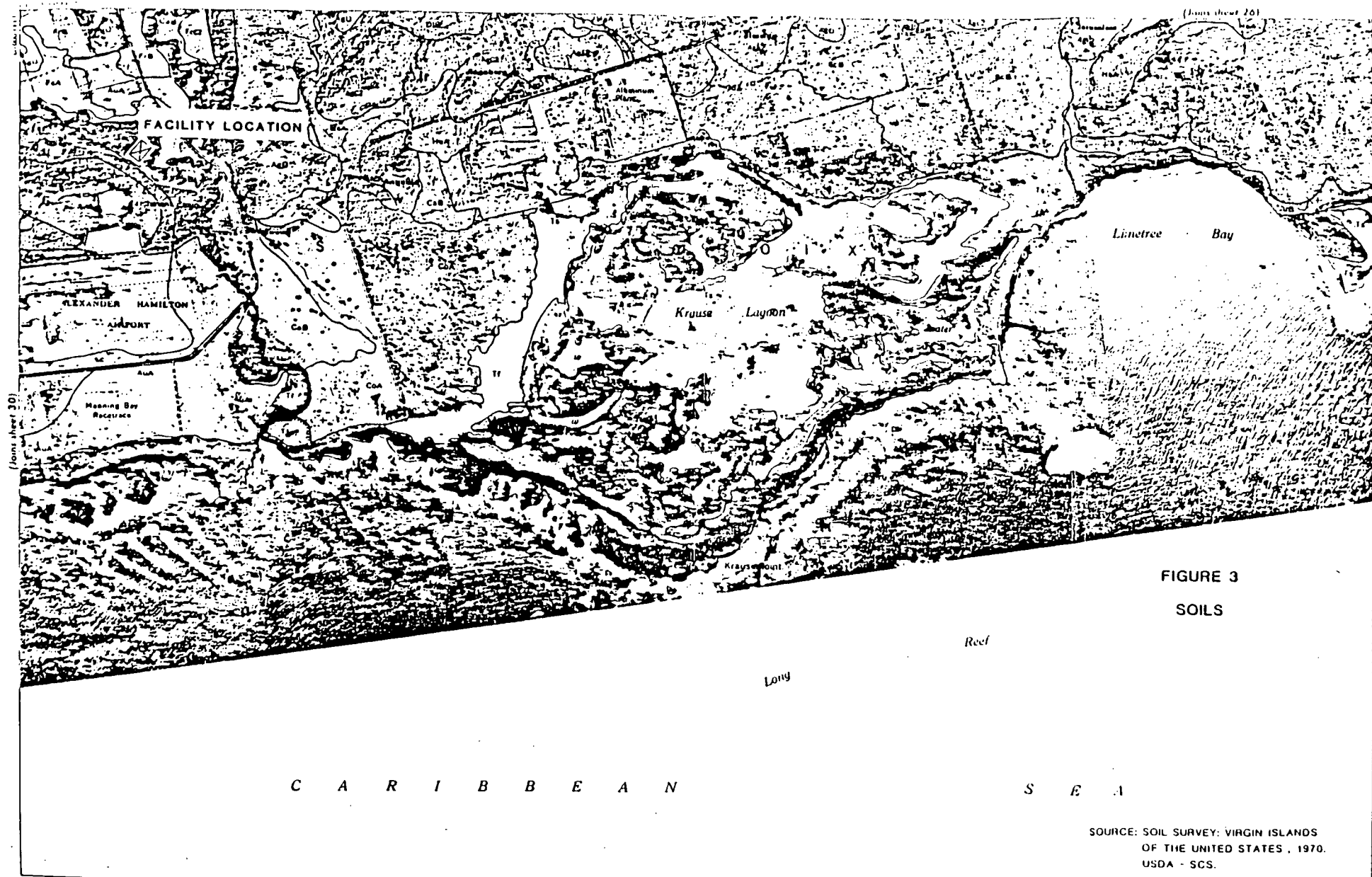


FIGURE 3
SOILS

SOURCE: SOIL SURVEY: VIRGIN ISLANDS
OF THE UNITED STATES, 1970.
USDA - SCS.

Contour lines based on Puerto Rican coordinate
system. Puerto Rico, St. John, 1960. Contour interval
some elevation. 1960 adjustment. Puerto Rican datum.

FIGURE

WELL FIELD LOCATIONS

0 2,000 FEET

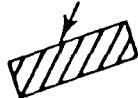


100147

CONCORDIA WELL FIELD



PROSPERITY WELL FIELD



La GRANGE WELL FIELD



Frederickstad

ADVENTURE WELL FIELD



GOLDEN GROVE WELL FIELD



NEGRO BAY WELL FIELD



FACILITY LOCATION



FAIR PLAINS WELL FIELD



BARREN SPOT WELL FIELD



SOURCE: COMPREHENSIVE WATER RESOURCES MANAGEMENT
PLAN FOR THE U.S. VIRGIN ISLANDS, 1983.

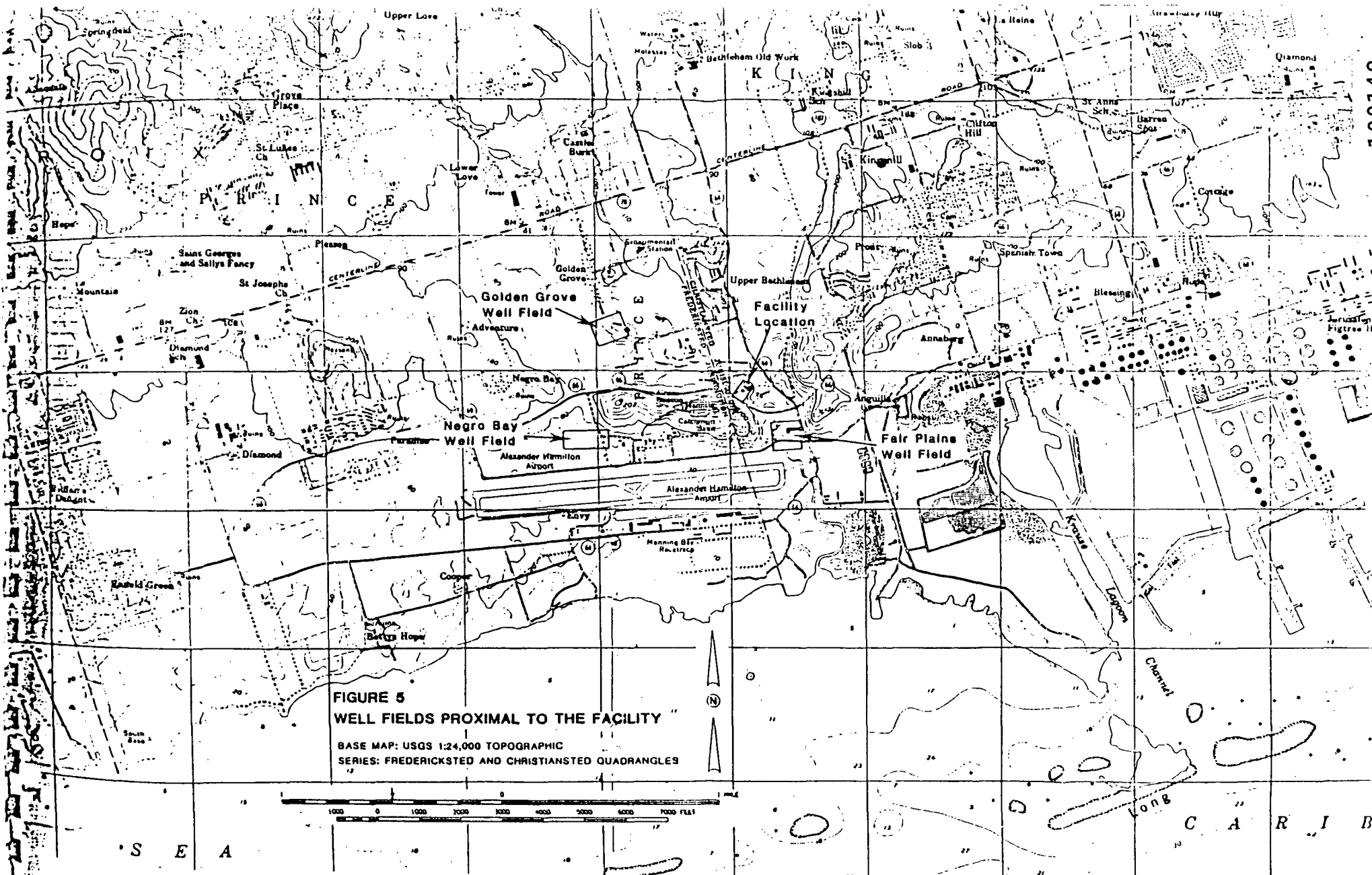
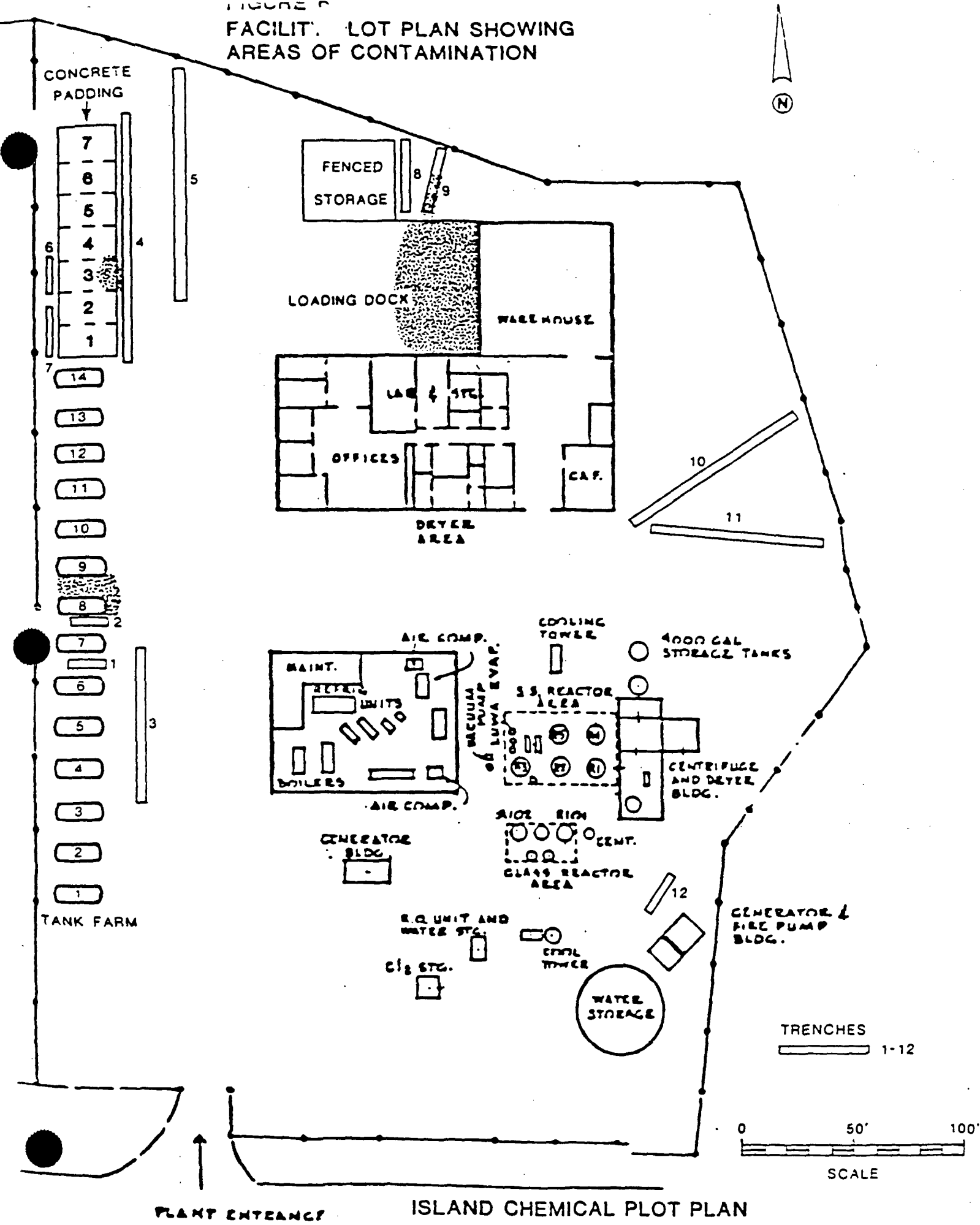
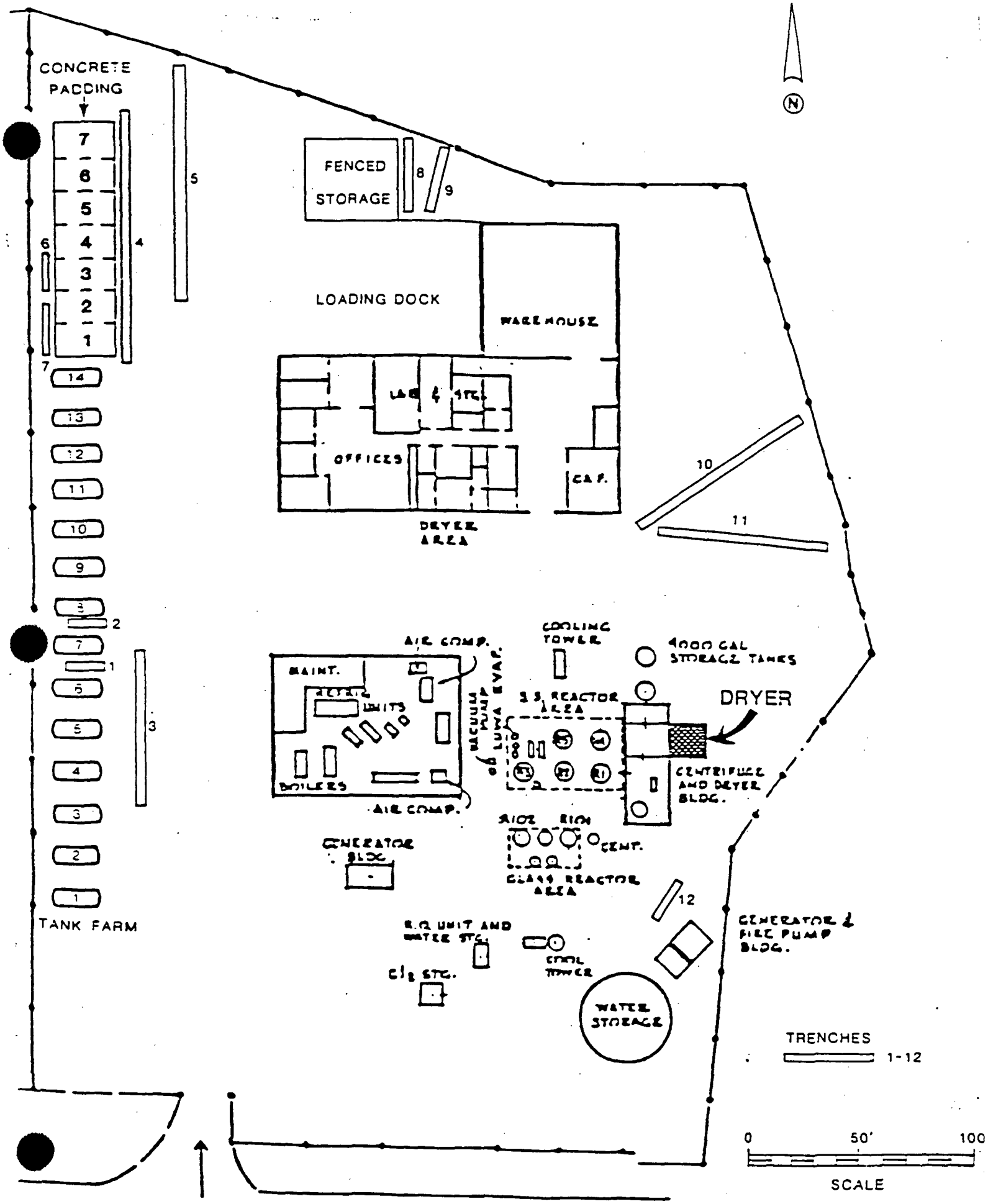


FIGURE 2
FACILITY LOT PLAN SHOWING
AREAS OF CONTAMINATION





PLANT ENTRANCE

ISLAND CHEMICAL PLOT PLAN

100150

ATTACHMENT C



Enviro SCIENCES INC.

19 COPELAND RD., DENVER, NEW JERSEY 07834
(201) 366-6256

May 15, 1985

Mr. Robert Harris
U.S.E.P.A.
Region II
26 Federal Plaza
NY, NY 10007

Re: Island Chemical Co. (Berlex) St. Croix, U.S.V.I.

Dear Mr. Harris:

As per our telephone communication on May 9, 1985, Enviro-Sciences, Inc. (ESI) will begin the cleanup of pyridine and toluene contamination at Island Chemical Co., U.S.V.I. This cleanup will commence on June 6 and be conducted as described in documents submitted to you in December, 1984 (Progress Report Island Chemical Company, Inc. St. Croix Virgin Islands) and April 4 (Addendum to Progress Report...).

I have briefed Mr. Carlos O'Neal in San Juan as to our plans and will forward to him the above documents. In addition, these same documents will be sent to Mr. Austin Moorhead of the Conservation and Cultural Affairs office in St. Croix.

ESI will take all samples which will be sent with a chain of custody to independent laboratories stateside for analysis. All samples will be handled in accordance with U.S. Department of Agriculture permits which are in the possession of the laboratories. ESI will adhere to the restrictions of the permits when shipping soil samples.

Attempts will be made to isolate all contamination (especially pyridine odor) to the site. If odor is excessive after concrete removal, release of contamination from the exposed area will be dampened using plastic sheeting. However, ESI does not think that excessive odor release will be a problem.

ATTACHMENT D



19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

May 7, 1985

Mr. Robert Harris
U.S.E.P.A.
Region II
Room 1000
26 Federal Plaza
New York, NY 10007

Reference: Island Chemical Co., St. Croix, U.S.V.I.

Dear Mr. Harris:

Enclosed is information concerning the manifesting of hazardous material at Island Chemical Co. when operations ceased and prior to its sale by Berlex to Virgin Island Chemical Co. Included are eight (8) manifests.

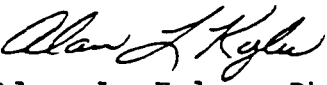
In addition, there is an explanation as to why activities at the facility would classify it as a small generator.

We are anticipating a meeting in the immediate future with USEPA staff members to discuss this project.

If you have any questions, call me at 201-366-6256.

Very truly yours,

ENVIRO-SCIENCES, INC.


Alan L. Kyles, Ph.D.
Vice President

ALK/po (AK-8531)

Enclosure

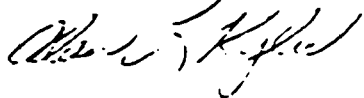
cc: Mr. Robert Milos
Mr. Frank Curtis
Ray Willis, Ph.D.

100154

I appreciate your continual attention to this project over the past months and will keep you informed as to our progress.

Very truly yours,

ENVIRO-SCIENCES, INC.



Alan L. Kyles, Ph.D.
Vice President

ALK/po (AK-8554)

cc: Bob Milos
Frank Curtis
Ray Willes, PhD.



ALL TYPE

COMMONWEALTH OF PORTO RICO
ENVIRONMENTAL QUALITY BOARD
HAZARDOUS WASTE MANIFEST

ART A:

DOCUMENT NO. 100 P. 1

OR REGISTRAR NAME Island Chemical Company, Incorporated	PHONE (809) 770-2900	PPA O NO
SITE ADDRESS Potato 130 Potato Bethlehem, St. Croix U.S. Virgin Islands		1 2 3 4 5 6 7 8 9 10 11 12
TRANSPORTER NO 1 Prallier Marine Transport Cooperative	PHONE (809) 221-1111	1 2 3 4 5 6 7 8 9 10 11 12
SITE ADDRESS Isla Grande, Puerto Rico		1 2 3 4 5 6 7 8 9 10 11 12
TRANSPORTER NO 2 Transportes Rico	PHONE (809) 792-7990	1 2 3 4 5 6 7 8 9 10 11 12
SITE ADDRESS Long Point, Puerto Rico, San Juan, Puerto Rico		1 2 3 4 5 6 7 8 9 10 11 12
TREATMENT, STORAGE OR DISPOSAL PLANT FACILITY Island Chemical of P.R., Inc.	PHONE (809) 836-1070	1 2 3 4 5 6 7 8 9 10 11 12
SITE ADDRESS Km. 31, Highway 61, Pinarol, Puerto Rico		1 2 3 4 5 6 7 8 9 10 11 12

IF MORE THAN TWO TRANSFORMERS ARE TO BE USED, ALL OF THE FOLLOWING ARE APPROPRIATE

THIS MODEL IS OF _____ OF A TOTAL OF _____ THE FIRST HARVEST DISBURSED ON IS

11501

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINER		TGA TYP / MATERIAL	EPA ATE DANGER TYPE
						ID	TYPES		
1 Telephone 1)	P.L.C. Liquid	19A	L	3,19,3	Gal	[]	[]	[]	[]
2				[]		[]	[]	[]	[]
3				[]		[]	[]	[]	[]
4				[]		[]	[]	[]	[]
5				[]		[]	[]	[]	[]
6				[]		[]	[]	[]	[]

SPY CASE HANDLED BY SIMPLE TONGS INCLUDING CONTAINER OF BOMB POW + IDENTIFICATION OF IDENTIFIABLE, WAS IT INCLUDING NO SHOOTING OF A WOMAN ZAROV'S MOTHER WHO IS
THE ONLY PLACE TO BE HANDLED BY

I, _____, do hereby declare the above named materials as property placed under described control and labeled and in proper condition for transportation in this country, and in the best interest of Transportation US FPA and the Commonwealth of PA. The article described above is consigned to the Transporter named The _____ and will not use the shipment of hazardous waste and have posted permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

	DATE President	DAY MONTH YEAR JUN 68	TIME OF ARRIVAL DATE JUN 68
I hereby certify my knowledge of the contents of the message and its transmission as true.	INITIALS OF THE OFFICIAL IN CHARGE OF THE MESSAGE PCBS	DAY MONTH YEAR JUN 68	DAY RECEIVED JUN 68

13.4.5.01 INTRODUCTION

CP-3156

Abstract

44 179 02

THE REPORTER AND 1 SIGNATURE (If only one is signed with a company stamp, the signature of the company is required) <i>[Signature]</i>		DATE RECEIVED JAN 1967	
TRANSPORTER AND 2 SIGNATURE (To the best of my knowledge the contents of the shipment I have accepted conform with the description on this manifest) THE REPORTER AND 2 SIGNATURE (I certify that I have not compared with a manifest and the contents of this shipment)		TRANSPORTER AND 2 SIGNATURE WHEEL @ 50	
THE FIRST STOP AT THE DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN RECEIPT AND SHIPMENT OR LISTING OF REASONS FOR ADD OR DELETION OF REJECTED MATERIALS		RECEIPT NO. 100	
(If any of these are rejected, SIGNATURE (Sign one of signature) I certify that the contents of this shipment conform with the description on this manifest except where discrepancies noted on this form		DATE RECEIVED JAN 1967	

DOI: 10.1002/for

10485

100156

COMMONWEALTH OF PUERTO RICO
ENVIRONMENTAL QUALITY BOARD
HAZARDOUS WASTE MANIFEST

DOCUMENT NO. P.R. 1002

Shipper: Inland Chemical Company, Incorporated (809) 778-2200
 130 Parate Bethlehem, St. Croix U.S. Virgin Islands
 Trailer Marine Transport Corporation (809) 721-1313
 Destination: Isla Grande, Puerto Rico
 Transporter: Transporte Diaz (809) 792-7999
 Destination: Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico
 Treatment, Storage or Disposal Facility: Inland Chemical of P.R., Inc. (809) 854-1090
 Destination: Km. 51, Highway #2, Manati, Puerto Rico

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. 1 OF A TOTAL OF 2 THE FIRST MANIFEST DOCUMENT NO. IS P.R. 1002

SHIPPER'S DOT SHIPPING NAME	DOT HAZARD CLASS	UN NUMBER	FORM	NET WEIGHT	UNITS	CONTAINER		DOT HAZ. CODE	DOT HAZ. TYPE
						NO.	TYPE		
1 TOLUENE RQ	Flam. Liquid	1294	L	612.00	1	1	1	1	1
2									
3									
4									
5									
6									

SPECIAL HAZARD, SPECIAL FORMS INCLUDING CONTAINER INFORMATION - IDENTIFICATION OF ADDITIONAL HAZARDS INCLUDED IN SHIPMENT OR HAZARDOUS MATERIALS WHICH DO NOT HAVE TO BE MANIFESTED

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation (DOT) and the Commonwealth of P.R. The marks described above were consigned to the transporter named. The transporter, storage or disposal facility, and will accept the shipment of hazardous materials and has a valid permit to do so. I hereby certify the foregoing is true and correct to the best of my knowledge.

SHIPPER'S SIGNATURE: *James H. Rodriguez* TITLE: President DATE SHIPPED: 11/11/80 EXPECTED DELIVERY DATE: 11/11/80

TRANSPORTER NO. 1 SIGNATURE: To the best of my knowledge the contents of the shipment I have accepted on this page conform with the description on this manifest. TRANSPORTER NO. 1 NAME: BCKU DATE RECEIVED: 11/11/80

DATE OF THIS CERTIFICATION: 11/11/80

PART B

TRANSPORTER NO. 1 SIGNATURE: I hereby certify that the contents of this shipment are as described on this manifest. TRANSPORTER NO. 1 NAME: BCKU DATE RECEIVED: 11/11/80

TRANSPORTER NO. 2 SIGNATURE: To the best of my knowledge the contents of this shipment I have accepted for transport conform with the description on this manifest. TRANSPORTER NO. 2 NAME: DATE RECEIVED: 11/11/80

TRANSPORTER NO. 3 SIGNATURE: I hereby certify that the contents of this shipment are as described on this manifest. TRANSPORTER NO. 3 NAME: DATE RECEIVED: 11/11/80

TREATMENT, STORAGE OR DISPOSAL FACILITY: IDENTIFICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS

TREATMENT, STORAGE OR DISPOSAL FACILITY SIGNATURE: I hereby certify that the contents of this shipment conform with the description on this manifest except those discrepancies noted on this form. DATE RECEIVED: 11/11/80

IN case of emergency or spill immediately call the Environmental Quality Board 800-775-9997

100157

1 DANGEROUS WASTE MANIFESTATION

DOCUMENT NO **P A** **E I**

NAME I. C. Chemical Co., Inc.	PHONE (1107) 771-2271	114 8 11
SITE ADDRESS P.O. Box 114 Estero Real, St. Cruz, U.S. Virgin Islands		1,1,0,9,3,0,6,1,1,1,1
TRANSPORTER NO 1 I. C. Marine Transport Corporation	PHONE (1107) 721-1313	
SITE ADDRESS P.O. Box 114, Puerto Rico		1,1,0,9,0,11,6,4,5,1,1
TRANSPORTER NO 2 I. C.	PHONE (1107) 792-7999	
SITE ADDRESS P.O. Box 114, Puerto Rico		1,1,0,9,0,0,3,2,1,1,1,1
TREATMENT STORAGE OR DISPOSAL FACILITY Interim Chemical of P.R., Inc.	PHONE (1107) 834-1170	
SITE ADDRESS P.O. Box 114, San Juan, Puerto Rico		1,1,0,9,0,1,3,2,2,1,1,1

IF MORE THAN TWO TRANSPORTERS ARE TO BE MUSTERED FOR THE FORMATIONS AT APPROPRIATE

THIS FORM IS ONE OF A TOTAL OF 1 THE FIRST MARXIST DOCUMENT NO. 1 P. 1

PROPRIETARY SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINER		TOL SPR HAZ CODE	TOL APP HAZ CODE
						NO	TYPE		
1. Toluene	Flam., Liquid	1203	L	147.63	Gal.	1	1	1	1
2.				1		1	1	1	1
3.				1		1	1	1	1
4.				1		1	1	1	1
5.				1		1	1	1	1
6.				1		1	1	1	1

SPYING HANDEDLY IN THE FORM OF THE UNITED STATES OF AMERICA. THE UNITED STATES OF AMERICA IS THE ONLY COUNTRY IN THE WORLD THAT IS NOT A MEMBER OF THE UNITED NATIONS. THE UNITED STATES OF AMERICA IS THE ONLY COUNTRY IN THE WORLD THAT IS NOT A MEMBER OF THE UNITED NATIONS.

DECLARATION (CONTINUED) This is to certify that the above named materials are properly classified, described, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Government of the Commonwealth of Massachusetts and the Commonwealth of P.R. The above described ship will be transported in the transport named The "SANTANA" through or through of the day and will accept the shipment of hazardous materials and has a valid permit to do so, except that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE	DATE	DATE SHIPPED	EXPECTED ARRIVAL DATE
Joseph H. Ludwig	President	00 11 00	00 11 00
TRANSMITTER NO. & SIGNATURE To the best of my knowledge the contents of the document have been accepted for a proper conference with the designator on the manifest		TRANSMITTER NO. 1 WHILE C NO SCXJ 00 00 00 00	DATE RECEIVED 00 11 00

FILED IN THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF COLUMBIA

PART B

RECEIPTED BY: <u>SECRETARY</u> I hereby acknowledge receipt of the foregoing should the contents of this shipment		DATE RECEIVED <u>12</u> <u>12</u>	
TRANSPORTED BY: <u>SECRETARY</u> To the best of my knowledge the contents are shipped in good condition and are not subject to loss or damage on this property		TRANSFERRED TO: NO. <u>00</u>	
I agree that the contents of this shipment are not subject to loss or damage on this property should the contents of this shipment		NO. <u>00</u>	
THE UNITED STATES OR DISPOSAL FACILITY INDICATION OF ANY DEFICIENCIES IN THIS MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR THIS DISPOSITION OF THE RECEIVED SHIPMENT		NO. <u>00</u>	
SHIPMENT SIGNED IN DISPOSAL FACILITY SECTION Upon receipt of inspection I certify that the contents of this shipment conform with the description on this manifest except those deficiencies noted on this form		DATE RECEIVED <u>12</u> <u>12</u>	
THE RECEIVING OFFICE OR FACILITY SHALL SIGN THE ENCLOSURE(S) AND RETURN TO THE OFFICE		DOCUMENT NO. <u>43</u> P. <u>1</u>	

DOCUMENT NO. 103 P. 1

100158

1007 1010 1013 1016 1019 1022 1025 1028 1031 1034 1037 1040 1043 1046 1049 1052 1055 1058 1061 1064 1067 1070 1073 1076 1079 1082 1085 1088 1091 1094 1097 1100 1103 1106 1109 1112 1115 1118 1121 1124 1127 1130 1133 1136 1139 1142 1145 1148 1151 1154 1157 1160 1163 1166 1169 1172 1175 1178 1181 1184 1187 1190 1193 1196 1199 1202 1205 1208 1211 1214 1217 1220 1223 1226 1229 1232 1235 1238 1241 1244 1247 1250 1253 1256 1259 1262 1265 1268 1271 1274 1277 1280 1283 1286 1289 1292 1295 1298 1301 1304 1307 1310 1313 1316 1319 1322 1325 1328 1331 1334 1337 1340 1343 1346 1349 1352 1355 1358 1361 1364 1367 1370 1373 1376 1379 1382 1385 1388 1391 1394 1397 1400 1403 1406 1409 1412 1415 1418 1421 1424 1427 1430 1433 1436 1439 1442 1445 1448 1451 1454 1457 1460 1463 1466 1469 1472 1475 1478 1481 1484 1487 1490 1493 1496 1499 1502 1505 1508 1511 1514 1517 1520 1523 1526 1529 1532 1535 1538 1541 1544 1547 1550 1553 1556 1559 1562 1565 1568 1571 1574 1577 1580 1583 1586 1589 1592 1595 1598 1601 1604 1607 1610 1613 1616 1619 1622 1625 1628 1631 1634 1637 1640 1643 1646 1649 1652 1655 1658 1661 1664 1667 1670 1673 1676 1679 1682 1685 1688 1691 1694 1697 1700 1703 1706 1709 1712 1715 1718 1721 1724 1727 1730 1733 1736 1739 1742 1745 1748 1751 1754 1757 1760 1763 1766 1769 1772 1775 1778 1781 1784 1787 1790 1793 1796 1799 1802 1805 1808 1811 1814 1817 1820 1823 1826 1829 1832 1835 1838 1841 1844 1847 1850 1853 1856 1859 1862 1865 1868 1871 1874 1877 1880 1883 1886 1889 1892 1895 1898 1901 1904 1907 1910 1913 1916 1919 1922 1925 1928 1931 1934 1937 1940 1943 1946 1949 1952 1955 1958 1961 1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015 2018 2021 2024 2027 2030 2033 2036 2039 2042 2045 2048 2051 2054 2057 2060 2063 2066 2069 2072 2075 2078 2081 2084 2087 2090 2093 2096 2099 2102 2105 2108 2111 2114 2117 2120 2123 2126 2129 2132 2135 2138 2141 2144 2147 2150 2153 2156 2159 2162 2165 2168 2171 2174 2177 2180 2183 2186 2189 2192 2195 2198 2201 2204 2207 2210 2213 2216 2219 2222 2225 2228 2231 2234 2237 2240 2243 2246 2249 2252 2255 2258 2261 2264 2267 2270 2273 2276 2279 2282 2285 2288 2291 2294 2297 2300 2303 2306 2309 2312 2315 2318 2321 2324 2327 2330 2333 2336 2339 2342 2345 2348 2351 2354 2357 2360 2363 2366 2369 2372 2375 2378 2381 2384 2387 2390 2393 2396 2399 2402 2405 2408 2411 2414 2417 2420 2423 2426 2429 2432 2435 2438 2441 2444 2447 2450 2453 2456 2459 2462 2465 2468 2471 2474 2477 2480 2483 2486 2489 2492 2495 2498 2501 2504 2507 2510 2513 2516 2519 2522 2525 2528 2531 2534 2537 2540 2543 2546 2549 2552 2555 2558 2561 2564 2567 2570 2573 2576 2579 2582 2585 2588 2591 2594 2597 2600 2603 2606 2609 2612 2615 2618 2621 2624 2627 2630 2633 2636 2639 2642 2645 2648 2651 2654 2657 2660 2663 2666 2669 2672 2675 2678 2681 2684 2687 2690 2693 2696 2699 2702 2705 2708 2711 2714 2717 2720 2723 2726 2729 2732 2735 2738 2741 2744 2747 2750 2753 2756 2759 2762 2765 2768 2771 2774 2777 2780 2783 2786 2789 2792 2795 2798 2801 2804 2807 2810 2813 2816 2819 2822 2825 2828 2831 2834 2837 2840 2843 2846 2849 2852 2855 2858 2861 2864 2867 2870 2873 2876 2879 2882 2885 2888 2891 2894 2897 2900 2903 2906 2909 2912 2915 2918 2921 2924 2927 2930 2933 2936 2939 2942 2945 2948 2951 2954 2957 2960 2963 2966 2969 2972 2975 2978 2981 2984 2987 2990 2993 2996 2999 3002 3005 3008 3011 3014 3017 3020 3023 3026 3029 3032 3035 3038 3041 3044 3047 3050 3053 3056 3059 3062 3065 3068 3071 3074 3077 3080 3083 3086 3089 3092 3095 3098 3101 3104 3107 3110 3113 3116 3119 3122 3125 3128 3131 3134 3137 3140 3143 3146 3149 3152 3155 3158 3161 3164 3167 3170 3173 3176 3179 3182 3185 3188 3191 3194 3197 3200 3203 3206 3209 3212 3215 3218 3221 3224 3227 3230 3233 3236 3239 3242 3245 3248 3251 3254 3257 3260 3263 3266 3269 3272 3275 3278 3281 3284 3287 3290 3293 3296 3299 3302 3305 3308 3311 3314 3317 3320 3323 3326 3329 3332 3335 3338 3341 3344 3347 3350 3353 3356 3359 3362 3365 3368 3371 3374 3377 3380 3383 3386 3389 3392 3395 3398 3401 3404 3407 3410 3413 3416 3419 3422 3425 3428 3431 3434 3437 3440 3443 3446 3449 3452 3455 3458 3461

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PR 15 04

Puerto Rico Island Chemical Co., Inc. (NIPP) 770-2200	171 (NIPP) 770-2200	171 (NIPP) 770-2200
Puerto Rico Estate 180 Estate Delishish, St. Euse, U.S. Virgin Islands (NIPP) 721 1311	171 (NIPP) 721 1311	171 (NIPP) 721 1311
Puerto Rico Trailer Marine Transport Corporation (NIPP) 742-7777	171 (NIPP) 742-7777	171 (NIPP) 742-7777
Puerto Rico Zina Portuaria, Puerto Nuevo, San Juan, Puerto Rico (NIPP) 856-1000	171 (NIPP) 856-1000	171 (NIPP) 856-1000
Puerto Rico K. S. Highway 22, Honolulu, Puerto Rico	171 (NIPP) 856-1000	171 (NIPP) 856-1000

[illegible]

<i>James H. Ludwig</i> James H. Ludwig President	12-14-15	12-14-15	12-14-15
<i>Don H. Lewis</i>	12-14-15	12-14-15	12-14-15

[illegible]

10, 20

100159

**CO. AONWEALTH OF PUERTO RICO
ENVIRONMENTAL QUALITY BOARD
HAZARDOUS WASTE MANIFEST**

PART A:		DOCUMENT NO.	P R 1C 05
GENERATOR NAME Island Chemical Co., Inc.	PHONE (809) 778-2200	EPB ☐ NO	
ST ADDRESS Estate 137, Estate Bethlehem, St. Croix, U.S. Virgin Islands		4 1 0 9 0 0 6 3 1 0 9 1	
TRANSPORTER NO 1 Trailer Marine Transport Corporation	PHONE (809) 721-1313	EPB ☐ NO	
ST ADDRESS Isla Grande, Puerto Rico		4 1 0 9 0 0 6 4 4 3 2 1	
TRANSPORTER NO 2 Transporte Diaz	PHONE (809) 792-7997	EPB ☐ NO	
ST ADDRESS Isla Portuñia, Puerto Nuevo, San Juan, Puerto Rico		4 1 0 9 0 0 6 3 2 6 0 3 1	
TREATMENT, STORAGE OR DISPOSAL FACILITY Island Chemical of P.R., Inc.	PHONE (809) 858-1090	EPB ☐ NO	
ST ADDRESS Km. 51, Highway # 2, Manati, Puerto Rico		4 1 0 9 0 0 6 3 9 9 2 1 1	

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNIT	CONTAINER		EPB	NO APP
NO	TYPE	NO	TYPE	NO	TYPE	NO	TYPE	NO	TYPE
1 Toluene Oil	Flam. Liquid	1290	1	10.75	Gal	1	1	1	1
2									
3									
4									
5									
6									

RECEIVED BY THE ADDRESSEE OF THIS MANIFEST DOCUMENT. CONTAINER IDENTIFICATION IS THE RESPONSIBILITY OF THE GENERATOR. THE MANIFEST DOCUMENT IS NOT VALID UNLESS IT IS SIGNED BY THE ADDRESSEE. IF THE ADDRESSEE IS NOT THE ADDRESSEE, THE MANIFEST DOCUMENT IS NOT VALID.

GENERATOR'S SIGNATURE: *Jerome H. Ludwig* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 1 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 2 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

PART B **1** **EPB** ☐ **NO** **4 1 0 9 0 0 6 3 1 0 9 1**

TRANSPORTER NO 1 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 2 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 3 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 4 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 5 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 6 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 7 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 8 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 9 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

TRANSPORTER NO 10 SIGNATURE: *MA Serrano* **DATE:** 11/11/91 **RECEIVED BY:** *MA Serrano* **DATE:** 11/11/91

100160

COMMONWEALTH OF PUERTO RICO
ENVIRONMENTAL QUALITY BOARD
HAZARDOUS WASTE MANIFEST

PART A:

GENERATOR NAME Inland Chemical Co., Inc.	PHONE (809) 721-2200	P R IL UK 00 00 00
SITE ADDRESS Catale 130, Catale Bethlehem, St. Croix, U.S. Virgin Islands		00000000000000000000
TRANSPORTER NO 1 Trailer Marine Transport Corporation	PHONE (809) 721-1313	
SITE ADDRESS Isla Grande, Puerto Rico		00000000000000000000
TRANSPORTER NO 2 Transporte Diaz	PHONE (809) 727-7222	
SITE ADDRESS Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico		00000000000000000000
TREATMENT, STORAGE OR DISPOSAL FACILITY NAME Inland Chemical of P.R., Inc.	PHONE (809) 854-1070	
SITE ADDRESS Km. 51, Highway # 2, Manati, Puerto Rico		00000000000000000000

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE:

THIS FORM IS NO. 1 OF A TOTAL OF 1 THE FIRST MANIFEST DOCUMENT NO. IS		P R		IL UK		00 00 00	
PROPERTY OR SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	QTY IN CARBON	QTY IN DRUMS	QTY IN TANKS	QTY IN OTHER	QTY IN TOTAL
1. Toluene (M)	Liq. Liquid	1296	1	000000	000000	000000	000000
2.							
3.							
4.							
5.							
6.							

EXCEPT WHERE SHOWN OTHERWISE, THIS MANIFEST IS TO BE USED FOR THE TRANSPORTATION OF HAZARDOUS WASTE ONLY. IT IS NOT TO BE USED FOR THE TRANSPORTATION OF OTHER MATERIALS. IT IS NOT TO BE USED FOR THE TRANSPORTATION OF MATERIALS THAT ARE NOT HAZARDOUS WASTE.

GENERATOR'S DECLARATION: I, the undersigned, hereby declare that the information furnished on this manifest is true and correct to the best of my knowledge and belief, and that the material is properly classified, described, and labeled in accordance with the requirements of the Department of Transportation, U.S. EPA and the Commonwealth of P.R. I am a duly licensed person or agent of the generator, transporter, or treatment, storage, or disposal facility, and I am authorized to sign this manifest on behalf of the generator, transporter, or treatment, storage, or disposal facility.

GENERATOR'S SIGNATURE: *Jerome H. Linkig* President DATE: 01/01/89

TRANSPORTER NO. 1 SIGNATURE: *John J. Diaz* DATE: 01/01/89

TRANSPORTER NO. 2 SIGNATURE: *John J. Diaz* DATE: 01/01/89

PART B:

TRANSPORTER NO. 1 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 2 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 3 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 4 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 5 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 6 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 7 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 8 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 9 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 10 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 11 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 12 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 13 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 14 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 15 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 16 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 17 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 18 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 19 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89
TRANSPORTER NO. 20 SIGNATURE: <i>John J. Diaz</i>	DATE: 01/01/89

10/80

100161

See cover sheet for instructions
 Please type
 PART A: *100 copies for*
 COMMONWEALTH OF PUERTO RICO
 ENVIRONMENTAL QUALITY BOARD
 HAZARDOUS WASTE MANIFEST
in diverted to Suburb from Phil. port
 DOCUMENT NO. *100* P. R. IC 07

PART A: <i>File on Division Trailer to Juan</i>		DOCUMENT NO	P R IC 07
SEMI-TRAILER NAME Island Chemical Co., Inc.	PHONE (809) 778-2200	TRA NO	
UNIT ADDRESS Estate 130, Estate Bethlehem, St. Croix, U.S. Virgin Islands		V1, D, 9, 8, 0, 6, 5, 1, 0, 2	
TRAILERPORTS NO Trailer Marine Transport Corporation	PHONE (809) 721-1313		
UNIT ADDRESS Isla Grande, Puerto Rico		C, R, D, 9, 8, 0, 6, 4, 4, 3, 7	
TRAILERPORTS NO Transporte Diaz	PHONE (809) 792-7999		
UNIT ADDRESS Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico		C, R, D, 9, 8, 0, 6, 5, 2, 6, 8, 3	
TRAILERPORTS NO Island Chemical Co. P.R., Inc.	PHONE (809) 854-1090		
UNIT ADDRESS Km. 31, Highway #2, Manati, Puerto Rico		C, R, D, 9, 8, 0, 6, 5, 2, 9, 3, 7, 1	

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE:

THIS LOAD IS NO. 1 OF A TOTAL OF 1 THE FIRST NAME(S) OF CARRIER IS P. R. I. C. O. 7

[illegible]

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED DATE 08-19-2006 BY 60322 UCBAW/SJS

64. NO DISPOSITION This is to certify that the above named motor-vehicle is properly classified, described, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. (F.R.) and the Commissioner of P.R. The motor described above was conveyed to the Transport agent. The Transport agent on receipt of this document will not accept the shipment of these items until he has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Knowledge C10000000, 00000000	Bill Jerome H. Ludwig	President	DATE SHIPPED 11/11/81	EXPECTED ARRIVAL DATE 11/11/81
TRANSPORTED ON 11/11/81 To the best of my knowledge the contents of the shipment have not been transported with the destination of this product		TRANSPORTED ON 11/11/81 SEC'S	DATE RECEIVED 11/11/81	DATE RECEIVED 11/11/81

11 APR 1966 1200Z

PART B

TRANSPORTER NO 1 SIGNATURE "Tom", and three men appeared with a car and showed the contents of this shipment.		DATE RECEIVED	
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of this shipment have not changed by transportations with the shipping date this container		DATE RECEIVED	
TRANSPORTER NO 3 SIGNATURE "I certify that I have not transported with or authorized others the contents of this shipment."		DATE RECEIVED	
TREATMENT SYMBOL OR DISPOSAL FACILITY INDICATOR BY THE OFFICE IN THEIR JURISDICTION AND SHIPMENT OR EXISTING OR NO ARMS		DATE RECEIVED	
TYPE AND DESCRIPTION OF RELATED MATERIALS		DATE RECEIVED	
TREATMENT SYMBOL OR DISPOSAL FACILITY INDICATOR BY THE OFFICE IN THEIR JURISDICTION AND SHIPMENT OR EXISTING OR NO ARMS		DATE RECEIVED	
TREATMENT SYMBOL OR DISPOSAL FACILITY INDICATOR BY THE OFFICE IN THEIR JURISDICTION AND SHIPMENT OR EXISTING OR NO ARMS		DATE RECEIVED	

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100162



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07068 201-584-0330

SOIL SAMPLE

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: July 31, 1985

LAB # 42889

SAMPLE ID: Dryer

CLIENT: ENVIRO SCIENCE ICC (Berlex)

SAMPLE DATE: 6/14/85

SAMPLED BY: A. Kylea

AT LAB DATE: 6/18/85

VOLATILE ORGANICS BY PURGE AND TRAP
By GC BTX/HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE	X
BROMOMETHANE	X
VINYL CHLORIDE	X
CHLOROETHANE	X
METHYLENE CHLORIDE	X
ACETONE	X
1,1-DICHLOROETHYLENE	X
1,1-DICHLOROETHANE **	X
t-1,2-DICHLOROETHYLENE	4.0
CHLOROFORM	340
1,2-DICHLOROETHANE	4.2
t-BUTYL METHYL ETHER	X
1,1,1-TRICHLOROETHANE	X
CARBON TETRACHLORIDE	X
BROMODICHLOROMETHANE	X
1,2-DICHLOROPROPANE	X

*Compounds co-elute (could be either material).

LT=Less Than, GT=Greater Than

dwb=Dry Weight Basis. X=Not Detected

*[c-1,3-DICHLOROPROPENE	X
t-1,3-DICHLOROPROPENE	
TCE (TRICHLOROETHYLENE)	X
*[1,1,2-TRICHLOROETHANE	X
DIBROMOCHLOROMETHANE	
BENZENE	6.6
DIISOPROPYL ETHER	X
2-CHLOROETHYL VINYL ETHER	X
BROMOFORM	X
1,1,2,2-TETRACHLOROETHANE	X
PCE (TETRACHLOROETHYLENE)	X
TOLUENE	4,000
CHLOROBENZENE	X
ETHYLBENZENE	16.1
M-XYLENE	17.7
*[O-XYLENE	15.1
P-XYLENE	

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of: 1 mg/kg dwb.

Unknown peaks detected (retention time, estimated amount): _____

NOTE: Compound Identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichenor, Vice President

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Data Sheet 3



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, N.J. 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 43747

CLIENT: ENVIRO SCIENCES, INC. - ICC (BERLEX) PROJECT

SAMPLE ID: Dryer

SAMPLE DATE: 7/1/85

SAMPLED BY: Enviro Sciences

AT LAB DATE: 7/11/85

VOLATILE ORGANICS BY PURGE AND TRAP
GAS CHROMATOGRAPHY / HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE	-----	X	1,2-DICHLOROPROPANE	-----	X
BROMOMETHANE	-----	X	*{c-1,3-DICHLOROPROPENE	-----	X
VINYL CHLORIDE	-----	X	t-1,3-DICHLOROPROPENE	-----	X
CHLOROETHANE	-----	X	TCE (TRICHLOROETHYLENE)	-----	X
METHYLENE CHLORIDE	-----	X	*{1,1,2-TRICHLOROETHANE	-----	X
ACETONE	-----	7	DIBROMOCHLOROMETHANE	-----	X
1,1-DICHLOROETHYLENE	-----	X	BENZENE	-----	X
1,1-DICHLOROETHANE **	-----	X	DIISOPROPYL ETHER	-----	X
t-1,2-DICHLOROETHYLENE	-----	X	2-CHLOROETHYL VINYL ETHER	-----	X
CHLOROFORM	-----	X	BROMOFORM	-----	X
1,2-DICHLOROETHANE	-----	X	1,1,2,2-TETRACHLOROETHANE	-----	X
t-BUTYL METHYL ETHER	-----	X	PCE (TETRACHLOROETHYLENE)	-----	X
1,1,1-TRICHLOROETHANE	-----	X	TOLUENE	-----	0.41
CARBON TETRACHLORIDE	-----	X	CHLOROBENZENE	-----	X
BROMODICHLOROMETHANE	-----	X	ETHYLBENZENE	-----	X

*Compounds co-elute (could be either material).

LT=Less Than dwb=Dry Weight Basis.

GT=Greater Than X=Not Detected

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of _____ mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) numerous other hydrocarbon peaks, 0.02 to 0.1 mg/kg

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

ET/

INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor, Vice President

100164

Sheet 4

REPORT DATE: August 15, 1985

LAB # 43752

CLIENT: ENVIRO SCIENCES, INC. - ICC (BERLEX) PROJECT

SAMPLE ID: Dryer

SAMPLE DATE: 7/1/85

SAMPLED BY: Enviro Sciences

AT LAB DATE: 7/11/85

**VOLATILE ORGANICS BY PURGE AND TRAP
GAS CHROMATOGRAPHY / HEADSPACE**

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE	X	1,2-DICHLOROPROPANE	X
BROMOMETHANE	X	*c-1,3-DICHLOROPROPENE	X
VINYL CHLORIDE	X	*t-1,3-DICHLOROPROPENE	X
CHLOROETHANE	X	TCE (TRICHLOROETHYLENE)	X
METHYLENE CHLORIDE	X	*1,1,2-TRICHLOROETHANE	X
ACETONE	2.0	*DIBROMOCHLOROMETHANE	X
1,1-DICHLOROETHYLENE	X	BENZENE	X
1,1-DICHLOROETHANE **	X	DIISOPROPYL ETHER	X
t-1,2-DICHLOROETHYLENE	X	2-CHLOROETHYL VINYL ETHER	X
CHLOROFORM	X	BROMOFORM	X
1,2-DICHLOROETHANE	X	1,1,2,2-TETRACHLOROETHANE	X
t-BUTYL METHYL ETHER	X	PCE (TETRACHLOROETHYLENE)	X
1,1,1-TRICHLOROETHANE	X	TOLUENE	1.5
CARBON TETRACHLORIDE	X	CHLOROBENZENE	X
BROMODICHLOROMETHANE	X	ETHYLBENZENE	X

**Compounds co-elute (could be either material).

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

LT=Less Than dwb=Dry Weight Basis.

GT=Greater Than X=Not Detected

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of _____ mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) 34.07 @ 15 mg/kg

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor, Vice President

REPORT DATE: August 15, 1985

LAB # 44629

SAMPLE ID: Dryer

CLIENT: ENVIRO SCIENCES, INC. - ICC (BERLEX) PROJECT

SAMPLE DATE: 7/17/85 SAMPLED BY: Enviro Sciences AT LAB DATE: 7/25/85

**VOLATILE ORGANICS BY PURGE AND TRAP
GAS CHROMATOGRAPHY / HEADSPACE**

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE-----	X	1,2-DICHLOROPROPANE -----	X
BROMOMETHANE-----	X	*[c-1,3-DICHLOROPROPENE -----	X
VINYL CHLORIDE -----	X	t-1,3-DICHLOROPROPENE -----	X
CHLOROETHANE -----	X	TCE (TRICHLOROETHYLENE) -----	X
METHYLENE CHLORIDE -----	X	*[1,1,2-TRICHLOROETHANE -----	X
ACETONE -----	1.2	DIBROMOCHLOROMETHANE -----	X
1,1-DICHLOROETHYLENE -----	X	BENZENE -----	X
1,1-DICHLOROETHANE ** -----	X	DIISOPROPYL ETHER -----	X
t-1,2-DICHLOROETHYLENE -----	X	2-CHLOROETHYL VINYL ETHER -----	X
CHLOROFORM -----	X	BROMOFORM -----	X
1,2-DICHLOROETHANE -----	X	1,1,2,2-TETRACHLOROETHANE -----	X
t-BUTYL METHYL ETHER -----	X	PCE (TETRACHLOROETHYLENE) -----	0.07
1,1,1-TRICHLOROETHANE -----	X	TOLUENE -----	0.36
CARBON TETRACHLORIDE -----	X	CHLOROBENZENE -----	X
BROMODICHLOROMETHANE -----	X	ETHYLBENZENE -----	X

**Compounds co-elute (could be either material).

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

LT=Less Than dwb=Dry Weight Basis.

GT=Greater Than X=Not Detected

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of _____ mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) numerous other hydrocarbon peaks 0.01 to 1 mg/kg

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

ET/

INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor, Vice President

100166

1 Sheet 6



**INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED**

SOIL
SAMPLE

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

REPORT DATE: July 31, 1985

LAB # 42886 & 42887-COMPOSITE

CLIENT: ENVIRO SCIENCES

SAMPLE SOURCE: ICC (Berlex)

SAMPLE DATE: 6/14/85 SAMPLED BY: A.Kyles AT LAB DATE: 6/18/85

**PRIORITY POLLUTANT VOLATILE ORGANICS + 40
by GC/MS + 15 PEAKS**

<u>Parameter</u>	<u>Result</u>	<u>Parameter</u>	<u>Result</u>
acrolein*-----	X	1,2-dichloropropane -----	X
acrylonitrile* -----	X	1,3-dichloropropylene -----	X
benzene -----	X	ethylbenzene -----	X
bromoform -----	X	methyl bromide -----	X
carbon tetrachloride-----	X	methyl chloride -----	X
chlorobenzene -----	X	methylene chloride -----	125
chlorodibromomethane -----	X	1,1,2,2-tetrachloroethane -----	X
chloroethane -----	X	tetrachloroethylene -----	X
2-chloroethylvinyl ether -----	X	toluene -----	1,560
chloroform -----	220	1,2-trans-dichloroethylene -----	X
dichlorobromomethane -----	X	1,1,1-trichloroethane -----	X
1,1-dichloroethane -----	X	1,1,2-trichloroethane -----	X
1,2-dichloroethane -----	X	trichloroethylene -----	X
1,1-dichloroethylene -----	X	vinyl chloride -----	X

Results reported in mg/kg (ppm), dry weight basis.

*Detection Limit 100 ppm

LT=Less than

X=Not detected

**OTHER COMPOUNDS DETECTED
APPROXIMATE CONCENTRATIONS**

benzyl acetate ----- 22
chloromethyl benzene -----1430
1-chloro-2-methyl benzene--- 40

INDUSTRIAL CORROSION MANAGEMENT, INC.

Edwin Tichenor
Edwin Tichenor
Vice President

ET/jmg


**INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED**

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

REPORT DATE: July 31, 1985LAB # 42886 & 42887 COMPOSITESOIL SAMPLECLIENT: ENVIRO SCIENCESAMPLE SOURCE: ICC (Berlex)SAMPLE DATE: 6/14/85 SAMPLED BY: A. Kyles AT LAB DATE: 6/18/85
**PESTICIDE & PCB EXTRACTABLES
PRIORITY POLLUTANTS + 40
by GC/MS**

<u>Parameter</u>	<u>Result</u>
Aldrin -----	LT 2.
a-BHC -----	LT 2
b-BHC -----	LT 2
d-BHC -----	LT 2
g-BHC -----	LT 2
Chlordane -----	LT 12
4,4'-DDD -----	LT 3
4,4'-DDE -----	LT 3
4,4'-DDT -----	LT 3
Dieldrin -----	LT 3
Endosulfan I -----	LT 3
Endosulfan II -----	LT 3
Endosulfan Sulfate -----	LT 3
Endrin -----	LT 3
Endrin Aldehyde -----	LT 3
Heptachlor -----	LT 3
Heptachlor Epoxide -----	LT 3
Toxaphene -----	LT 12
PCB-1016 -----	LT 45
PCB-1221 -----	LT 45
PCB-1232 -----	LT 45
PCB-1242 -----	LT 45
PCB-1248 -----	LT 45
PCB-1254 -----	LT 45
PCB-1260 -----	LT 45

All results are reported in mg/kg (ppm), dry weight basis.

INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichnor
 Edwin Tichnor
 Vice President *ds*

ET/jmg
 LT=Less Than
 X=Not Detected

100168



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

SOIL SAMPLE

UNDER CERTIFICATE Drinking Water/ Wastewater Laboratory ID #14116 Data Sheet 9

REPORT DATE: July 31, 1985

LAB # 42886 & 42887-COMPOSITE

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

CLIENT: ENVIRO SCIENCES

SAMPLE SOURCE: ICC (Berlex)

SAMPLE DATE: 6/14/85 SAMPLED BY: A.Kyles AT LAB DATE: 6/18/85

BASE/NEUTRAL EXTRACTABLES PRIORITY POLLUTANTS + 40
by GC/MS + 15 PEAKS

Parameter	Result	Parameter	Result
acenaphthene -----	X	diethyl phthalate -----	X
acenaphthylene -----	X	dimethyl phthalate -----	X
anthracene -----	X	di-n-butyl phthalate -----	X
benzidine -----	X	2,4-dinitrotoluene -----	X
benzo(a)anthracene -----	X	2,6-dinitrotoluene -----	X
benzo(a)pyrene -----	X	di-n-octyl phthalate -----	X
3,4-benzofluoranthene -----	X	1,2-diphenylhydrazine(as azobenzene)-	X
benzo(ghi)perylene -----	X	fluoranthene -----	X
benzo(k)fluoranthene -----	X	fluorene -----	X
bis(2-chloroethoxy)methane ----	X	hexachlorobenzene -----	X
bis(2-chloroethyl)ether -----	X	hexachlorobutadiene -----	X
bis(2-chloroisopropyl)ether----	X	hexachlorocyclopentadiene -----	X
bis(2-ethylhexyl)phthalate ----	X	hexachloroethane -----	X
4-bromophenyl phenyl ether ----	X	Indeno(1,2,3-cd)pyrene -----	X
butylbenzyl phthalate -----	X	isophorone -----	X
2-chloronaphthalene -----	X	naphthalene -----	X
4-chlorophenyl phenyl ether ----	X	nitrobenzene -----	X
chrysene -----	X	N-nitrosodimethylamine -----	X
dibenzo(a,h)anthracene -----	X	N-nitrosodi-n-propylamine -----	X
1,2-dichlorobenzene -----	X	N-nitrosodiphenylamine -----	X
1,3-dichlorobenzene -----	X	phenanthrene -----	X
1,4-dichlorobenzene -----	X	pyrene -----	X
3,3-dichlorobenzidine -----	X	1,2,4-trichlorobenzene -----	X

None of the above listed Priority Pollutants detected at a sensitivity level of 450 μ g/kg (ppm) dry weight basis. **

LT=Less Than

X=Not Detected **Large dilution necessary due to high concentration of benzyl acetate.

APPROXIMATE CONCENTRATION
OTHER COMPOUNDS DETECTED

benzyl acetate ----- 170,000
benzene methanol ----- 15,000
1,1'-[oxybis (methylene)
bis]benzene ----- 4,000

Chloromethyl benzene ----- 4,400
diphenyl methanone ----- 30,000
9H-fluorene-9-one ----- 3,000

All results reported in mg/kg (ppm), dry weight basis.

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INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichenor

ET/imp



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RAMENKA PL, NEW JERSEY 07040 201 584 0330

SOIL SAMPLE

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: July 31, 1985

LAB # 42886 & 42887 COMPOSITE

CLIENT: ENVIRO SCIENCES

SAMPLE SOURCE: ICC (Berlex)

SAMPLE DATE: 6/14/85 SAMPLED BY: A. Kylee AT LAB DATE: 6/18/85

ACID EXTRACTABLES
PRIORITY POLLUTANTS + 40
by GC/MS+10 PEAKS

ACID EXTRACTABLES PRIORITY POLLUTANTS + 10 Peaks

2-chlorophenol -----	X
2-nitrophenol -----	X
phenol -----	X
2,4,-dimethylphenol -----	X
2,4,-dichlorophenol -----	X
pentachlorophenol -----	X
2,4-dinitrophenol -----	X
4,6-dinitro-o-cresol -----	X
4-nitrophenol -----	X
2,4,6-trichlorophenol -----	X
4-chloro-3 methyl phenol-----	X

None of the above listed Priority Pollutants detected
at a sensitivity level of 450 mg/kg (ppm) dry weight basis.

OTHER COMPOUNDS DETECTED APPROXIMATE CONCENTRATIONS

No other Phenolic compounds detected at a sensitivity
of 500 mg/kg (ppm) dry weight basis. **

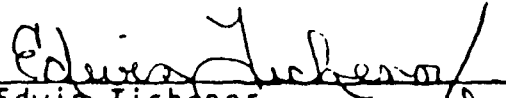
INDUSTRIAL CORROSION MANAGEMENT, INC.

** Large dilution necessary due to high concentration
of benzyl acetate.

ET/jmg

LT=Less Than

X=Not Detected


Edwin Ticheagar
Vice President

100170

Data Sheet 10



**INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED**

SOIL SAMPLE

NJDEP Certified Drinking Water
Wastewater Laboratory ID #14116

REPORT DATE: July 31, 1985LAB # 42886 & 42887 Composite

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201 584 0171

CLIENT: ENVIRO SCIENCESSAMPLE SOURCE: ICC (Berlex)SAMPLE DATE: 6/14/85 SAMPLED BY: A. Kyles AT LAB DATE: 6/18/85PRIORITY POLLUTANTS + 40TOXIC POLLUTANTS: Metals, Cyanide and Total Phenols

<u>PARAMETER</u>	<u>RESULT</u>
Total Antimony -----	<u>LT 118</u>
Total Arsenic -----	<u>40.0</u>
Total Beryllium -----	<u>LT 2.87</u>
Total Cadmium -----	<u>22.8</u>
Total Chromium -----	<u>592</u>
Total Copper -----	<u>327</u>
Total Lead -----	<u>688</u>
Total Mercury -----	<u>2.73</u>
Total Nickel -----	<u>134</u>
Total Selenium -----	<u>LT 1.08</u>
Total Silver -----	<u>LT 7.48</u>
Total Thallium -----	<u>LT 66.2</u>
Total Zinc -----	<u>3,594</u>
Total Cyanide -----	<u>1.44</u>
Total Phenol -----	<u>9.01</u>

All results are reported in mg/kg (ppm), dry weight basis.

We thank you for this opportunity to serve you. If you have any questions, please do not hesitate to call.

Very truly yours,
INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichegar
Edwin Tichegar
Vice President

ET/jmq
LT=Less Than
X=Not Detected

100171



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/
Wastewater Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 44418

CLIENT: ENVIRO SCIENCES, INC.

SAMPLE SOURCE: ICC (BERLEX) PROJECT

SAMPLE ID: St. Croix

SAMPLE DATE: unknown

SAMPLED BY: Al Kyles

AT LAB DATE: 7/22/85

19 JULY 1985

WATER

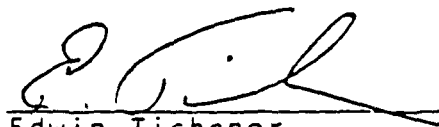
PRIORITY POLLUTANT VOLATILE ORGANICS
by GC/MS

Parameter	Result	Parameter	Result
acrolein*-----	X	1,2-dichloropropane -----	X
acrylonitrile*-----	X	1,3-dichloropropylene -----	X
benzene -----	0.04	ethylbenzene -----	X
bromoform -----	X	methyl bromide -----	X
carbon tetrachloride -----	X	methyl chloride -----	X
chlorobenzene -----	X	methylene chloride -----	X
chlorodibromomethane -----	X	1,1,2,2-tetrachloroethane -----	X
chloroethane -----	X	tetrachloroethylene -----	X
2-chloroethylvinyl ether -----	X	toluene -----	0.38
chloroform -----	X	1,2-trans-dichloroethylene -----	X
dichlorobromomethane -----	X	1,1,1-trichloroethane -----	X
1,1-dichloroethane -----	X	1,1,2-trichloroethane -----	X
1,2-dichloroethane -----	X	trichloroethylene -----	X
1,1-dichloroethylene -----	X	vinyl chloride -----	X

Results reported in mg/l (ppm). Detection limit 0.001 mg/l (ppm).

*Detection Limit: 0.1 mg/l

INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor
Vice President

ET/jmg

LT=Less Than
X=Not Detected

Chen
1253

100172



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201 584-0330

Model Certificate Drinking Water/Wastewater
Laboratory ID 116

Data Sheet 13

REPORT DATE: August 15, 1985

LAB # 44418

CLIENT: ENVIRO SCIENCES, INC.

SAMPLE SOURCE: ICC(BERLEX) St. Croix

SAMPLE DATE: ~~unknown~~ 19 AUGUST '85 SAMPLED BY: Al Kyles AT LAB DATE: 7/22/85

WATER

PESTICIDE & PCB EXTRACTABLES
PRIORITY POLLUTANTS
by GC/MS

<u>Parameter</u>	<u>Result</u>
Aldrin	LT 0.01
a-BHC	LT 0.01
b-BHC	LT 0.01
d-BHC	LT 0.01
g-BHC	LT 0.01
Chlordane	LT 0.02
4,4'-DDD	LT 0.01
4,4'-DDE	LT 0.01
4,4'-DDT	LT 0.01
Dieldrin	LT 0.01
Endosulfan I	LT 0.01
Endosulfan II	LT 0.01
Endosulfan Sulfate	LT 0.01
Endrin	LT 0.01
Endrin Aldehyde	LT 0.01
Heptachlor	LT 0.01
Heptachlor Epoxide	LT 0.01
Toxaphene	LT 0.02

PCB-1016	LT 0.01
PCB-1221	LT 0.01
PCB-1232	LT 0.01
PCB-1242	LT 0.01
PCB-1248	LT 0.01
PCB-1254	LT 0.01
PCB-1260	LT 0.01

All results reported in mg/l (ppm).

INDUSTRIAL CORROSION MGMT., INC.

Edwin Tichenor
Vice President

ET/jmg

LT=Less than

X=Not detected

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**INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED**

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 44418

CLIENT: ENVIRO SCIENCES, INC.,

SAMPLE SOURCE: ICC (BERLEX) PROJECT

SAMPLE ID: ST. Croix

SAMPLE DATE: unknown

SAMPLED BY: Al Kyles

AT LAB DATE: 7/22/85

19 July 1985

BASE/NEUTRAL EXTRACTABLES PRIORITY POLLUTANTS
by GC/MS

Parameter	Result	Parameter	Result
acenaphthene -----	X	diethyl phthalate -----	X
acenaphthylene -----	X	dimethyl phthalate -----	X
anthracene -----	X	di-n-butyl phthalate -----	X
benzidine -----	X	2,4-dinitrotoluene -----	X
benzo(a)anthracene -----	X	2,6-dinitrotoluene -----	X
benzo(a)pyrene -----	X	di-n-octyl phthalate -----	X
3,4-benzofluoranthene -----	X	1,2-diphenylhydrazine (as azobenzene) -----	X
benzo(ghi)perylene -----	X	fluoranthene -----	X
benzo(k)fluoranthene -----	X	fluorene -----	X
bis(2-chloroethoxy)methane -----	X	hexachlorobenzene -----	X
bis(2-chloroethyl)ether -----	X	hexachlorobutadiene -----	X
bis(2-chloroisopropyl)ether -----	X	hexachlorocyclopentadiene -----	X
bis(2-ethylhexyl)phthalate -----	X	hexachloroethane -----	X
4-bromophenyl phenyl ether -----	X	indeno(1,2,3-cd)pyrene -----	X
butylbenzyl phthalate -----	X	isophorone -----	X
2-chloronaphthalene -----	X	naphthalene -----	X
4-chlorophenyl phenyl ether -----	X	nitrobenzene -----	X
chrysene -----	X	N-nitrosodimethylamine -----	X
dibenzo(a,h)anthracene -----	X	N-nitrosodi-n-propylamine -----	X
1,2-dichlorobenzene -----	X	N-nitrosodiphenylamine -----	X
1,3-dichlorobenzene -----	X	phenanthrene -----	X
1,4-dichlorobenzene -----	X	pyrene -----	X
3,3-dichlorobenzidine -----	X	1,2,4-trichlorobenzene -----	X

None of the above Priority Pollutants detected at a sensitivity level of 0.03 mg/l (ppm)

**Other compounds see Addendum I

INDUSTRIAL CORROSION MANAGEMENT, INC.


Edwin Tichenor
Vice President

LT=Less Than
X=Not Detected
ET/imo

100174

ata Sheet 14

ICM

NJDEP Certified Drinking Water/
Wastewater Laboratory ID #14116REPORT DATE: August 15, 1985LAB # 44418CLIENT: ENVIRO SCIENCES, INC.SAMPLE SOURCE: ICC (Berlex)SAMPLE ID: St. CroixSAMPLE DATE: unknown 19 July 1985 SAMPLED BY: Al. Kyles AT LAB DATE: 7/22/85

BASE/NEUTRAL EXTRACTABLES PRIORITY POLLUTANTS

ADDENDUM I

OTHER COMPOUNDS DETECTED

by GC/MS

<u>Parameter</u>	<u>Result</u>
benzaldehyde -----	<u>3.0</u>
chloromethyl benzene -----	<u>0.3</u>
benzene methanol -----	<u>24.0</u>
phenyl acetate -----	<u>26.0</u>
diphenyl methane -----	<u>0.4</u>
1-1'-[oxybis(methylene)]bis benzene -----	<u>0.4</u>

All results are reported in mg/l (ppm).

We thank you for this opportunity to serve you. If you have any questions,
please do not hesitate to call.

INDUSTRIAL CORROSION MANAGEMENT, INC.

Edwin Tichenor
Vice PresidentET/jmg
encl.
LT=Less Than

100175



INDUSTRIAL CORROSION MANAGEMENT INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/
Wastewater Laboratory ID #14116REPORT DATE: August 15, 1985LAB # 44418CLIENT: ENVIRO SCIENCES, INC.SAMPLE SOURCE ICC (BERLEX) PROJECT ST. CroixSAMPLE DATE: unknown 19 July 1985 SAMPLED BY: Al Kyles AT LAB DATE: 7/22/85

ACID EXTRACTABLES PRIORITY POLLUTANTS by GC/MS

WATER

<u>Parameter</u>	<u>Result</u>
2-chlorophenol -----	X
2-nitrophenol -----	X
phenol -----	X
2,4-dimethylphenol -----	X
2,4-dichlorophenol -----	X
2,4,6-trichlorophenol -----	X
pentachlorophenol -----	X
2,4-dinitrophenol -----	X
4,6-dinitro-o-cresol -----	X
4-nitrophenol -----	X
4-chloro-3 methyl phenol -----	X

None of the above Priority Pollutants detected at a sensitivity level of 0.01 mg/l (ppm).
OTHER PEAKS DETECTED: benzoic acid @ 3 mg/l

INDUSTRIAL CORROSION MGMT., INC

Edwin Tichenor
Vice President

ET:jmg

LT=Less Than

X=Not Detected

100176



INDUSTRIAL CORROSION MANAGEMENT INCORPORATED

NJDEP Certified Drinking Water
Wastewater Laboratory ID #14116

REPORT DATE: August 15, 1985

LAB # 44418

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201 584 0101

CLIENT: ENVIRO SCIENCES INC.

SAMPLE SOURCE: ICC (BERLEX) PROJECT

SAMPLE ID: St. Croix

SAMPLE DATE: unknown

19 JULY 1985

SAMPLED BY: Al Kyles

AT LAB DATE: 7/22/85

PRIORITY POLLUTANTS

WATER SAMPLE

TOXIC POLLUTANTS: Metals, Cyanide and Total Phenols

PARAMETER

RESULT

Total Antimony -----	<u>LT 0.016</u>
Total Arsenic -----	<u>LT 0.005</u>
Total Beryllium -----	<u>LT 0.013</u>
Total Cadmium -----	<u>0.003</u>
Total Chromium -----	<u>0.027</u>
Total Copper -----	<u>0.153</u>
Total Lead -----	<u>0.011</u>
Total Mercury -----	<u>0.001</u>
Total Nickel -----	<u>0.080</u>
Total Selenium -----	<u>LT 0.005</u>
Total Silver -----	<u>0.008</u>
Total Thallium -----	<u>0.029</u>
Total Zinc -----	<u>4.85</u>
Total Cyanide -----	<u>0.053</u>
Total Phenol -----	<u>0.161</u>

All results are reported in mg/l (ppm).

We thank you for this opportunity to serve you. If you have any questions, please do not hesitate to call.

Very truly yours,
INDUSTRIAL CORROSION MGMT., INC.


Edwin Tichenor
Vice President

ET/mg
LT=Less Than
X=Not Detected

100177



19 COPELAND RD., DENVER, NEW JERSEY 07834

CHAIN OF CUSTODY RECORD

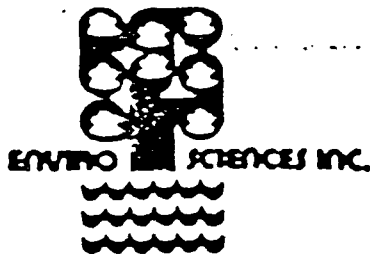
Installation: ICC (Berlex)				Samplers: (Signature) <i>Alan L. Kyles</i>			
Survey No.:							
Sample No.	Station Location	Analysis	Date	Time	Sample Type		No. of Containers
					Comp.	Grab	
1	Drain Line <i>42881</i>	Toluene	6/8/85			X	2
	[* Identify the contents of the black soil sample.]						
2	Laboratory Pit <i>42883</i>	Pyridine	6/14/85			X	4
3	Laboratory Pit-duplicate <i>42884</i>	VOA / GC <i>42885</i>	6/14/85			X	2
	[* Time limit may have expired, if so do not run.]						
4	Pit-duplicate (liquid) Priority Pollutants <i>42885</i>		6/14/85	<i>Held</i>		X	2
5	Pit-Interface (liquid/sludge) <i>42886</i>	combine and run	6/14/85			X	2
6	Pit-sludge <i>42887</i>	priority pollutants <i>42888</i>	6/14/85	<i>P+O</i>	*	X	4
	[* One container has a white lump, segregate it and analyze for quinidine.]						
7	Dryer <i>GC #5 42889</i>	Toluene	6/14/85			X	2
Relinquished by: (Sign.) <i>Janet L. Miller</i>			Received by: (Sign.) <i>Robert H.</i>		Date/Time <i>6/18/85 12N</i>		
Relinquished by: (Sign.)			Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)			Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.) <i>Robert H.</i>			Rec'd by Laboratory for field analysis (Sign.) <i>Alan L. Kyles</i>		Date/Time <i>6/18/85 12:45</i>		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by:		Date/Time		
Method of Shipment: Express Air Freight			<i>*Benzyl Acetate</i>				

100178

LAB NO. 42885

Pit duplicate (liquid) Priority Pollutants +40
(Process Pit)

Samples not analyzed because sample volume too small.

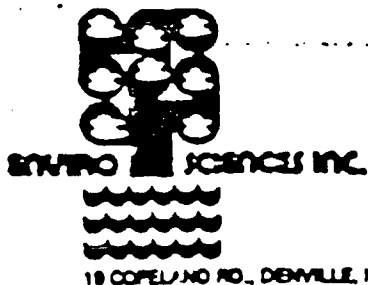


Enviro SCIENCES INC.

CHAIN OF CUSTODY RECORD

19 COPELAND RD., DENVER, NEW JERSEY 07834

Installation: <i>ICC (Beirex)</i>			Samplers: (Signature) <i>Alan J. Kylin</i>			
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
13747	<i>DRYER Trench</i>	<i>July</i>	<i>11:00 AM</i>		<i>X</i>	<i>1</i>
13748	<i>Log Pit #1 Trench</i>	<i>July</i>	<i>"</i>		<i>X</i>	<i>1</i>
13749	<i>" " #2 "</i>	<i>July</i>	<i>"</i>		<i>X</i>	<i>1</i>
13750	<i>" " #3 "</i>	<i>July</i>	<i>"</i>		<i>X</i>	<i>1</i>
13751	<i>" " #4 "</i>	<i>July</i>	<i>"</i>		<i>X</i>	<i>1</i>
13752	<i>DRYER Trench</i>	<i>July</i>	<i>"</i>		<i>X</i>	<i>1</i>
Relinquished by: (Sign.) <i>Alan J. Kylin</i>		Received by: (Sign.) <i>Hazel Brennan</i>		Date/Time <i>7/11/15 8:20 AM</i>		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by:		Date/Time	
Method of Shipment: <i>Alan J. Kylin Company Van</i>						



CHAIN OF CUSTODY RECORD

Installation: <i>ICC Busby</i>		Samplers: (Signature) <i>John D. Hartung</i>				
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
#44629	<i>Dryer (Toluene)</i>	<i>17 JULY</i>	<i>10: AM</i>		<i>X</i>	<i>2</i>
#44630	<i>LOB Pit Sample 1 (Puridine)</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>1</i>
#44631	<i>" " " 2 (Puridine)</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>1</i>
	<i>PRIORITY POLLUTANTS + 40</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>6</i>
	<i>Process Pit Water</i>					
	<i>SAMPLES LOST BY AIR FREIGHT NOT FOUND UNTIL AFTER SAMPLES</i>					
	<i>HAD EXPIRED. RESAMPLED 19/JULY/85</i>					
Relinquished by: (Sign.) <i>John D. Hartung</i>		Received by: (Sign.) <i>D L Hettner</i>		Date/Time <i>7/25/85 5:00</i>		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by:		Date/Time	
Method of Shipment: <i>Express Air Freight</i>						



19 COPELAND RD., DEENVILLE, NEW JERSEY 07834

CHAIN OF CUSTODY RECORD

Installation: <i>ICC Bully</i>		Samplers: (Signature) <i>Alan L. Kyler</i>				
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
4418	<i>PRIORITY POLLUTANTS + 40</i>	<i>19 Nov 85</i>	<i>12:00</i>		<i>X</i>	<i>6</i>
	<i>Perkins Pet Water</i>					
Relinquished by: (Sign.) <i>John D. Hartung</i>		Received by: (Sign.) <i>D. L. Hunsinger</i>		Date/Time <i>7/22 2:15</i>		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by:		Date/Time	
Method of Shipment: <i>Air Express Freight</i>						

ATTACHMENT F



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: September 12, 1985

LAB # 45362

CLIENT: ENVIRO SCIENCE - ICC BERLEX PROJECT

SAMPLE ID: Lab Pit #5965

SAMPLE DATE: August 7, 1985

SAMPLED BY: Enviro Science

AT LAB DATE: August 9, 1985

VOLATILE ORGANICS BY PURGE AND TRAP
GAS CHROMATOGRAPHY / HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE	X	1,2-DICHLOROPROPANE	X
BROMOMETHANE	X	*c-1,3-DICHLOROPROPENE	X
VINYL CHLORIDE	X	t-1,3-DICHLOROPROPENE	X
CHLOROETHANE	X	TCE (TRICHLOROETHYLENE)	X
METHYLENE CHLORIDE	X	*1,1,2-TRICHLOROETHANE	X
ACETONE	0.32	DIBROMOCHLOROMETHANE	X
1,1-DICHLOROETHYLENE	X	BENZENE	0.34
1,1-DICHLOROETHANE **	0.02	DIISOPROPYL ETHER	X
t-1,2-DICHLOROETHYLENE	0.02	2-CHLOROETHYL VINYL ETHER	X
CHLOROFORM	X	BROMOFORM	X
1,2-DICHLOROETHANE	X	1,1,2,2-TETRACHLOROETHANE	X
t-BUTYL METHYL ETHER	X	PCE (TETRACHLOROETHYLENE)	X
1,1,1-TRICHLOROETHANE	X	TOLUENE	0.08
CARBON TETRACHLORIDE	X	CHLOROBENZENE	X
BROMODICHLOROMETHANE	X	ETHYLBENZENE	0.01

*Compounds co-elute (could be either material).

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

LT=Less Than dwb=Dry Weight Basis.
GT=Greater Than X=Not Detected

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.01 mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) Xylenes approx 0.06 mg/kg dwb

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard S. Levine
Richard S. Levine/President

INDUSTRIAL CORROSION MANAGEMENT INCORPORATED

1152 ROUTE 10 HANDEL PH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: September 12, 1985

LAB # 45363

CLIENT: ENVIRO SCIENCE - ICC BERLEX PROJECT

SAMPLE ID: Lab Pit #5966

SAMPLE DATE: August 7, 1985

SAMPLED BY: Enviro Science

AT LAB DATE: August 9, 1985

VOLATILE ORGANICS BY PURGE AND TRAP GAS CHROMATOGRAPHY / HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE	X
BROMOMETHANE	X
VINYL CHLORIDE	X
CHLOROETHANE	X
METHYLENE CHLORIDE	X
ACETONE	0.27
1,1-DICHLOROETHYLENE	X
1,1-DICHLOROETHANE **	0.02
t-1,2-DICHLOROETHYLENE	0.01
CHLOROFORM	X
1,2-DICHLOROETHANE	X
t-BUTYL METHYL ETHER	X
1,1,1-TRICHLOROETHANE	X
CARBON TETRACHLORIDE	X
BROMODICHLOROMETHANE	X

1,2-DICHLOROPROPANE	X
*[c-1,3-DICHLOROPROPENE	X
t-1,3-DICHLOROPROPENE	X
TCE (TRICHLOROETHYLENE)	X
*[1,1,2-TRICHLOROETHANE	X
DIBROMOCHLOROMETHANE	X
BENZENE	1.37
DIISOPROPYL ETHER	X
2-CHLOROETHYL VINYL ETHER	X
BROMOFORM	X
1,1,2,2-TETRACHLOROETHANE	X
PCE (TETRACHLOROETHYLENE)	X
TOLUENE	X
CHLOROBENZENE	X
ETHYLBENZENE	X

*Compounds co-elute (could be either material).

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

LT=Less Than dwb=Dry Weight Basis.

GT=Greater Than X=Not Detected

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg dwb.

Unknown peaks detected (retention time, estimated amount)

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard S. Levine
Richard S. Levine/President

100185

ESL:

INDUSTRIAL CORROSION MANAGEMENT INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: September 12, 1985

LAB # 45364

CLIENT: ENVIRO SCIENCE - ICC BERLEX PROJECT

SAMPLE ID: Lab Pit #5967

SAMPLE DATE: August 7, 1985

SAMPLED BY: Enviro Science

AT LAB DATE: August 9, 1985

VOLATILE ORGANICS BY PURGE AND TRAP GAS CHROMATOGRAPHY / HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis

CHLOROMETHANE	-----	X
BROMOMETHANE	-----	X
VINYL CHLORIDE	-----	X
CHLOROETHANE	-----	X
METHYLENE CHLORIDE	-----	X
ACETONE	-----	0.23
1,1-DICHLOROETHYLENE	-----	X
1,1-DICHLOROETHANE **	-----	X
t-1,2-DICHLOROETHYLENE	-----	0.03
CHLOROFORM	-----	0.11
1,2-DICHLOROETHANE	-----	X
t-BUTYL METHYL ETHER	-----	X
1,1,1-TRICHLOROETHANE	-----	X
CARBON TETRACHLORIDE	-----	X
BROMODICHLOROMETHANE	-----	X

1,2-DICHLOROPROPANE	-----	X
*[c-1,3-DICHLOROPROPENE	-----	X
t-1,3-DICHLOROPROPENE	-----	X
TCE (TRICHLOROETHYLENE)	-----	X
*[1,1,2-TRICHLOROETHANE	-----	X
DIBROMOCHLOROMETHANE	-----	X
BENZENE	-----	0.01
DIISOPROPYL ETHER	-----	X
2-CHLOROETHYL VINYL ETHER	-----	X
BROMOFORM	-----	X
1,1,2,2-TETRACHLOROETHANE	-----	X
PCE (TETRACHLOROETHYLENE)	-----	X
TOLUENE	-----	0.05
CHLOROBENZENE	-----	X
ETHYLBENZENE	-----	0.04

*Compounds co-elute (could be either material).

**Tetrahydrofuran & Phosgene also elute at this point. Numerical results are calculated for 1,1-Dichloroethane only.

LT=Less Than dwb=Dry Weight Basis.

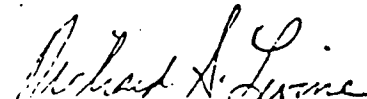
GT=Greater Than X=Not Detected

For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.01 mg/kg dwb.

X Unknown peaks detected (retention time, estimated amount) Xylene --0.02 mg/kg dwb

NOTE: Compound identification is based upon retention time matches with specific known standards. Confirmation of analysis using GC/MS is required to positively identify any material and/or amount detected.

INDUSTRIAL CORROSION MANAGEMENT, INC.


Richard S. Levine/President



CHAIN OF CUSTODY RECORD

18 COPELAND RD., DEWILLE, NEW JERSEY 07834

Installation: <i>ICC Facility</i>			Samplers: (Signature) <i>Alan J. Kelly</i>			
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
45364	<i>Dryer (Towere)</i>	<i>7 August</i>	<i>10:am</i>		<i>X</i>	<i>1</i>
153624	<i>1st Pit (Volatile Organics)</i>	<i>"</i>	<i>2:00pm</i>		<i>X</i>	<i>2</i>
15360-4	<i>1st Pit (Pyridine)</i>	<i>"</i>	<i>2:00pm</i>		<i>X</i>	<i>2</i>
Relinquished by: (Sign.) <i>John D. Hartman</i>		Received by: (Sign.) <i>D. E. Hittner</i>		Date/Time <i>8/9/65</i>		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by:		Date/Time	
Method of Shipment: <i>Air Express Freight</i>						

ATTACHMENT G



YORK LABORATORIES DIVISION

YMC

1984

CERTIFIED REPORT TRANSMITTAL

REPORT NUMBER 30850-145DATE November 12, 1984

CLIENT

Enviro-Sciences, Inc.
19 Copeland Road
Denville, New Jersey 07834

ATTENTION Mr. Irv Cohen

The above referenced report is enclosed. Copies of this report and supporting data will be retained in our files in the event they are required for future reference.

If there are any questions concerning this report, please do not hesitate to contact us.

Any samples submitted to our Laboratory will be retained for a maximum of sixty (60) days from receipt of this report, unless other arrangements are desired.

Naturally, as in the past, our staff will be pleased to quote on any future requirements you may have. In addition to the service provided, we also offer the following:

- Hazardous Waste Analyses
- Product Evaluation/R&D
- Water and Wastewater Analyses
- Air and Process Gas Analyses
- Industrial Hygiene Surveys
- Metallurgical Analyses
- Microbiological Analyses
- Mass Spectrometry Services

Very Truly Yours

Robert Q. Bradley
Vice President

November 12, 1984

30850-145
ENVIRO-SCIENCES, INC.
19 Copeland Road
Denville, New Jersey 07834

Attention: Mr. Irv Cohen

PURPOSE

Nine (9) soil samples were submitted to York Laboratories for determination of toluene and pyridine on a quantitative basis. Other compounds found in the samples were also indentified and are reported on a semi-quantitative basis. The samples were also analyzed for oil and grease.

METHODOLOGIES

The samples were analyzed for toluene using the dynamic headspace Gas Chromatograph/Mass Spectrometry method in accordance with Chemical Analysis of Sediments and Elutriate Testing, EPA 1979. A Tekmar Model LSC-3 Purge and Trap interfaced with an HP 5995C GC/MS/DS were used for the analysis.

The samples were analyzed for pyridine and oil and grease in accordance with EPA/CE-81-1 Procedures for Handling and Chemical Analysis of Sediments and Water Samples, May 1981. An HP 5995C GC/MS/DS was used for the pyridine analysis.

RESULTS

The results are listed in the following tables.

Prepared by: Gail D. Sprio
Gail D. Sprio
Senior Chemist

Approved by: Jeffrey C. Curran
Jeffrey C. Curran
Chief Chemist

GDS/JCC/mz

100190

TABLE 1
 ENVIRO-SCIENCES, INC.
TOLUENE AND PYRIDINE RESULTS

<u>Sample Identification</u>	<u>Toluene ug/kg (ppb)</u>	<u>Pyridine ug/kg (ppb)</u>
20 Septic (Auger)	540	<1,000
20 A-2'	690	<1,000
21 A-2'	15	<1,000
21 A-4'	43	<1,000
25 - 2'	210	13,000
27 - 2'	16	26,000
32 - 2'	15	43,000
35 - 4'	8	<1,000
36 - 2'	7	<1,000

TABLE 2
ENVIRO-SCIENCES, INC.

<u>Sample Identification</u>	<u>Compounds Found</u>	<u>Concentration*</u> (ug/kg)
20 Septic (Auger)	1,1-methylene bis-benzene	8,400
	diphenyl methanone	64,000
	methylene chloride	<5 (1.5)
	chloroform	12
	benzene	<5 (0.5)
20 A - 2'	methylene chloride	<5 (2.3)
	chloroform	5
	benzene	<5 (0.9)
	ethyl benzene	68
	total xylenes	500
21 A - 2'	methylene chloride	<5 (2.4)
	chloroform	<5 (3.8)
	trichloroethylene	<5 (0.8)
	benzene	<5 (0.5)
	tetrachloroethylene	<5 (0.9)
	ethyl benzene	7
21 A - 4'	methylene chloride	<5 (2.2)
	chloroform	<5 (2.6)
	benzene	<5 (0.4)
25 - 2'	methylene chloride	<5 (1.7)
	chloroform	5
	benzene	<5 (0.4)
27 - 2'	methylene chloride	<5 (2.2)
	chloroform	19
	benzene	<5 (0.6)
32 - 2'	methylene chloride	<5 (4.4)
	chloroform	<5 (4.2)
	1,1,1-trichloroethane	<5 (0.8)
	benzene	<5 (0.8)
35 - 4'	methylene chloride	<5 (2.4)
	chloroform	13
	1,1,1-trichloroethane	11
	benzene	<5 (0.4)
36 - 2'	methylene chloride	<5 (1.6)
	chloroform	<5 (1.4)
	benzene	<5 (0.2)

*Results are reported on a semi-quantitative basis.

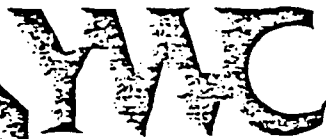
TABLE 3
ENVIRO-SCIENCES, INC.
OIL AND GREASE RESULTS

<u>Sample Identification</u>	<u>Oil And Grease mg/kg (ppm)</u>
20 Septic (Auger)	241
20 A - 2'	566
21 A - 2'	1,500
21 A - 4'	27.9
25 - 2'	89.6
27 - 2'	187
32 - 2'	50.6
35 - 4'	39.5
36 - 2'	965

100193



YORK LABORATORIES DIVISION



6/17/85

CERTIFIED REPORT TRANSMITTAL

REPORT NUMBER 30850-1195

DATE September 25, 1985

CLIENT Envirosciences, Inc.
19 Copeland Road
Denville, NJ 07834

ATTENTION Dr. A. Kyles

The above referenced report is enclosed. Copies of this report and supporting data will be retained in our files in the event they are required for future reference.

If there are any questions concerning this report, please do not hesitate to contact us.

Any samples submitted to our Laboratory will be retained for a maximum of sixty (60) days from receipt of this report, unless other arrangements are desired.

Naturally, as in the past, our staff will be pleased to quote on any future requirements you may have. In addition to the service provided, we also offer the following:

- Hazardous Waste Analyses
- Product Evaluation/R&D
- Water and Wastewater Analyses
- Air and Process Gas Analyses
- Industrial Hygiene Surveys
- Metallurgical Analyses
- Microbiological Analyses
- Mass Spectrometry Services

Very Truly Yours

Robert Q. Bradley
Vice President

100194

September 25, 1985

30850-1195
ENVIROSCIENCES, INC.
19 Copeland Road
Denville, New Jersey 07834

Attention: Dr. A. Kyles

PURPOSE AND RESULTS

Eight (8) soil samples were submitted to York Laboratories for analysis. The samples were prepared and analyzed in accordance with Procedures for Handling and Chemical Analysis of Sediment and Water Samples, EPA/CE-81-1.

The results are reported in the following Tables.

Prepared by: Daniel F. Ott
Daniel F. Ott
Laboratory Manager

Approved by: Jeffrey C. Curran
Jeffrey C. Curran
Chief Chemist

DFO/JCC/md

100195

TABLE 1
30850-1195
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Toluene, ug/kg</u>
Drainline #1, 6/7/85 4 p.m.	140,000
Drainline #2, 6/7/85 4 p.m.	310,000
Dryer #1, 6/14/85 10 a.m.	1,500,000
Dryer #2, 6/14/85 10 a.m.	150,000

100196

TABLE 2
30850-1195
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Pyridine, ug/kg</u>
Lab Pit #1, 6/14/85	3,900
Lab Pit #2, 6/14/85	<150
Lab Pit #3, 6/14/85	510
Lab Pit #4, 6/14/85	180

100197



YORK LABORATORIES DIVISION

YMC

7/1/85

CERTIFIED REPORT TRANSMITTAL

REPORT NUMBER 30850-1283

DATE September 25, 1985

CLIENT Envirosiences, Inc.
 19 Copeland Road
 Denville, NJ 07834

ATTENTION Dr. A. Kyles

The above referenced report is enclosed. Copies of this report and supporting data will be retained in our files in the event they are required for future reference.

If there are any questions concerning this report, please do not hesitate to contact us.

Any samples submitted to our Laboratory will be retained for a maximum of sixty (60) days from receipt of this report, unless other arrangements are desired.

Naturally, as in the past, our staff will be pleased to quote on any future requirements you may have. In addition to the service provided, we also offer the following:

- Hazardous Waste Analyses
- Product Evaluation/R&D
- Water and Wastewater Analyses
- Air and Process Gas Analyses
- Industrial Hygiene Surveys
- Metallurgical Analyses
- Microbiological Analyses
- Mass Spectrometry Services

Very Truly Yours,

Robert Q. Bradley
Vice President

100198

September 25, 1985

30850-1283
ENVIROSCIENCES, INC.
19 Copeland Road
Denville, New Jersey 07834

Attention: Dr. A. Kyles

PURPOSE AND RESULTS

Six (6) soil samples were submitted to York Laboratories for analysis. The samples were prepared and analyzed in accordance with Procedures for Handling and Chemical Analysis of Sediment and Water Samples, EPA/CE-81-1.

The results are reported in the following Tables.

Prepared by: Daniel F. Ott
Daniel F. Ott
Laboratory Manager

Approved by: Jeffrey C. Curran
Jeffrey C. Curran
Chief Chemist

DFO/JCC/md

100199

TABLE 1
30850-1283
ENVIROSCIENCES, INC.

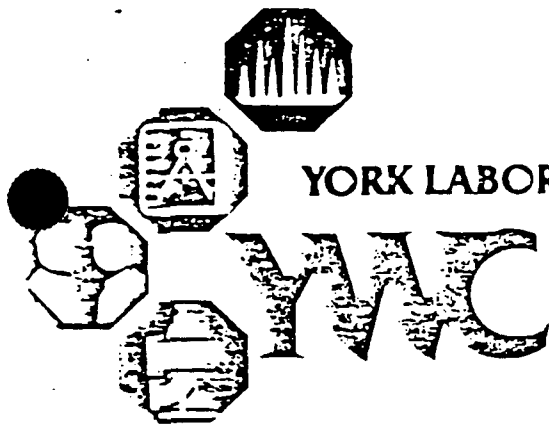
<u>Sample Identification</u>	<u>Toluene, ug/kg</u>
5434 - Dryer, 7/1/85	7,700
5435 - Dryer, 7/1/85	920

100200

TABLE 2
30850-1283
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Pyridine, ug/kg</u>
5436 - Lab Pit, #1, 7/1/85	1,100
5437 - Lab Pit, #2, 7/1/85	3,400
5438 - Lab Pit, #3, 7/1/85	<150
5439 - Lab Pit, #4, 7/1/85	<150

100201



YORK LABORATORIES DIVISION

CERTIFIED REPORT TRANSMITTAL

REPORT NUMBER 30850-1343

DATE September 26, 1985

CLIENT Envirosciences, Inc.
19 Copeland Road
Denville, NJ 07834

ATTENTION Dr. A. Kyles

The above referenced report is enclosed. Copies of this report and supporting data will be retained in our files in the event they are required for future reference.

If there are any questions concerning this report, please do not hesitate to contact us.

Any samples submitted to our Laboratory will be retained for a maximum of sixty (60) days from receipt of this report, unless other arrangements are desired.

Naturally, as in the past, our staff will be pleased to quote on any future requirements you may have. In addition to the service provided, we also offer the following:

- Hazardous Waste Analyses
- Product Evaluation/R&D
- Water and Wastewater Analyses
- Air and Process Gas Analyses
- Industrial Hygiene Surveys
- Metallurgical Analyses
- Microbiological Analyses
- Mass Spectrometry Services

Very Truly Yours,

Robert Q. Bradley
Vice President

100202

September 26, 1985

30850-1343
ENVIROSCIENCES, INC.
19 Copeland Road
Denville, New Jersey 07834

Attention: Dr. A. Kyles

PURPOSE AND RESULTS

Four (4) soil samples were submitted to York Laboratories for analysis. The samples were prepared and analyzed in accordance with Procedures for Handling and Chemical Analysis of Sediment and Water Samples, EPA/CE-81-1.

The results are reported in the following Tables.

Prepared by: Daniel F. Ott
Daniel F. Ott
Laboratory Manager

Approved by: Jeffrey C. Curran
Jeffrey C. Curran
Chief Chemist

DFO/JCC/md

100203

TABLE 1
30850-1343
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Toluene, ug/kg</u>
5753 - Dryer	600
5754 - Dryer	660

100204

TABLE 2
30850-1343
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Pyridine, ug/kg</u>
5751 - Lab Pit #2	<150
5752 - Lab Pit #1	<150

100205

YORK LABORATORIES DIVISION

AWC

8/7/85

CERTIFIED REPORT TRANSMITTAL

REPORT NUMBER 30850-1444

DATE September 25, 1985

CLIENT Envirosciences, Inc.
19 Copeland Road
Denville, NJ 07834

ATTENTION Dr. A. Kyles

The above referenced report is enclosed. Copies of this report and supporting data will be retained in our files in the event they are required for future reference.

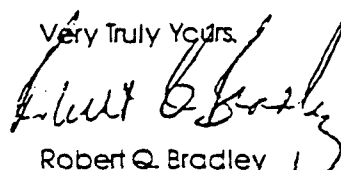
If there are any questions concerning this report, please do not hesitate to contact us.

Any samples submitted to our Laboratory will be retained for a maximum of sixty (60) days from receipt of this report, unless other arrangements are desired.

Naturally, as in the past, our staff will be pleased to quote on any future requirements you may have. In addition to the service provided, we also offer the following:

- Hazardous Waste Analyses
- Product Evaluation/R&D
- Water and Wastewater Analyses
- Air and Process Gas Analyses
- Industrial Hygiene Surveys
- Metallurgical Analyses
- Microbiological Analyses
- Mass Spectrometry Services

Very Truly Yours,



Robert Q. Bradley
Vice President

September 25, 1985

30850-1444
ENVIROSCIENCES, INC.
19 Copeland Road
Denville, New Jersey 07834

Attention: Dr. A. Kyles

PURPOSE AND RESULTS

Five (5) soil samples were submitted to York Laboratories for analysis. The samples were prepared and analyzed in accordance with Procedures for Handling and Chemical Analysis of Sediment and Water Samples, EPA/CE-81-1.

The results are reported in the following Tables.

Prepared by: Daniel F. Ott
Daniel F. Ott
Laboratory Manager

Approved by: Jeffrey C. Curran
Jeffrey C. Curran
Chief Chemist

DFO/JCC/md

100207

TABLE 1
30850-1444
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Toluene, ug/kg</u>
ICC Berlex, 8/7/85 1:00	360

100208

TABLE 2
30850-1444
ENVIROSCIENCES, INC.

<u>Sample Identification</u>	<u>Pyridine, ug/kg</u>
ICC Berlex - Lab Pit, 8/7/85 12:00	2,700
ICC Berlex - Lab Pit, 8/7/85 12:00	<150

100209

TABLE 3
30850-1444
ENVIROSCIENCES, INC.
VOLATILE PRIORITY POLLUTANTS

All results reported in ug/l.

Compound	<u>Sample Identification</u>					
	ICC Berlex		ICC Berlex		ICC Berlex	
	Lab	Pit	Lab	Pit	Lab	Pit
	8/7/85	3:00	8/7/85	3:00	8/7/85	3:00
chloromethane		<10		<10		<10
bromomethane		<10		<10		<10
vinyl chloride		<10		<10		<10
chloroethane		<10		<10		<10
methylene chloride		<10		<10		<10
trichlorofluoromethane		<10		<10		<10
acrolein		<100		<100		<100
acrylonitrile		<100		<100		<100
1,1-dichloroethene		<10		<10		<10
1,1-dichloroethane		<10		<10		<10
trans-1,2-dichloroethene		<10		<10		<10
chloroform		<10		<10		<10
1,2-dichloroethane		<10		<10		<10
1,1,1-trichloroethane		<10		<10		<10
carbon tetrachloride		<10		<10		<10
bromodichloromethane		<10		<10		<10
2-chloroethylvinyl ether		<10		<10		<10
1,2-dichloropropane		<10		<10		<10
trans-1,3-dichloropropene		<10		<10		<10
trichloroethylene		<10		<10		<10
benzene		<10		<10		<10
cis-1,3-dichloropropene		<10		<10		<10
dibromochloromethane		<10		<10		<10
1,1,2-trichloroethane		<10		<10		<10
bromoform		<10		<10		<10
tetrachloroethylene		<10		<10		<10
1,1,2,2-tetrachloroethane		<10		<10		<10
toluene		22		21		360
chlorobenzene		<10		<10		<10
ethyl benzene		<10		<10		<10

100210

ATTACHMENT H

100211

A GENERAL INFORMATION

ATTACHMENT H

GENERATOR NAME: ISLAND CHEMICAL COMPANY (P.L.C.) TRIPLE M. MINE TREATMENT
 CITY ADDRESS: P.O. Box 6775 CRAIGSMILL ST. JOHN
 TRANSPORTER PHONE: 404/452-1117 DCUG
 GENERATOR USEPA I.D. Y1D980651D95
 GENERATOR STATE I.D. _____
 TECHNICAL CONTACT: Allen L. Kyles (Environmental) TITLE: Vice President PHONE: 904/409-5182
 NAME OF WASTE: HAZARDOUS WHITE SOLID NOS 201/566-6256
 PROCESS GENERATING WASTE: SPRI

B PHYSICAL CHARACTERISTICS OF WASTE

COLOR: Brown - Black
 ODOR: ☒ NONE ☐ MILD ☐ STRONG
 DESCRIBE: _____
 PHYSICAL STATE @ 70°F: ☒ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER
 LAYERS: ☐ MULTILAYERED ☐ BI-LAYERED ☒ SINGLE PHASED
 FREE LIQUIDS: ☐ YES ☒ NO
 VOLUME: _____ %
 pH: ☐ < 2 ☐ 7.1-10 ☐ N/A ☐ 2-4 ☐ 10.1-12.5 ☒ 4.1-6.9 ☐ > 12.5 ☐ 7 ☐ EXACT _____
 SPECIFIC GRAVITY: ☐ < .8 ☐ .8-1.0 ☒ 1.1-1.2 ☐ > 1.7 ☐ EXACT _____
 FLASH POINT: ☐ < 0°F ☐ 70°F-100°F ☐ 101°F-170°F ☐ 140°F-200°F ☒ > 200°F ☒ NO FLASH
 CLOSED CUP ☐ OPEN CUP ☐ EXACT _____

C CHEMICAL COMPOSITION (TOTALS MUST ADD TO 100%)

Soil & Gravel 99.9 %
Toluene (1.5 ppm) 50.001 %
Hexane (20 ppm) 50.001 %
 _____ %
 _____ %
 _____ %
 _____ %
 _____ %
 _____ %
 _____ %

D METALS ☐ TOTAL (PPM) ☐ EPA EXTRACTION PROCEDURE (mg/L)
 ARSENIC (As) NA SELENIUM (Se) NA
 BARIUM (Ba) NA SILVER (Ag) NA
 CADMIUM (Cd) NA COPPER (Cu) NA
 CHROMIUM (Cr) NA NICKEL (Ni) NA
 MERCURY (Hg) NA ZINC (Zn) NA
 LEAD (Pb) NA THALLIUM (Tl) NA
 CHROMIUM-HEX (Cr + 6) NA
 OTHER COMPONENTS - TOTAL (PPM) _____
 CYANIDES NONE PCB'S NONE
 SULFIDES NONE PHENOLICS SEE N/A

F SHIPPING INFORMATION

D.O.T. HAZARDOUS MATERIAL? ☒ YES ☐ NO
 PROPER SHIPPING NAME: HAZARDOUS WHITE SOLID NOS
 HAZARD CLASS: ORM-E I.D. NO. NA-9189 R.D. < 216
 METHOD OF SHIPMENT: ☐ BULK LIQUID ☐ BULK SOLID
☒ DRUM (TYPE/SIZE) 55 gal 1914
 ANTICIPATED VOLUME: _____ GALS. _____ CUBIC YARDS
 OTHER: 8250/65
 PER: ☒ ONE TIME ☐ WEEK ☐ MONTH
☐ QUARTER ☐ YEAR ☐ _____

G HAZARDOUS CHARACTERISTICS

REACTIVITY: ☒ NONE ☐ PYROPHORIC ☐ SHOCK SENSITIVE
☐ EXPLOSIVE ☐ WATER REACTIVE ☐ OTHER _____
 OTHER HAZARDOUS CHARACTERISTICS:
☒ NONE ☐ RADIOACTIVE ☐ ETIOLOGICAL
☐ PESTICIDE MANUFACTURING WASTE ☐ OTHER _____
 USEPA HAZARDOUS WASTE? ☐ YES ☐ NO
 USEPA HAZARDOUS CODE(S) U220 U002
 STATE HAZARDOUS WASTE? ☐ YES ☒ NO
 STATE CODE(S) NA

H SPECIAL HANDLING INFORMATION

None per Alan L. Kyles
9/25/95 ☐ ADDITIONAL PAGE(S) ATTACHED

WE CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS COMPLETE AND ACCURATE, AND THAT ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED.
 AUTHORIZED SIGNATURE: Alan L. Kyles TITLE: Vice President DATE: 12 Sept 1995
 100212

A GENERAL INFORMATION

GENERATOR NAME ISLAND CHEMICAL COMPANY (BALDU LGB) TRANSPORTER TRAILER MARINE TRANSPORT
 CITY ADDRESS Box 6723 TRANSPORTER PHONE: 404/252-1427 (DOUG MARTIN)
CHRISTIANSTED IS GENERATOR USEPA I.D. V.I.D. 910.65.10.95
St. Croix USVI 00720 GENERATOR STATE I.D. _____
 TECHNICAL CONTACT: ALAN L. KYLES (CARLOS SCHEIN) TITLE: VICE PRESIDENT PHONE: 919/409-5112
 NAME OF WASTE: HEXAZODAS WHITE LIQUID NOS 20/366-6256
 PROCESS GENERATING WASTE: VARIOUS PHARM. MANUF. WHITE STREAMS

B PHYSICAL CHARACTERISTICS OF WASTE

COLOR <u>Clear-Opaque</u>	ODOR ☐ NONE ☒ MILD ☐ STRONG DESCRIBE <u>SULFUR</u>	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☒ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☒ SINGLE PHASED	FREE LIQUIDS ☒ YES ☒ NO VOLUME <u>100</u> %
PH: ☐ < 2 ☐ 7.1-10 ☐ N/A ☐ 2-4 ☐ 10.1-12.5 ☒ 4.1-6.9 ☐ > 12.5 ☐ 7 ☐ EXACT _____	SPECIFIC GRAVITY ☐ < ☐ 1.3-1.4 ☒ 8-1.0 ☐ 1.5-1.7 ☐ 1.1-1.2 ☐ > 1.7 ☐ EXACT _____	FLASH POINT ☐ < 70°F ☐ > 200°F ☐ 70°F - 100°F ☒ NO FLASH ☐ OPEN CUP ☐ 101°F - 139°F ☐ EXACT _____ ☐ 140°F - 200°F		

C CHEMICAL COMPOSITION (TOTALS MUST ADD TO 100%)

CHEMICAL COMPOSITION (TOTALS MUST ADD TO 100%)		METALS ☒ TOTAL (PPM) ☐ EPA EXTRACTION PROCEDURE (mg/L)	
<u>WATER</u>	<u>99.0</u> %	ARSENIC (As)	<u>LT 0.005</u>
<u>BENZENE</u>	<u>20.01</u> %	BARIUM (Ba)	<u>N/A</u>
<u>TOLUENE</u>	<u>< 0.01</u> %	CADMIUM (Cd)	<u>0.003</u>
<u>BORON ALKYLIDE</u>	<u>< 0.01</u> %	CHROMIUM (Cr)	<u>0.027</u>
<u>CHLOROMETHYL BENZENE</u>	<u>< 0.01</u> %	MERCURY (Hg)	<u>0.001</u>
<u>BUTYL METHANOL</u>	<u>< 0.01</u> %	LEAD (Pb)	<u>0.011</u>
<u>PHENYL ACETIC</u>	<u>< 0.01</u> %	CHROMIUM-HEX (Cr + 6)	<u>-</u>
<u>DIPHENYL METHANE</u>	<u>< 0.01</u> %	☒ OTHER COMPONENTS - TOTAL (PPM)	
<u>1-1'-[OXYBIS(METHYLENE)] BIS BENZENE</u>	<u>< 0.01</u> %	CYANIDES	<u>0.053</u>
<u>ENZOIC ACID</u>	<u>< 0.01</u> %	SULFIDES	<u>N/A</u>
		PCB'S	<u>NONE</u>
		PHENOLICS	<u>0.161</u>

F SHIPPING INFORMATION

D.O.T. HAZARDOUS MATERIAL? ☒ YES ☐ NO

PROPER SHIPPING NAME: HEXAZODAS WHITE LIQUID NOS

HAZARD CLASS: ORM-E I.D. NO. NA-9189 R.O. CMS

METHOD OF SHIPMENT: ☐ BULK LIQUID ☐ BULK SOLID
☐ DRUM (TYPE/SIZE) 55 gal 17E

ANTICIPATED VOLUME: 40000 GALS. _____ CUBIC YARDS
 OTHER 40000 lbs

PER: ☒ ONE TIME ☐ WEEK ☐ MONTH
☐ QUARTER ☐ YEAR

HAZARDOUS CHARACTERISTICS

REACTIVITY: ☒ NONE ☐ PYROPHORIC ☐ SHOCK SENSITIVE
☐ EXPLOSIVE ☐ WATER REACTIVE ☐ OTHER _____

OTHER HAZARDOUS CHARACTERISTICS:
☒ NONE ☐ RADIOACTIVE ☐ ETIOLOGICAL
☐ PESTICIDE MANUFACTURING WASTE ☐ OTHER _____

USEPA HAZARDOUS WASTE? ☒ YES ☐ NO

USEPA HAZARDOUS CODE(S): U220 U019 P028

STATE HAZARDOUS WASTE? ☐ YES ☒ NO

STATE CODE(S): HA

H SPECIAL HANDLING INFORMATION

None Required per Alan L. Kyles
9/25/85 AKW ☐ ADDITIONAL PAGE(S) ATTACHED

I HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS COMPLETE AND ACCURATE, AND THAT ALL KNOWN OR
 SUSPECTED HAZARDS HAVE BEEN DISCLOSED.

SIGNED SIGNATURE

TITLE

DATE

100213

Alan L. Kyles

Vice President (EIT)

12 Jan 1985

GENERATOR'S WAS MATERIAL PROFILE SHEET

U 48004

A GENERAL INFORMATION

GENERATOR NAME IRONO Chemical Company (Baker Labs) TRANSPORTER TRACIL MARINE TRANSPORT
 CITY ADDRESS P.O. Box 6773 TRANSPORTER PHONE 404/452-4427 (Dove Martin)
CHRISTIANSTEDT GENERATOR USEP/I/D Y12980651095
ST. CROIX U.S.V.I. 00820 GENERATOR STATE I.D. -
 TECHNICAL CONTACT ALAN L. KULL (Enviro Services) TITLE Vice President PHONE 919/499-5182
 NAME OF WASTE 16320000 Waste Solid NOS 201/366-6252
 PROCESS GENERATING WASTE NOVE Sp. 11

B PHYSICAL CHARACTERISTICS OF WASTE

COLOR <u>Black, Gray-Brown</u> <u>Tan</u>	ODOR ☐ NONE ☒ MILD ☐ STRONG DESCRIBE <u>Toluene?</u>	PHYSICAL STATE @ 70°F ☒ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BILAYERED ☒ SINGLE PHASED	FREE LIQUIDS ☐ YES ☒ NO VOLUME _____%
---	--	---	--	--

pH: ☐ < 2 ☒ 7.1-10 ☐ N/A ☒ 2-4 ☐ 10.1-12.5 ☐ 4.1-6.9 ☐ > 12.5 ☐ 7 ☐ EXACT _____	SPECIFIC GRAVITY ☐ < .8 ☐ 1.3-1.4 ☐ .8-1.0 ☐ 1.5-1.7 ☒ 1.1-1.2 ☐ > 1.7 ☐ EXACT _____	FLASH POINT ☐ < 70°F ☐ > 200°F ☐ CLOSED CUP ☐ 70°F - 100°F ☒ NO FLASH ☐ OPEN CUP ☐ 101°F - 139°F ☐ EXACT _____ ☐ 140°F - 200°F
---	---	---

C CHEMICAL COMPOSITION (TOTALS MUST ADD TO 100%)

<u>SOIL</u>	<u>99.3</u> %
<u>TOLUENE</u>	<u>0.56</u> %
<u>CHLOROFORM</u>	<u>2.01</u> %
<u>METHYLENE CHLORIDE</u>	<u>0.12</u> %
<u>PERMANENT TETRACHLORIDE</u>	<u>2.01</u> %
<u>ETHYL BENZENE</u>	<u>2.01</u> %
<u>UNKNOWN HYDROCARBONS</u>	<u>2.01</u> %

D METALS TOTAL (PPM) EPA EXTRACTION PROCEDURE (mg/L)

ARSENIC (As)	<u>NA</u>	SELENIUM (Se)	<u>NA</u>
BARIUM (Ba)	<u>NA</u>	SILVER (Ag)	<u>NA</u>
CADMIUM (Cd)	<u>NA</u>	COPPER (Cu)	<u>NA</u>
CHROMIUM (Cr)	<u>NA</u>	NICKEL (Ni)	<u>NA</u>
MERCURY (Hg)	<u>NA</u>	ZINC (Zn)	<u>NA</u>
LEAD (Pb)	<u>NA</u>	THALLIUM (Tl)	<u>NA</u>
CHROMIUM-HEX (Cr + 6)	<u>NA</u>		

E OTHER COMPONENTS - TOTAL (PPM)

CYANIDES	<u>NA</u>	PCB'S	<u>NA</u>
SULFIDES	<u>NA</u>	PHENOLICS	<u>NA</u>

F SHIPPING INFORMATION

D.O.T. HAZARDOUS MATERIAL? ☒ YES ☐ NO
 PROPER SHIPPING NAME HAZARDOUS WASTE SOLID - NOS
 HAZARD CLASS ORM-E I.D. NO. NA-9189 R.O. < 100
 METHOD OF SHIPMENT: ☐ BULK LIQUID ☐ BULK SOLID
☒ DRUM (TYPE/SIZE) 55 gal DOT 17H
 ANTICIPATED VOLUME: _____ GALS. _____ CUBIC YARDS
 OTHER 11,000 lbs
 PER: ☒ ONE TIME ☐ WEEK ☐ MONTH
☐ QUARTER ☐ YEAR

G HAZARDOUS CHARACTERISTICS

REACTIVITY ☒ NONE ☐ PYROPHORIC ☐ SHOCK SENSITIVE
☐ EXPLOSIVE ☐ WATER REACTIVE ☐ OTHER _____
 OTHER HAZARDOUS CHARACTERISTICS:
☒ NONE ☐ RADIOACTIVE ☐ ETIOLOGICAL
☐ PESTICIDE MANUFACTURING WASTE ☐ OTHER _____
 USEPA HAZARDOUS WASTE? ☒ YES ☐ NO
 USEPA HAZARDOUS CODE(S) U220 U001 U000 U211
 STATE HAZARDOUS WASTE? ☐ YES ☒ NO
 STATE CODE(S) NA

H SPECIAL HANDLING INFORMATION

None Reported

BY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS COMPLETE AND ACCURATE, AND THAT ALL KNOWN OR REASONABLY EXPECTED HAZARDS HAVE BEEN DISCLOSED.
 AUTHORIZED SIGNATURE Alan L. Kull TITLE Vice President (EST) DATE 12 Sept 1985

GENERATOR'S WASTE MATERIAL PROFILE SHEET

414 D 48603

A GENERAL INFORMATION

GENERATOR NAME: ISLAND CHEMICAL COMPANY (BELL & LUM) TRANSPORTER: TRIPLE MARINE TRANSPORT
 ADDRESS: P.O. Box 6773 TRANSPORTER PHONE: 408/552-1427 (Dore Martin)
CHRISTIANSTED GENERATOR USEPA I.D. V1D910651095
ST. CROIX USVI 00820 GENERATOR STATE I.D. -
 TECHNICAL CONTACT: ALAN L. KYLES (Enviro Science) TITLE: Vice President PHONE: 919/499-5182
 NAME OF WASTE: HAZARDOUS WASTE Liquid NOS 201/366-6256
 PROCESS GENERATING WASTE: VARIOUS PHARM. MANUFACTURING WASTE STREAMS

B PHYSICAL CHARACTERISTICS OF WASTE

COLOR <u>Gray Beige to Tan</u>	ODOR ☐ NONE ☐ MILD ☒ STRONG DESCRIBE <u>Benzyl Acetate</u>	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☒ LIQUID ☐ POWDER	LAYERS ☒ MULTILAYERED ☐ BILAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☒ YES ☐ NO VOLUME <u>30</u> %
H: ☐ < 2 ☐ 7.1-10 ☐ N/A ☐ 2-4 ☐ 10.1-12.5 ☐ 4.1-8.9 ☐ > 12.5 ☐ 7 ☐ EXACT <u>6.20</u>	SPECIFIC GRAVITY ☐ < .8 ☐ .8-1.0 ☐ 1.1-1.2 ☐ EXACT <u>1.0222</u> ☐ 1.3-1.4 ☐ 1.5-1.7 ☐ > 1.7	FLASH POINT ☐ < 70°F ☒ > 200°F ☒ CLOSED CUP ☐ 70°F - 100°F ☐ NO FLASH ☐ OPEN CUP ☐ 101°F - 139°F ☐ EXACT <u>100°C</u> ☐ 140°F - 200°F		

C CHEMICAL COMPOSITION (TOTALS MUST ADD TO 100%)

Soil 300 %
WATER 47.2 %
Benzyl Acetate 17.0 %
Benzyl Methacrylate 1.5 %
Isomyl Methacrylate 3.0 %
Tartrates (Methylated) bis(2-butenes) 0.4 %
9H-Fluorene-9-one 0.3 %
Chlorobenzene Butane (400 ppm) 944.2 %
Toluene 0.16 %
Chloroform (220 ppm) Methylene Chloride (15 ppm) 4.04 %

D METALS ☒ TOTAL (PPM) ☐ EPA EXTRACTION PROCEDURE (mg/L)
 ARSENIC (As) 40 SELENIUM (Se) LT 1.08
 BARIUM (Ba) NA SILVER (Ag) LT 1.48
 CADMIUM (Cd) 22.8 COPPER (Cu) 327
 CHROMIUM (Cr) 592 NICKEL (Ni) 134
 MERCURY (Hg) 2.73 ZINC (Zn) 3,594
 LEAD (Pb) 688 THALLIUM (Tl) LT 66.2
 CHROMIUM-HEX (Cr = 6) -

E OTHER COMPONENTS - TOTAL (PPM)

CYANIDES 1.44 PCB'S NONE
 SULFIDES NA PHENOLICS 9.01

F SHIPPING INFORMATION

U.S. HAZARDOUS MATERIAL? ☒ YES ☐ NO
 PROPER SHIPPING NAME: HAZARDOUS WASTE Liquid NOS
 HAZARD CLASS ORM-E I.D. NO. NA 9189 R.O. 300
 METHOD OF SHIPMENT: ☐ BULK LIQUID ☐ BULK SOLID
☒ DRUM (TYPE/SIZE) 55 gal DOT 17H
 ANTICIPATED VOLUME: 2500 GALS. - CUBIC YARDS
 OTHER -
 PER: ☒ ONE TIME ☐ WEEK ☐ MONTH
☐ QUARTER ☐ YEAR

G HAZARDOUS CHARACTERISTICS

REACTIVITY: ☒ NONE ☐ PYROPHORIC ☐ SHOCK SENSITIVE
☐ EXPLOSIVE ☐ WATER REACTIVE ☐ OTHER SLIGHTLY
 OTHER HAZARDOUS CHARACTERISTICS: CAUSTIC (BURNING SENSITIVE TO SKIN)
☒ NONE ☐ RADIOACTIVE ☐ ETIOLOGICAL
☐ PESTICIDE MANUFACTURING WASTE ☐ OTHER -
 USEPA HAZARDOUS WASTE? ☒ YES ☐ NO
 USEPA HAZARDOUS CODE(S): U044 U080 D006 D008
U220 D007 D009
 STATE HAZARDOUS WASTE? ☐ YES ☒ NO
 STATE CODE(S): NA

H SPECIAL HANDLING INFORMATION

None Required

I CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS COMPLETE AND ACCURATE, AND THAT ALL KNOWN OR SUSPECTED HAZARDOUS MATERIALS HAVE BEEN DISCLOSED.

AUTHORIZED SIGNATURE: Alan L. Kyles TITLE: Vice President (EST) DATE: 100215
12 Sept 1985

ATTACHMENT I

Mr. Austin Moshead
 Department of Conservation and Cultural Affairs
 Division of Natural Resource Management
 14F Building III
 Water Control House
 Christonsted, St. Croix, USVI 00820

Dear Mr. Moshead:

As per our discussion today (October 1, 1992), Federal Chemical Company (Fuchs) is requesting permission to evaporate by boiling approximately 4,000 gallons of water. The water is in the process pit and is contaminated with 0.05 and 0.38 ppm of benzene and toluene, respectively. The contamination level is documented in correspondence to you dated August 15, 1992 (Data Sheets 12-17, Priority Pollutants + 40).

Maximum rate of evaporation is expected to be about 1,000 gallons per day, thus a 200 TLV for emissions will not be exceeded.

We were given permission by US EPA Region II to evaporate toluene from contaminated soil which had a concentration level in excess of 700 ppm (Rogers Report p. 2; December, 1992). This is a much higher level of concentration than the contaminated soil.

We consider that treatment of contaminated water
to be the best alternative rather than state-side
disposal.

Your immediate response to this matter would be
most appreciated.

Very truly yours,

Alvin J. Kyle Ph.D.
Enviro - Sciences, Inc.

ATTACHMENT J



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please Print or Type

(Form designed for use on elite (12-pitch) typewriter)

Form Approved

ATTACHMENT J

res 7-31-85

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 2	ATTACHMENT J		res 7-31-85
3. Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 800 FAIRFIELD ROAD WAYNE NEW JERSEY 07070		Trailer Number RTMZ 251880		A. State Manifest Document Number CWMA 243031		B. State Generator's ID	
4. Generator's Phone (201) 696-4100		5. Transporter 1 Company Name O'NEALE'S TRUCKING & TRAILER TRANSPORT, INC.		6. US EPA ID Number PR1019181061415719		C. State Transporter's ID	
7. Transporter 2 Company Name TROPICAL MARINE TRANSPORT INC.		8. US EPA ID Number PR1019181061415719		E. State Transporter's ID		F. Transporter's Phone	
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459		10. US EPA ID Number AL101010612141614		G. State Facility's ID		H. Facility's Phone 205/652-9721	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity		14. Unit	
a. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA 9189 CWM Profile Number ALAD 48602		No. 44		Type 1		Waste No.	
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD 48603		No. 35		Type 1		Waste No.	
c. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD 41604		No. 1		Type 1		Waste No.	
d. CWM Profile Number							
Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above					
11A. LESS THAN 1.0% TOLUENE AND BENZENE SLIGHT ODOR OF BENZYL ACETATE		081		081			
11B. APPROXIMATELY 20% ORGANIC, PRIMARILY BENZYL ACETATE		081		081			
11C. LESS THAN 1.0% TOLUENE AND BENZENE CHLOROFORM		081		081			
15. Special Handling Instructions and Additional Information 11C. Soil permit in three drums. Must be inspected by USDA-PAP Prior to departure from Ft. Chis. Permit Included.							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.							
Printed/Typed Name Alan L. Kyles		Signature Alan L. Kyles		Month Day Year 11/01/85			
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name O'Neale's Transport Inc Norton C. M. Burt		Signature Norton C. M. Burt		Month Day Year 11/01/85			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name HENRY HENRI		Signature Henry Henri		Month Day Year 11/01/85			
19. Discrepancy Indication Space 0 123							
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name HOWARD TOMPLE		Signature Howard Tomple		Month Day Year 11/20/85			

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No. V10980651095	Manifest Document No.	22. Page 2 of 2	Information in the shaded areas is not required by Federal law.	
23. Generator's Name ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD 07470 WAYNE, NEW JERSEY 07470		Trailer Number RTMZ 251880		L. State Manifest Document Number CWMA 243031		
				M. State Generator's ID		
24. Transporter Company Name RENDER NATIONWIDE		25. US EPA ID Number FL0980803977		N. State Transporter's ID		
26. Transporter Company Name RYDER RANGER		27. US EPA ID Number FL0980803977		O. Transporter's Phone		
				P. State Transporter's ID		
				Q. Transporter's Phone 318-4306240		
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		29. Containers		30. Total Quantity	31. Unit	R. Waste No.
		No.	Type			
a. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NO 9189						
		CWM Profile Number ALD 48602		44	DM	
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLORFORM) ORM-E NO 9189						
		CWM Profile Number ALD 48603		35	DM	
c. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLORFORM) ORM-E NO 9189						
		CWM Profile Number ALD 48604		1	DM	
d.						
		CWM Profile Number				
e.						
		CWM Profile Number				
f.						
		CWM Profile Number				
g.						
		CWM Profile Number				
h.						
		CWM Profile Number				
i.						
		CWM Profile Number				
S. Additional Descriptions for Materials Listed Above				T. Handling Codes for Wastes Listed Above		
28a. Less than 1% Toluene and Benzene Slight odor of benzyl acetate 28b. Approximately 30% organic primarily Benzyl Acetate 28c. Less than 1% Toluene & Chloroform				a. d. g. b. e. h. c. f. i.		
32. Space for Handling Instructions and Additional Information						
28c. Fuel present in these drums. Must be inspected by USDA-PPS prior to departure from St. Louis. Permit included.						
33. Transporter Acknowledgement of Receipt of Materials						Date
Printed/Typed Name Onesio Transport Inc			Signature Anton C. M. Guit Jr.		Month Day Year 1 0 1 7 8 5	
34. Transporter Acknowledgement of Receipt of Materials						Date
Printed/Typed Name Charles M. Duhon			Signature Charles M. Duhon		Month Day Year 12 2 86	
35. Discrepancy Indication Space						



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No 2000-0404 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V11D198065109572002		Manifest Document No. 000002		2. Page 1 of 2		Information in the shaded areas is not required by Federal law	
3. Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD WAYNE NEW JERSEY 07090		Trailer Number RTMZ 251880		A. State Manifest Document Number CWMA 243031		B. State Generator's ID			
4. Generator's Phone (201) 696-4100		5. Transporter 1 Company Name O'NEALE'S TRUCKING & TRAILER TRUCKING, INC.		6. US EPA ID Number PR101980651095719		C. State Transporter's ID		D. Transporter's Phone	
7. Transporter 2 Company Name TROPICAL MARINE TRANSPORT INC.		8. US EPA ID Number PR101980651095719		E. State Transporter's ID		F. Transporter's Phone			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459		10. US EPA ID Number AL10000622464		G. State Facility's ID		H. Facility's Phone 205/652-9721			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol	
a. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA 9189 CWM Profile Number ALAD 45602				44 M					
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD 45603				35 M					
c. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD 45604				1 M					
d. CWM Profile Number									
Additional Descriptions for Materials Listed Above 11A. LESS THAN 1.0% TOLUENE AND BENZENE SLIGHT ODOR OF BENZYL ACETATE 11B. APPROXIMATELY 20% BENZENE, PRIMARILY BENZYL ACETATE 11C. LESS THAN 1.0% TOLUENE AND BENZENE CHLOROFORM				K. Handling Codes for Wastes Listed Above 081 081 081 d.					
15. Special Handling Instructions and Additional Information 11C. Soil permit in three drums. Must be inspected by USDA-PPS Prior to departure from St. Clair. Permit included.									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.									
Printed/Typed Name Alan L. Kyle				Signature Alan L. Kyle				Month Day Year 11/01/85	
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed/Typed Name O'Neale's Transport Inc Norton C. M. Burr				Signature Norton C. M. Burr				Month Day Year 11/01/85	
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name HENRY HENRI				Signature Henry Henri				Month Day Year 11-20-85	
19. Discrepancy Indication Space 100222									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name HOWARD TOMPLE				Signature Howard Tomple				Month Day Year 11/20/85	

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No. V10980651095	Manifest Document No.	22. Page 2 of 2	Information in the shaded area is not required by Federal law	
23. Generator's Name ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD 07470 WAYNE, NEW JERSEY 07470		Trailer Number RTMZ 251880		L. State Manifest Document Number CWMA 243031		
24. Transporter Company Name RENKER NETWORK		25. US EPA ID Number FLD980803977		N. State Transporter's ID		
26. Transporter Company Name DYER RANGER		27. US EPA ID Number FLD980803977		O. Transporter's Phone		
				P. State Transporter's ID		
				Q. Transporter's Phone 318-4396240		
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		29. Containers	30. Total Quantity	31. Unit	R. Waste No.	
a. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NO 9189		No	Type			
CWM Profile Number ALAD 48602		44	DM			
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLORFORM) ORM-E NO 9189						
CWM Profile Number ALAD 48603		35	DM			
c. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLORFORM) ORM-E NO 9189						
CWM Profile Number ALAD 48604		1	DM			
d.						
CWM Profile Number						
e.						
CWM Profile Number						
f.						
CWM Profile Number						
g.						
CWM Profile Number						
h.						
CWM Profile Number						
i.						
CWM Profile Number						
S. Additional Descriptions for Materials Listed Above		T. Handling Codes for Wastes Listed Above				
28a. Less than 1% Toluene and Benzene		a. d. g.				
Slight odor of benzyl acetate		b. e. h.				
28b. Approximately 20% organic, primarily Benzyl Acetate		c. f. i.				
28c. Less than 1% Toluene & Chloroform						
32. Special Handling Instructions and Additional Information						
28c. Not present in these drums. Must be migrated by USDO-PRR prior to departure from St. Louis. Permit included.						
33. Transporter Acknowledgement of Receipt of Materials		Signature			Date	
Printed/Typed Name Onesie Transport Inc		Charles M. Doherty			12/17/85	
34. Transporter Acknowledgement of Receipt of Materials		Signature			Date	
Printed/Typed Name Charles M. Doherty		Charles M. Doherty			12/2/86	
35. Discrepancy Indication Space						



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2000-0404 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V110980651095170003		Manifest Document No. 170003		2. Page 1 of 2		Information in the shaded areas is not required by Federal law	
3. Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD WAYNE, NEW JERSEY 07090		Trailer Number TMTZ 680365		A. State Manifest Document Number CWMA 243032					
4. Generator's Phone (201) 698-8100				B. State Generator's ID					
5. Transporter 1 Company Name ONEALE'S TRUCKING AND TRAILER TRENWORTH, INC.		6. US EPA ID Number P20980642579		C. State Transporter's ID					
7. Transporter 2 Company Name TRAILER MARINE TRANSPORT, INC.		8. US EPA ID Number P20980642579		D. Transporter's Phone					
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459		10. US EPA ID Number AL000622464		E. State Transporter's ID					
				F. Transporter's Phone 404-452-1447					
				G. State Facility's ID					
				H. Facility's Phone 205/652-9721					
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers		13. Total Quantity		14. Unit Wt/Vol	
				No. Type				1. Waste No.	
a. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA9189 CWM Profile Number ALAD 48602				1 F D 15					
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLOROFORM) ORM-E NA9189 CWM Profile Number ALAD 48603				110 D 15					
c. HAZARDOUS WASTE SOLID NOS (METAL DRUMS) ORM-E NA9189 CWM Profile Number ALAE 68804				14 D 15					
d.									
CWM Profile Number									
Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above					
11a. Less than 1.0% Toluene and Benzene				a. DB1					
11b. Approximately 20% organic, primarily benzyl acetate				c. DB1					
11c. Drums contain pieces of metal drums w/ Voids				b. DB1					
15. Special Handling Instructions and Additional Information				d.					
11c. Drums will have to be filled with inert material by CWMA									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.									
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.									
Printed Name ALAN L. KYLE				Signature Alan L. Kyle				Month Day Year 11/01/85	
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed Name Oneale's Transport Inc Norton C. M. Burt				Signature Norton C. M. Burt				Month Day Year 11/01/85	
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed Name Howard Berry				Signature Howard Berry				Month Day Year 11/22/85	
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.									
Printed Name Howard Temple				Signature Howard Temple				Month Day Year 11/20/85	

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No. V 1 D 9 8 0 6 5 1 0 9 5	Manifest Document No. I C 0 0 3	22. Page 2 of 2	Information in the shaded areas is not required by Federal law	
23. Generator's Name ISLEND CHEMICAL COMPANY 300 FAIRFIELD ROAD WARREN, NEW JERSEY 07070 TEL 201-694-4100		Trailer Number TMTZ 680365		L. State Manifest Document Number CWMA 273032		
24. Transporter's Company Name RANGER NATIONAL		25. US EPA ID Number FLD 980803977		M. State Generator's ID		
26. Transporter's Company Name RYDER RANGER		27. US EPA ID Number FLD 007022572		N. State Transporter's ID		
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		29. Containers		O. Transporter's Phone 318-439-6240		
		No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene) ORIM-E NA 9189 CWM Profile Number ALRD 48602		12	DM			
b. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene) ORIM-E NA 9189 CWM Profile Number ALRD 48602		10	DM			
c. HAZARDOUS WASTE SOLID NOS (METAL DRUMS) ORIM-E NA 9189 CWM Profile Number ALAE 68804		14	DM			
d. CWM Profile Number						
e. CWM Profile Number						
f. CWM Profile Number						
g. CWM Profile Number						
h. CWM Profile Number						
i. CWM Profile Number						
S. Additional Descriptions for Materials Listed Above 28a. Less than 1.0% Toluene & Benzene 28b. Approximately 20% organic, primarily benzene acetate 28c. Drums contain pieces of metal drums or voids				T. Handling Codes for Wastes Listed Above		
32. Special Handling Instructions and Additional Information 28c. Drums will have to be filled with inert material by CWM.				a. d. g. b. e. h. c. f. i.		
33. Transporter's Acknowledgement of Receipt of Materials				Date		
Printed/Typed Name Charles C. M. Burr		Signature Charles C. M. Burr		Month Day Year 10/17/85		
34. Transporter's Acknowledgement or Receipt of Materials				Date		
Printed/Typed Name JESSE DAILEY		Signature Jesse Dailey		Month Day Year 12/2/85		
35. Discrepancy Indication Space						

100225



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type

(Form designed for use on elite (12-pitch) typewriter)

Form Approved OMB No 2000-0404 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V1109806151095110003		Manifest Document No. 110003		2. Page 1 of 2		Information in the shaded areas is not required by Federal law	
3. Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD WAYNE, NEVADA 89414		Trailer Number TMTZ 680365		A. State Manifest Document Number CWMA 243032		B. State Generator's ID			
4. Generator's Phone (201) 696-4100		6. US EPA ID Number P.R.D. 980615179		C. State Transporter's ID		D. Transporter's Phone			
5. Transporter 1 Company Name ONEALE'S TRUCKING AND TRAILER TRAWLPORT, INC.		8. US EPA ID Number P.R.D. 980615179		E. State Transporter's ID		F. Transporter's Phone 404-452-1444			
7. Transporter 2 Company Name TRAWL MARINE TRANSPORT, INC.		10. US EPA ID Number A.L.D. 0006224614		G. State Facility's ID		H. Facility's Phone 205/652-9721			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459									
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity		14. Unit		15. Waste No.	
a. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene) ORM-E NA 9189 CWM Profile Number ALAD 48602		1 Drum		1		Drum			
b. HAZARDOUS WASTE LIQUID NOS (Toluene & Chloroform) ORM-E NA 9189 CWM Profile Number ALAD 48603		1 Drum		1		Drum			
c. HAZARDOUS WASTE SOLID NOS (Metal Drums) ORM-E NA 9189 CWM Profile Number ALAE 68804		1 Drum		1		Drum			
d. CWM Profile Number									
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above							
11a. Less than 1.0% Toluene and Benzene		a. DB1							
11b. Approximately 20% organic, primarily Benzene		c. DB1							
11c. Drums contain pieces of metal drums w/ Voids		b. DB1							
15. Special Handling Instructions and Additional Information									
11c. Drums will have to be filled with inert material by CWMA									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.									
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.									
Printed Name RON L. KYLE		Signature Ron L. Kyle		Month Day Year 11/01/85					
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed Name Oneale's Transport Inc Norton C. M. Burt		Signature Norton C. M. Burt		Month Day Year 11/01/85					
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed Name Charles Henry		Signature Charles Henry		Month Day Year 11/02/85					
19. Discrepancy Indication Space								100226	
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed Name Howard Temple		Signature Howard Temple		Month Day Year 11/20/85					

**UNIFORM HAZARDOUS
WASTE MANIFEST
(Continuation Sheet)**

21. Generator's US EPA ID No.

V 12980651095

Manifest
Document No

IC003

22. Page

242

Information in the shaded areas
is not required by Federal
law

J. Generator's Name

ISLAND CHEMICAL COMPANY
300 FAIRFIELD ROAD
WAHNE, NEW JERSEY 07070
TEL 201-694-4100

Trailer Number
TMTZ 680365

L. State Manifest Document Number

CWMA 243032

M. State Generator's ID

24. Transporter's Company Name

RANGER NATIONAL INC

25. US EPA ID Number

FLD 980803977

N. State Transporter's ID

O. Transporter's Phone

26. Transporter's Company Name

RYAN RANGER

27. US EPA ID Number

FLD 007022572

P. State Transporter's ID

Q. Transporter's Phone 318-439-6749

28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

29. Containers	No.	Type	30. Total Quantity	31. Unit Meas	R. Waste No.
a.	12	DM			
b.	12	DM			
c.	14	DM			
d.					
e.					
f.					
g.					
h.					
i.					

a. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

b. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

c. HAZARDOUS WASTE SOLID NOS (METAL DRUMS)

ORM-E NA9189

CWM Profile Number ALAE 68804

d. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

e. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

f. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

g. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

h. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

i. HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)

ORM-E NA9189

CWM Profile Number ALRD 48602

S. Additional Descriptions for Materials Listed Above

28a. Less than 1.0% Toluene & Benzene
28b. Approximately 80% organic, primarily benzene & acetone
28c. Drums contain pieces of metal drums & voids

T. Handling Codes for Wastes Listed Above

a. d. g.
b. e. h.
c. f. i.

32. Special Handling Instructions and Additional Information

28c. Drums will have to be filled with inert material by CWM.

33. Transporter's Acknowledgement of Receipt of Materials

Printed/Typed Name
G. V. Burt

Signature
Gordon C. M. Burt Jr.

Date
Month Day Year
1 2 1985

34. Transporter's Acknowledgement of Receipt of Materials

Printed/Typed Name
JESSE DAILEY JR

Signature
Jesse Dailey

Date
Month Day Year
1 2 1985

Discrepancy Indication Space

100227



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter)

Form Approved OMB No 2000-0404 Expires 7-31-85

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V1098065109510001		Manifest Document No. 10001		2. Page 1 of 2		Information in the shaded areas is not required by Federal law					
3. Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 800 FAIRFIELD ROAD WAYNE NEW JERSEY 07470				Trailer Number RTM2;274676		A. State Manifest Document Number CWMA 243033							
4. Generator's Phone (201) 694-4100						B. State Generator's ID							
5. Transporter 1 Company Name O'NEALE'S TRUCKING & TRAILER TRANSPORT, INC.				6. US EPA ID Number PRD980644579		C. State Transporter's ID							
7. Transporter 2 Company Name TRENER MARINE TRANSPORT, INC.				8. US EPA ID Number PRD980644579		D. Transporter's Phone							
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459				10. US EPA ID Number ALD000622464		E. State Transporter's ID							
						F. Transporter's Phone							
						G. State Facility's ID							
						H. Facility's Phone 205/652-9721							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.	
a. HAZARDOUS WASTE SOLID NOS (TOLUENE & ACETONE) ORM-E NA 9189 CWM Profile Number ALAE68803						150 M							
b. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD48604						230 M							
c. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA 9189 CWM Profile Number ALAD48602						380 M							
d.													
Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above							
11a. less than 1.0% Toluene and Acetone						a. DB1							
11b. less than 1.0% Toluene and Chloroform						c. DB1							
11c. less than 1.0% Toluene and Benzene HAS SLIGHT ODOR OF BENZYL ALCOHOL						b. DB1							
15. Special Handling Instructions and Additional Information NONE / ITEMS 11a, 11b, 11c. MUST BE TREATED BY UNCLASIFIED FIRM TO DEFERRED FROM ST. CROIX. PERMIT REQUIRED													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.													
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.													
Printed Name ALON L. KYLES				Signature Alon L. Kyles				Month Day Year 10/09/85					
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed Name O'Neale's Transport Inc Norton C.M. Burt				Signature Norton C.M. Burt				Month Day Year 12/01/85					
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed Name JENNA HEWLEY				Signature Jenna Hewley				Month Day Year 12/02/85					
19. Discrepancy Indication Space													
										100228			
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.													
Printed Name HOWARD TEMPLE				Signature Howard Temple				Month Day Year 11/30/85					

**UNIFORM HAZARDOUS
WASTE MANIFEST
(Continuation Sheet)**

21. Generator's US EPA ID No.

Manifest
Document No.

22. Page

Information in the shaded areas
is not required by Federal
law.

V I D 9 8 0 6 5 1 0 9 5

IC001

2 of 2

23. Generator's Name

ISLAND CHEMICAL COMPANY
300 FAIRFIELD ROAD 07070
WAYNE, NEW JERSEY

Trailer Number
RTM2; 274676

TEL 201-692 2100

L. State Manifest Document Number

CWMA 245033

M. State Generator's ID

24. Transporter's Company Name

RANGER NATIONAL

25. US EPA ID Number

FL 0 9 8 0 8 0 3 9 7 7

N. State Transporter's ID

O. Transporter's Phone

26. Transporter's Company Name

RYDER RANGER

27. US EPA ID Number

FL 0 0 7 0 2 2 5 7 0

P. State Transporter's ID

Q. Transporter's Phone 318-439-6249

28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

29. Containers

No. Type

30.
Total
Quantity

31.
Unit
Wt/Vol

32.
R.
Waste No.

a. ~~HAZARDOUS WASTE SOLID NOS (Toxic & Corrosive)~~

~~ORM-E NA 9189~~

CWM Profile Number ALA 663023

15 DM

b. ~~HAZARDOUS WASTE SOLID NOS (Toxic & Corrosive)~~

~~ORM-E NA 9189~~

CWM Profile Number ALA 091004

23 DM

c. ~~HAZARDOUS WASTE LIQUID NOS (Toxic & Corrosive)~~

~~ORM-E NA 9189~~

CWM Profile Number ALA 38602

34 DM

d.
CWM Profile Number

QSR 10/3

e.
CWM Profile Number

f.
CWM Profile Number

g.
CWM Profile Number

h.
CWM Profile Number

i.
CWM Profile Number

j.
CWM Profile Number

k.
CWM Profile Number

l.
CWM Profile Number

m.
CWM Profile Number

n.
CWM Profile Number

o.
CWM Profile Number

p.
CWM Profile Number

q.
CWM Profile Number

r.
CWM Profile Number

s.
CWM Profile Number

t.
CWM Profile Number

u.
CWM Profile Number

v.
CWM Profile Number

w.
CWM Profile Number

x.
CWM Profile Number

y.
CWM Profile Number

z.
CWM Profile Number

aa.
CWM Profile Number

ab.
CWM Profile Number

ac.
CWM Profile Number

ad.
CWM Profile Number

ae.
CWM Profile Number

af.
CWM Profile Number

T. Handling Codes for Wastes Listed Above

a. d. g.
b. e. h.
c. f. i.

32. Special Handling Instructions and Additional Information

SEE PERMIT IN ITEMS 11a & 11b. MUST BE INSPECTED BY USOP-PPQ PRIOR
TO DEPARTURE FROM ST. CROIX PERMIT INCLUDES

Alvin Kyles 10/29/85

33. Transporter Acknowledgement of Receipt of Materials

Date

Printed/Typed Name
Ranger National Inc

Signature

Alvin C. M. Bunt

Month Day Year
10 17 85

34. Transporter Acknowledgement of Receipt of Materials

Date

Printed/Typed Name
DANIEL R LOUET

Signature

Daniel R. Louet

Month Day Year
11 21 85

Discrepancy Indication Space

100229



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Use print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2000-0404 Expires 7-31-85

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V1D9B065109510001		Manifest Document No.		2. Page 1 of 2		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD WAYNE NEW JERSEY 07420				Trailer Number RTMZ;274676		A. State Manifest Document Number CWMA 243033							
4. Generator's Phone (201) 694-4100						B. State Generator's ID							
5. Transporter 1 Company Name O'NEALE'S TRUCKING & TRAILER TRANSPORT, INC.				6. US EPA ID Number PRD9806141579		C. State Transporter's ID							
7. Transporter 2 Company Name TRENER MARINE TRANSPORT, INC.				8. US EPA ID Number PRD9806141579		D. Transporter's Phone							
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459				10. US EPA ID Number ALD0000622464		E. State Transporter's ID							
						F. Transporter's Phone							
						G. State Facility's ID							
						H. Facility's Phone 205/652-9721							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.	
a. HAZARDOUS WASTE SOLID NOS (TOLUENE & ACETONE) ORM-E NA 9189 CWM Profile Number ALA E68803						150 M							
b. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALA D48604						230 M							
c. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA 9189 CWM Profile Number ALAD48602						380 M							
d. CWM Profile Number													
16. Additional Descriptions for Materials Listed Above 11a. Less than 1.0% Toluene and Acetone 11b. Less than 1.0% Toluene and Chloroform 11c. Less than 1.0% Toluene and Benzene NOS SLIGHT ODOR OF BENZYL ACETATE						K. Handling Codes for Wastes Listed Above a. DB1 c. DB1 b. DB1 d.							
15. Special Handling Instructions and Additional Information NONE / ITEMS 11a & 11b. SOLID. MUST BE IMPROVED BY UNDR-PPG PRIOR TO DEPARTURE FROM ST. CROIX. PERMIT INQUIRED													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.													
Printed, Typed Name ALAN L. KYLES						Signature Alan L. Kyles				Month Day Year 11/07/95			
17. Transporter 1 Acknowledgement of Receipt of Materials Printed, Typed Name O'Neale's Transport Inc Norton C.M. Burt						Signature Norton C.M. Burt				Month Day Year 11/01/95			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed, Typed Name GENDA HENRY						Signature Genda Henry				Month Day Year 11/02/95			
19. Discrepancy Indication Space 0243													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed, Typed Name HOWARD TEMPLE													
Signature Howard Temple						Month Day Year 11/20/95							

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No V1D980651095 IC001		Manifest Document No 242		Information in the shaded areas is not required by Federal law	
23. Generator's Name ISLAND CHEMICAL COMPANY 300 FAIRFIELD ROAD 07070 WAYNE, NEW JERSEY 07090 TEL 201-696 2100		Trailer Number RTMZ; 274676		L. State Manifest Document Number CWMA 243033		M. State Generator's ID	
24. Transporter's Company Name RANGER NATIONAL		25. US EPA ID Number FLD 980803977		N. State Transporter's ID		O. Transporter's Phone	
26. Transporter's Company Name RYDER RANGER		27. US EPA ID Number FLD 007022570		P. State Transporter's ID		Q. Transporter's Phone 318-439-5245	
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				29. Containers No. Type		30. Total Quantity Unit R. Waste No.	
a. NOXAPROX WASTE SOLID NOS (TOLUENE & ACETONE) ORM-E NA 9189 CWM Profile Number ALAE60303				15 D.M.			
b. NOXAPROX WASTE SOLID NOS (TOLUENE & ACETONE) ORM-E NA 9189 CWM Profile Number ALAD91604				23 D.M.			
c. NOXAPROX WASTE LIQUID NOS (TOLUENE & ACETONE) ORM-E NA 9189 CWM Profile Number ALAD8602				38 D.M.			
d. CWM Profile Number ALAD 10/3							
e. CWM Profile Number							
f. CWM Profile Number							
g. CWM Profile Number							
h. CWM Profile Number							
i. CWM Profile Number							
5. Additional Descriptions for Materials Listed Above 20. Low Hazard 10% Toluene and Acetone 20b. Low Hazard 10% Toluene and Acetone 20c. Low Hazard 10% Toluene and Acetone 20d. Low Hazard 10% Toluene and Acetone				T. Handling Codes for Wastes Listed Above a. d. g. b. e. h. c. f. i.			
32. Special Handling Instructions and Additional Information SEE PERMIT AND ITEMS 11a & 11b. MUST BE INSPECTED BY USCA-PPQ PRIOR TO DEPARTURE FROM ST. CROIX PERMIT INCLUDED ALAN KYLE 10/6/95							
33. Transporter's Acknowledgement of Receipt of Materials Printed/Typed Name WILLIAM C. M. BUNT						Signature William C. M. Bunt	
34. Transporter's Acknowledgement of Receipt of Materials Printed/Typed Name DANIEL R. LOUET						Signature Daniel R. Louet	
5. Discrepancy Indication Space							

ATTACHMENT K



ENVIRO SCIENCES INC.

19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

32 EAST 39 STREET, NEW YORK, NEW YORK 10016
(212) 697-9450

November 15, 1985

Mr. Carl Becnell
G. A. Becnell, Customs Brokers
150 Marine Street
Lake Charles, Louisiana 70601

Dear Mr. Becnell:

As per a telephone request from Mr. Frank Curtis of Berlex Laboratories, Inc., I am sending the enclosed laboratory analytical sheets which describe the chemical contents of hazardous wastes which originated in St. Croix, USVI. It is my understanding that U. S. Customs will not release the material for shipment to Chemical Waste Management, Inc. in Alabama until they know the contents of the shipment.

Below is a listing of data sheets and to which drums they are applicable.

<u>DATA SHEETS</u>	<u>CHEM. WASTE MANIFEST NO.</u>	<u>MATERIAL</u>	<u>NO. OF DRUMS</u>
1 and 2	ALA D 48604	Soil	24
3 - 6	ALA E 68803	Soil	15
7 - 11	ALA D 48603	Sludge	45
12 - 17	ALA D 48602	Water	94
*	ALA E 68804	Pieces of Metal Drums	14

* Pieces of washed drums which contained materials in items 1 and 2 above.

I trust that this information will suffice for release of the material. If you have any questions, contact me at 919/499-5182 or 201/366-6256.

Very truly yours,

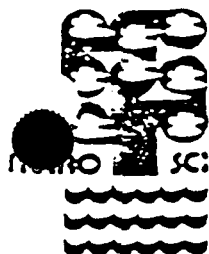
Alan L. Kyles, PhD.
Vice President

enclosures

100233

ATTACHMENT L

100234



ENVIRO-SCIENCES INC.

19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

November 6, 1985

Mr. Louis Diguardia
USEPA
Environmental Services Division
Woodbridge Avenue
Edison, NJ 08837

Re: Island Chemical Company, St. Croix, U.S.V.I.

Dear Mr. Diguardia:

Through the Freedom of Information Act, I am requesting a copy of the analytical results for samples taken by you on September 9, 1985 at the Island Chemical Company site in St. Croix, U.S.V.I.

Berlex Laboratories, Inc., the company responsible for site cleanup, wishes to finalize their responsibilities to the new owner, Virgin Island Chemical Company.

Your immediate response to this request would be appreciated.

Very truly yours,

ENVIRO-SCIENCES, INC.

Alan L. Kyles, Ph.D.
Vice President

ALR/po (AK-85391)

ATTACHMENT M

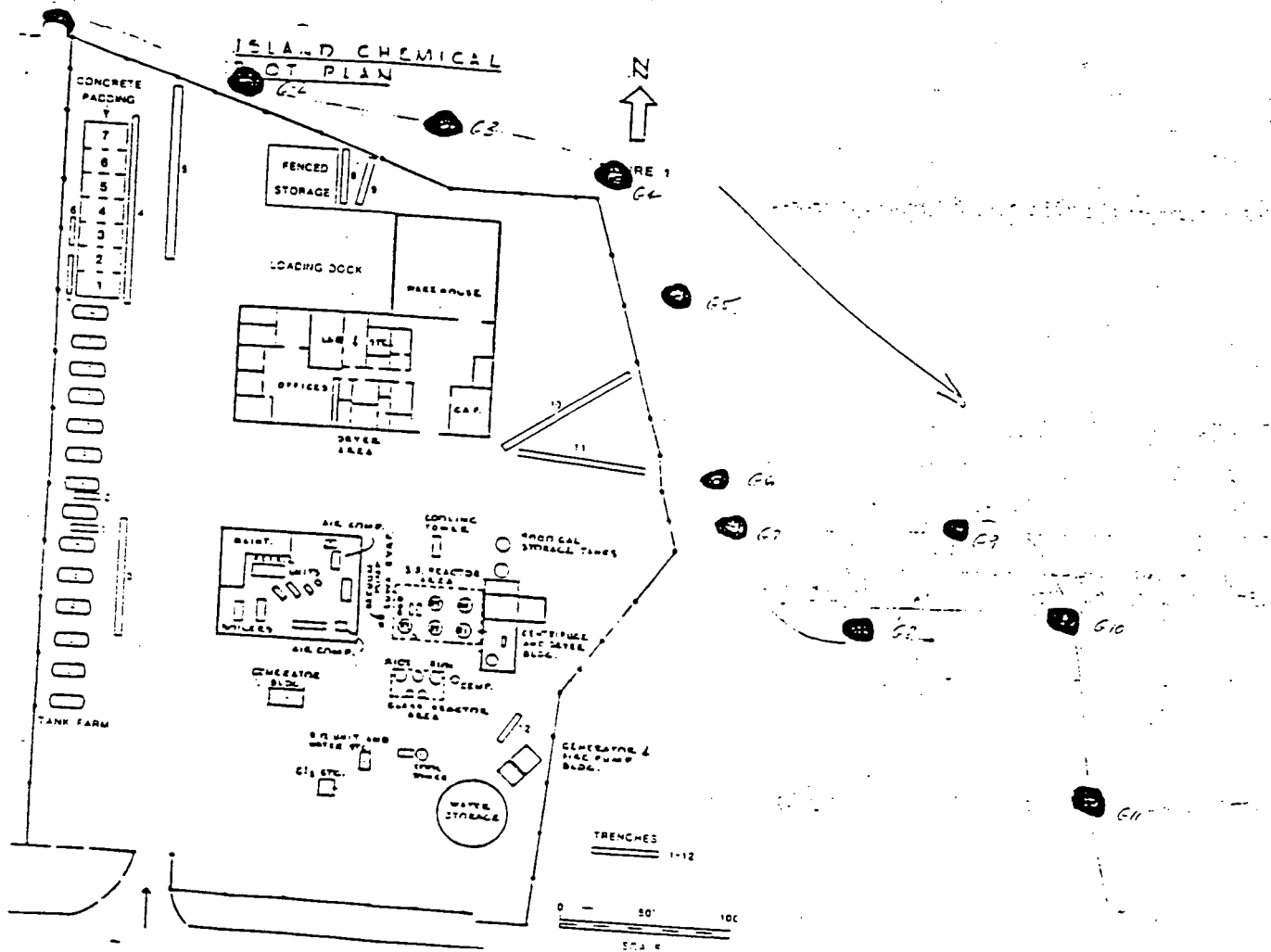
Heavy Metal Analyses For "Gut" Samples

<u>Location</u>	<u>Cadmium</u>	<u>Chromium</u>	<u>Copper</u>	<u>Lead</u>	<u>Mercury</u>	<u>Zinc</u>
G-1 1)	LT 0.24	14.5	37.3	21.0	LT 0.092	63.1
G-2	LT 0.23	16.4	38.3	22.0	LT 0.103	57.8
G-3 2)	LT 0.22	16.7	33.8	14.5	LT 0.101	129
G-4	LT 0.22	12.0	25.3	13.2	LT 0.102	37.1
G-5	LT 0.23	17.1	36.1	20.2	LT 0.105	57.2
G-6 3)	1.0	46.4	40.0	32.9	LT 0.122	349
G-7 3)	2.4	71.1	51.4	46.4	LT 0.121	861
G-8	LT 0.23	20.4	32.8	19.4	LT 0.093	76.2
G-9	LT 0.23	19.8	34.9	21.4	LT 0.113	75.7
G-10	LT 0.30	30.6	62.7	16.5	LT 0.106	66.5
G-11 4)	LT 0.54	41.1	69.7	12.8	LT 0.194	871

Volatile Organic Analyses

All samples appear to be clean (verbal from ICM 6 Mar, 4:00 p.m.)

- 1) G-1: Background - above plant site.
- 2) G-3: Just below Laboratory pit outlet to the gut.
- 3) G-6 and G-7: At point of drain line discharge.
- 4) G-11: Setting "basin" area in gut 250-300 feet beyond drainline discharge point.



**INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED**

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0110

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52463

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kyles

SAMPLE ID: G-1

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

(This report form contains both the original sample result and the duplicate result.)

Parameter	Sample Result	Sample Duplicate	RPD	Control Limits	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X	X	X	X
Arsenic	X	X	X	X	X	X
Beryllium	X	X	X	X	X	X
Cadmium	LT 0.24	LT 0.26	NC	NC	LT 0.24	LT 0.24
Chromium	14.5	17.9	20%	±20%	LT 0.22	LT 0.22
Copper	37.3	43.5	15%	±20%	LT 0.62	LT 0.62
Lead	21.0	25.7	20%	±20%	LT 1.3	LT 1.3
Mercury	LT 0.092	LT 0.093	NC	NC	LT 0.092	LT 0.092
Nickel	X	X	X	X	X	X
Selenium	X	X	X	X	X	X
Silver	X	X	X	X	X	X
Thallium	X	X	X	X	X	X
Zinc	63.1	67.8	7%	±20%	LT 2.28	1.03
Phenol	X	X	X	X	X	X
Cyanide	X	X	X	X	X	X

NC = Non-calculable RPD due to value(s) less than detection limit.

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

RPD = Relative percent difference.

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard S. Levine
Richard S. Levine
President

RSL/dlh

100239



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1152 ROUTE 12 RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52464

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES, INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kvles

SAMPLE ID: G-2

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

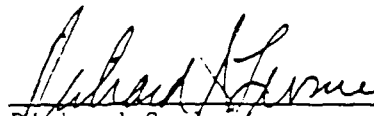
Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.23	LT 0.23	LT 0.23
Chromium	16.4	LT 0.21	LT 0.21
Copper	38.3	LT 0.59	LT 0.59
Lead	22.0	LT 1.3	LT 1.3
Mercury	LT 0.103	LT 0.103	LT 0.103
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	57.8	LT 2.1	0.97
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.


Richard S. Levine
President

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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52465

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES, INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kvles

SAMPLE ID: G-3

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.22	LT 0.22	LT 0.22
Chromium	16.7	LT 0.21	LT 0.21
Copper	33.8	LT 0.58	LT 0.58
Lead	14.5	LT 1.3	LT 1.3
Mercury	LT 0.101	LT 0.101	LT 0.101
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	129	LT 2.1	0.96
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.


Richard S. Levine
President

100241

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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0230

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52466

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kyles

SAMPLE ID: G-4

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.22	LT 0.22	LT 0.22
Chromium	12.0	LT 0.20	LT 0.20
Copper	25.3	LT 0.57	LT 0.57
Lead	13.2	LT 1.3	LT 1.3
Mercury	LT 0.102	LT 0.102	LT 0.102
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	37.1	LT 2.1	0.94
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.

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Richard S. Levine
President

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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52467

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kyles

SAMPLE ID: G-5

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

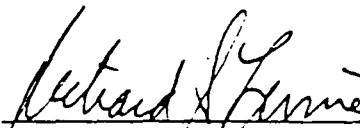
Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.23	LT 0.23	LT 0.23
Chromium	17.1	LT 0.21	LT 0.21
Copper	36.1	LT 0.60	LT 0.60
Lead	20.2	LT 1.3	LT 1.3
Mercury	LT 0.105	LT 0.105	LT 0.105
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	57.2	LT 2.2	0.98
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.


Richard S. Levine
President

100243

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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07864 201-584-0300

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52468

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kvles

SAMPLE ID: G-6

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

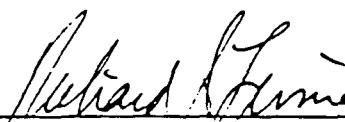
Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	1.0	LT 0.28	LT 0.28
Chromium	46.6	LT 0.25	LT 0.25
Copper	40.0	LT 0.71	LT 0.71
Lead	32.9	LT 1.6	LT 1.6
Mercury	LT 0.122	LT 0.122	LT 0.122
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	349	LT 2.6	1.2
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.


Richard S. Levine
President

100244

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1152 ROUTE 10 RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52469

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kyles

SAMPLE ID: G-7

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

(This report form contains both the original sample result and the spike recovery.)

Parameter	Sample Result	Spike Added	Spiked Sample Result	%R	Control Limits for %R	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X	X	75-125 %	X	X
Arsenic	X	X	X	X	75-125 %	X	X
Beryllium	X	X	X	X	75-125 %	X	X
Cadmium	2.4	1	1.13	103%	75-125 %	LT 0.28	LT 0.28
Chromium	71.1	1	4.04	119%	75-125 %	LT 0.25	LT 0.25
Copper	51.4	1	2.89	83%	75-125 %	LT 0.72	LT 0.72
Lead	46.4	1	2.92	106%	75-125 %	LT 1.5	LT 1.5
Mercury	LT 0.121	0.004	0.0035	88%	75-125 %	LT 0.121	LT 0.121
Nickel	X	X	X	X	75-125 %	X	X
Selenium	X	X	X	X	75-125 %	X	X
Silver	X	X	X	X	75-125 %	X	X
Thallium	X	X	X	X	75-125 %	X	X
Zinc	861	1	1.72	103%	75-125 %	LT 20.1	1.17
Phenol	X	X	X	X	75-125 %	X	X
Cyanide	X	X	X	X	75-125 %	X	X

%R = Percent Spike Recovery

NR = Not required. Standard addition performed.

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

The spiked sample result is based on the soil in solution. It does not directly reflect the final mg/kg dry weight basis result of the sample.

INDUSTRIAL CORROSION MANAGEMENT, INC.

100245

Michael J. L...



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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52470

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kyles

SAMPLE ID: G-8

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.23	LT 0.23	LT 0.23
Chromium	20.4	LT 0.21	LT 0.21
Copper	32.8	LT 0.60	LT 0.60
Lead	19.4	LT 1.3	LT 1.3
Mercury	LT 0.093	LT 0.093	LT 0.093
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	76.2	LT 0.44	0.99
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

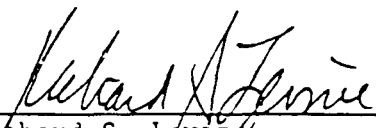
X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.

100246

RSL/clh


Richard S. Levine
President



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INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52471

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kvles

SAMPLE ID: G-9

AT LAB DATE: February 21, 1986

UNITS: mg/kg (ppm) dry weight basis

MATRIX: Soil

Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.23	LT 0.23	LT 0.23
Chromium	19.8	LT 0.21	LT 0.21
Copper	34.9	LT 0.61	LT 0.61
Lead	21.4	LT 1.1	LT 1.1
Mercury	LT 0.113	LT 0.113	LT 0.113
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	75.7	LT 0.44	0.99
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.

100247

Richard S. Levine
President

RSL/dlh



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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52472

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES, INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kvles

SAMPLE ID: G-10

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.30	LT 0.30	LT 0.30
Chromium	30.6	LT 0.27	LT 0.27
Copper	62.7	LT 0.77	LT 0.77
Lead	16.5	LT 1.4	LT 1.4
Mercury	LT 0.106	LT 0.106	LT 0.106
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	66.5	LT 0.56	1.3
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

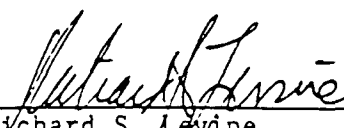
X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.

100248

RSL/dlh


Richard S. Levine
President

**INDUSTRIAL
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INCORPORATED**

1157 ROUTE 10, HANCOCK, NJ 07030 NEW JERSEY 07030 201 584 0100

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 5, 1986

LAB # 52473

PRIORITY POLLUTANT
LABORATORY ANALYSIS

CLIENT: ENVIRO SCIENCES INC.

SAMPLE DATE: February 19, 1986

SAMPLE SOURCE: Island Chemical Co.

SAMPLED BY: Alan Kvles

SAMPLE ID: G-11

AT LAB DATE: February 21, 1986

UNITS: mg/kg(ppm) dry weight basis

MATRIX: Soil

Parameter	Sample Result	Minimum Detection Limit	Method Blank Analysis
Antimony	X	X	X
Arsenic	X	X	X
Beryllium	X	X	X
Cadmium	LT 0.54	LT 0.54	LT 0.54
Chromium	41.1	LT 0.49	LT 0.49
Copper	69.7	LT 1.4	LT 1.4
Lead	12.8	LT 2.5	LT 2.5
Mercury	LT 0.194	LT 0.194	LT 0.194
Nickel	X	X	X
Selenium	X	X	X
Silver	X	X	X
Thallium	X	X	X
Zinc	871	LT 5.1	2.3
Phenol	X	X	X
Cyanide	X	X	X

dwb = Dry Weight Basis

X = Not Analyzed

LT = Less Than

INDUSTRIAL CORROSION MANAGEMENT, INC.

100249

Richard S. Levine
Richard S. Levine
President

RSL/dlh

**INDUSTRIAL
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MANAGEMENT
INCORPORATED**

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584 0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52463

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project

SAMPLE ID: G-1

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles

AT LAB DATE: February 21, 1986

**VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE**

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROPANE -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 69%
d₈ toluene - 125%
BFB - 131%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard A. Levine

100250

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52464

CLIENT: ENVIRO SCIENCES INC. - Island Chemical Company Project

SAMPLE ID: G-2

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles

AT LAB DATE: February 21, 1986

**VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE**

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROPANE -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

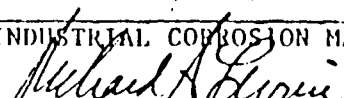
SURROGATE RECOVERIES: d₂ methylene chloride - 64%
d₈ toluene - 114%
BFB - 126%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

100251



NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52465

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project

SAMPLE ID: G-3

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles

AT LAB DATE: February 21, 1986

**VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE**

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROPANE -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 98%
d₈ toluene - 61%
BFB - 57%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

100252

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard J. Hume
President



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1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52466

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project SAMPLE ID: G-4

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles AT LAB DATE: February 21, 1986

VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROPANE -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 100%
d₈ toluene - 70%
BFB - 63%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard H. Hume

100253



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52467

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project

SAMPLE ID: G-5

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles

AT LAB DATE: February 21, 1986

VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROpane -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 97%
d₈ toluene - 67%
BFB - 66%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard J. Gurni

100254



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07069 201 584 0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52468

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project SAMPLE ID: G-6

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles AT LAB DATE: February 21, 1986

VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROPANE -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 84%
d₈ toluene - 66%
BFB - 59%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

 X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard J. Ferraro

100255

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52469

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project

SAMPLE ID: G-7

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles

AT LAB DATE: February 21, 1986

**VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE**

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE	-----	ND
BROMOMETHANE	-----	ND
VINYL CHLORIDE	-----	ND
CHLOROETHANE	-----	ND
METHYLENE CHLORIDE	-----	ND
ACETONE	-----	ND
1,1-DICHLOROETHYLENE	-----	ND
1,1-DICHLOROETHANE	-----	ND
t-1,2-DICHLOROETHYLENE	-----	ND
CHLOROFORM	-----	ND
1,2-DICHLOROETHANE	-----	ND
t-BUTYL METHYL ETHER	-----	ND
1,1,1-TRICHLOROETHANE	-----	ND
CARBON TETRACHLORIDE	-----	ND
BROMODICHLOROMETHANE	-----	ND

1,2-DICHLOROPROPANE	-----	ND
c-1,3-DICHLOROPROPENE	-----	ND
t-1,3-DICHLOROPROPENE	-----	ND
TCE (TRICHLOROETHYLENE)	-----	ND
1,1,2-TRICHLOROETHANE	-----	ND
DIBROMOCHLOROMETHANE	-----	ND
BENZENE	-----	ND
DIISOPROPYL ETHER	-----	ND
2-CHLOROETHYL VINYL ETHER	-----	ND
BROMOFORM	-----	ND
1,1,2,2-TETRACHLOROETHANE	-----	ND
PCE (TETRACHLOROETHYLENE)	-----	ND
TOLUENE	-----	ND
CHLOROBENZENE	-----	ND
ETHYLBENZENE	-----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 111%
d₈ toluene - 126%
BFB -

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

 x For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

 x Other compounds detected: hydrocarbon RT 44 min, approx. 0.5 mg/kg(possibly octane)

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard J. Hume

100256

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52470

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project SAMPLE ID: G-8

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles AT LAB DATE: February 21, 1986

VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND	1,2-DICHLOROPROPANE -----	ND
BROMOMETHANE -----	ND	c-1,3-DICHLOROPROPENE -----	ND
VINYL CHLORIDE -----	ND	t-1,3-DICHLOROPROPENE -----	ND
CHLOROETHANE -----	ND	TCE (TRICHLOROETHYLENE) -----	ND
METHYLENE CHLORIDE -----	ND	1,1,2-TRICHLOROETHANE -----	ND
ACETONE -----	ND	DIBROMOCHLOROMETHANE -----	ND
1,1-DICHLOROETHYLENE -----	ND	BENZENE -----	ND
1,1-DICHLOROETHANE -----	ND	DIISOPROPYL ETHER -----	ND
t-1,2-DICHLOROETHYLENE -----	ND	2-CHLOROETHYL VINYL ETHER -----	ND
CHLOROFORM -----	ND	BROMOFORM -----	ND
1,2-DICHLOROETHANE -----	ND	1,1,2,2-TETRACHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND	PCE (TETRACHLOROETHYLENE) -----	ND
1,1,1-TRICHLOROETHANE -----	ND	TOLUENE -----	ND
CARBON TETRACHLORIDE -----	ND	CHLOROBENZENE -----	ND
BROMODICHLOROMETHANE -----	ND	ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 104%
d₈ toluene - 72%
BFB - 55%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

x For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

Other compounds detected: _____

INDUSTRIAL CORROSION MANAGEMENT, INC.

100257

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52471

CLIENT: ENVIRO SCIENCES INC. - Island Chemical Company Project

SAMPLE ID: G-9

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles

AT LAB DATE: February 21, 1986

VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE -----	ND
BROMOMETHANE -----	ND
VINYL CHLORIDE -----	ND
CHLOROETHANE -----	ND
METHYLENE CHLORIDE -----	ND
ACETONE -----	ND
1,1-DICHLOROETHYLENE -----	ND
1,1-DICHLOROETHANE -----	ND
t-1,2-DICHLOROETHYLENE -----	ND
CHLOROFORM -----	ND
1,2-DICHLOROETHANE -----	ND
t-BUTYL METHYL ETHER -----	ND
1,1,1-TRICHLOROETHANE -----	ND
CARBON TETRACHLORIDE -----	ND
BROMODICHLOROMETHANE -----	ND

1,2-DICHLOROPROPANE -----	ND
c-1,3-DICHLOROPROPENE -----	ND
t-1,3-DICHLOROPROPENE -----	ND
TCE (TRICHLOROETHYLENE) -----	ND
1,1,2-TRICHLOROETHANE -----	ND
DIBROMOCHLOROMETHANE -----	ND
BENZENE -----	ND
DIISOPROPYL ETHER -----	ND
2-CHLOROETHYL VINYL ETHER -----	ND
BROMOFORM -----	ND
1,1,2,2-TETRACHLOROETHANE -----	ND
PCE (TETRACHLOROETHYLENE) -----	ND
TOLUENE -----	ND
CHLOROBENZENE -----	ND
ETHYLBENZENE -----	ND

SURROGATE RECOVERIES: d₂ methylene chloride - 102%
d₈ toluene - 76%
BFB - 68%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

 X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 0.02 mg/kg(ppm) dwb.

 Other compounds detected: _____



INDUSTRIAL
CORROSION
MANAGEMENT
INCORPORATED

1152 ROUTE 10, RANDOLPH, NEW JERSEY 07869 201-584-0330

NJDEP Certified Drinking Water/Wastewater
Laboratory ID #14116

REPORT DATE: March 10, 1986

LAB # 52473

CLIENT: ENVIRO SCIENCES, INC. - Island Chemical Company Project SAMPLE ID: G-11

SAMPLE DATE: February 19, 1986 SAMPLED BY: Alan Kyles AT LAB DATE: February 21, 1986

VOLATILE ORGANICS BY PURGE AND TRAP
By GC/MS - HEADSPACE

Compounds detected in parts per million (milligrams/kilograms) dry weight basis.

CHLOROMETHANE	ND
BROMOMETHANE	ND
VINYL CHLORIDE	ND
CHLOROETHANE	ND
METHYLENE CHLORIDE	ND
ACETONE	ND
1,1-DICHLOROETHYLENE	ND
1,1-DICHLOROETHANE	ND
t-1,2-DICHLOROETHYLENE	ND
CHLOROFORM	ND
1,2-DICHLOROETHANE	ND
t-BUTYL METHYL ETHER	ND
1,1,1-TRICHLOROETHANE	ND
CARBON TETRACHLORIDE	ND
BROMODICHLOROMETHANE	ND

1,2-DICHLOROPROPANE	ND
c-1,3-DICHLOROPROPENE	ND
t-1,3-DICHLOROPROPENE	ND
TCE (TRICHLOROETHYLENE)	ND
1,1,2-TRICHLOROETHANE	ND
DIBROMOCHLOROMETHANE	ND
BENZENE	ND
DIISOPROPYL ETHER	ND
2-CHLOROETHYL VINYL ETHER	ND
BROMOFORM	ND
1,1,2,2-TETRACHLOROETHANE	ND
PCE (TETRACHLOROETHYLENE)	ND
TOLUENE	ND
CHLOROBENZENE	ND
ETHYLBENZENE	ND

	WATER	SOIL
SURROGATE RECOVERIES:		
d ₂ methylene chloride	101%	109%
d ₈ toluene	173%	111%
BFB	163%	65%

LT=Less Than, GT=Greater Than, ND=Not Detected
dwb=Dry Weight Basis

X For the above listed Volatile Pollutants, nothing detected at a sensitivity level of 5 ug/l(ppb)-water
0.1 mg/kg(ppm) - soil

Other compounds detected: _____

INDUSTRIAL CORROSION MANAGEMENT, INC.

Richard H. Hume

100259



For all types - phos. 2-24-86 4:00 PM
 VO's by GC/MS
 Metals Pb, Zn, Hg, Cd, Cr, Cu
 Someone from Enviro to sign Chain
 CHAIN OF CUSTODY RECORD
 Janet L. Miller of Custody
 Fresh Samples 6-6, 7 & 11

Installation: <i>Isaco Chemical Company</i>		Samplers: (Signature) <i>Janet L. Miller</i>				
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
6-1	<i>Heavy Metals</i>	<i>12/22/86</i>	<i>9:11 AM</i>		<i>X</i>	<i>1</i>
6-1	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>2</i>
6-2	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>1</i>
6-2	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>2</i>
6-3	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>1</i>
6-3	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>2</i>
6-4	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>1</i>
6-4	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>2</i>
6-5	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>1</i>
6-5	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	<i>2</i>
Relinquished by: (Sign.) <i>Janet L. Miller</i>		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.) <i>Janet L. Miller</i>		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time		Rec'd for Laboratory by: <i>J. L. Miller</i>		Date/Time <i>12-22-86</i>
Method of Shipment:				<i>11:30 AM</i>		



CHAIN OF CUSTODY RECORD

Per Al Kyle phone call.
2/24/86 4:00 PM
Janet L. Miller

Installation: <i>Island Chemical Company</i>		Samplers: (Signature) <i>Al Kyle</i>				
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of
				Comp.	Grab	
G-1	<i>Heavy Metals</i>	<i>19 Feb 86</i>	<i>9:11 am</i>		<i>X</i>	
G-2	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	
G-3	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	
G-4	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	
<i>G-8</i>	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	
<i>G-8</i>	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	
<i>G-9</i>	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	
<i>G-9</i>	<i>VO</i>	<i>"</i>	<i>"</i>		<i>X</i>	
<i>G-10</i>	<i>Heavy Metals</i>	<i>"</i>	<i>"</i>		<i>X</i>	
G-10	Heavy Metals	"	"		X	
Relinquished by: (Sign.) <i>Al Kyle</i>		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.) <i>Carl R. Chubb</i>		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by: <i>J. Lyons</i>		Date/Time <i>2 -</i>	
Method of Shipment:						



CHAIN OF CUSTODY RECORD

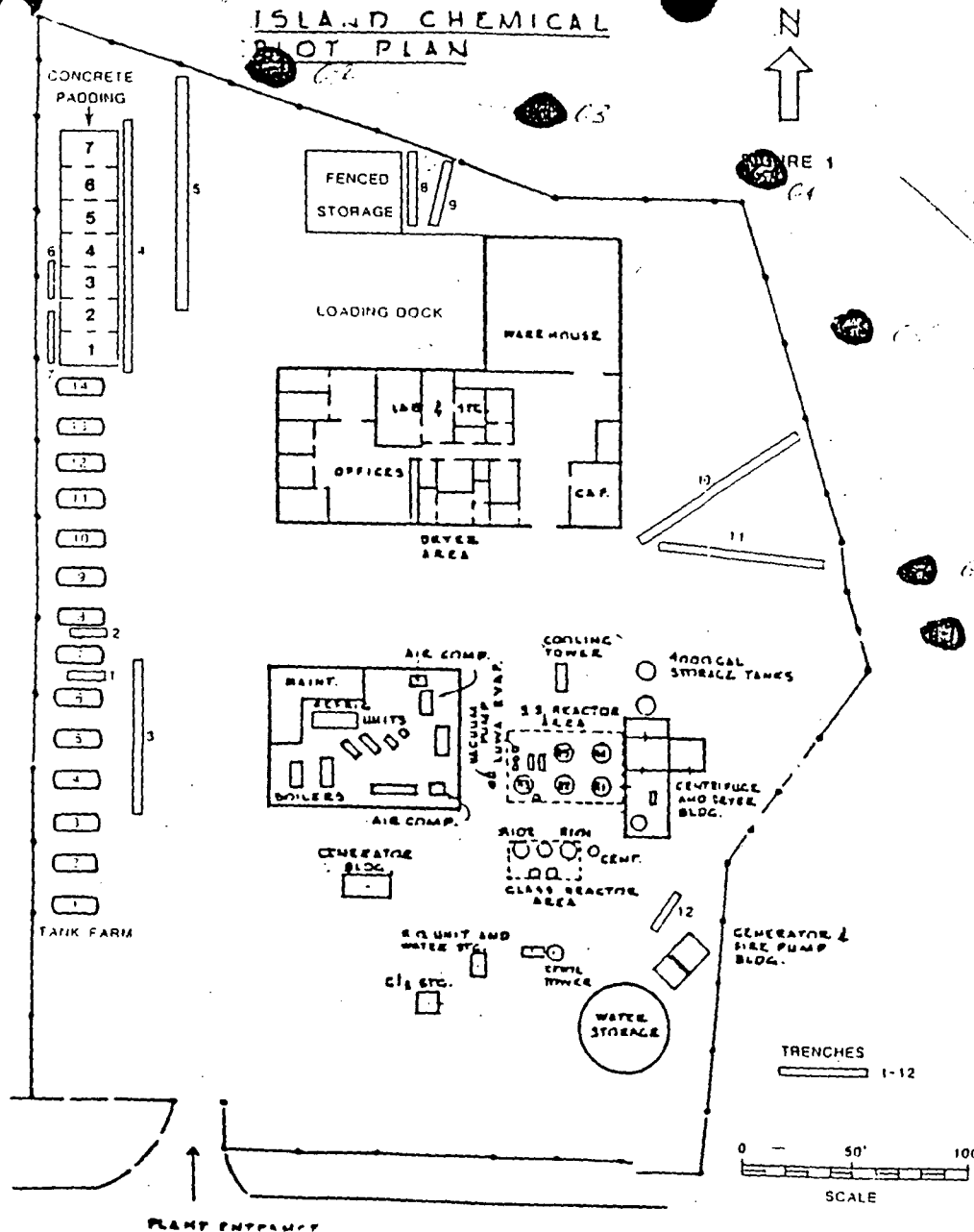
Per Al Kyles phone call
2/24/86 4:00 PM
Janet L. Miller

Installation: <u>Island Chemical Co.</u>		Samplers: (Signature) <u>Al Kyles</u>				
Survey No.:						
Sample No.	Station Location	Date	Time	Sample Type		No. of Containers
				Comp.	Grab	
1	Heavy Metals	19 FEB 86	9-11 am		X	1
2	VO	"	"		X	2
Relinquished by: (Sign.) <u>Al Kyles</u>		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.)		Received by: (Sign.)		Date/Time		
Relinquished by: (Sign.) <u>C. R. Chubb</u>		Rec'd by Laboratory for field analysis (Sign.)		Date/Time		
Dispatched by: (Sign.)		Date/Time	Rec'd for Laboratory by: <u>J. Lyons</u>		Date/Time 2-21-86	
Method of Shipment:		4:30 pm				

METALS

<u>Pit Sludge</u>		<u>Sample Points G-6& G-7</u> (Avg.)	<u>% Of</u>
Cadmium	22.8	1.7	7.5
Chromium	592	58.9	10.0
Copper	327	45.7	14.0
Lead	688	39.7	5.8
Zinc	3594	605	16.8

ISLAND CHEMICAL PLOT PLAN



100264



19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

February 7, 1986

Mr. Conrad Simon
USEPA Region II
26 Federal Plaza
New York, N.Y. 10007

Dear Mr. Simon:

Enviro-Sciences, Inc. (ESI) has completed the proposed scope of work for on site cleanup of the Island Chemical Company (Berlex) facility in St. Croix, U.S. Virgin Islands. The cleanup program and methodology were presented to Mr. Robert Harris of your office in December, 1984 and ammended in a subsequent report dated April 4, 1985.

Briefly, the cleanup involved decontamination at several locations. These are:

- 1) soil around above ground storage tanks - Toluene;
- 2) soil around a concrete pad - Toluene;
- 3) soil along a collapsed drain line - Toluene, Heavy Metals;
- 4) water and sludge in a process pit - Toluene, Heavy Metals, Benzyl Acetate; and
- 5) soil in a laboratory waste pit - Pyridine.

All materials from the first four (4) locations listed above were containerized in proper 55-gallon steel drums, manifested and shipped as hazardous wastes to Chemical Waste Management, Inc. (CWM) Emelle, Alabama. CWM acknowledged receipt of these materials for disposal.

The laboratory waste pit soil was treated on site to decrease pyridine contamination level from above 1000 ppm to less than 2 ppm. ESI considers this level of contamination to be below levels which would require any additional cleanup efforts.

February 7, 1986

Page -2-

The collapse of the drain line and subsequent analysis of soil has initiated the need to conduct additional sampling off-site in the "gut" or dry creekbed. ESI will undertake this sampling program immediately to ascertain the presence of contamination and, if present, concentration levels.

We would appreciate any comments relating to our cleanup program at the Island Chemical Company site.

You may contact me or Mr. Irving Cohen at (201) 366-6256.

Very truly yours,

ENVIRO-SCIENCES, INC.



Alan L. Kyles, Ph.D.
Vice President

ALK/ak

cc: Robert Milos
Frank Curtis

100266



CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY - REGION II
Environmental Services Division
EDISON, NEW JERSEY 08817

1/7/85
sent back to
Hayes
original sent
to F. Curtis
Bx

Name of Site and Address (V.I. Quad 1) VID80651215			9/1/85
Sample Number	Number of Containers	Description of Sample	
DE751	1	Q1 - NUSA	} North S. 1 - Complete } Drying Room
	2	Q2 - NUSA	
DE752	1	Q1 - NUSA	} North S. 1 - Complete }
	2	Q2 - NUSA	
DE753	1	Q1 - NUSA	} S. D. S. 1 - Complete }
	2	Q2 - NUSA	
DE754	1	Q1 - NUSA	} S. D. S. 1 - Complete }
	2	Q2 - NUSA	
DE755	1	Q1 - NUSA	} S. D. S. 1 - Complete }
	2	Q2 - NUSA	
DE756	1	Q1 - NUSA	} S. D. S. 1 - Complete }
	2	Q2 - NUSA	

Person Assuming Responsibility for Sample					Time	Date
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody	
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody	
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody	
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody	



U. S. Environmental Protection Agency
Region II

LOUIS DIGUARDIA
Geologist

Environmental Services Division
Woodbridge Avenue
Edison, New Jersey 08837

(201) 321-6712



EXPERT HOME REPAIRS
No job is too small

Raymond Hays

(809) 773-6257

18 Grapetree Bay,
Christiansburg, St. Croix
U.S.V.I. 00820

ATTACHMENT N



610 W. MAIN ST., ROCKAWAY, NEW JERSEY 07866

ENVIRO SCIENCES INC.

19 COPELAND RD., DENVILLE, NEW JERSEY 07834
(201) 366-6256

April 21, 1986

Mr. Conrad Simon
USEPA Region II
26 Federal Plaza
New York, N.Y. 10007

Dear Mr. Simon:

This letter is to follow up on certain matters raised in our letter of February 7, 1986, a copy of which is enclosed. As we advised, Enviro-Sciences has sampled the "gut" area adjacent to the site. Analyses of these soil samples disclose the presence of the metal described on Exhibit A, at the levels set forth on the Exhibit. Subsequent EP Toxicity tests conducted on a composite of sample numbers 6, 7 and 11 indicate concentration levels do not exceed the maximum permissible concentration levels set forth in 40 CFR, Part 261.24 (Exhibit A, page 2).

Operations personnel at Berlex Laboratories, Inc. (the corporate parent of Island Chemical) have reviewed the processes in use by Island Chemical at the site. The metals listed on Exhibit A were not involved in the processes run by Island Chemical. While we do not know for sure, it is likely that these elements are present in the anti-rust paint used on the buildings on site (and many other buildings on the island).

In addition, volatile organic analyses for soil samples at these same locations indicate that none are present.

April 21, 1986

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In view of the relatively low leachability of metals found and the likely source of the material involved, no further action is planned.

Very truly yours,

ENVIRO-SCIENCES, INC.



Alan L. Kyles, Ph.D.
Vice President

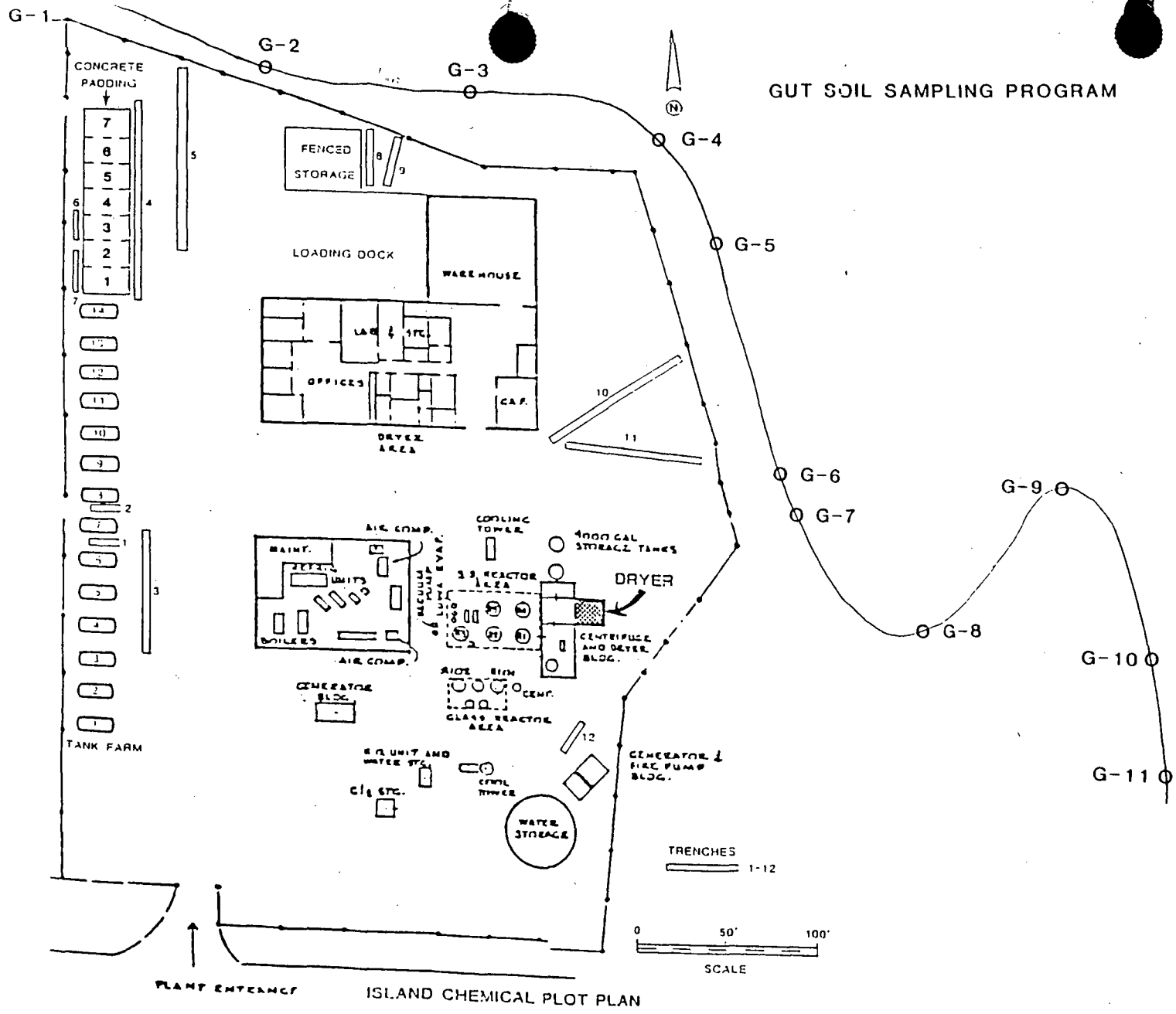
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CC: Charles Dolan, USEPA
B. Milos, Berlex
R. Willis, Berlex
F. Curtis, Berlex
I. Arshen, Berlex

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GUT SOIL SAMPLING PROGRAM



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