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SDMS Document



115530

RCRA Enforcement

Interim Report- No Analysis data

Berlex Laboratories
St. Croix, VI

VID980651095

March 13, 1986

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100001

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Summary

Objective

This RCRA enforcement inspection was conducted of Berlex Laboratories (ICC) at the request of the Solid Waste Branch in order to gather information necessary to determine the facility's compliance with applicable RCRA regulations.

Findings and Recommendations

1. Drums of hazardous material are being stored on the Berlex (ICC) site. Environmental Sciences, Inc. (ESI), the facility's contractor claims that these drums of chemicals have not been declared "waste" yet and so are not subject to accumulation and storage requirements. Most of the drums are the property of Virgin Island Chemical; no representative of this company was present on the site. ESI claims that thirty-three of the drums in storage belong to Berlex (ICC). The other drums (approximately 155) ESI says belong to Virgin Island Chemical. The attached inventory (Attachment 2), prepared by a Virgin Island Chemical representative but given to EPA by ESI, contains a listing of the drums in storage. The number in the inventory does not match the number counted by EPA.
2. A storm sewer that collects run-off from the facility discharges into a intermittent stream behind the Berlex (ICC) property. The facility does not have a NPDES permit.
3. The results of the analyses for organics, metals, and PCB's revealed the following:
 - Phthalates appeared in all of the samples ranging from 1000 ug/kg to 17,000 ug/kg in the soil samples and 3.9 ug/l to 280 ug/l in the water sample.
 - Organics contamination was higher in the sample taken from the gut sediments at the point of the drainage pit discharge than in the other samples. This contamination consisted of xylene, di-n-octyl phthalate, 1,4-dichlorobenzene, 1,2-dichlorobenzene, napthalene, flourene, phenanthrene, and aliphatic and aromatic hydrocarbons.
 - Chloroform appeared in the on-site well at a level of 130 ug/l.
 - PCB's were detected below the detection limit in all six of the samples.
 - The metals arsenic (estimated value), beryllium (estimated value), chromium (ranging from 10 ug/kg to 52 ug/kg), copper (ranging from 40 ug/kg to 58 ug/kg), lead (estimated value), nickel (ranging from 19 ug/kg to 32 ug/kg), antimony (ranging from 8.4 ug/kg to 10 ug/kg), selenium (estimated value), and zinc (ranging from 63 ug/kg to 360 ug/kg) were all detected in the sediment samples. Arsenic, beryllium, cadmium, chromium, copper, mercury, antimony, and zinc were all detected in the water sample at estimated values.

Purpose of Survey

A RCRA enforcement inspection was conducted at Berlex Laboratories (otherwise known as Island Chemical Company or ICC), St. Croix, VI. The survey was conducted at the request of the Solid Waste Branch to generate additional information necessary to determine the facility's compliance with RCRA regulations. The elements of the survey included a review of the facility's history; inspection of the facility; and the sampling of the stream sediments behind the plant, the laboratory waste pit, and an on-site well.

Facility History

The Berlex (ICC) facility has undergone many changes in ownership since it opened. The owner of the land itself, that the facility is built on, has remained constant. A local landowner originally leased the land on a 99 year lease. The first operator of the plant was Pierrell America, Inc., who started operations in 1972. There were several other owners of the facility until 1979, when Berlex Laboratories (ICC) obtained the facility, having merged with the then current owner, Cooper Laboratories.

Berlex Laboratories (ICC), a subsidiary of Schearing, began operating in November 1979. Their process involved taking quinidine (found in the eucalyptus tree) and changing isomers in the substance to convert it to quinine. This process continued through late 1982. In October 1982 Berlex (ICC) notified EPA of the forthcoming closure and removal of waste materials and excess chemicals (xylene, toluene) to Inland Chemical of Puerto Rico. EPA assigned Berlex (ICC) the RCRA identification number VID80651095. Prior to this removal, Berlex (ICC) was operating as a small quantity generator.

In 1984 Berlex (ICC) sold the facility to Virgin Island Chemical. Virgin Island Chemical planned to produce benzyl acetate at the site by reacting benzyl chloride with acetic acid. This process was in operation for approximately 6-8 months, but ceased when the market price of benzyl acetate plummeted.

As part of the sales contract with Virgin Island Chemical, Berlex (ICC) was required to clean up any contamination present at the site. Berlex (ICC) hired Enviro-Sciences, Inc. (ESI) of Denville, NJ, to survey the site and certify it as environmentally clean. ESI's sampling survey disclosed four areas of contamination. Two areas, between tanks 8 and 9 and concrete slab #3 (see Figure 1) were found to be contaminated, primarily with toluene. This contamination was thought to be from process spills. The other two areas, along trench #9 and underneath the concrete loading dock, were contaminated primarily with pyridine, thought to be from a leaking laboratory drain. The quantity of contaminants was estimated at 125 pounds of toluene and 120 pounds of pyridine.

ESI recommended on-site treatment of this contaminated soil. The toluene contaminated soil was to be placed in a drying oven equipped with carbon filters, so that emission rates did not exceed the 200 ppm TLV for toluene.

The pyridine contaminated soil was to be treated by cutting the concrete pad and tilling the soil every 2-3 days to allow the soil to aerate. A structure was to be built over the area to prevent soil saturation from rainfall. ESI reported by letter on May 15, 1985 that this clean-up would be initiated on June 6, 1985.

The Environmental Services Division conducted an inspection of Berlex Laboratories (ICC) on September 9, 1985. The findings of this inspection are summarized in the attached report (Attachment 1). On October 10, 1985, 192 fifty-five gallon drums of waste were shipped from Berlex (ICC) to Chemical Waste Management in Alabama (see Attachment 2 - Hazardous waste manifests). This waste included:

- ° Toluene contaminated soil which had been treated in the drying oven
- ° Process pit water and sludge
- ° Drums and soil from the wastewater drainage line

The pyridine contaminated soil remained in place.

As of March 13, 1986, Virgin Island Chemical is not operating the facility. A warehouse full of drums exists on the site. ESI claims that approximately 33 of these drums belong to Berlex (ICC). According to ESI the drums contain mostly laboratory reagents, washings, and miscellaneous materials. These have been sampled by ESI and analysis is currently underway. The remaining drums belong to Virgin Island Chemical. These drums contain raw materials, product, and other incidentals used in the Virgin Island Chemical process. A count of these drums yielded a number of approximately 155. According to an inventory of drums by Virgin Island Chemical, which ESI possessed, the number should have been approximately 208. According to ESI, this inventory may have not been accurate because some of the materials may have been re-sold on the island. A representative of Virgin Island Chemical was not present during the inspection. A listing of the drum inventory is provided as Figure 2.

Presently, plans are being developed for U.S. Resources, Inc. to lease the site from Virgin Island Chemical. A representative of U.S. Resources was present on the site on the day of the inspection and some of the company's equipment was present on-site. U.S. Resources, Inc. plans to operate the facility as an alcohol conversion plant. The process involves dehydrating alcohol contaminated with water, which is then used to make gasohol.

Facility areas/treatment units inspected

During the March 13th inspection the following areas were inspected and/or sampled:

°Process pit

The process pit is an 8,000 gallon underground concrete pit that was used to contain process wastewater and sludge that settled from this wastewater. This pit was cleaned out in 1982 when Berlex (ICC) shut down operations. The sludge and wastewater present in the tank were

disposed of locally. In 1985 ESI tested water which was found accumulating in the tank. The results from this analysis showed contamination consisting of benzyl chloride and some heavy metals. The pit was cleaned again and the contents were shipped to Chemical Waste Management in Alabama as "hazardous waste liquid, N.O.S.". This tank was not sampled during the March 13th inspection, as originally planned, because it was sealed with concrete after the 1985 clean-out.

°Toluene drying oven

The oven used for the treatment of toluene contaminated soil was found to be empty during the March 13th inspection (see photos 1 and 2). According to ESI's representative, the soil present during EPA's September 9, 1985 inspection was shipped to Chemical Waste Management in October 1985.

°Pyridine contaminated pad

The concrete pad located behind the Berlex (ICC) facility was the area of pyridine contamination. The pad was broken up and the soil tilled every 2-3 days as treatment for the removal of pyridine as specified in ESI's workplan. At the time of the March 13th inspection the area was uncovered, and according to ESI, had not been tilled recently.

Two samples, #085254 and #085255, were taken from this area. A composite of the soil from the surface to a three foot depth was obtained. A sample, #085252, was also taken from a suspected area of seepage into the intermittent stream behind the Berlex (ICC) plant. This soil sample was a composite from the surface to approximately 10 inches in depth. A background soil sample, #085251, was also taken upstream of the Berlex property for comparison purposes.

°Storm water sewer

According to ESI, the original storm water sewer at the facility consisted of old, clean toluene drums welded together and attached to a concrete line. In October 1985 the line was excavated and the drums were found to be corroded. Sludge was found to be accumulated in the bottom of the line. The drums, sludge, and two feet of soil were removed and shipped out. A new PVC line was installed (see photo 3). Although this storm water sewer discharges into an intermittent stream located at the edge of the property, the facility does not possess a NPDES permit. Sampling done earlier in this area by ESI revealed higher than background levels of zinc, cadmium, chromium, and lead.

A soil sample, #085253, was taken at the point of discharge to the intermittent stream. During sampling, a tropical rainstorm developed, and water was observed discharging from the pipe (see photos 4 and 5).

°Production well

During the inspection a production well was discovered on-site. The well was not in use at the time, but was still operable. ESI had no knowledge

of the purpose, depth, or construction of the well or which owner of the facility had installed or used it. A water sample, #085256, was taken from this well (see photo 6).

*Drum storage area

A variety of chemicals are presently being stored in a warehouse located on the Berlex (ICC) property. According to ESI, the drums contain raw materials, product, and incidentals from Virgin Island Chemical and Berlex (ICC). Approximately 188 drums were found to be stored during the March 13th inspection (see photos 7, 8, 9, and 10). Attachment 2 lists the name and quantity of waste stored, according to Virgin Island Chemical's inventory and ESI's statements.

Sampling procedures

A total of six samples were taken from the Berlex (ICC) facility (see Figure 2- Map of sampling points). Three of the six samples were taken from the intermittent stream (known as the "gut") that runs along the edge of the Berlex (ICC) property. The first sample taken, #085251, was a background soil sample to be used as a comparison to the other samples taken from the gut. The sample was taken from the surface mud using polyethylene scoops and mixed on Benchkote paper to insure representative split samples. The sample was analyzed for purgeable organics (POA's), non-volatile organics (NVOA's), PCB's, and metals.

The second and third samples, #085252 and #085253, were soil samples taken from areas of the gut directly behind the Berlex (ICC) facility. Sample #085252 was taken from an area behind the laboratory drainage pit where drainage may have seeped into the gut. Sample #085253 was taken from the area of the gut where the storm sewer discharges. Both of these soil samples were taken from the surface to a depth of 10" using a stainless steel hand auger. The first core from the auger was discarded to minimize cross-contamination; the remaining cores were mixed on Benchkote paper in order to obtain a well-mixed representative sample. Both of the samples were analyzed for POA's, NVOA's, PCB's and metals.

Two soil samples were obtained from the laboratory waste drainage pit. The first sample, #085254, was taken approximately 10 feet from the building, and the second, #085255, approximately 20 feet from the building. The stainless steel bucket auger (rinsed with water and deionized water) was used to obtain cores to a depth of 3 feet. The cores were mixed on Benchkote paper in order to obtain a representative and well-mixed sample. Both of the samples were analyzed for POA's, NVOA's, PCB's, and metals.

The sixth sample, #085256, was obtained from the production well located on the site. Since the well was of indeterminate diameter and depth, a precise determination of the volume of water to be removed could not be made. By considering the average depth to groundwater in the area of the Berlex (ICC) facility, and the apparent size of the well casing, it was estimated that purging 150 gallons from the well would remove 3-5 times the well volume and samples representative of the groundwater would be obtained. Consequently, the well was pumped for 6 minutes and 20 seconds, removing 170 gallons of water. The sample was then taken directly from the plastic hose attached to the well head to minimize damage to the well head.

All samples were split, with ESI acting for the facility. The samples were collected in appropriate containers and preserved according to EPA protocol. All samples were shipped on ice the following day to EPA's Edison laboratory.

Results of Analysis

The results of the analysis of the sediment and water samples are summarized on three tables. Table 1 presents a list of organic compounds for which analyses were conducted. This list does not include compounds which the laboratory may have identified as major peaks. Table 2 shows the organic compounds that were identified in the samples collected. Table 3 lists the results of the metal scan analysis.

Most of the samples showed some organics contamination. All of the samples, including the background sample taken in the gut, contained phthalates, chiefly di-n-octyl phthalate, with butyl benzyl phthalate and bis(2-ethyl hexyl phthalate also appearing in a few samples. These values ranged from 1000 ug/kg to 17,000 ug/kg in the soil samples and 3.9 ug/l to 280 ug/l in the water sample. The results from the sample taken in the gut, at the point where the drainage line discharges (#085253), showed more contamination. This sample contained xylene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, di-n-octyl phthalate, naphthalene, flourene, phenanthrene, and aliphatic and aromatic hydrocarbons. The on-site well results showed contamination with chloroform. The PCB analysis results showed the presence of PCB's below the detection limit in all of the samples.

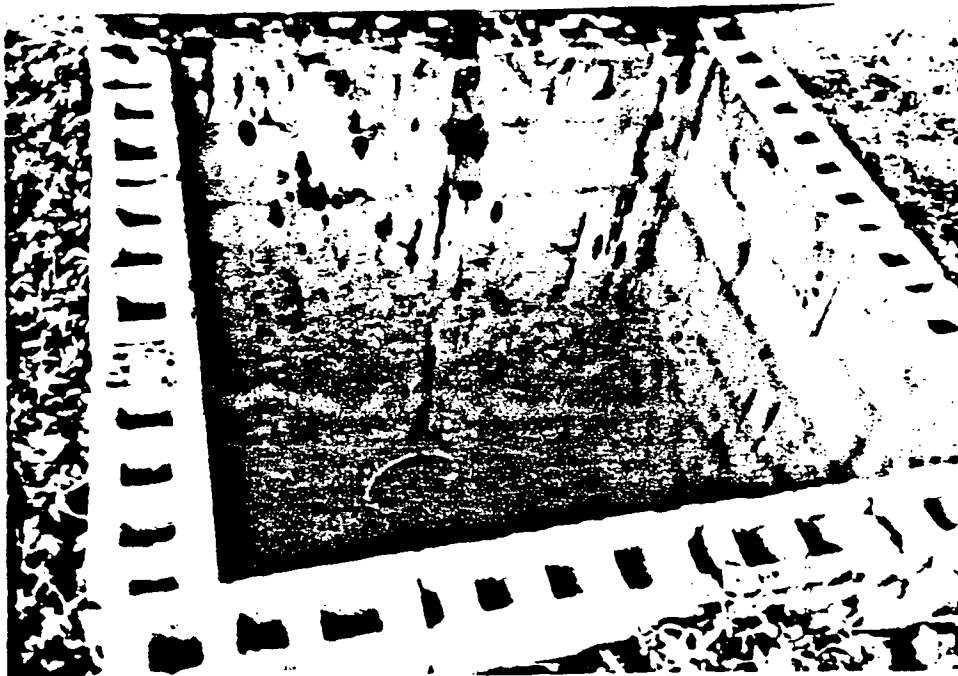
The results of the metals analyses, for the sediment samples, showed varying levels of arsenic, beryllium, chromium, copper, lead, nickel, antimony, selenium, and zinc. The results of the metals analyses for the water sample showed estimated levels of arsenic, beryllium, cadmium, chromium, copper, mercury, antimony, and zinc. The value for chromium in the sediment samples increased from the background level of 10 ug/kg to 52 ug/kg at the point of the drainage pit discharge, finally leveling off to 25 and 27 ug/kg in the lab waste pit. The value for copper remained fairly constant through all the samples. The value for zinc decreased from background to the point where the lab waste pit seeped into the gut, but increased to a high of 360 ug/kg at the point where the drainage pit discharged into the gut. The value leveled off to 79 and 80 ug/kg in the lab waste pit. The value for nickel was also higher at the point where the drainage pit discharged into the gut, with as value of 32 ug/kg.



1. Oven formerly used for the drying
of toluene contaminated earth.



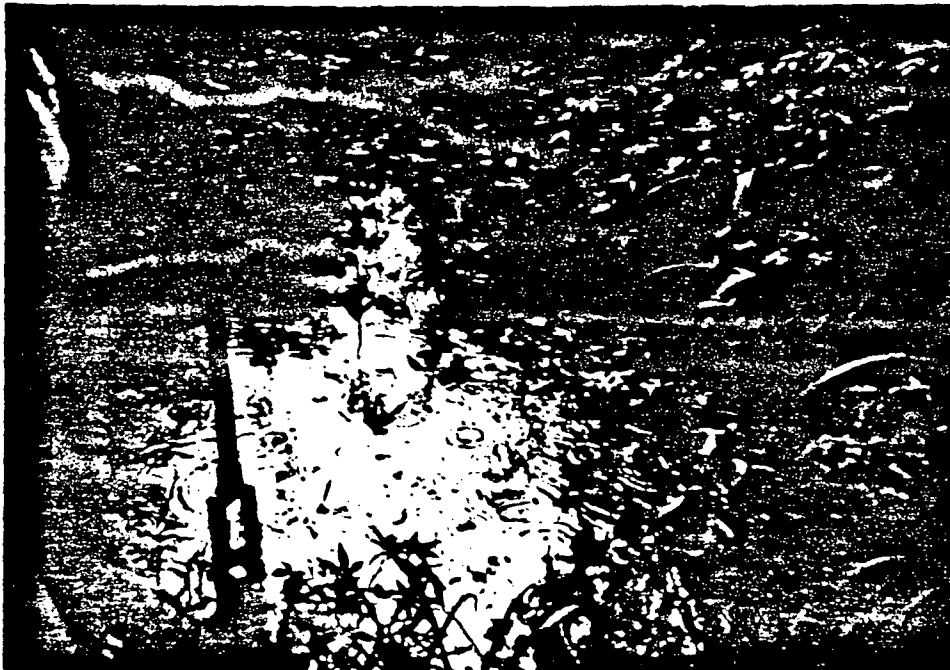
2. Former toluene drying oven.



3. Polyethylene storm sewer line replaced in 1985.



4. Storm sewer discharge into intermittent stream behind Berlex property during tropical storm.



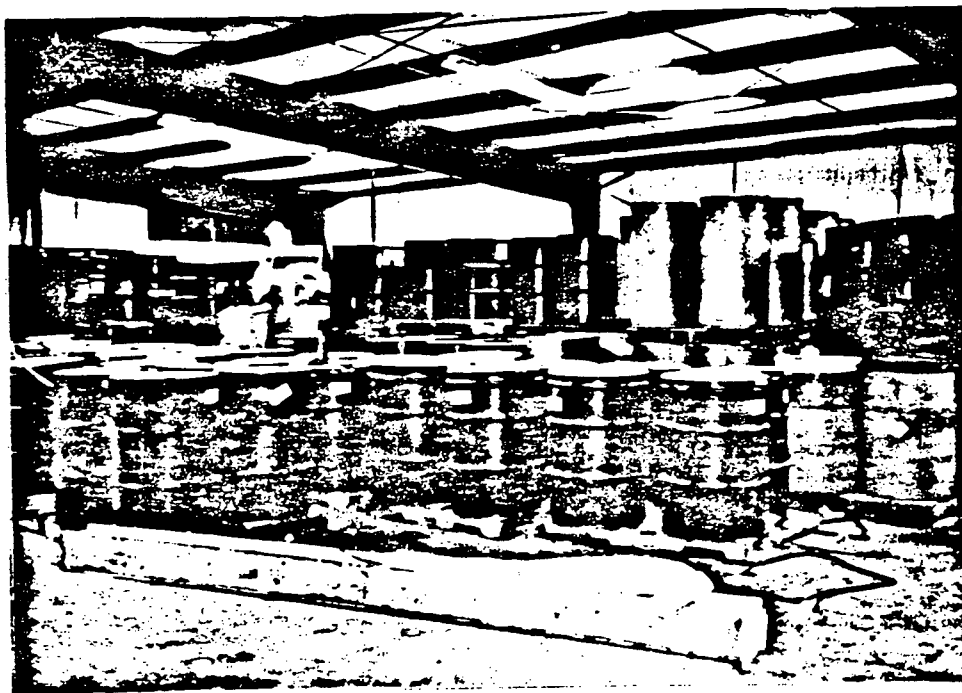
5. Sampling of intermittent stream bed during discharge of storm sewer.



6. Production well located on-site.



7. Warehouse used for drum storage- first room of drums



8. Warehouse used for drum storage- second room of drums



9. Lab pack drums stored in warehouse.



10. Close-up of drums of benzyl chloride in warehouse.

Figure 1 - Map of facility:
Contaminated areas

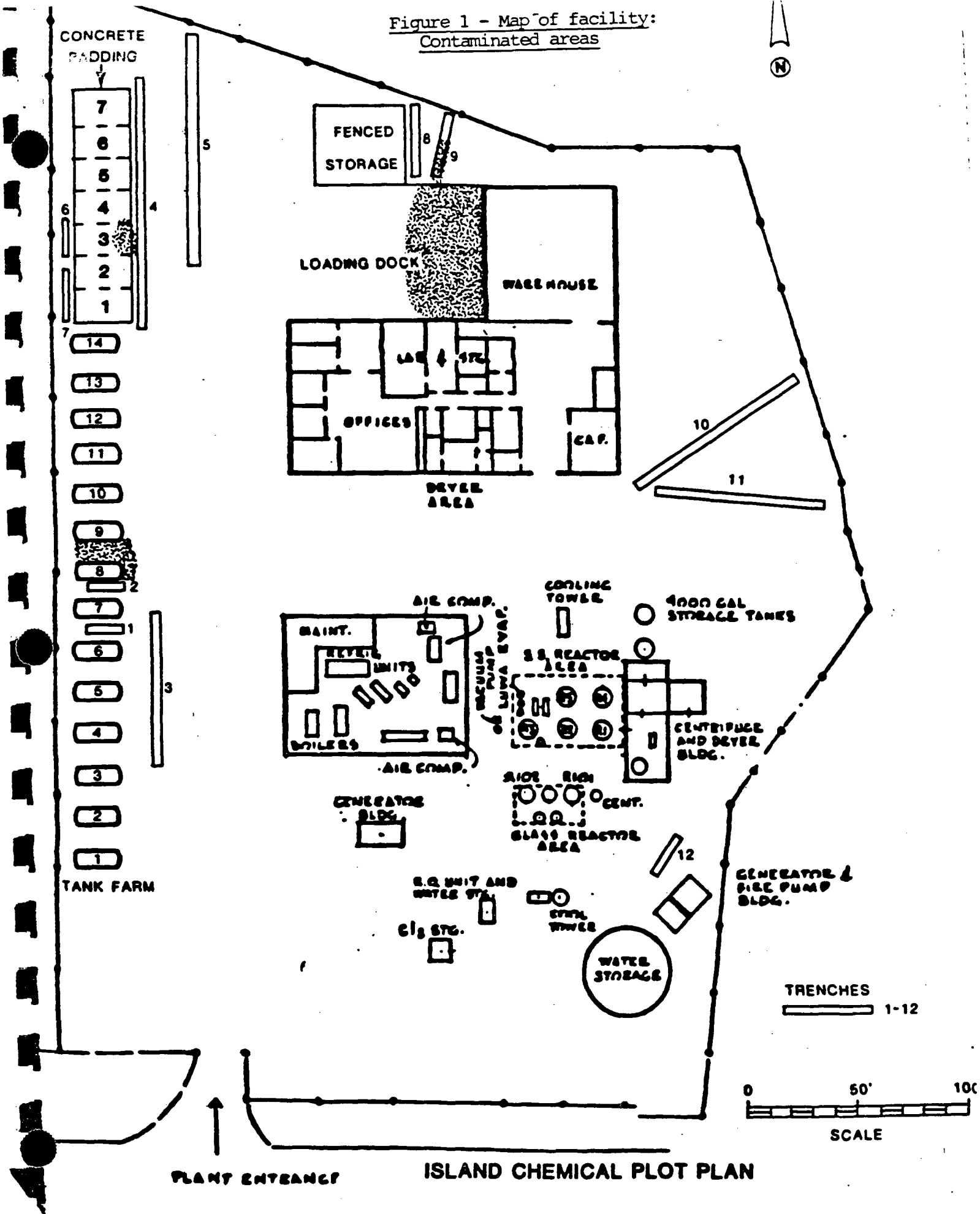


Figure 2 - Drums in storage

Virgin Island Chemical drums:

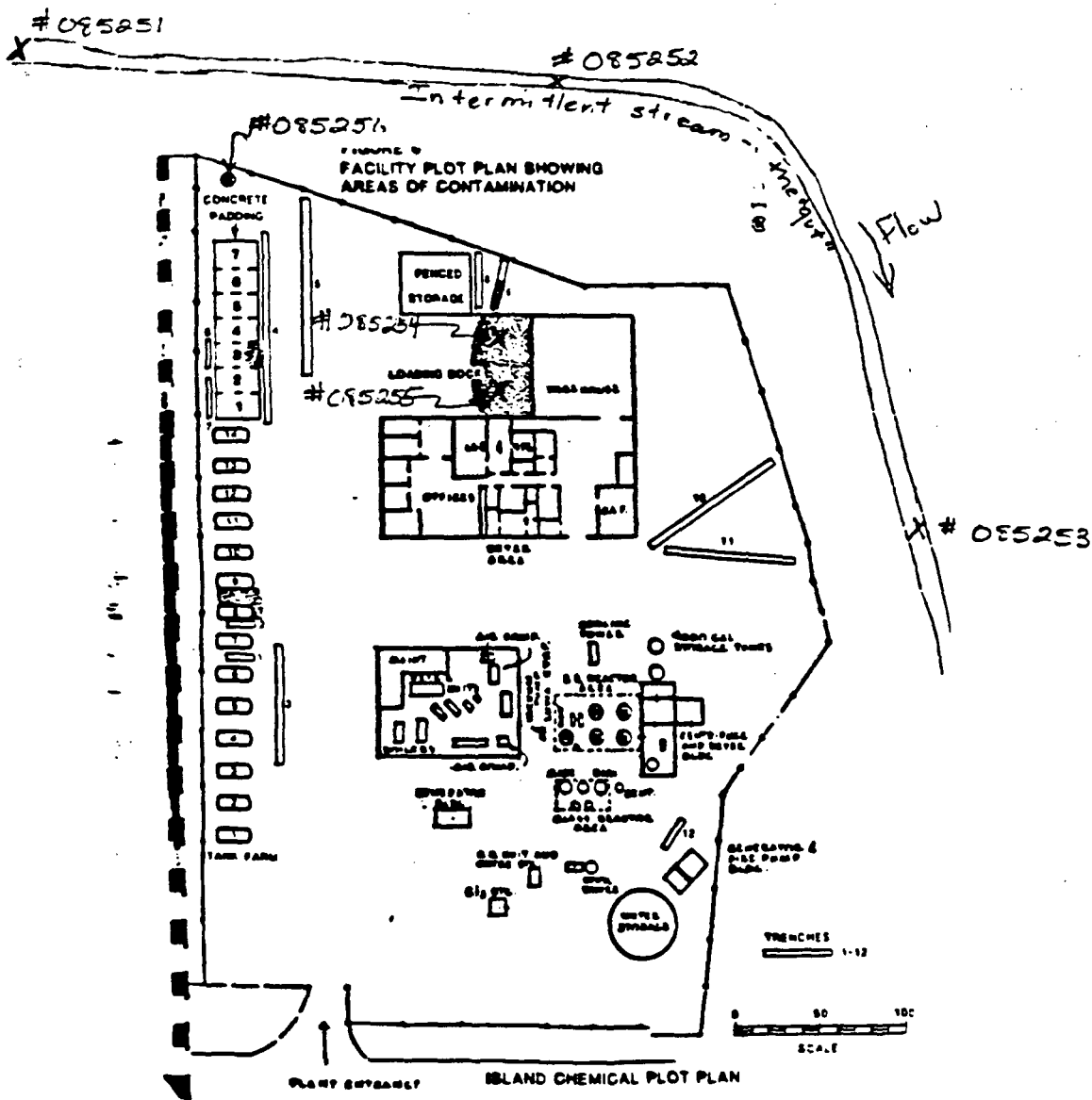
<u>Type of material</u>	<u>Waste #</u>	<u>Size of drum</u>	<u>Quantity</u>
Anti-freeze		55 gallon	19
Miscellaneous detergent		20 gallon, 15 gallon	13
Salt		35 gallon (fiber)	2
Toluene	U220	55 gallon	10
Lube oil		55 gallon	5
Modul		35 gallon (fiber, steel)	2
Herbicide		55 gallon (plastic)	1
Benzyl chloride	P028	55 gallon	28
Methyl isobutyl carbonyl		55 gallon	12
Salicylic acid		55 gallon (fiber)	27
Sodium hydroxide		55 gallon (plastic)	33
Acetic acid		55 gallon	18
Triethylamine (TEA)		55 gallon	3
Acetone	U002	55 gallon	1
Methyl isobutyl ketone	U161	55 gallon	1
Sulfanic acid		55 gallon (fiber)	1
Sodium acetate		35 gallon	1
Sodium hexametaphosphate		35 gallon	1
Benzyl acetate		55 gallon	22
Toluene-acetone mix	U002,U220	55 gallon	2
Methanol		55 gallon	4
Sodium hydroxide (solid)		55 gallon	2
			<u>208</u>

Chloroform drums (empty)	55 gallon	4
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Berlex (ICC) drums:

<u>Type of material</u>	<u>Quantity</u>
Lab chemicals (Aceto-nitrate, Acetic acid)	33 (total)
Washings	
Cut up drums	
Miscellaneous materials	
Crystallized material	

Figure 3
Map of sampling points



x = Sampling point

- = Production well

Not to scale.

100016

Table 1 - Organic compounds for which analysis was conducted

Acid Compounds

2,4,6-trichlorophenol
p-chloro-n-cresol
2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
pentachlorophenol
phenol

Base/Neutral Compounds

acenaphthene
benzidine
1,2,4-trichlorobenzene
hexachlorobenzene
hexachloroethane
bis(2-chloroethyl) ether
2-chloronaphthalene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3'-dichlorobenzidine
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
(as azobenzene)
fluoranthene
4-chlorophenyl phenyl ether

Base/Neutral Compounds

4-bromophenyl phenyl ether
bis-(2-chloroisopropyl) ether
bis(2-chloroethoxy) methane
hexachlorobutadiene
hexachlorocyclopentadiene
isophorone
naphthalene
nitrobenzene
N-nitrosodiphenylamine
N-nitrosodl-n-propylamine
bis(2-ethylhexyl) phthalate
butyl benzyl phthalate
di-n-butyl phthalate
di-n-octyl phthalate
diethyl phthalate
dimethyl phthalate
benzo(a)anthracene
benzo(a)pyrene
3,4-benzofluoranthene
benzo(k)fluoranthene
chrysene
acenaphthylene
anthracene
benzo(ghi)perylene
fluorene
phenanthrene
dibenzo(a,h)anthracene
indeno(1,2,3-cd)pyrene
pyrene

Volatiles

acrolein
acrylonitrile
benzene
carbon tetrachloride
chlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
chloroethane
2-chloroethylvinyl ether
chloroform
1,1-dichloroethene
1,2-trans-dichloroethene
1,2-dichloropropane
1,3-dichloropropane
ethylbenzene
methylene chloride
chloromethane
bromoethane
bromoform
dichlorobromomethane
trichlorofluoromethane
dichlorodifluoromethane
chlorodibromomethane
tetrachloroethylene
toluene
trichloroethylene
vinyl chloride

Pesticides

aldrin
dieldrin
chlorlone
4,4'-DDE
4,4'-DDT
4,4'-DDD
endosulfan I
endosulfan II
endosulfan sulfate
enrln
enrln aldehyde
heptachlor
heptachlor epoxide
IWK-Alpha
IWK-Delta
IWK-Delta
IWK-Gamma
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1240
PCB-1260
PCB-1016
toxaphene

Dioxins
2,3,7,8-tetrachloro
p-dioxin

-12-

100017

List does not include compounds identified as other major peaks.

Table 2 - Results of Organic Analysis- Organic Compounds Detected

<u>Compound name</u>		<u>Sample location/Sample #</u>				
<u>VOA</u>	Gut Back-ground* #085251	Lab waste pit seep #085252	Drainage pit disch. #085253	Lab waste pit # 1 #085254	Lab waste pit # 2 #085255	On-site well (ug/l) #085256
Xylene Chloroform			470			130
<u>NVOA</u>						
Butyl benzyl phthalate	1000					2K
Di-n-octyl phthalate	17000	9000	7700	4900	3200	3.9
1,4 dichlorobenzene			870			
1,2 dichlorobenzene			2900			
Napthalene			2100			
Flourene			2000			
Phenanthrene			2400			
Bis(2-ethylhexyl)phthalate						280
Aliphatic & aromatic hydrocarbons			M			
<u>PCB</u>						
PCB-1016	1000K	1000K	1000K	1000K	1000K	1K
PCB-1221	1000K	1000K	1000K	1000K	1000K	1K
PCB-1232	1000K	1000K	1000K	1000K	1000K	1K
PCB-1242	1000K	1000K	1000K	1000K	1000K	1K
PCB-1248	1000K	1000K	1000K	1000K	1000K	1K
PCB-1254	1000K	1000K	1000K	1000K	1000K	1K
PCB-1260	1000K	1000K	1000K	1000K	1000K	1K

*All values in ug/kg except where otherwise stated.

K = Actual value known to be less than value given.

M = Presence of material verified but not quantified.

Blank space means compound was not detected in sample analysis.

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Table 3 - Results of Metals Scan Analysis

<u>Compound name</u>		<u>Sample location/Sample #</u>				
	Gut Back-ground* #085251	Lab waste pit seep #085252	Drainage pit disch. #085253	Lab waste pit # 1 #085254	Lab waste pit # 2 #085255	On-site well (ug/l) #085256
Silver						
Arsenic	2J	1J	0.8J	0.8J	2J	2J
Beryllium		7J	8J	7J	7J	5J
Cadmium						3J
Chromium	10	22	52	27	26	7J
Copper	40	45	52	55	58	8J
Mercury						0.6J
Lead			30J			
Nickel	19	20J	32	25	27	
Antimony		10		8.4		3J
Selenium	1J		1J	0.8J	0.8J	
Thallium						
Zinc	100	63	360	80	79	20J

*All values in mg/kg except where otherwise stated.

J = Estimated value.

M = Presence of material verified but not quantified.

Blank space means compound was not detected in sample analysis.

100019

Attachment 1:

ESD Report of September 9, 1985

Berlex Laboratories (ICC)
VID980651095

March 13, 1986

☒ Generator

☐ Transporter

☒ TSD

RCRA Enforcement

Berlex Laboratories, (a subsidiary of
Island Chemical Co., Inc.)
St. Croix, Virgin Islands

VID80651095

September 9, 1985

Participating Personnel:

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Figure 5 - Sample Location Map - Lab Waste Drainage Area

SUMMARY

Objective

This compliance evaluation and sampling inspection was conducted at the request of the Solid Waste Branch to support and verify the decontamination and removal by Berlex (ICC), St. Croix, VI of soil contaminated with toluene and pyridine.

Findings

1) Sampling results indicate:

- ° Organic analysis on samples #087001 and #087002 (drying oven) detected the following organic compounds ranging in values from 460 ppb to 15000000 ppb: toluene, flourene, bis(2-ethylhexyl) phthalate, benzophenone and di-n-octyl phthalate (detected only in sample #087002).
- ° Organics analysis on samples #087003, #087004, #087005, and #087006 (lab waste drainage area) detected the following organic compounds ranging in values from 360 ppb to 75,000 ppb: toluene, bis(2-ethylhexyl) phthalate, di-n-octyl phthalate, chloroform, benzene and di-n-butyl phthalate.

From the results, the toluene values were found to be within the acceptable level range of 2 ppm (reference document #2). Due to the late arrival of guidance protocol from EPA Research Laboratories, Cincinnati, no analysis of pyridine was performed.

2) Confirmation of on-site treatment of soil by Berlex (ICC) for toluene and pyridine was made.

° Toluene

The drying oven was employed for the volatilization of toluene from the soil, but the necessary charcoal filters to absorb the volatilized material were not observed.

° Pyridine

The contaminated soil was tilled and aerated using a backhoe and then covered over by a large synthetic liner. No permanent structure had been built to prevent future saturation of the soil from rainfall. The present liner was not owned by Berlex but rented.

- 3) No data on the sampling performed by Berlex was ever received by the USEPA, Environmental Services Division, Edison, NJ to confirm the clean-up by Berlex.
- 4) The re-routing of existing laboratory discharges to a self-contained unit and portable toilet facilities was not observed.
- 5) On October 10, 1985, Dr. A. L. Kyles, Vice President, Enviro-Sciences, the consultant working with Berlex (ICC) informed me that 192, 55-gallon drums of waste was removed from Berlex for disposal. The material consisted of the following:
 - ° Process pit water and sludge.
 - ° Drums and soil from the wastewater drainage line.
 - ° 1, 55-gallon drum of water/toluene.
 - ° Toluene contaminated soil.

No manifest copies were received to confirm this shipment.

- 6) Hazardous material was stored on-site for greater than 90 days and in quantities greater than 1000 kg. Berlex is then subject to the regulations 40 CFR Parts 262 and 264. None of these regulations were observed to have been followed.
- 7) In review, a question is raised that a possible source of contamination is that of the dry creek bed. Process wastewater was discharged via a drainage line to the creek bed. Since the drainage line and soil associated with the line was found contaminated, the possibility of soil contamination in the creek is likely and should be investigated.

DISCUSSION

Applicable Regulations

40 CFR Parts 262 and 264.

Purpose of Survey

A RCRA compliance evaluation and sampling inspection (CEI) was conducted at Berlex Laboratories (ICC), St. Croix, VI on September 9, 1985. The survey was conducted at the request of the Solid Waste Branch to support and verify Berlex's decontamination and removal of soil contaminated with toluene and pyridine.

The elements of the survey included a compliance record review, site survey and sampling.

Facility History

The Berlex Laboratories, Inc. plant, under the name Island Chemical Company (ICC), produced quinidine from November, 1979 after purchasing the site from Cooper Laboratories, until late 1982. In October 1982, Berlex notified EPA of the forthcoming closure and removal of waste materials and excess chemicals (xylene, toluene) from the site to Island Chemical of Puerto Rico. EPA assigned Berlex the ID No. VID80651095. Prior to the removal, Berlex was operating as a small quantity generator.

Berlex sold the site in September 1984, 21 months after the shut-down of operations to Virgin Island Chemical Co. The sales contract for the site called for the contractor Enviro-Sciences, Inc. (ESI), 19 Copeland Road, Denville, NJ to survey the site and certify it as environmentally clean. An ESI sampling survey initiated in September 1984 disclosed two areas of soil contamination, with the compounds of concern being toluene and pyridine.

On December 21, 1984 Enviro-Sciences, Inc. delivered a progress report describing ESI's sampling and analysis of soil at the Berlex site on St. Croix and included recommendation for treatment of the pyridine (U196) and toluene (U220) contaminated areas.

The recommended on-site treatment was selected by ESI as a more economical method than the alternative off-site shipment of drummed soil to the U.S. mainland for placement in an approved landfill. The proposed method of clean-up includes the drying of toluene contaminated soil (which is presently stored at the facility in drums) and degradation of pyridine contaminated soil. This would occur by exposure to ambient air causing soil aeration. Soil saturation by rainfall would be prevented by covering the area with a synthetic liner.

The toluene contamination resulted from soil leaks/spills at a tank site and pyridine contamination from leaks from a laboratory drain line. The estimated quantity of the two materials (toluene and pyridine) are less than 245 pounds.

On May 15, 1985, ESI reported the intended initiation of clean-up activities on June 6, 1985.

Facility Description and Operation

The Berlex Laboratories, Inc. (Berlex) plant under the name Island Chemical Co. (ICC), located in St. Croix, Virgin Island started producing quinidine gluconate in November 1979 and operated for 2 years. During operations Berlex employed 215 people on a 2 shift, 5 day/week, work schedule. Maximum production output was estimated at 50 tons/year, but this level was never reached. The first production batch by Berlex was November 1, 1979 (see Site Location Map, Figure 1).

Berlex (ICC), St. Croix, VI manufactured as their sole product quinidine gluconate. The basic raw materials used in production included quinine sulfate, toluene, and methanol. Production involved the conversion of quinine sulfate into quinine gluconate by the addition of toluene in a reaction vessel. The liquid was then distilled with methanol to produce the crystalline solid, quinidine gluconate.

Within the production area, the facility housed the following reaction vessels:

Reaction Vessels

<u>Number of Vessels</u>	<u>Material Construction</u>	<u>Capacity</u>
4	Stainless Steel	1200-1500 gallons
1	Carbon Steel	1200 gallons
1	Glass Lined	3000 gallons
1	Glass Lined	2000 gallons
3	Glass Lined (Receivers)	2000 gallons

Bulk raw materials arrived in tank trucks and were stored on-site in 14, 8000 gallon raw material tanks (see photograph #1).

Water Usage and Treatment

Groundwater was the primary source of water used in production. Approximately 20,000 gallons were used, of which, 10,000 gallons were recovered. Water was pretreated by filtering and adjusting pH (with sulfuric acid) due to the high carbonate concentration in the groundwater. The facility also housed the following systems (and tanks):

<u>Number of Tanks</u>	<u>Capacity</u>	<u>Systems</u>
1	15,000 gallons	Boiler System
1	15,000 gallons	Drinking Water (rainwater)
4	50,000 gallons	Recirculated Cooling Water
1	20,000 gallons	Reduction/Oxidation Unit
1	250,000 gallons	Firetank

Wastewater from production operations (primarily cooling water) was collected in a 17,000 gallon underground concrete, process pit. No treatment was applied but prior to discharge, the pit was sampled to see if any product was released by accident. If nothing showed in the sampling, the water was discharged via an underground pipe to a dry creek adjacent to facility property.

Waste Streams

Hazardous wastes at Berlex (ICC) were generated from the following sources:

1) Process Pit Water and Sludge

The 17,000 gallon underground concrete pit used to contain production wastewater and accumulate settled sludge from this wastewater.

2) Former Main Wastewater Drainage Line

The underground pipe (constructed of welded 55-gallon drums) from the process pit to dry creek bed. The pipeline was excavated due to the finding of numerous leaks and punctures from which wastewater had contaminated the soil (see Figure 2, areas of contamination).

3) Contaminated Soil Due to Drainage Line Leakage

A) Contaminated soil associated with the excavation of the main wastewater drainage line.

B) Contaminated soil due to drainage line leakage from the laboratory drain.

4) Contaminated soil from raw material spillage - toluene, pyridine.

The spills associated with material transfer and tank or line leakage. Includes soil under the concrete surface loading dock, along trench number 4, under concrete slab number 3, between tanks numbered 8 and 9, and along trench number 9 (see Figure 2, areas of contamination).

5) Contaminated or off-specification raw materials which could neither be reworked nor sold.

Prior to the facility's shutdown, Berlex (ICC) was said to be operating as a small quantity generator. What Berlex did with waste prior to the requested hazardous waste shipment (October 27, 1982) is unknown.

Treatment Methodology

As a result of sampling performed by Enviro-Science, Inc. (ESI) to certify how environmentally clean the site was, ESI disclosed two areas of soil contamination by toluene and pyridine (see figure #2, Plot Plan Showing Areas of Contamination). In response to such a disclosure, ESI recommended on-site treatment as an alternative to the economically unfeasible transport of the waste to the U.S. mainland.

Reference document #1, contained the following methodology of treatment which was to be followed:

° Toluene

The toluene contaminated soil would be placed on trays in a dryer located within the facility (see Figure 3, location of drying oven).

Soils with low and high toluene concentration were permitted to be mixed to insure uniform drying. The empty drums from which the excavated material was stored would be washed with a nonphosphate detergent, rinsed with tap water and then air dried. Drum washings would be collected and later evaporated in the dryer. These same drums would be used to store the air-dried soil until laboratory analysis indicates that it is free of toluene or has very low concentration. If the soil is found to be free of toluene or at very low levels (2 ppm, reference document #2), it will be redistributed on the site.

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 would not be exceeded (see photographs #4 & #5).

° Pyridine

The pyridine contaminated area would be treated in a 3 step approach.

- 1) The pyridine contaminated area would be covered over to prevent the saturation of soil from rainfall (see photograph #6).
- 2) The concrete surface loading dock in the vicinity of the pyridine contaminated areas would be removed using a backhoe and hauled to a landfill or used to stabilize the bank along the dry river bed. The Department of Public Works would be contacted for permission to do the latter.
- 3) The pyridine contaminated soil would be tilled and aerated using a backhoe at 2-3 day intervals. Soil turning would allow exposure of the contaminated soil to ambient air.

Samples would be taken at the beginning of the cleaning operation and continue at weekly intervals until acceptable pyridine levels are reached (2 ppm, reference document #2). 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.

Waste Storage

Berlex at the time of inspection was storing waste material in two areas:

1) Outside Fenced Storage Area

During facility operations, this was used as a raw material storage area. It consists of a 50' x 20' concrete pad surrounded by a chain-link fence. At the time of inspection, 1, 55-gallon drum containing approximately 40 gallons of a water/toluene mixture was being stored. Other empty 55-gallon drums were also present (see photograph #2 & #3, Outside Drum Storage Area).

2) Warehouse Storage

This area was used by Berlex as their major raw material storage area. At the time of inspection, 20, 55-gallon drums of toluene contaminated soil were being stored prior to treatment in the drying oven (see photographs #12, #13, & #14). Large numbers of 55-gallon drums containing raw materials used in production were also being stored in the warehouse.

Manifested Shipments

After the shutdown of plant operations in late 1982, the raw materials which remained on-site in the facility's above-ground storage tank were removed (including toluene and xylene). The transporters and TSD used for these shipments were as follows:

Transporters

Trailer Marine Transport Corp. PRD980644579
Isla Grande, Puerto Rico

Transporte Diaz PRD980526834
Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico

TSD

Island Chemical of P.R. Inc. PRD090399718
Km 51, Highway #2, Manati, Puerto Rico

The manifests are enclosed as Attachment IV.

According to Dr. A. L. Kyles, Vice President of Enviro-Science, the consultant working with Berlex (ICC), 192, 55 - gallon drums of waste was removed from the Berlex (ICC) facility on October 10, 1985. The drum contents consisted of the following material:

- ° Process pit water and sludge
- ° Drums and soil from the wastewater drainage line
- ° 1, 55-gallon drum of water/toluene
- ° Toluene contaminated soil

No manifest copies were ever received on the shipments from Dr. Kyles.

Sampling Procedures

On September 9, 1985 samples were taken at Berlex (ICC), St. Croix, Virgin Island from the following areas:

- ° Composite soil sample from the drying oven (left side).
Sample #087001
- ° Composite soil sample from the drying oven (right side).
Sample #087002
- ° Surface soil composite from the north side of the Lab Waste Drainage Area.
Sample #087003

- ° Subsurface soil composite from the north side of the Lab Waste Drainage Area.
Sample #087004
- ° Surface soil composite from the south side of the Lab Waste Drainage Area.
Sample #087005
- ° Subsurface soil composite from the south side of the Lab Waste Drainage Area.
Sample #087006

Attachment III contains copies of the sample data sheets.

Within the drying oven, the soil was placed on steel trays and stacked in 13, 20 tray bins. A division of the dryer into the left side and right side was made and a composite sample was taken from a representative number of trays. See Figure 4, for sample locations. Photographs #4 and #5, show the location of the drying oven.

To take a more representative sample of the Lab Waste Drainage Area, the area was divided into two sections: north and south. Surface soil samples were taken using trowels and subsurface soil samples (approx. 3 foot depth) were taken using dedicated bucket augers. Due to the very resistant nature of the soil (impermeable clay) only a sample depth of three feet could be obtained. See Figure 5, for sample locations. Photographs #7, #8, #9, #10, and #11, shows the areas of sampling.

Sampling equipment and containers were prepared according to EPA standard procedures prior to sampling. A total of six samples were taken.

The samples were analyzed for purgeable (POA) and non-volatile (NVOA) organic priority pollutants. All analyses were performed in EPA's Edison, New Jersey laboratory. EPA standard procedures were followed for the collection of samples throughout the survey. Samples were not split with facility representatives. Receipt for samples (Attachment I) and chain-of-custody methods forms (Attachment II) were employed for all samples taken.

Sample Results

Sample results are given in Table I.

Organic analysis on samples #087001 and #087002 (drying oven) detected the following organic compounds ranging in values from 460 ppb to 15,000,000 ppb: toluene, flourene, bis(2-ethyl hexyl) phthal, benzphenone and di-n-octyl phthalate (detected only in sample #087002).

Organic analysis on samples #087003, #087004, #087005 and #087006 (lab waste drainage area) detected the following organic compounds ranging in values from 360 ppb to 75,000 ppb: toluene, bis(2-ethylhexyl) phthalate, di-n-octyl phthalate, chloroform, benzene and di-n-butyl phthalate.

From the results the toluene values were found within the acceptable range of 2 ppm. No laboratory analysis was performed for pyridine due to late arrival of guidance on pyridine protocol from EPA Research Laboratories, Cincinnati.

Reference Documents

- 1) Enviro-Science Inc., Progress Report, Island Chemical Company, Inc. (Berlex), April 4, 1985.
- 2) U.S. Environmental Protection Agency, Review of a Report on Proposed Soil Decontamination by Enviro-Sciences, Inc.
- 3) U.S. Environmental Protection Agency, Fact Sheet, Requests to Treat Contaminated Soil at St. Croix Plant Site, February 5, 1985.
- 4) U.S. Environmental Protection Agency, ICC/Berlex Plant Site, St. Croix Fact Sheet Including Preliminary Analytical Results on Nearby Well Fields.

Table I

Results of Organics Analysis on Samples

Organic Compounds	Sample# 087001 ug/kg	Sample# 087002 ug/kg	Sample# 087003 ug/kg	Sample# 087004 ug/kg	Sample# 087005 ug/kg	Sample# 087006 ug/kg
Toluene	460	560	420	440	360	400
Flourene	9200	1300				
Bis(2-ethylhexyl)Phtha- -late	13000	4700	16000	1900	51000	36000
Benzophenone	15000000	2600000				
Di-n-octyl Phthalate		500J		4200	600J	2000
Chloroform				200K		
Benzene				200K		
Di-n-butyl Phthalate						75000

Sample #087001 - Aerated Soil Composite from Storage Room (left side)

Sample #087002 - Aerated Soil Composite from Storage Room (right side)

Sample #087003 - Surface Soil Composite from North Side of Lab Waste Drainage Area

Sample #087004 - Subsurface Soil Composite from North Side of Lab Waste Drainage Area

Sample #087005 - Surface Soil Composite from South Side of Lab Waste Drainage Area

Sample #087006 - Subsurface Soil Composite from South Side of Lab Waste Drainage Area

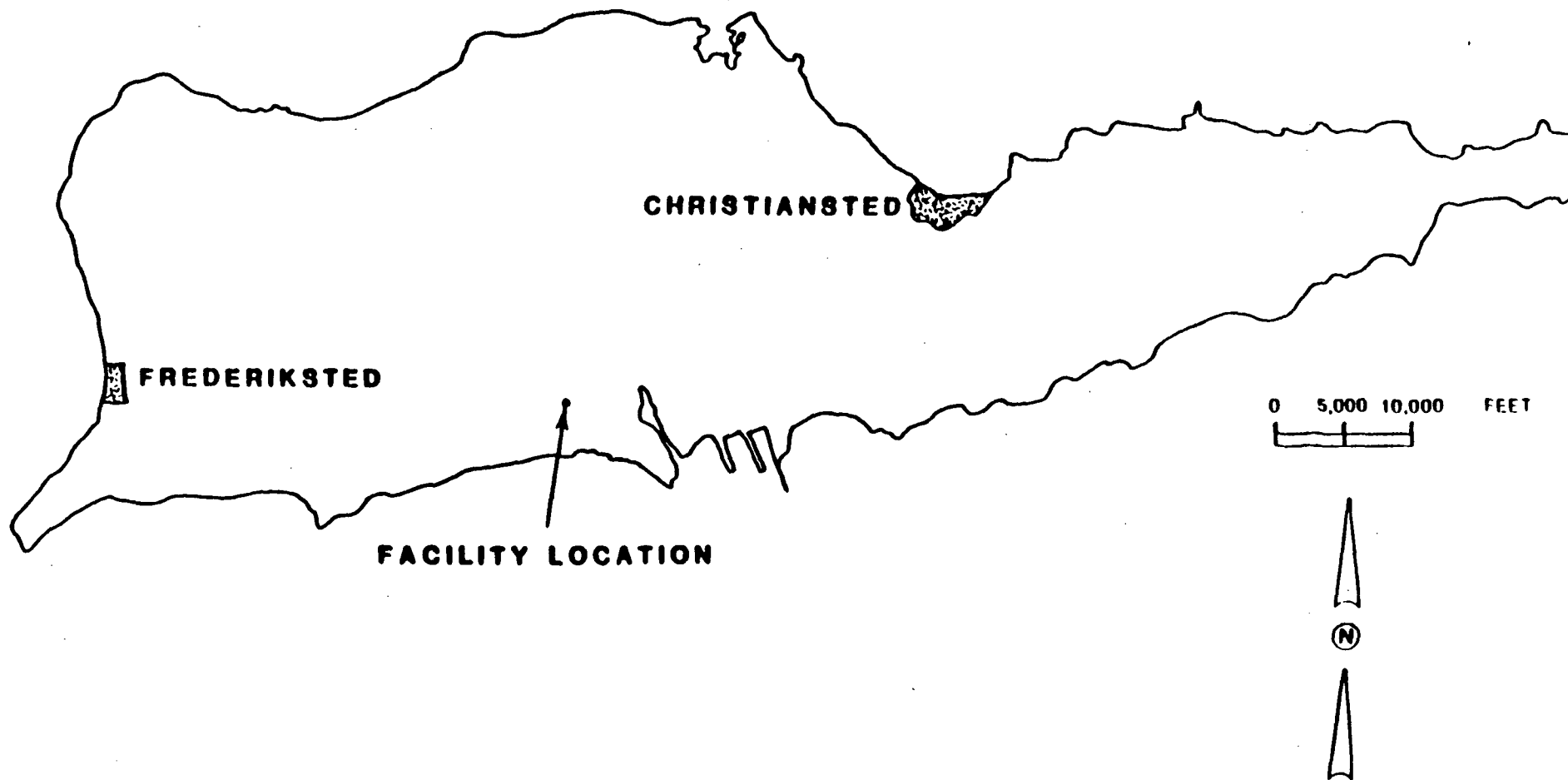
K = Actual value known to be less than value given

J = Estimated value

Blank Space - Material Analyzed but not detected

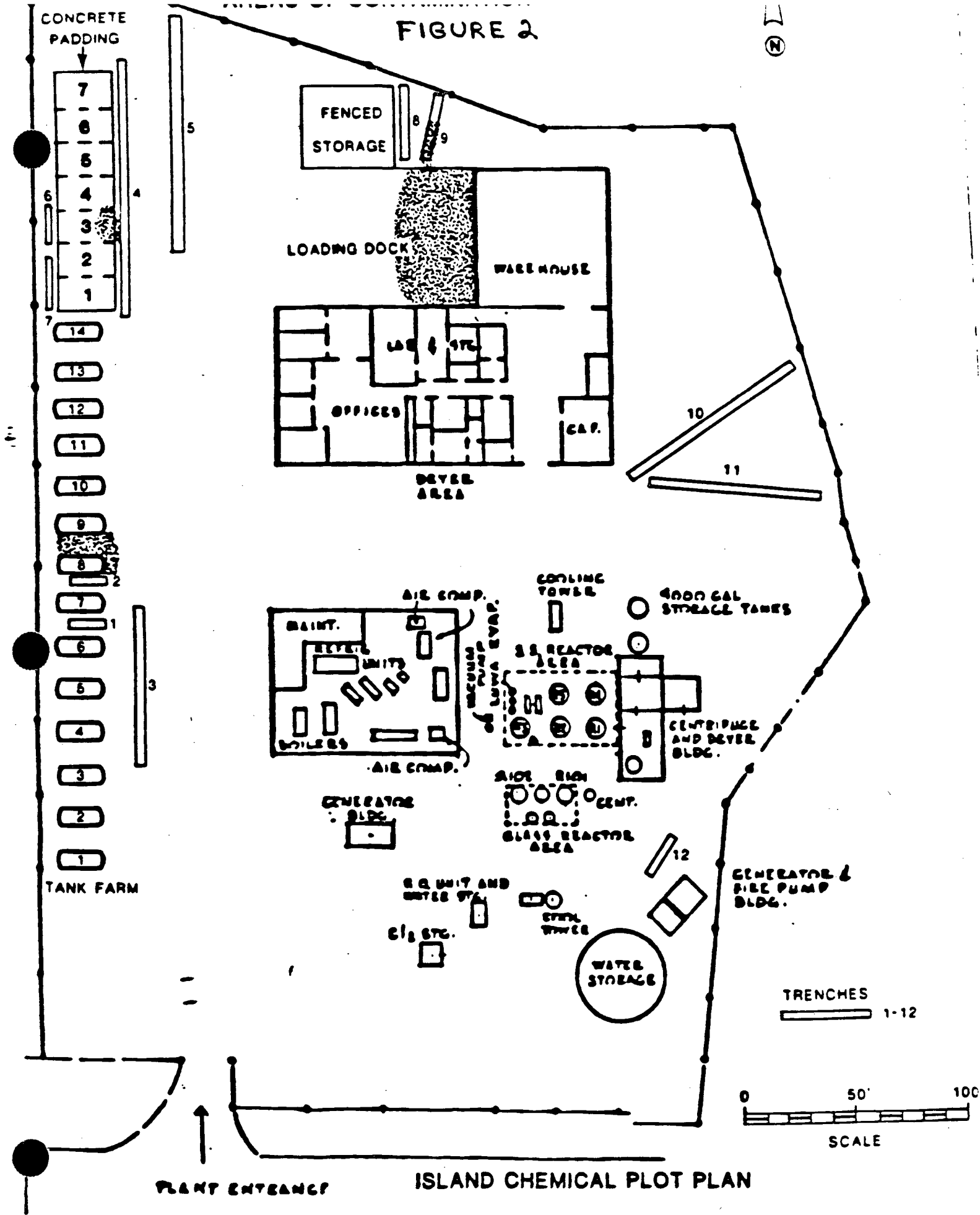
FIGURE 1

FACILITY LOCATION MAP



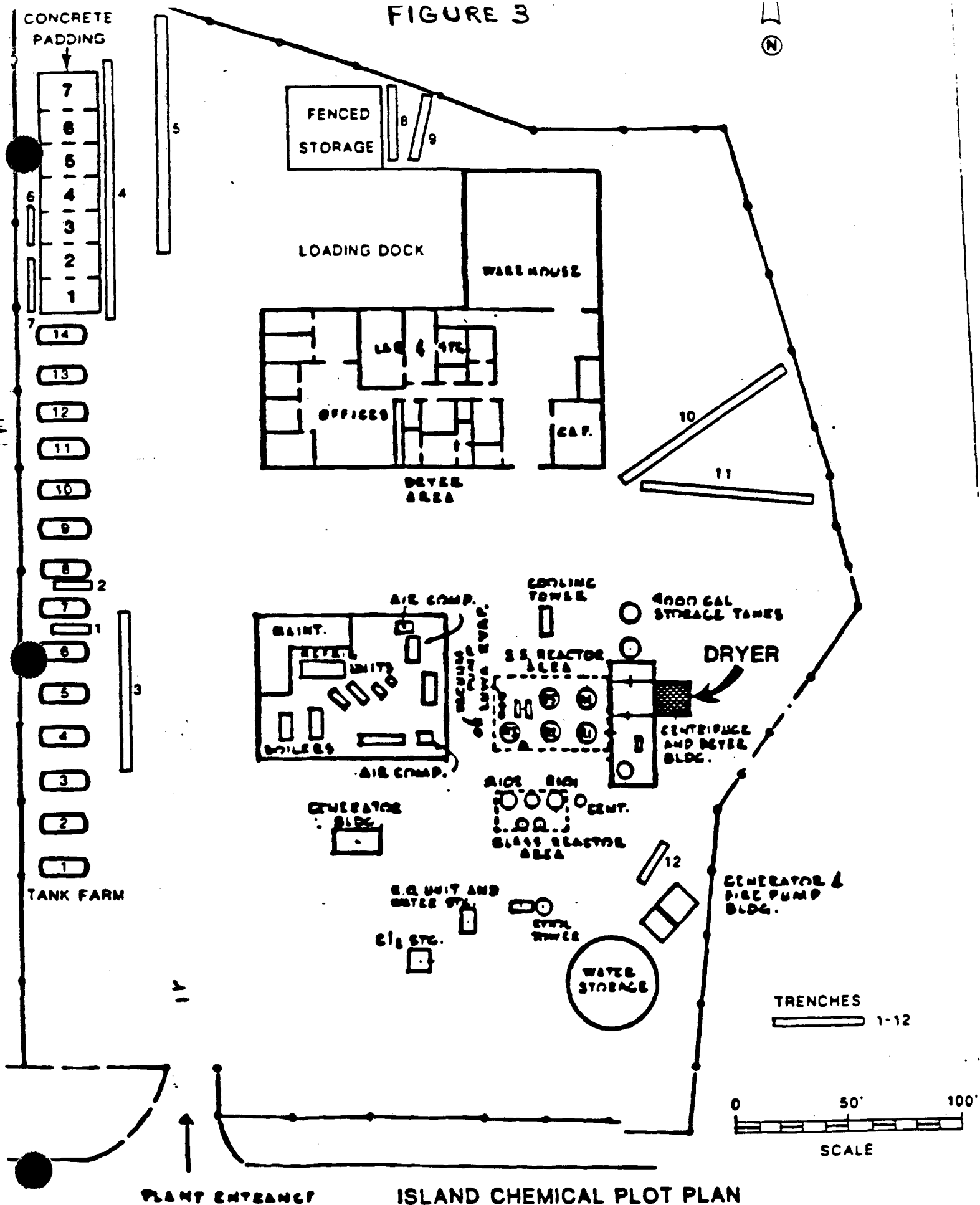
**SOURCE: COMPREHENSIVE WATER RESOURCES
MANAGEMENT PLAN FOR THE UNITED
STATES VIRGIN ISLANDS, 1983.**

100036



100037

FIGURE 3

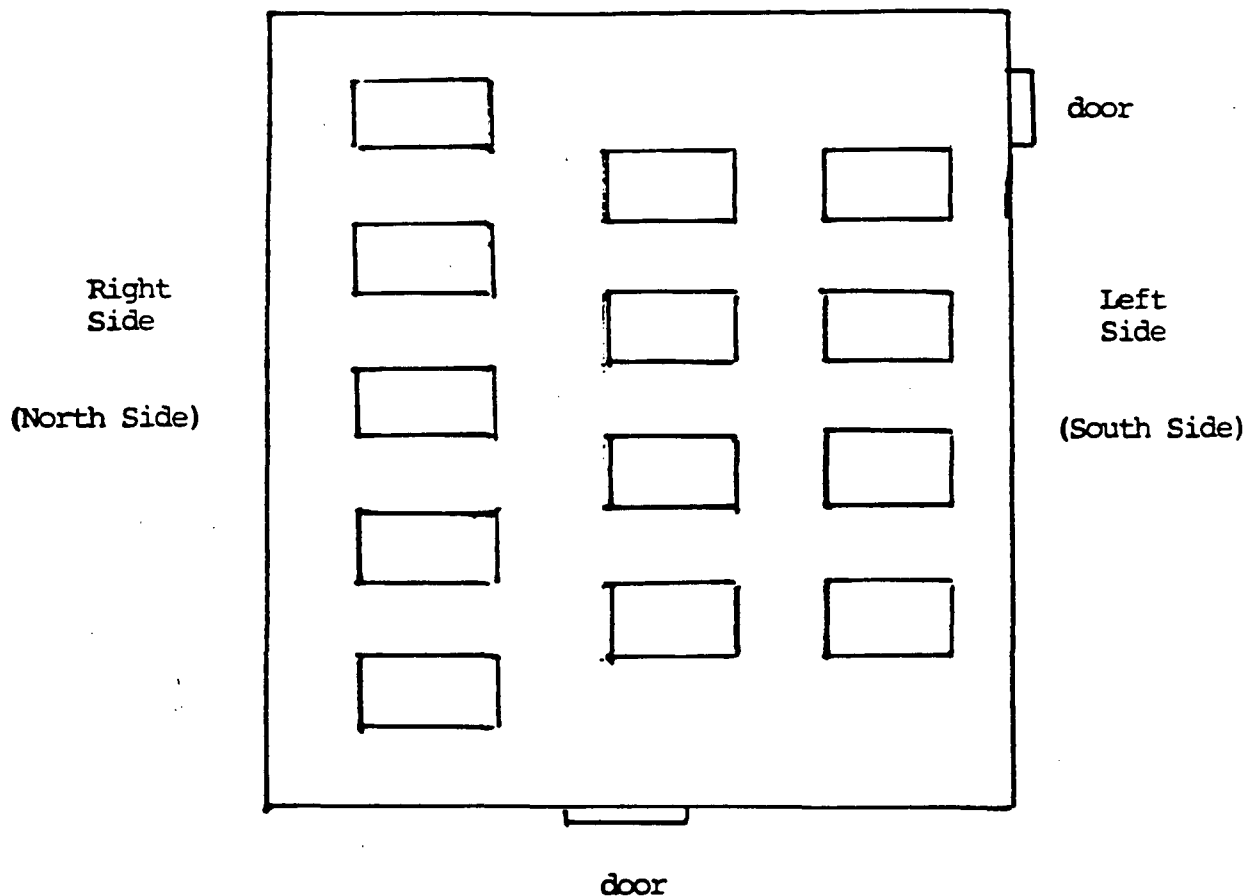


100038

DRYING OVEN

- toluene contaminated soil

(Top View)



Composite soil sample from drying oven

- #087001 - left side (south side)
- #087002 - right side (north side)

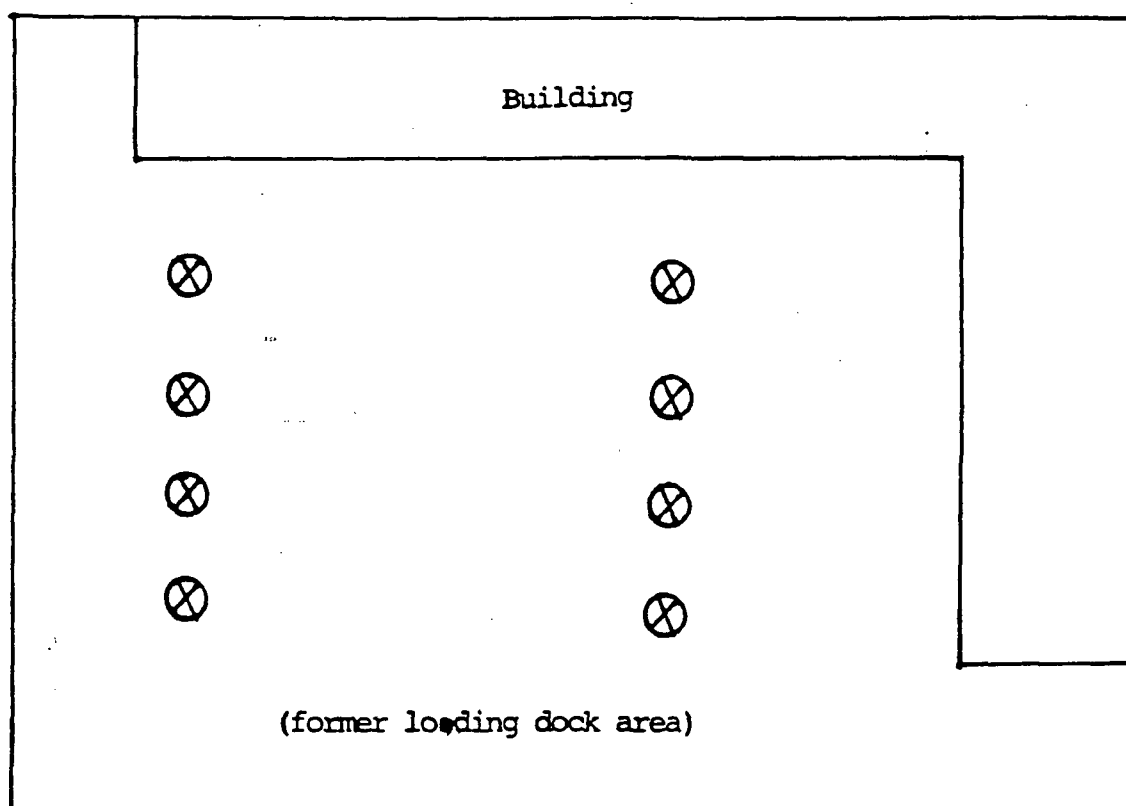
(Not to Scale)

* Each rectangle represents one bin containing a stack of twenty trays.

Figure 4 - Sample Location Map - Drying Oven

LAB WASTE DRAINAGE AREA

- pyridine contaminated soil



⊗ - Sample locations for composite

↑
NORTH

Soil sample from north side of the Lab Waste Drainage Area

° Surface - #087003

° Subsurface - #087004

Soil sample from south side of the Lab Waste Drainage Area

° Surface - #087005

° Subsurface - #087006

(Not to Scale)

Figure 5 - Sample Location Map - Lab Waste Drainage Area

ATTACHMENT I

Receipt For Samples

Berlex Laboratories
St. Croix. VI

September 9, 1985

RECEIPT FOR SAMPLES CHAIN OF CUSTODY RECORD

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

Name of Unit and Address: Berlex Laboratories (V.I. Chemical) VID 80651095		9/9/85			
Sample Number	Number of Containers	Description of Samples			
087001	1 2	Qt. - NVOA 40 ml vials	} Aerated Soil - Composite } Aerated Soil - Composite } Surface Soil - Composite } Subsurface Soil - Composite } Surface Soil - Composite } Subsurface Soil - Composite		
087002	1 2	Qt. - NVOA 40 ml vials			
087003	1 2	Qt. - NVOA 40 ml vials			
087004	1 2	Qt. - NVOA 40 ml vials			
087005	1 2	Qt. - NVOA 40 ml vials			
087006	1 2	Qt. - NVOA 40 ml vials			
Person Assuming Responsibility for Sample:			9/9/85 <i>John C. [Signature]</i> USFA <i>[Signature]</i> 9/9/85-2:02		
Person Assuming Responsibility for Sample:			Time Date		
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

ATTACHMENT II

Chain of Custody Form

Berlex Laboratories
St. Croix. VI

September 9, 1985

100043

CHAIN OF CUSTODY RECORD

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

Name of Unit and Address: Berlex Laboratories Inc. St. Croix, Virgin Islands USA VID 80651095					
Sample Number	Number of Containers	Description of Samples			
087001	1	Qt. Jar NVOA w/ice			
	2	40 ml Vials w/ice			
087002	1	Qt. Jar NVOA w/ice			
	2	40 ml Vials w/ice			
087003	1	Qt. Jar NVOA w/ice			
	2	40 ml Vials w/ice			
087004	1	Qt. Jar NVOA w/ice			
	2	40 ml Vials w/ice			
087005	1	Qt. Jar NVOA w/ice			
	2	40 ml Vials w/ice			
087006	1	Qt. Jar NVOA w/ice			
	2	40 ml Vials w/ice			

Person Assuming Responsibility for Sample: Louie D. Delli				Time 1:00 PM	Date 9/1/85
--	--	--	--	-----------------	----------------

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
087001 to 087006	Louie D. Delli 9/1/85	Kevin Petrus	10:00 PM	9/1/85	Shipment of Samples to Lab
087001 to 087006	Kevin Petrus	R. Miller	7:45 AM	9/1/85	Log in at OSCAR
Sample Number 087001 to 087006	R. Miller	R. Mason	1:30 PM	9/1/85	For analysis
Sample Number 7001 to 087006	R. Mason	Chet Goldberg	2:00 PM	9/1/85	For PQA and NVOA analysis

ATTACHMENT III

Sample Data Sheets

Berlex Laboratories
St. Croix. VI

September 9, 1985

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

UEF

Project Name Berlex Lubstric. St Croix, VI

Collector(s) D. Guardia Affiliation US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE _____

DATA BASE CODE _____

STA. TYPE CODE _____

Samples to:

Bact ☐ Bio ☒ Chem ☒ Other ☐

Station No.

VE 080651095

Sample Depth (Ft.)/Fac. Loc. Code

3200

Lab Number

087001

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other Soil

BOD - Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container Glass Jar - 1
Plastic Jar
Metal
POA Vial - 2
Cubittainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____
Preservation
Acid _____
Solvent _____
Chemical _____
Wet Ice
Dry Ice
Ambient
Other _____

Cleaning Procedure
Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:
Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill Industrial
Leachate Effluent
Drum Process Stream
Test Well Holding Pond
Depth: Drum
Other: Waste Pile
Municipal Treatment
Storage Tank Influent
Top Effluent-CI
Middle Effluent-Non CI
Bottom Sludge
Truck Ambient
Drum Lake
Tank Stream
Other Pond
Ocean
Wells Estuary
Monitoring
Production
Drinking
Private

Type of Sample

Grab Composite
Time Space ☒

Collection (Ending) Date

Yr Mo Day
8 5 09 09

Ending Time (24 Hr)

1100

Beginning Date

Yr Mo Day
8 5 09 09

Beginning Time (24 Hr)

1043

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Sample Location Description:

aerated soil composite from storage room (left side)

Remarks:

1-qt. NVQA jar } iced
2-40 ml POA vials }
contaminated soil from
toluene spill.

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

UEF

Project Name Bureau Laboratories (Island Environmental Center)
Collector(s) D. Guardia Affiliation EPA-ESD

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowl Cream Dipper
Automatic
Other _____

LDMS CODE _____

DATA BASE CODE _____

STA. TYPE CODE _____

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (Soil)

BOD - Seed Supplied ☐ Yes ☐ No Source: _____

Sample Preparation (Circle)

Container
Glass Jar
Plastic Jar
Metal
POA Vial
Cubitainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____

Cleaning Procedure

Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:
Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill
Leachate
Drum
Test Well
Depth:
Other:
Storage Tank
Top
Middle
Bottom
Truck
Drum
Tank
Other:
Wells
Monitoring
Production
Drinking
Private
Industrial
Effluent
Process Stream
Holding Pond
Drum
Waste Pile
Municipal Treatment
Influent
Effluent-CI
Effluent-Non CI
Sludge
Ambient
Lake
Stream
Pond
Ocean
Estuary

Preservation

Acid
Solvent
Chemical
Wet Ice
Dry Ice
Ambient
Other _____

Sample Location Description:

Aerated soil composite from right side
of storage room plus contained on floor

Remarks:

NVOA - 1 quart glass jar
FOA's - 2 glass vials
Contaminated soil from toluene spill

Samples to:

Bact ☐ Bio ☐ Chem ☒ Other ☐

Station No.

VID 804E1E75

Sample Depth (Ft.)/Fac. Loc. Code

3201

Lab Number

087002

Type of Sample

Grab Composite
Time Space ☒

Collection (Ending) Date

Yr Mo Day
850909

Ending Time (24 Hr)

1113

Beginning Date

Yr Mo Day
850909

Beginning Time (24 Hr)

1100

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity (‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

UEF

Project Name Berlex Lab, Inc. St. Croix, VI
Collector(s) D. Guenther Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE _____

DATA BASE CODE _____

STA. TYPE CODE _____

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (Soil)

BOD — Seed Supplied ☐ Yes ☐ No Source: _____

Sample Preparation (Circle)

Container
Glass Jar - 1
Plastic Jar
Metal
POA Vial - 2
Cubitainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____
Preservation
Acid _____
Solvent _____
Chemical _____
Wet Ice
Dry Ice
Ambient
Other _____

Cleaning Procedure

Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:
Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill
Leachate
Drum
Test Well
Depth: _____
Other: _____
Storage Tank
Top
Middle
Bottom
Truck
Drum
Tank
Other: _____
Wells
Monitoring
Production
Drinking
Private

Industrial
Effluent
Process Stream
Holding Pond
Drum
Waste Pile
Municipal Treatment
Influent
Effluent-CI
Effluent-Non CI
Sludge
Ambient
Lake
Stream
Pond
Ocean
Estuary

Sample Location Description:

Surface soil composite from north
side of laboratory waste drainage
area

Remarks:

1-qt NVOA jar } iced
2-40 ml POA vials }
clayey soil, somewhat wet

Samples to:

Bact Bio Chem ☒ Other

Station No.

V2080651095

Sample Depth (Ft.)/Fac. Loc. Code

3202

Lab Number

087003

Type of Sample

Grab Composite
Time Space ☒

Collection (Ending) Date

Yr Mo Day
850909

Ending Time (24 Hr)

1200

Beginning Date

Yr Mo Day
850909

Beginning Time (24 Hr)

1140

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (µMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey
ENVIRONMENTAL SERVICES DIVISION

UEF

Project Name Borlex Laboratories Inc. (Holand Chem. Co.)
Collector(s) L. Guardia Affiliation EPA-ESD

Samples to:

Bact	Bio	Chem ☒	Other
------	-----	--	-------

Station No.

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

Sample Depth (Ft.)/Fac. Loc. Code

3	0	3
---	---	---

Lab Number

087004

Type of Sample

Grab	Composite
	Time Space ☒

Collection (Ending) Date

Yr	Mo	Day
8	5	09

Ending Time (24 Hr)

1	1	5	5
---	---	---	---

Beginning Date

Yr	Mo	Day
8	5	09

Beginning Time (24 Hr)

1	1	4	0
---	---	---	---

pH

--	--	--	--

Sample Temp. (°C)

--	--	--	--

DO (mg/l)

--	--	--	--

Cond. (µMHOS/CM)

--	--	--	--	--	--

Salinity(‰)

--	--	--	--

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowe Cream Dipper
Automatic
Other

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (Soil)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Sample Source Type (Circle)

Container	Cleaning Procedure
<u>Glass Jar</u>	<u>Detergent Wash</u>
Plastic Jar	<u>Water Rinse</u>
<u>Metal</u>	Acid Rinse
<u>POA Vial</u>	Solvent Rinse:
Cubitainer	Acetone
Acetate Core	Hexane
Paper Cap	<u>Methylene Chloride</u>
<u>Teflon Cap</u>	Other (Specify):
Foil Cap	
Other	
Preservation	
Acid	
Solvent	
Chemical	
<u>Wet Ice</u>	
Dry Ice	
Ambient	
Other	

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	Drum
Other:	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-CI
Middle	Effluent-Non CI
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description:

Subsurface soil sample from lab drainage area

Remarks:

NUOA - 1 qt glass jar
PCA - 2 glass vials
Clayey soil

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey
ENVIRONMENTAL SERVICES DIVISION

UEF

Project Name Borlex Labs Inc. Site No. VI
Collector(s) D. Guard, Jr. Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE _____

DATA BASE CODE _____

STA. TYPE CODE _____

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (Soil)

BOD - Seed Supplied ☐ Yes ☐ No Source: _____

Sample Preparation (Circle)

Container
Glass Jar - 1
Plastic Jar
Metal
POA Vial - 2
Cubitainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____
Preservation
Acid _____
Solvent _____
Chemical _____
Wet Ice
Dry Ice
Ambient
Other _____

Cleaning Procedure

Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:
Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill Industrial
Leachate Effluent
Drum Process Stream
Test Well Holding Pond
Depth: Drum
Other: Waste Pile
Municipal Treatment
Storage Tank Influent
Top Effluent-CI
Middle Effluent-Non CI
Bottom Sludge
Truck Ambient
Drum Lake
Tank Stream
Other Pond
Wells Ocean
Monitoring Estuary
Production
Drinking
Private

Samples to:

Bact Bio Chem ☒ Other

Station No.

VI 0206 S1095

Sample Depth (Ft.)/Fac. Loc. Code

3204

Lab Number

087005

Type of Sample

Grab Composite ☒
Time Space

Collection (Ending) Date

Yr Mo Day
85 09 09

Ending Time (24 Hr)

1155

Beginning Date

Yr Mo Day
85 09 09

Beginning Time (24 Hr)

1140

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Sample Location Description:

Surface soil composite from ^{DA} south side of laboratory waste drainage area.

Remarks:

1-qt. NVCA } used
2-40ml POA vials }
clayey soil

FIELD DATA SHEET

UEF

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Parker Laboratories Inc. (Island Chemical Co.)

Collector(s) D. Gaudin Affiliation E.P.A. - E.D.

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE _____

DATA BASE CODE _____

STA. TYPE CODE _____

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other Soil

BOD - Seed Supplied ☐ Yes ☐ No Source: _____

Sample Preparation (Circle)

Container	Cleaning Procedure
<u>Glass Jar</u>	<u>Detergent Wash</u>
<u>Plastic Jar</u>	<u>Water Rinse</u>
Metal	Acid Rinse
<u>POA Vial</u>	Solvent Rinse:
Cubitainer	Acetone
Acetate Core	Hexane
Paper Cap	<u>Methylene Chloride</u>
<u>Teflon Cap</u>	Other (Specify): _____
Foil Cap	
Other _____	
Preservation	
Acid _____	
Solvent _____	
Chemical _____	
<u>Wet Ice</u>	
Dry Ice	
Ambient	
Other _____	

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth: _____	Drum
Other: _____	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-CI
Middle	Effluent-Non CI
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other _____	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description:

Soil sample from lab drainage area

Remarks:

Work - 1 glass jar
POA - 2 glass vials

Change book

Samples to:

Bact ☒ Bio ☐ Chem ☒ Other ☐

Station No.

V1D806S1295

Sample Depth (Ft.)/Fac. Loc. Code

3205

Lab Number

087006

Type of Sample

Grab ☐ Composite ☒
Time ☐ Space ☒

Collection (Ending) Date

Yr 85 Mo 09 Day 09

Ending Time (24 Hr)

1230

Beginning Date

Yr 85 Mo 09 Day 09

Beginning Time (24 Hr)

1205

pH

7.0

Sample Temp. (°C)

20.0

DO (mg/l)

7.0

Cond. (uMHOS/CM)

150

Salinity(‰)

0.0

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

ATTACHMENT IV

Waste Manifests

Berlex Laboratories
St. Croix. VI

September 9, 1985

PART A:

DOCUMENT NO

P R IC 08

GENERATOR NAME Island Chemical Co., Inc.	PHONE (0119) 778-2200	EPA ID NO V11D9B0651095
SITE ADDRESS Estate 130, Estate Bethlehem, St. Croix, U.S. Virgin Islands		
TRANSPORTER NO 1 Trailer Marine Transport Corporation	PHONE (809) 721-1313	P1R1D9B0644579
SITE ADDRESS Isla Grande, Puerto Rico		
TRANSPORTER NO 2 Transporte Diaz	PHONE (809) 792-7999	P1R1D9B065216834
SITE ADDRESS Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico		
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY Inland Chemical of P.R., Inc.	PHONE (809) 854-1090	P1R1D090399718
SITE ADDRESS 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 1 THE FIRST MANIFEST DOCUMENTATION IS P R IC 08

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	HAZARDOUS CLASS	NET QUANTITY	UNIT	CONTAINER NO.	DATE RECEIVED	DATE RECEIVED	DATE RECEIVED	DATE RECEIVED
1 Xylene RQ	Flam. Liquid	1307	1	13161216	gal	131	1/1	1/1	1/1	1/1
2										
3										
4										
5										
6										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION OR IDENTIFICATION OF HAZARDOUS WASTE SHOULD BE PRINTED OR TYPED IN A MINIMUM OF TWO LINES WHICH DO NOT HAVE TO BE MANIFESTED

GENERATOR'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, U.S. EPA and the Commonwealth of P.R. The waste described above were consigned to the transporter named The Receiver, Storage or Disposal Facility and will accept the shipment of hazardous waste, and has a duty to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE Jerome H. Ludwig	TITLE President	DATE SIGNED 1/1/83	EXPECTED ARRIVAL DATE 1/2/83
TRANSPORTER NO 1 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conform with the description on this manifest"		TRANSPORTER NO 1 VEHICLE NO SECS	DATE RECEIVED 1/2/83

TRAN AT THIS TIME

PART B

EPA ID NO

V11D9B0651095

TRANSPORTER NO 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"	DATE RECEIVED 1/1/83
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conform with the description on this manifest"	TRANSPORTER NO 2 VEHICLE NO SECS
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conform with the description on this manifest"	DATE RECEIVED 1/1/83
TREATMENT, STORAGE OR DISPOSAL FACILITY IDENTIFICATION OF HAZARDOUS WASTE BETWEEN MANIFEST AND SHIPMENT (LISTING OF HAZARDOUS MATERIALS)	HANDLING METHOD
	1 2 3 4 5 6
TREATMENT, STORAGE OR DISPOSAL FACILITY IDENTIFICATION OF HAZARDOUS WASTE BETWEEN MANIFEST AND SHIPMENT (LISTING OF HAZARDOUS MATERIALS)	DATE RECEIVED 1/1/83

46/80

100053

INSTRUCTIONS
PLEASE TYPE

COMMONWEALTH OF PUERTO RICO
ENVIRONMENTAL QUALITY BOARD
HAZARDOUS WASTE MANIFEST

PART 1

DOCUMENT NO

P R IC 07

GENERATOR NAME Island Chemical Co., Inc.	PHONE (809) 778-2200	EPA ID NO V11D9B065109
SITE ADDRESS Estate 130, Estate Bethlehem, St. Croix, U.S. Virgin Islands		
TRANSPORTER NO. 1 Trailer Marine Transport Corporation	PHONE (809) 721-1313	
SITE ADDRESS Isle Grande, Puerto Rico		P1R1D9B064457
TRANSPORTER NO. 2 Transporte Diaz	PHONE (809) 792-7999	
SITE ADDRESS Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico		P1R1D9B0521683
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY Inland Chemical of P.R., Inc.	PHONE (809) 854-1090	
SITE ADDRESS Km. 51, Highway # 2, Manati, Puerto Rico		P1R1D9B039971

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. I, C, 0, 7, 1

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		108 EPA HAZ CODE	ECR/WT WASTE
						NO	TYPE		
1 Xylene RQ	Flam. Liquid	1307	L	3320	gal	1	TK	I	FQ
2									
3									
4									
5									
6									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (for IDENTIFICATION OF AIRCRAFT WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'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, U.S. EPA and the Commonwealth of P.R. The waste described above were consigned to the Transporter named The Treatment, Storage or Disposal Facility and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE Jerome H. Ludwig	TITLE President	DATE SHIPPED 11/13/83	EXPECTED ARRIVAL DATE 12/1/83
TRANSPORTER NO. 1 SIGNATURE "To the best of my knowledge the contents of the shipment, I have accepted for transport conform with the description on this manifest"		TRANSPORTER NO. 1 VEHICLE ID NO. SECS 1912181211910	DATE RECEIVED 11/13/83

TEAM AT THIS LOCATION

PART 2

GEN EPA UN

V11D9B065109

TRANSPORTER NO. 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment."	DATE DELIVERED 11/13/83
TRANSPORTER NO. 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conform with the description on this manifest"	TRANSPORTER NO. 2 VEHICLE ID NO. 11/13/83
TRANSPORTER NO. 2 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment."	DATE RECEIVED 11/13/83
TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF TSD AND DISPOSITION OF REJECTED MATERIALS	DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS
HANDLING METHOD	
TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE "I certify that the contents of the shipment conform with the description on this manifest except those described herein noted on this form"	
DATE RECEIVED 11/13/83	

In case of emergency or spill immediately call the Environmental Quality Board (809) 725-8397

DOCUMENT NO

100054

PART 2:

4 11 11 06

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 F

11.06

Special handling instructions including container exemption (ie identification of animal or contents prohibited, etc) or a quarantining location which do not have to be manifested

of the RATION'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, labeled and are in proper condition for transportation in accordance with the applicable regulations of the Department of Transportation, U.S. EPA and the Commonwealth of MA. The waste described above will be shipped to the treatment, storage or disposal facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I hereby, that the foregoing is true and correct to the best of my knowledge.

YEAR AT THIS PERIOD.

44-31209

PART B

CAN IFA ELM

15,10,9,8,0,6,5,1,0,9,5

TRANSPORTER NO 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"		DATE DELIVERED: 10 20 82	
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conforming with the description on this manifest"		TRANSPORTER NO 2 VEHICLE NO NO	DATE RECEIVED: 10 20 82
TRANSPORTER NO 2 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"		DATE RECEIVED: 10 20 82	
TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF MISSING FOR AND DISPOSITION OF REJECTED MATERIALS		MONTHLY MONTHLY 1 3 12 2 5	
TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE "Upon close inspection, I certify that the contents of this shipment conform with the description on this manifest except those discrepancies noted on this form"		DATE RECEIVED: 10 20 82	
In case of emergency or spill, immediately call the Environmental Quality Board (EQB) 722-0112			

100055

RT A:

DOCUMENT NO

P R IC 05

GENERATOR NAME Island Chemical Co., Inc.		PHONE (809) 778-2200	EPA ID NO V I D 9 8 0 6 5 1 0 9 1
SITE ADDRESS Estate 130, Estate Bethlehem, St. Croix, U.S. Virgin Islands			
TRANSPORTER NO 1 Trailer Marine Transport Corporation		PHONE (809) 721-1313	P R D 9 8 0 6 4 4 5 7 1
SITE ADDRESS Isla Grande, Puerto Rico			
TRANSPORTER NO 2 Transporte Diaz		PHONE (809) 792-7999	P R D 9 8 0 5 2 6 8 3 1
SITE ADDRESS Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico			
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY Inland Chemical of P.R., Inc.		PHONE (809) 854-1090	P R D 0 9 0 3 9 9 7 1 1
SITE ADDRESS 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 1 THE FIRST MANIFEST DOCUMENT NO IS P. R. 1 IC 0 5

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA ID NO	TSD/PA WASTE TYPE
						NO	TYPE		
1 Toluene RD	Flam. Liquid	1294	L	14731	Gal	1	TK	1	F D 0
2									
3									
4									
5									
6									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (ie IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT IN A SIGNATURE AND SIGNATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'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, U.S. EPA and the Commonwealth of P.R. The waste described above were transported to the transporter named The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE <i>Jerome H. Ludwig</i> Jerome H. Ludwig	TITLE President	DATE SHIPPED JUN 10 1983	EXPECTED ARRIVAL DATE JUN 24 1983
TRANSPORTER NO 1 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conforms with the description on this manifest."		TRANSPORTER NO 1 VEHICLE ID NO S C X U 2131105119	DATE RECEIVED JUN 22 1983

M. A. Serrano SEAL AT THIS INDICATION *RHP-31210*

PART B		GEN EPA ID NO	V I D 9 8 0 6 5 1 0 9 1
TRANSPORTER NO 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment."		DATE DELIVERED JUN 23 1983	
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conforms with the description on this manifest."		DATE RECEIVED JUN 24 1983	
TRANSPORTER NO 2 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment."			
TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS		HANDLING METHOD 502	
TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE "Upon visual inspection, I certify that the contents of this shipment conform with the description on this manifest except those discrepancies noted on this form."		DATE RECEIVED JUN 24 1983	
In case of emergency or spill, immediately call the Environmental Emergency Response Unit at 725 8997			

HAZARDOUS WASTE MANIFEST

A: **Island Chemical Co., Inc.** (809) 770-2200
 EPA ID NO: **V11D9B065107**

SHIP ADDRESS: **Estero 130 Estate Bethlehem, St. Croix, U.S. Virgin Islands**

TRANSPORTER NAME: **Trailer Marine Transport Corporation** (809) 721 1313
 EPA ID NO: **P1R1D9B064457**

SHIP ADDRESS: **Isla Grande, Puerto Rico**

TRANSPORTER NAME: **Transporte Diaz** (809) 792-7999
 EPA ID NO: **P1R1D9B052683**

SHIP ADDRESS: **Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico**

PRODUCER/STORAGE NAME: **Inland Chemical of P.R., Inc.** (809) 854-1090
 EPA ID NO: **P1R1D1D9D39971**

SHIP ADDRESS: **Km. 51, Highway #2, Manati, Puerto Rico**

THIS MANIFEST MUST BE COMPLETED AND SIGNED BY THE PRODUCER/STORAGE AND THE TRANSPORTER. THE FIRST MANIFEST DOCUMENT NO. IS **1** C D 4.

PRODUCER/STORAGE NAME	MS DOT HAZARD CLASS	UN NUMBER	HAZARD	NET QUANTITY	DATE	CONTAINER		EPC ID NO.	SIGNATURE
						NO.	TYPE		
Isolene PQ	Flam. Liquid	1294	1	15.150	6/1	1	TK	1	1

SIGNATURE: *Jerome H. Ludwig* President
 DATE: **12/14/82** EPC ID NO.: **12/23/8**

SIGNATURE: *SCAU* DATE: **12/14/82** EPC ID NO.: **12/23/8**

12-14-82

PART B

SIGNATURE: *E. Pacci* DATE: **12/22/82**

SIGNATURE: *SCAU* DATE: **12/22/82**

TRANSPORTER NO 1 T. J. J. Marine Transport Corporation	PHONE (809) 721-1313	P, R, D, 9, 0, 0, 6, 4, 4, 5, 7
SITE ADDRESS P.O. Box 10, Puerto Rico		
TRANSPORTER NO 2 L. Diaz	PHONE (809) 792-7999	P, R, D, 9, 0, 0, 5, 2, 0, 0, 3
SITE ADDRESS San Juan, Puerto Nuevo, San Juan, Puerto Rico		
TREATMENT STORAGE OR DISPOSAL (TSD) FACILITY Inland Chemical of P.R., Inc.	PHONE (809) 854-1020	P, R, D, 0, 9, 0, 3, 2, 2, 7, 1
SITE ADDRESS P.O. Box 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 1 THE FIRST MANIFEST DOCUMENT NO. IS P. R. 1, C, 0, 3

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA HAZ CODE	EPA WASTE ID
						NO	TYPE		
1. Toluene	Flam. Liquid	1204	L	147.63	Gal.	1	TK	1	Flam
2									
3									
4									
5									
6									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS MATERIAL WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the Commonwealth of P.R. The waste described above were consigned to the Transporter named The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE Jerome H. Ludwig	TITLE President	DATE SHIPPED MO: 02 DAY: 17 YR: 82	EXPECTED ARRIVAL DATE MO: 02 DAY: 17 YR: 82
TRANSPORTER NO 1 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conform with the description on this manifest"	TRANSPORTER NO 1 VEHICLE ID NO SCXU 03100000	DATE RECEIVED MO: 02 DAY: 17 YR: 82	

YEAR AT THIS PERFORMANCE

PART B

GEN EPA IDN W1000000000

TRANSPORTER NO 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"	DATE DELIVERED MO: 02 DAY: 17 YR: 82
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conform with the description on this manifest"	DATE RECEIVED MO: 02 DAY: 17 YR: 82
TRANSPORTER NO 2 VEHICLE ID NO	
TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE "I certify that the contents of this shipment conform with the description on this manifest except these discrepancies noted on this form"	DATE RECEIVED MO: 02 DAY: 17 YR: 82
TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR SUCH DIFFERENCES	
HANDLING APPROVED 1 502 3 5	

DOCUMENT NO. W-43 P. R.

COMMONWEALTH OF MASSACHUSETTS
ENVIRONMENTAL QUALITY BOARD
HAZARDOUS WASTE MANIFEST

CSN 1C 02

DOCUMENT NO.

P. R.

BUSINESS NAME: <i>Chemical Waste Inc.</i>		PHONE: <i>617-277-2000</i>	EPA NO. <i>1000</i>
ADDRESS: <i>1000 North Street, Boston, MA 02110</i>		CITY: <i>Boston</i>	STATE: <i>MA</i>
BUSINESS NAME: <i>Chemical Waste Inc.</i>		PHONE: <i>617-277-2000</i>	EPA NO. <i>1000</i>
ADDRESS: <i>1000 North Street, Boston, MA 02110</i>		CITY: <i>Boston</i>	STATE: <i>MA</i>
BUSINESS NAME: <i>Chemical Waste Inc.</i>		PHONE: <i>617-277-2000</i>	EPA NO. <i>1000</i>
ADDRESS: <i>1000 North Street, Boston, MA 02110</i>		CITY: <i>Boston</i>	STATE: <i>MA</i>

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

THIS EXTRA IS NO. _____		OF A TOTAL OF _____		THE FIRST MANIFEST DOCUMENT NO. IS _____		P. R. _____			
PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	YORR	NET QUANTITY	UNITS	CONTAINERS		DATE RECEIVED	DATE SHIPPED
						NO	TYPE		

EXEMPTIONS: (If any, including container exemption, or identification of additional wastes included in shipment of a non-hazardous material, must be manifested)

DECLARATION: This is to certify that the above named materials are properly classified, described, marked and labeled and are in proper condition for transport in accordance with applicable regulations of the Department of Transportation, U.S. EPA and the Commonwealth of P.R. The waste described above were consigned to the Transporter named Transporter Signature/Storage/Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

INITIALS: SIGNATURE	TITLE	DATE SHIPPED	EXPIRATION DATE
TRANSPORTER NO. 1 SIGNATURE "To the best of my knowledge the contents of the material I have accepted for transport conform with the description on this manifest"	TRANSPORTER NO. 1 VEHICLE NO. NO.	DATE RECEIVED	DATE SHIPPED

YEAR AT THIS PERFORMANCE

TRANSPORTER NO. 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"	TRANSPORTER NO. 1 VEHICLE NO. NO.	DATE RECEIVED	DATE SHIPPED
TRANSPORTER NO. 2 SIGNATURE "To the best of my knowledge the contents of the material I have accepted for transport conform with the description on this manifest"	TRANSPORTER NO. 2 VEHICLE NO. NO.	DATE RECEIVED	DATE SHIPPED
TRANSPORTER NO. 2 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"		DATE RECEIVED	DATE SHIPPED
STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR NON-DISPOSITION OF REJECTED MATERIALS		DATE RECEIVED	
100059		DATE RECEIVED	
STORAGE OR DISPOSAL FACILITY SIGNATURE "Upon visual inspection, I certify that the contents of this shipment conform with the description on this manifest except for the differences noted on this form"		DATE RECEIVED	
In case of emergency or spill, immediately call the Environmental Quality Board (800) 252-9999		DATE RECEIVED	

DOCUMENT NO.

P. R.

ENVIRONMENTAL QUALITY BOARD HAZARDOUS WASTE MANIFEST

DOCUMENT NO.

P. R. ICD2
EPA ID NO

NAME Chemical Company, Incorporated	PHONE (809) 778-2200	V, I, D, 9, 8, 0, 6, 5, 1, 0, 9, 5
ADDRESS Route 130 Estate Bethlehem, St. Croix U.S. Virgin Islands		
TRANSPORTER NO 1 Trailer Marine Transport Corporation	PHONE (809) 721-1313	P, R, D, 9, 8, 0, 6, 4, 4, 5, 7, 9
SITE ADDRESS Isla Grande, Puerto Rico		
TRANSPORTER NO 2 Transporte Diaz	PHONE (809) 792-7999	P, R, D, 9, 8, 0, 5, 2, 6, 8, 3, 4
SITE ADDRESS Zona Portuaria, Puerto Nuevo, San Juan, Puerto Rico		
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY Inland Chemical of P.R., Inc.	PHONE (809) 854-1090	P, R, D, 10, 9, 10, 3, 9, 9, 7, 1, 8
SITE ADDRESS 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 1 THE FIRST MANIFEST DOCUMENT NO. IS

P. R.

1, C, 0, 2

GENERATOR	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA HAZ CODE	EPA WASTE TYPE
							NO	TYPE		
1	TOLUENE RQ	Flam. Liquid	1294	L	512.05	Gal.	1	TK	1	F 10 10 15
2										
3										
4										
5										
6										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'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, U.S. EPA and the Commonwealth of P.R. The waste described above were consigned to the Transporter named The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE <i>Gerome H. Ludwig</i>	TITLE President	DATE SHIPPED MO: <u>11</u> DAY: <u>21</u> YR: <u>1981</u>	EXPECTED ARRIVAL DATE MO: <u>11</u> DAY: <u>23</u> YR: <u>1981</u>
TRANSPORTER NO. 1 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conforms with the description on this manifest"	TRANSPORTER NO. 1 VEHICLE ID. NO. SCXU	DATE RECEIVED MO: <u>11</u> DAY: <u>23</u> YR: <u>1981</u>	

YEAR AT THIS PERFORATION

PART B

GEN EPA ID NO

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

TRANSPORTER NO. 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"	DATE DELIVERED MO: <u>11</u> DAY: <u>23</u> YR: <u>1981</u>												
TRANSPORTER NO. 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conforms with the description on this manifest"	DATE RECEIVED MO: <u>11</u> DAY: <u>23</u> YR: <u>1981</u>												
TRANSPORTER NO. 2 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment"													
TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4">HANDLING METHOD</th> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>5</td><td>6</td><td>7</td><td>8</td> </tr> </table>	HANDLING METHOD				1	2	3	4	5	6	7	8
HANDLING METHOD													
1	2	3	4										
5	6	7	8										
TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE "Upon visual inspection I certify that the contents of this shipment conform with the description on this manifest except those discrepancies noted on this form"	DATE RECEIVED MO: <u>11</u> DAY: <u>23</u> YR: <u>1981</u>												

In case of emergency or spill immediately call the Environmental Quality Board (809) 725-8992

DOCUMENT NO

P. R.

100060

10/80

ART A:

DOCUMENT NO. 1001 P. R.

GENERATOR NAME Island Chemical Company, Incorporated		PHONE (809) 778-2500	EPA ID NO 73,09,0,6,5,1,0,9,1
SITE ADDRESS Estato 130 Petate Bethlehem, St. Cruz U.S. Virgin Islands			
TRANSPORTER NO 1 Triller Marine Transport Corporation		PHONE (809) 721-1111	73,09,0,6,4,4,3,7,9
SITE ADDRESS Isla Grande, Puerto Rico			
TRANSPORTER NO 2 Transporte Diaz		PHONE (809) 787-7998	73,09,0,6,3,2,6,3,1
SITE ADDRESS Zona Portuaria, Puerto Ricos, San Juan, Puerto Rico			
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY Island Chemical of P.R., Inc.		PHONE (809) 856-8093	73,09,0,6,3,0,9,7,1
SITE ADDRESS Ra. 31, Highway 42, Manati, Puerto Rico			

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

THIS FORM IS NO. _____ OF A TOTAL OF _____ THE FIRST MANIFEST DOCUMENT NO. IS _____ P. R. <u>1,001</u>									
PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS		EPA HAZ CODE	EPA WASTE TYPE
						NO	TYPE		
1 Toluene P2	Flam. Liquid	1204	2	5,3,2,5	Gal.	1	1	1	2
2									
3									
4									
5									
6									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: I hereby certify that the above named materials are properly classified, described, marked and labeled and are in proper condition for transportation according to the requirements of the Department of Transportation, U.S. EPA and the Commonwealth of P.R. The waste described above were consigned to the Transporter named The _____ and I hereby certify that I am and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

TITLE President		DATE SHIPPED 11/15/80		EXPECTED ARRIVAL DATE 11/15/80	
VEHICLE NO. 1 2310303		DATE RECEIVED 11/15/80			

YEAR AT THIS PERFORATION

11-31156

PART B

GEN EPA ID# 73,09,0,6,5,1,0,9,1

TRANSPORTER NO 1 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment."		DATE DELIVERED 11/15/80									
TRANSPORTER NO 2 SIGNATURE "To the best of my knowledge the contents of the shipment I have accepted for transport conforms with the description on this manifest."		DATE RECEIVED 11/15/80									
TRANSPORTER NO 2 SIGNATURE "I certify that I have not tampered with or materially altered the contents of this shipment."											
TREATMENT STORAGE OR DISPOSAL FACILITY INDICATION OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS		HANDLING METHOD									
		<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> </tr> </table>		1	2	3	4	5	6	7	8
1	2	3	4								
5	6	7	8								
TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE "Upon visual inspection I certify that the contents of this shipment conform with the description on this manifest except those discrepancies noted on this form."		DATE RECEIVED 11/15/80									
In case of emergency or spill immediately call the Environmental Quality Board (809) 725-8992											

DOCUMENT NO. 1001 P. R.

PHOTOGRAPHS

Berlex Laboratories

St. Croix. VI

September 9, 1985

100062

PHOTOGRAPHS



Photo #1 - Aboveground raw material storage tanks. Berlex, VI

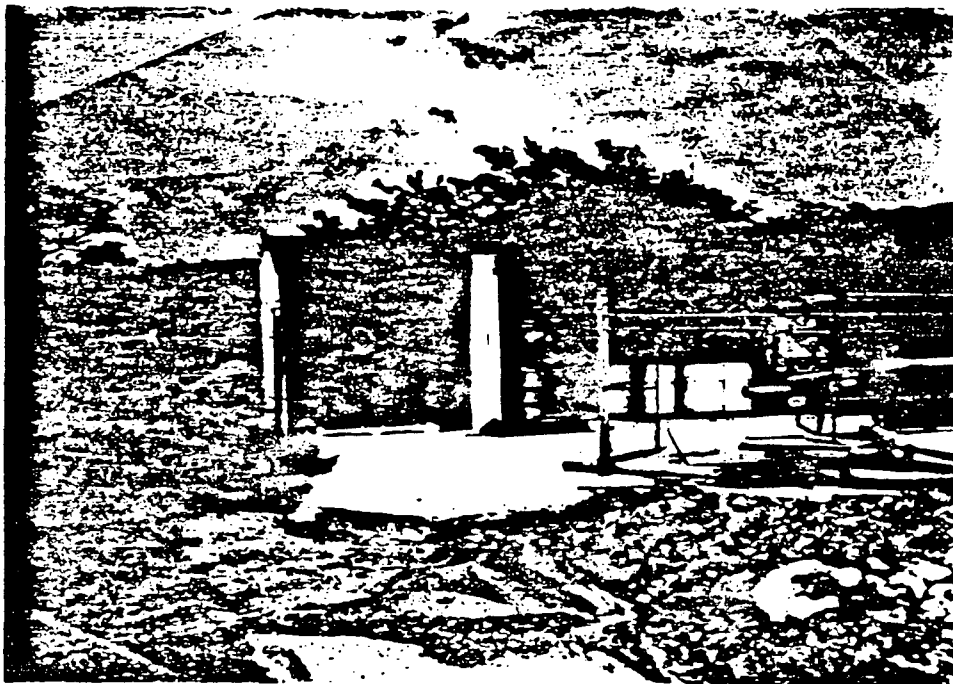


Photo #2 - Outside material storage area. Berlex, VI

PHOTOGRAPHS

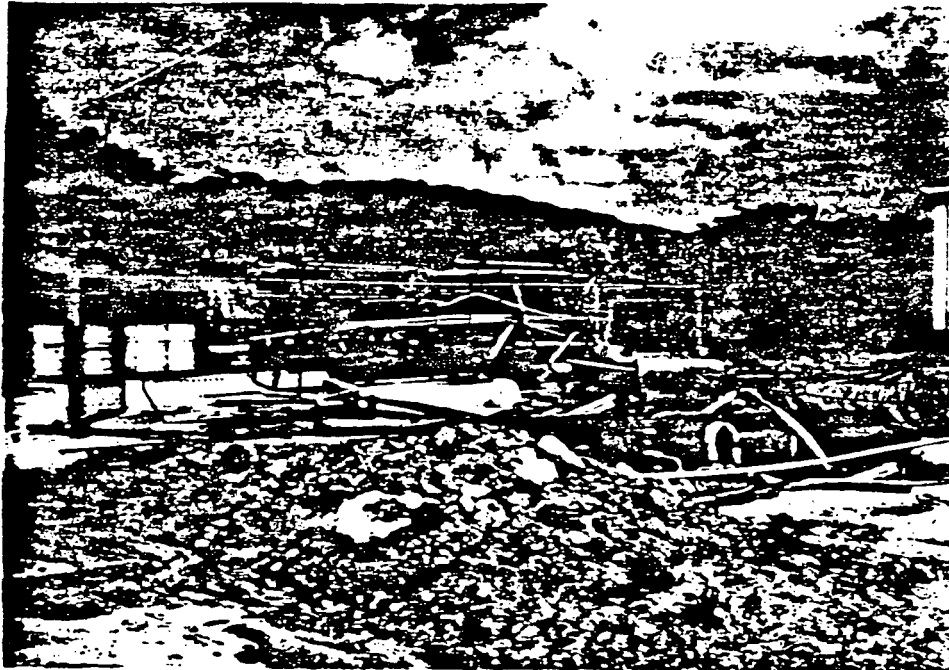


Photo #3 - Outside material storage area. Berlex, VI



Photo #4 - Location of toluene drying oven. Berlex, VI

PHOTOGRAPHS

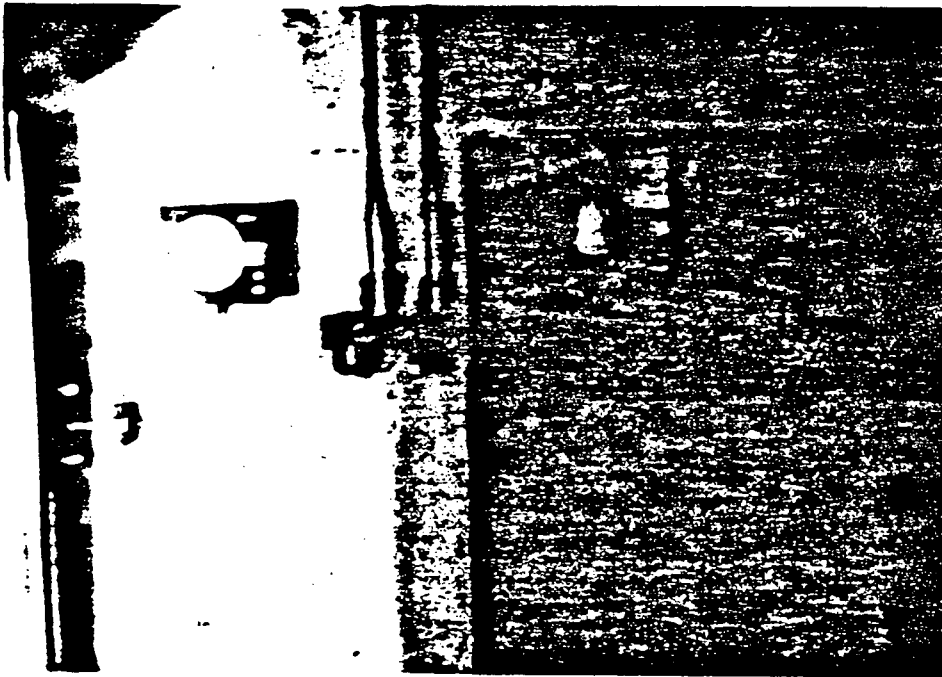


Photo #5 - Entrance to toluene drying oven. Berlex, VI

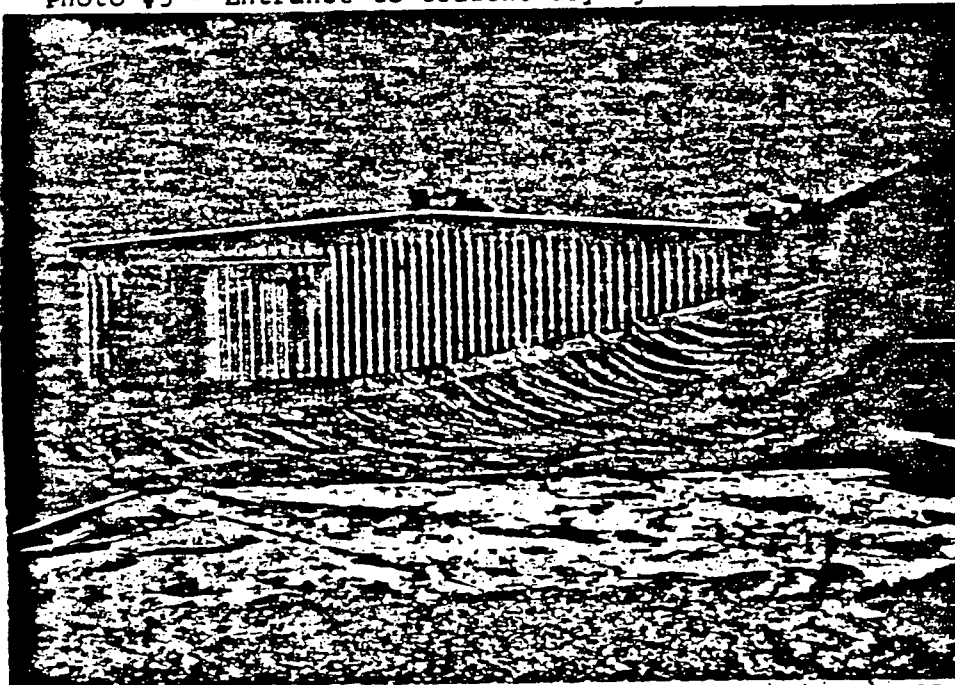


Photo #6 - Pyridine contaminated Area. Synthetic liner used to prevent saturation of soil. Berlex, VI

PHOTOGRAPHS

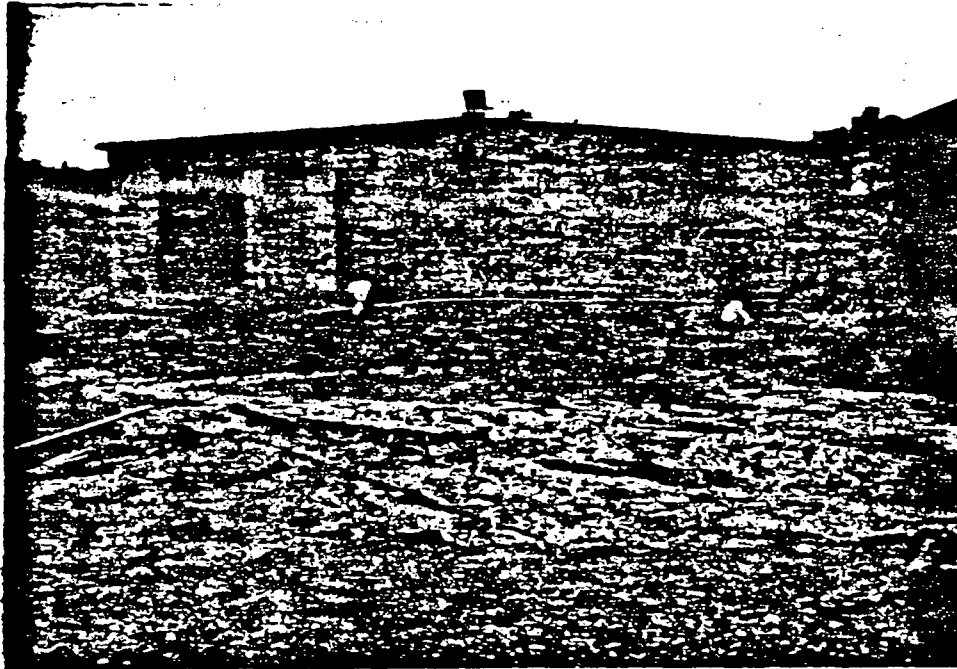


Photo #7 & #8 - Pyridine contaminated area. Lab waste drainage area, surface sampling using trowels. Berlex, VI



PHOTOGRAPHS

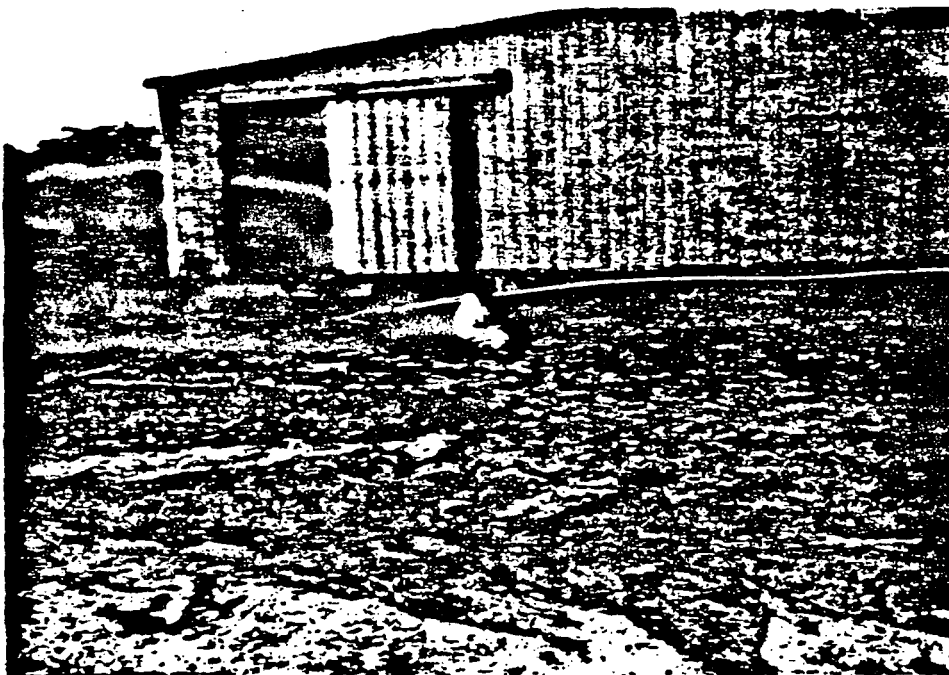


Photo #9 - Pyridine contaminated area. Lab waste drainage area, surface sampling using trowels. Berlex, VI



Photo #10 - Pyridine contaminated area. Lab waste drainage area, subsurface sampling using bucket augers. Berlex, VI

PHOTOGRAPHS



Photo #11 - Pyridine contaminated area. Lab waste drainage area, subsurface sampling using bucket augers. Berlex, VI

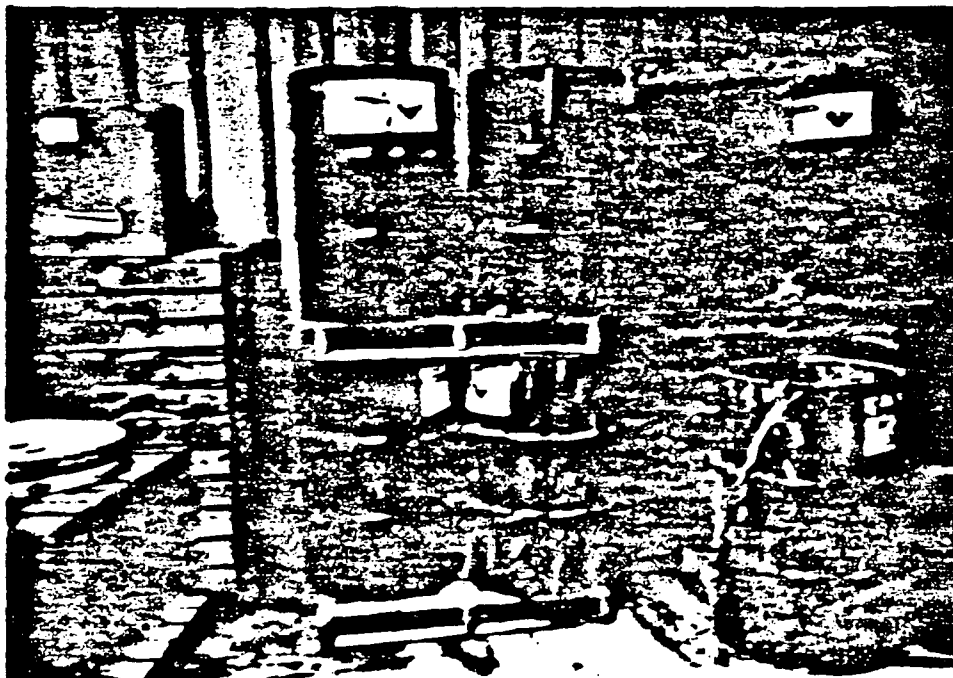


Photo #12 - 55-gallon drums of toluene contaminated soil in warehouse. Berlex, VI

PHOTOGRAPHS

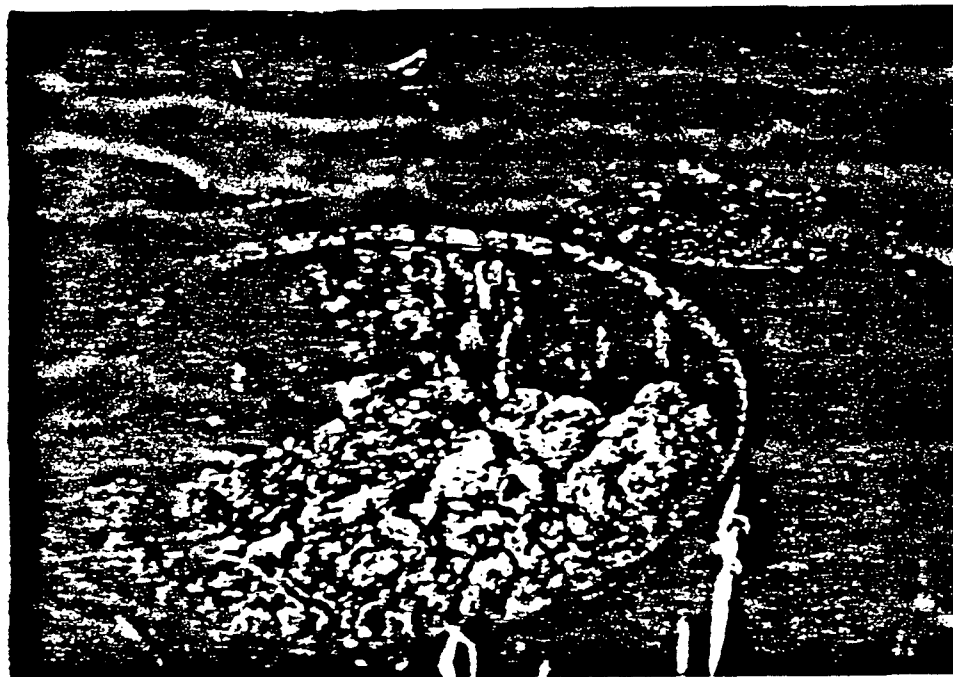


Photo #13 - Close-up view of toluene contaminated soil stored in warehouse. Berlex, VI



Photo #14 - 55-gallon drums of raw materials stored in warehouse. Berlex, VI

Attachment 2:

Hazardous waste manifests

Berlex Laboratories (ICC)
VID980651095

March 13, 1986



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. V1098065109510003		Manifest Document No. 0003		2. Page 1 of 2		Information in the shaded areas is not required by Federal law	
Generator's Name and Mailing Address ISLAND CHEMICAL COMPANY 800 FAIRFIELD ROAD 07070 WAYNE, NEW JERSEY 07090				Trailer Number TMTZ 680365		A. State Manifest Document Number CWMA 243032			
4. Generator's Phone (201) 696-6100						B. State Generator's ID			
5. Transporter 1 Company Name ONEALE'S TRUCKING AND TRAILER TRANSPORT, INC.				6. US EPA ID Number PRD980642599		C. State Transporter's ID			
7. Transporter 2 Company Name TRAILER MARINE TRANSPORT, INC.				8. US EPA ID Number PRD980642579		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 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	
						No. Type		Unit	
a. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA9189 CWM Profile Number ALAD 48602						1 ZDA			
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLOROFORM) ORM-E NA9189 CWM Profile Number ALAD 48603						110DA			
c. HAZARDOUS WASTE SOLID NOS (METAL DRUMS) ORM-E NA9189 CWM Profile Number ALAE 68804						14DA			
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 Benzene 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 CUMA									
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 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/Typed Name Glenora Berry				Signature Glenora Berry				Month Day Year 11/02/85	
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/Typed Name HOWARD TOMPHE				Signature Howard Tomphey				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.

3. Generator's Name

ISLAND CHEMICAL COMPANY
300 PARKFIELD ROAD
CHRYSLER, NEW JERSEY 07003
TEL 201-694-8100

Trailer Number
TMTZ 680365

L. State Manifest Document Number

CWMA 273032

M. State Generator's ID

24. Transporter Company Name

RANGER NATIONAL

25. US EPA ID Number

FLD 980803977

N. State Transporter's ID

O. Transporter's Phone

26. Transporter Company Name

RYDER RANGER

27. US EPA ID Number

FLD 007022578

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	R. Waste No.
12	DM			
10	DM			
14	DM			

a. ~~HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)~~

~~ORM-E NA9189~~

CWM Profile Number ALRD 48603

b. ~~HAZARDOUS WASTE LIQUID NOS (Toluene & Benzene)~~

~~ORM-E NA9189~~

CWM Profile Number ALAD 48603

c. ~~HAZARDOUS WASTE SOLID NOS (METAL DRUMS)~~

~~ORM-E NA9189~~

CWM Profile Number ALAE 68804

d.

CWM Profile Number

ALC

e.

CWM Profile Number

12/3

f.

CWM Profile Number

h.

CWM Profile Number

i.

CWM Profile Number

5. Additional Descriptions for Materials Listed Above

28a. Less than 10% Toluene & Benzene

28b. Approximately 80% organic, possibly benzyl acetate

28c. Drums contain pieces of metal drums or lids

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 filed with inert material by CWM.

33. Transporter Acknowledgement of Receipt of Materials

Date

Printed/Typed Name
Norton C. M. Burt

Signature

Norton C. M. Burt

Month Day Year

10 17 85

34. Transporter Acknowledgement of Receipt of Materials

Date

Printed/Typed Name

GESSE DAILEY

Signature

Gesse Dailey

Month Day Year

11 24 85

Discrepancy Indication Space

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on 11x17 (12-pitch) typewriter)

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

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V11D9806510951C001		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 800 FAIRFIELD ROAD WAYNE NEW JERSEY 07470				Trailer Number RTMZ;274676		A. State Manifest Document Number CWMA 243033							
4. Generator's Phone (201) 696-4100						B. State Generator's ID							
5. Transporter 1 Company Name O'NEALE TRUCKING & TRAILER TRANSPORT, INC.		6. US EPA ID Number PRD 980642579				C. State Transporter's ID							
7. Transporter 2 Company Name TRIKER MARINE TRANSPORT, INC.		8. US EPA ID Number PRD 980642579				D. Transporter's Phone							
						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 ALD 000622464		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		14. Unit		15. Waste No.	
						No. Type		Quantity		Wt/Vol			
a. HAZARDOUS WASTE SOLID NOS (TOLUENE & ACETONE) ORM-E NA 9189 CWM Profile Number ALA E68803						15 DM							
b. HAZARDOUS WASTE SOLID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALA D48604						123 DM							
c. HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE) ORM-E NA 9189 CWM Profile Number ALAD48602						38 DM							
d. CWM Profile Number													
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. DBI c. DBI b. DBI d.							
15. Special Handling Instructions and Additional Information NONE / ITEMS 11a & 11b. SOLID. MUST BE INTERFERED BY UNDO-PPG PRIOR TO DEPARTURE FROM ST. CRK. PERMIT TAKEN													
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 ALON L. KYLES				Signature <i>Alon L. Kyles</i>				Month Day Year 10/09/95					
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed/Typed Name O'Neale's Transport Inc Norton C.M. Burt				Signature <i>Norton C.M. Burt</i>				Month Day Year 11/01/78					
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name GENDA HENRY				Signature <i>Genda Henry</i>				Month Day Year 12/02/95					
19. Discrepancy Indication Space 12/3													
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 TEMACÉ				Signature <i>Howard Temacé</i>				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 I C 0 0 1

242

23. Generator's Name

ISLAND CHEMICAL COMPANY
300 FAIRFIELD ROAD 07070
WAYNE, NEW JERSEY 07090
TEL 201-696 2100

Trailer Number
RTM2; 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 007002570

P. State Transporter's ID

Q. Transporter's Phone 318-439-6240

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

29. Containers

30. Total Quantity

31. Unit

32. Waste No.

a. ~~HAZARDOUS WASTE SOLID NOS (FURNACE SLAG)~~

~~ORM-E NA 9189~~

CWM Profile Number

ALAE6023

15 DM

b. ~~HAZARDOUS WASTE SOLID NOS (FURNACE SLAG)~~

~~ORM-E NA 9189~~

CWM Profile Number

ALAD9104

23 DM

c. ~~HAZARDOUS WASTE LIQUID NOS (TOLUENE & BENZENE)~~

~~ORM-E NA 9189~~

CWM Profile Number

ALAE602

34 DM

d.
 CWM Profile Number

ADR 10/3

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

~~2a. See sheet 10% Toluene and Benzene~~
~~2b. See sheet 10% Toluene and Chloroform~~
~~2c. See sheet 10% Toluene and Benzene~~
~~SUBST. ROAD OF BANGS PAPER~~

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

Alow Kipen 10/09/85

33. Transporter Acknowledgement of Receipt of Materials

Date

Printed/Typed Name
G. Neale's Transport Inc
Norton C. M. Burr

Signature

Norton C. M. Burr

Month Day Year
11 01 78 5

34. Transporter Acknowledgement of Receipt of Materials

Date

Printed/Typed Name
DANIEL R LOUET

Signature

Daniel R. Louet

Month Day Year
11 12 85

Discrepancy Indication Space

100074

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. V1D1980651109572002	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 07090		Trailer Number RTM2 251880		A. State Manifest Document Number CWMA 243031		
4. Generator's Phone (201) 696-6100				B. State Generator's ID		
5. Transporter 1 Company Name O'NEALE'S TRUCKING & TRAILER TRANSPORT, INC.		6. US EPA ID Number PRD19806425719		C. State Transporter's ID		
7. Transporter 2 Company Name TRUCKEER MARINE TRANSPORT INC.		8. US EPA ID Number PRD19806425719		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		13. Total Quantity	14. Unit Wt/Vol	L Waste No.
a. HAZARDOUS LIQUID NOS (TOLUENE & BENZENE) ORM-E NA 9189 CWM Profile Number ALAD 48602		44				
b. HAZARDOUS LIQUID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD 48603		35				
c. HAZARDOUS LIQUID SOLID NOS (TOLUENE & CHLOROFORM) ORM-E NA 9189 CWM Profile Number ALAD 48604		1				
d. CWM Profile Number						
J. Additional Descriptions for Materials Listed Above NA. LESS THAN 1.0% TOLUENE AND BENZENE SLIGHT ODOR OF BUNYL ACETATE NB. APPROXIMATELY 20% RESIN, PRIMARY BENZYL ACETATE NC. LESS THAN 1.0% TOLUENE AND BENZENE CARBON		K. Handling Codes for Wastes Listed Above D81 D81 D81				
15. Special Handling Instructions and Additional Information NC. Soil permit in these drums. Must be inspected by USDA-PAP Prior to Departure from Ft. Cavix. 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. Burt		Signature Norton C. M. Burt		Month Day Year 11/01/85		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name Gloria Henry		Signature Gloria Henry		Month Day Year 11/22/85		
19. Discrepancy Indication Space 12/3						
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 11/20/85		

Please print or type

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

Form Approved OMB No 2006 0404 Expires 7 31 86

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 07070 WAYNE, NEW JERSEY 07090 201/692-4100		Trailer Number RTMZ 251880		L. State Manifest Document Number CWMA 243031		
24. Transporter Company Name RENNER NATIONWIDE		25. US EPA ID Number V10980803977		N. State Transporter's ID		
26. Transporter Company Name RYDER RANGER		27. US EPA ID Number V1098077578		O. Transporter's Phone		
				P. State Transporter's ID		
				U. Transporter's Phone 312-4396240		
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) ORATE NO 9189		No. Type				
CWM Profile Number ALAD 98602		44 DM				
b. HAZARDOUS WASTE LIQUID NOS (TOLUENE & CHLORFORM) ORATE NO 9189						
CWM Profile Number ALAD 98603		35 DM				
c. Hazardous Waste Solid NOS (TOLUENE & CHLORFORM) ORATE NO 9189						
CWM Profile Number ALAD 98609		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				
1a. Less than 1% Toluene and Benzene Slight odor of benzyl acetate		a. d. g.				
1b. Approximately 20% organic primarily benzyl acetate		b. e. h.				
1c. Less than 1% Toluene & Chloroform		c. f. i.				
32. Special Handling Instructions and Additional Information						
2c. Soil present in these drums. Must be inspected by HSOA-PPE prior to departure from St. Louis. Permit included.						
33. Transporter Acknowledgement of Receipt of Materials		Date				
Printed/Typed Name Oneale Transport Inc Norton C. M. Huff		Signature Norton C. M. Huff		Month Day Year 10/17/85		
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						

100076

Attachment 3:

Copies of chain of custody and sampling paperwork

Berlex Laboratories (ICC)
VID980651095

March 13, 1986

CHAIN OF CUSTODY RECORD

Receipt for samples

ENVIRONMENTAL PROTECTION AGENCY - REGION II

SURVEILLANCE & ANALYSIS DIVISION

EDISON, NEW JERSEY 08817

VID980651095

Name of Unit and Address: Berlex Laboratories St. Croix, Virgin Islands						
Sample Number	Number of Containers	Description of Samples				
085251 085251 085252 085253 085254 085255 085256	2 1 1 1	2 40 ml. vials for POA analysis 1 quart glass jar for NVOA analysis 1 quart glass jar for PCB analysis 1 quart glass jar for metals scan analysis The above samples were taken at the following locations: Gut #1 (Background) Gut #2 (Lab pit seepage area) Gut #3 (Drainage line entry), Lab waste pit #1 (composite of pit soil to 3 ft.), Lab waste pit (composite of pit soil to 3 ft.) 2 40 ml. vials for POA analysis 2 liter glass jars for NVOA analysis 1 liter glass jar for PCB analysis 1 gallon cubitainer for metals scan analysis The above sample was taken from the on-site well.				
Person Assuming Responsibility for Sample: <i>Representative for Berlex (Island Chemical Co)</i> <i>R. New 1486</i> <i>Alan Z. Kyles</i>						
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody	

ENVIRONMENTAL PROTECTION AGENCY - REGION II
SURVEILLANCE & ANALYSIS DIVISION
EDISON, NEW JERSEY 08817

Name of Unit and Address: VID 7806-7095 Berke Laboratories St. Louis, MO					
Sample Number	Number of Containers	Description of Samples			
68-57	2	40 ml. vials for PCA analysis			
	1	600 ml. glass jar for NACA analysis			
	1	600 ml. glass jar for PCB analysis			
	1	quart glass jar for metals analysis			
68-57		"			
68-57		"			
68-57		"			
68-57		"			
68-57	2	40 ml. vials for PCA analysis			
	2	liter glass bottle for NACA analysis			
	1	liter glass bottle for PCB analysis			
	1	gallon cubitainer for metals analysis			

Person Assuming Responsibility for Sample: Carol Price Time 5:00 Date 3/1				
---	--	--	--	--

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
68-57	Carol Price				Sample to lab
68-57	Carol Price	J. Williams	8:30 AM	3/1/80	Turned out OSCAR
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

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Berlex Laboratories, St. Clair, VI.
Collector(s) P. Rice Affiliation U.S.E.P.A.

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE M
DATA BASE CODE H
STA. TYPE CODE F

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ()

BOD — Seed Supplied ☐ Yes ☐ No Source: _____

Sample Preparation (Circle)

Container
Glass Jar
Plastic Jar
Metal
POA Vial
Cubitainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____

Cleaning Procedure
Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:

Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	Drum
Other: _____	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-CI
Middle	Effluent-Non CI
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other: _____	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Preservation

Acid _____
Solvent _____
Chemical
Wet Ice
Dry Ice
Ambient
Other _____

Sample Location Description:

Background sample from stream (gut)
behind Berlex property

Remarks:

2 - 40 ml. vials for POA analysis
1 - quart glass jar for NVOA analysis
1 - quart glass jar for PCB analysis
1 - quart glass jar for metals analysis
Interpretation is a compound of interest
all samples recd

Samples to:

Bact Bio Chem ☒ Other

Station No.

VID980651095

Sample Depth (Ft.)/Fac. Loc. Code

3100

Lab Number

085251

Type of Sample

Grab ☒ Composite
Time Space

Collection (Ending) Date

8 Yr 0 Mo 3 Day

Ending Time (24 Hr)

1318

Beginning Date

Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (µMHOS/CM)

Salinity(‰)

Sample Split

☒ Yes ☐ No

If Yes With Whom? Facility Contractor

Receipt ☒ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Berlex Laboratories, St. Croix VI
Collector(s) Price Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE m

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

Solvent : Extract Other ()

BOD - Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container

Glass Jar

Plastic Jar

Metal

POA Vial

Cubitainer

Acetate Core

Paper Cap

Teflon Cap

Foil Cap

Other _____

Cleaning Procedure

Detergent Wash

Water Rinse

Acid Rinse

Solvent Rinse:

Acetone

Hexane

Methylene Chloride

Other (Specify):

Sample Source Type (Circle)

Landfill

Leachate

Drum

Test Well

Depth:

Other: _____

Storage Tank

Top

Middle

Bottom

Truck

Drum

Tank

Other: _____

Wells

Monitoring

Production

Drinking

Private

Industrial

Effluent

Process Stream

Holding Pond

Drum

Waste Pile

Municipal Treatment

Influent

Effluent-CI

Effluent-Non CI

Sludge

Ambient

Lake

Stream

Pond

Ocean

Estuary

Samples to:

Bact Bio ☒ Chem Other

Station No.

VID980651095

Sample Depth (Ft.)/Fac. Loc. Code

3101

Lab Number

085252

Type of Sample

Grab Composite

☒ Time ☐ Space

Collection (Ending) Date

Yr 86 Mo 03 Day 13

Ending Time (24 Hr)

1345

Beginning Date

Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☒ Yes ☐ No

If Yes With Whom? Facility

Receipt ☒ Yes ☐ No

Sample Location Description:

Sample from stream (gut) behind plant
(lab waste pit seepage area)

Surface to 10"

Remarks:

2- 40 ml vials for VOA analysis
1- quart glass jar for NVOA analysis
1- quart glass jar for PCB analysis
1- quart glass jar for metals analysis
+ 2- 100 ml vials for a compound of specific interest
All samples used

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey
ENVIRONMENTAL SERVICES DIVISION

Project Name Barker Laboratories, St. Clair VI
Collector(s) P. Lee Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE M

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ()

BOD - Seed Supplied ☐ Yes ☐ No Source: _____

Sample Preparation (Circle)

Container

Glass Jar

Plastic Jar

Metal

POA Vial

Cubitainer

Acetate Core

Paper Cap

Teflon Cap

Foil Cap

Other _____

Preservation

Acid _____

Solvent _____

Chemical _____

Wet Ice

Dry Ice

Ambient

Other _____

Cleaning Procedure

Detergent Wash

Water Rinse

Acid Rinse

Solvent Rinse:

Acetone

Hexane

Methylene Chloride

Other (Specify): _____

Sample Source Type (Circle)

Landfill

Leachate

Drum

Test Well

Depth:

Other: _____

Storage Tank

Top

Middle

Bottom

Truck

Drum

Tank

Other: _____

Wells

Monitoring

Production

Drinking

Private

Industrial

Effluent

Process Stream

Holding Pond

Drum

Waste Pile

Municipal Treatment

Influent

Effluent-CI

Effluent-Non CI

Sludge

Ambient

Lake

Stream

Pond

Ocean

Estuary

Sample Location Description:

Sample from stream (cut) behind plants
drainage line discharge area

Surface to approx. 10 inches

Remarks:

2 - 40 ml. vials for POA analysis
1 - quart glass jar for NNOA analysis
1 - quart glass jar for PCB analysis
1 - quart glass jar for metals analysis
* Note: P. Lee is a specific compound of interest
All samples iced

Samples to:

Bact Bio Chem ☒ Other

Station No.

VID980651095

Sample Depth (Ft.)/Fac. Loc. Code

3102

Lab Number

085253

Type of Sample

Grab ☒ Composite
Time Space

Collection (Ending) Date

Yr Mo Day
860313

Ending Time (24 Hr)

1420

Beginning Date

Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (µMHOS/CM)

Salinity(‰)

Sample Split

☒ Yes ☐ No

If Yes With Whom? Facility contact

Receipt ☒ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Ecology Laboratories, St. Croix VI
Collector(s) Price Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE M
DATA BASE CODE H
STA. TYPE CODE F

Samples to:

Bact ☐ Bio ☐ Chem ☒ Other ☐

Station No.

VI2980651095

Sample Depth (Ft.)/Fac. Loc. Code

3200

Lab Number

085254

Type of Sample

Grab ☒ Composite ☐
Time ☐ Space ☐

Collection (Ending) Date

Yr 86 Mo 03 Day 13

Ending Time (24 Hr)

1525

Beginning Date

Yr ☐ Mo ☐ Day ☐

Beginning Time (24 Hr)

☐ ☐ ☐ ☐

pH

☐ ☐ ☐ ☐

Sample Temp. (°C)

☐ ☐ ☐ ☐

DO (mg/l)

☐ ☐ ☐ ☐

Cond. (µMHOS/CM)

☐ ☐ ☐ ☐ ☐ ☐

Salinity(‰)

☐ ☐ ☐ ☐

Sample Split

☒ Yes ☐ No

If Yes With Whom?

Facility contractor
Receipt ☒ Yes ☐ No

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ()

BOD - Seed Supplied

☐ Yes ☐ No

Source:

Sample Preparation (Circle)

Container

Glass Jar
Plastic Jar
Metal

POA Vial

Cubitainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____

Preservation

Acid _____
Solvent _____
Chemical _____
Wet Ice
Dry Ice
Ambient
Other _____

Cleaning Procedure

Detergent Wash
Water Rinse
Acid Rinse

Solvent Rinse:

Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill

Leachate
Drum
Test Well
Depth: _____
Other: _____

Storage Tank

Top
Middle
Bottom

Truck

Drum
Tank
Other _____

Wells

Monitoring
Production
Drinking
Private

Industrial

Effluent
Process Stream
Holding Pond
Drum
Waste Pile
Municipal Treatment

Influent

Effluent-Cl
Effluent-Non Cl
Sludge
Ambient
Lake
Stream
Pond
Ocean
Estuary

Sample Location Description:

Composite from surface to 3 feet
Lab waste pit area

Remarks:

2- 40 ml. vials for POA analysis
1- quart glass jar for NVOA analysis
1- quart glass jar for PCB analysis
1- quart glass jar for metals scan
1- line is a compound of specific interest
All samples used.

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Berlex Laboratories, St. Croix VI
Collector(s) Price Affiliation U.S.E.P.A.

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE M
DATA BASE CODE H
STA. TYPE CODE F

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ()

BOD - Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container
Glass Jar
Plastic Jar
Metal
POA Vial
Cubittainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____

Cleaning Procedure

Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:
Acetone
Hexane
Methylene Chloride
Other (Specify): _____

Sample Source Type (Circle)

Landfill Industrial
Leachate Effluent
Drum Process Stream
Test Well Holding Pond
Depth: Drum
Other: Waste Pile
Municipal Treatment
Storage Tank Influent
Top Effluent-CI
Middle Effluent-Non CI
Bottom Sludge
Truck Ambient
Drum Lake
Tank Stream
Other: Pond
Ocean
Wells Estuary
Monitoring
Production
Drinking
Private

Preservation

Acid _____
Solvent _____
Chemical _____
Wet Ice
Dry Ice
Ambient
Other _____

Sample Location Description:

Composite from surface to 3 feet
Lab waste pit area

Remarks:

2 - 40 ml. vials for POA analysis
1 - quart glass jar for NVOA analysis
1 - quart glass jar for PCB analysis
1 - quart glass jar for metals analysis
Note: 1 quart jar for composite of specific interest
All samples used.

Samples to:

Bact Bio Chem ☒ Other

Station No.

VID980651095

Sample Depth (Ft.)/Fac. Loc. Code

3201

Lab Number

085255

Type of Sample

Grab ☒ Composite
Time Space

Collection (Ending) Date

Yr Mo Day
860313

Ending Time (24 Hr)

1540

Beginning Date

Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (µMHOS/CM)

Salinity(‰)

Sample Split

☒ Yes ☐ No

If Yes With Whom? Facility contracts

Receipt ☒ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Becker Laboratories, St. Croix VI
Collector(s) Krice Affiliation U.S. E.P.A.

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other Exiler

LDMS CODE M
DATA BASE CODE H
STA. TYPE CODE F

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ()

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container
Glass Jar
Plastic Jar
Metal
POA Via
Cubitainer
Acetate Core
Paper Cap
Teflon Cap
Foil Cap
Other _____
Preservation
Acid HNO₃ x 2
Solvent _____
Chemical _____
Wet Ice
Dry Ice
Ambient
Other _____

Cleaning Procedure
Detergent Wash
Water Rinse
Acid Rinse
Solvent Rinse:
Acetone
Hexane
Methylene Chloride
Other (Specify):

Sample Source Type (Circle)

Landfill Industrial
Leachate Effluent
Drum Process Stream
Test Well Holding Pond
Depth: Drum
Other: Waste Pile
Municipal Treatment
Storage Tank Influent
Top Effluent-CI
Middle Effluent-Non CI
Bottom Sludge
Truck Ambient
Drum Lake
Tank Stream
Other Pond
Wells Ocean
Monitoring Estuary
Production
Drinking
Private

Samples to:

Bact Bio Chem ☒ Other

Station No.

VI D980651095

Sample Depth (Ft.)/Fac. Loc. Code

300.0

Lab Number

085256

Type of Sample

Grab Composite
☒ Time Space

Collection (Ending) Date

Yr Mo Day
8 6 03 13

Ending Time (24 Hr)

1605

Beginning Date

Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (µMHOS/CM)

Salinity(‰)

Sample Split

☒ Yes ☐ No

If Yes With Whom? Technical contractor

Receipt ☒ Yes ☐ No

Sample Location Description:

On site well

Remarks:

2 - 40 ml. vials for POA analysis
2 - 1 liter bottles for NVON analysis
1 - 1 liter bottle for PCB analysis
1 - gallon cubitainer for metals scan
preserved w/ HNO₃ to pH < 2
All samples iced.