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8002-10-1
Rev. No. 1

FINAL DRAFT
SITE INSPECTION REPORT
JAMECO INDUSTRIES, INC.
WYANDANCH, SUFFOLK COUNTY, NEW YORK

PREPARED UNDER

WORK ASSIGNMENT NO. 019-2JZZ
CONTRACT NO. 68-W9-0051

DECEMBER 31, 1991

VOLUME 1 OF 2

SUBMITTED BY:

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1011

SITE SUMMARY AND RECOMMENDATIONS

The Jameco Industries, Inc. (Jameco) Site is located on Wyandanch Avenue, in a commercial/manufacturing/residential section of Wyandanch, Town of Babylon, Suffolk County, New York. The privately-owned, 7.8 acre facility, is comprised of a large manufacturing building, offices, and a shipping warehouse. Figures 1 and 2 provide a Site Location map and Site map, respectively.

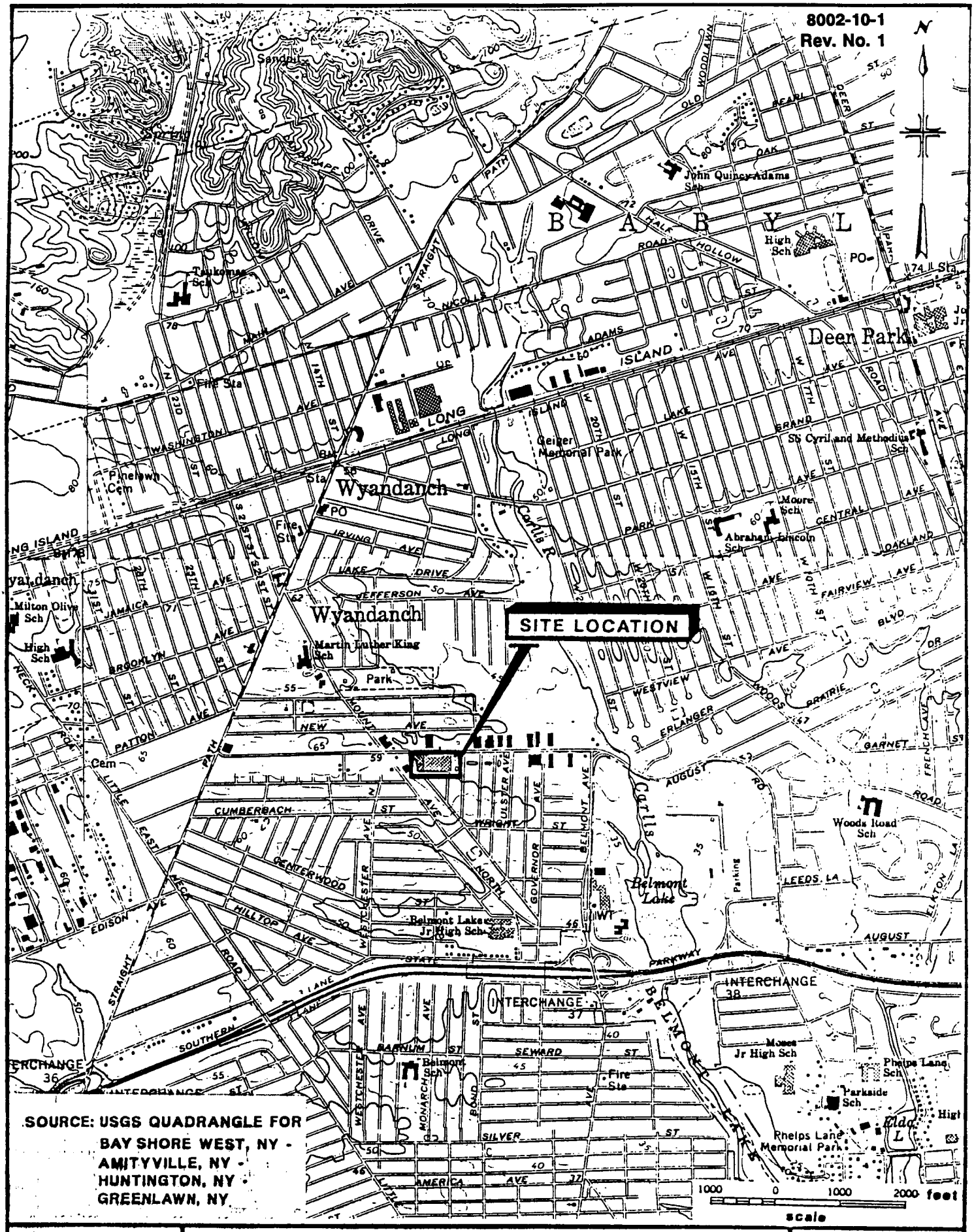
An active facility since 1964, Jameco operations include metal finishing and nickel & chrome electroplating of brass and copper plumbing fixtures. Heavy metals and solvents (trichloroethylene and tetrachloroethylene used during cleaning processes) were regularly discharged as part of a wastestream generated from Jameco's operations. Until 1975, three unlined sludge lagoons were utilized as the primary method of collecting untreated wastewater and sludge. In 1975, the lagoon system was abandoned, deposited sludge was excavated and hauled off-site, and a new on-site waste disposal system was implemented. Effluent is presently treated by a chemical precipitation system prior to discharge into the ground, via 48 leaching pools. The leach field was constructed as part of the updated disposal system and is permitted under the State Pollutant Discharge Elimination System (SPDES).

On March 29, 1988, the Suffolk County Department of Health Services (SCDHS) responded to a chemical discharge emanating from the Jameco facility. Inadequate maintenance of the leach field resulted in an effluent overflow, observed exiting the facility underneath a fence, onto an adjacent property of a private residence (50 Oswego Place, Ref. 9 & 20). Blue-green colored effluent was collected for chemical analysis, and analytical results indicated the presence of several inorganic constituents at levels exceeding SPDES permit limitations. Additionally, surficial soil samples collected from the backyard of the private residence were analyzed by the SCDHS, as a result of the unpermitted discharge. The analytical results delineate an area of contaminated soil on the adjacent residential property, for which no removal or remediation has occurred.

In October of 1990, the New York State Department of Environmental Conservation (NYSDEC), in cooperation with the New York State Attorney Generals Office (NYSAG), initiated a Consent Order

with Jameco, to conduct a site investigation of the facility. Information/analytical data gathered during the AKRF, Inc. (environmental consultant for Jameco)/NYSDEC site investigation, were utilized in the evaluation of the Jameco Site. Results of the investigation indicated the presence of on-site contaminated soils and a release to the water table aquifer of organic and inorganic substances, at notable levels above background (upgradient) concentrations.

The recommendation for the Jameco Industries, Inc. Site is **LOWER PRIORITY FOR FURTHER ACTION.** There is a high potential for exposure to on and off-site contaminated soils, by nearby residents and Jameco employees. The impact of contamination detected in the water table aquifer is significant, as persons residing downgradient of the site are served with potable water from private wells and a Suffolk County Water Authority municipal supply well (serving approximately 4,500 persons) is located 300 feet upgradient of the site. Additionally, the site is located above a wellhead protection area and 93,774 people utilize groundwater as a source for drinking water within four (4) miles of the Jameco facility. The plausible site impact to downslope surface waters is low, as the facilities generated wastestreams were discharged to the unlined lagoons. Although, there does exist a potential for regional groundwater flow to transport contamination to local surface water bodies (i.e., Carlls River, Belmont Lake). Finally, from 1964 to 1975 when untreated wastestreams were discharged to the unlined lagoon system, organic compounds potentially may have volatilized to the air during disposal. Since the activation of the on-site treatment system in 1975 though, there is a relatively low potential of contaminant migration to air.



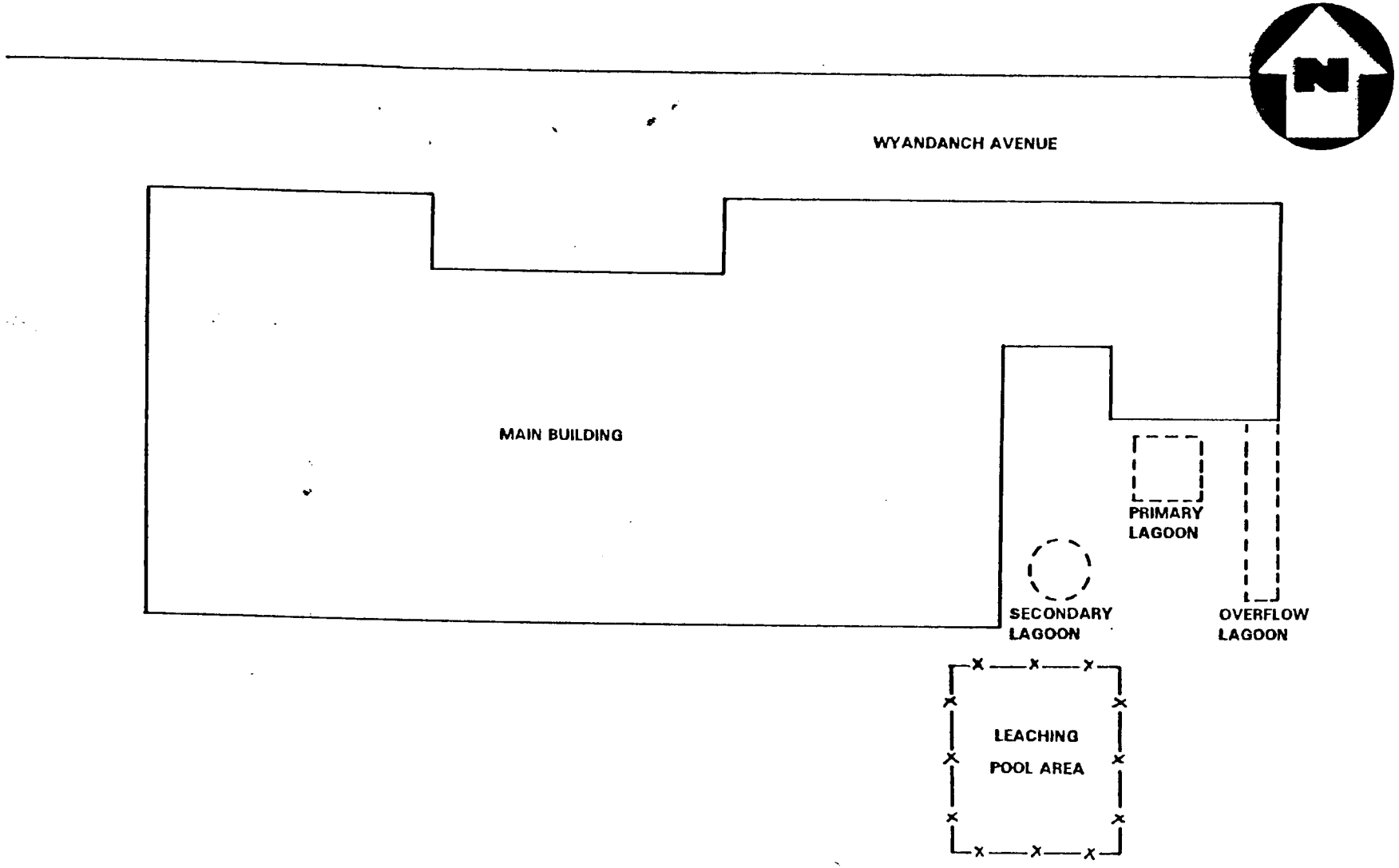
SOURCE: USGS QUADRANGLE FOR
BAY SHORE WEST, NY -
AMITYVILLE, NY -
HUNTINGTON, NY -
GREENLAWN, NY

JAMECO INDUSTRIES, INC.
WYANDANCH, NEW YORK

SITE LOCATION MAP

FIGURE 1

150331



SITE MAP
JAMECO INDUSTRIES, INC.
WYANDANCH, N.Y.

FIGURE 2

8002-10-1
Rev. No. 1

SITE ASSESSMENT REPORT: SITE INSPECTION

PART I: SITE INFORMATION

1. Site Name/Alias Jameco Industries, Inc.

   Street 248 Wyandanch Avenue

   City Wyandanch State NY Zip 11798

2. County Suffolk County Code 103 Cong.Dist. 2

3. EPA ID No. NYD 002415404

4. Block No. 2 Lot No. 37.5

5. Latitude 40° 44' 28" N Longitude 073° 21' 19" W

   USGS Quad. Bay Shore West, NY

6. Owner HM Realty Telephone No. (516) 643-5300

   Street 248 Wyandanch Avenue

   City Wyandanch State NY Zip 11798

7. Operator Jameco Industries, Inc. Telephone No. (516) 643-5300

   Street 248 Wyandanch Avenue

   City Wyandanch State NY Zip 11798

8. Type of Ownership

   X Private ___ Federal ___ State

   ___ County ___ Municipal ___ Unknown ___ Other ___

9. Owner/Operator Notification on File

   X RCRA 3001 ___ Date 8/18/80 ___ CERCLA 103c Date ___

   ___ None ___ Unknown

10. Permit Information

Permit	Permit No.	Date Issued	Expiration Date
SPDES	NY-0081540	08/01/91	08/01/96

Comments

Permit for discharge into groundwater via leaching pool field from process water outfall (002).

11. Site Status

X Active ___ Inactive

12. Years of Operation 1964 to Present

13. Identify the types of waste sources (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Sources

Waste Unit No.	Waste Source Type	Facility Name for Unit
1	Surface Impoundment	Sludge lagoons
2	Contaminated Soil	Contaminated Soil

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

Active leach field, permitted currently under SPDES, comprised of 48 leaching pools. Located in the southern portion of the property, the leach field accepts the current operational effluent discharges.

Ref. Nos. 1, 2, 4, 5, 6, 9, 26, 33, pp. 6, 9

14. Information available from

Contact Amy Brochu Agency U.S. EPA Telephone No. (908)906-6802

Preparer Steven T. McNulty Agency Malcolm Pirnie, Inc. Date 12/31/91

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit ___1___ - ___Three sludge lagoons___

Source Type

_____	Landfill	_____	Contaminated Soil
___X___	Surface Impoundment	_____	Pile (Specify type: chemical, junk, trash, tailing, etc.)
_____	Drums	_____	Land Treatment
_____	Tanks/Containers	_____	Other (Specify _____)

Description:

From 1964 to 1975, three unlined sludge lagoons were used to collect untreated wastewater and sludge, a by-product of Jameco's finishing, cleaning, and electroplating operations. The lagoons were constructed upon the natural soil (a combination of the Riverhead, Haven, and Plymouth series soils) at the facility, which is comprised of sandy loams, sands, and gravel. This type of soil would allow the untreated wastewater discharge to filter through the lagoon, collecting the sludge at the soil interface. The surface area of the lagoons are as follows:

Primary lagoon 36 feet x 36 feet => 1,296 square feet
Secondary lagoon 33 feet in diameter => 855.3 square feet
Overflow lagoon 18 feet x 107 feet => 1,926 square feet
Total => 4,077.3 square feet

During an on-site reconnaissance it was noted that the area of the abandoned sludge lagoons was completely backfilled with native soil, and from information obtained during a Phase I Investigation, the approximate depths of the various lagoons was estimated to be five (5) feet.

The operation of the former lagoon system, was as follows:

1) Initial discharge was routed to the primary lagoon, until sludge filled the lagoon completely.

2) Discharge was then rerouted to the secondary lagoon, until sludge filled the lagoon completely.

3) The sludge in either lagoon would subsequentially be removed by a waste scavenger and disposed of at a landfill.

There is a report which indicates that sludge may have been disposed of permanently on the site, by spreading the sludge on the ground at the Jameco property (Ref. No. 17).

4. The overflow lagoon was a shallow basin used to collect any effluent overflow resulting from a discharge overload into the primary and secondary lagoons.

The primary lagoon, besides accepting the effluent discharge, was used to collect stormwater runoff from the Jameco's facilities roof drainage pipes. The overflow lagoon thus functioned during heavy rainstorm events to prevent overflows from migrating off-site into adjacent residential neighborhoods.

Hazardous Waste Quantity

The hazardous waste quantity is based upon daily flow estimates for the years of operation between 1964 to 1975 (12 years). With an 25,000 gpd (gallons per day) discharge, the total wastestream discharged to the lagoons was 75,000,000 gallons.

Hazardous Substances/Physical State

The following organic compounds were detected in monitoring well samples (liquid state) collected at the site: 1,2 dichloroethene, trichloroethene, tetrachloroethene, methylene chloride, benzene, 4-methyl-2-pentanone, toluene, chlorobenzene, xylene, vinyl chloride. Inorganic constituents detected in monitoring well samples (liquid state) collected at the site included: barium, chromium (total), copper, iron, nickel, thallium and zinc. The following inorganic substances have been detected in soil samples (solid state) collected at the site: aluminum, barium, chromium (total), cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, selenium, thallium, vanadium, and zinc.

Ref. Nos. 4; 5; 17; 24; 26; 33, pp. 6, 9; 35; 36

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 2 - Contaminated Soil

Source Type

_____	Landfill	X	Contaminated Soil
_____	Surface Impoundment	_____	Pile (Specify type: chemical, junk, trash, tailing, etc.)
_____	Drums	_____	Land Treatment
_____	Tanks/Containers	_____	Other (Specify _____)

Description:

On March 29, 1988 the active leach field (consisting of 48 leaching pools) overflowed, resulting in soil contamination on a residential property (50 Oswego Pl.) adjacent to the Jameco facility (Ref. No. 9). Water and soil samples were collected at the time of the illegal discharge by the Suffolk County Department of Health Services (SCDHS), to delineate the extent of contaminant migration for the spill area. The soil contaminated by the discharge was not remediated or removed from the residential property.

Hazardous Waste Quantity

The exact area over which contaminant migration occurred is unknown. From SCDHS references, it can be estimated that approximately 2,000 square feet of soil was contaminated during the overflow.

Hazardous Substances/Physical State

SCDHS personnel collected water samples in the leachpool field during the time of the effluent overflow. The following inorganic contaminants were detected: copper, chromium (total), nickel, iron, and zinc. In addition to the water samples, soil samples were collected at the adjacent residential property and the following inorganic contaminants were detected: copper, chromium (total), and nickel.

Ref. Nos. 9; 20; 21; 22; 26

PART III. SAMPLING RESULTS

EXISTING ANALYTICAL DATA

Investigation of potential groundwater and soil contamination at the Jameco Site was initiated in 1991, as part of a Consent Order Agreement between the NYSDEC/NYSAG and Jameco representatives. Prior to the investigatory sampling, six monitoring wells were drilled upgradient, into, and downgradient of the backfilled lagoon locations. Locations of monitoring wells (Figure 3) were selected to characterize the potential groundwater contamination problem and were screened into the Upper Glacial aquifer, the initial underlying water-bearing formation.

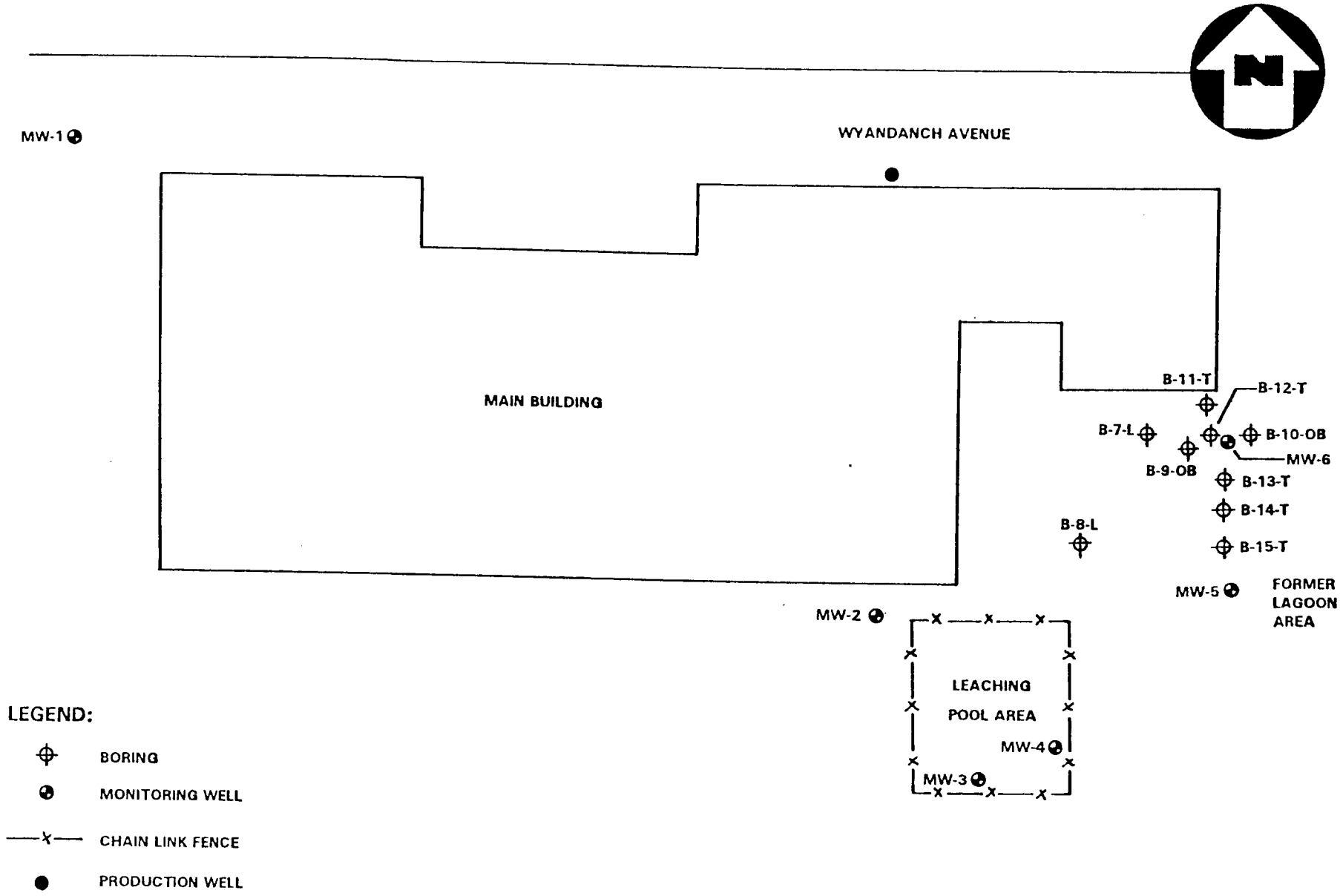
Analytical results of groundwater sampling indicated the presence of organic and inorganic contaminants in downgradient wells (MW 2-6). Selected contaminants were either not detected in the upgradient well (MW 1) or were three times greater than upgradient analyte concentrations. A summary of these results is presented in Table 1. The contaminants identified, indicate an observed release into the aquifer underlying the site.

In addition to groundwater sampling, thirty-seven (37) soil samples were collected at differential depths during the time periods of the monitoring well installation and soil boring completion. Analytical results of the soil samples collected, indicate the presence of inorganic contaminants. Selected contaminants were either not detected in the background soil samples (collected during the installation of MW 1) or were three times greater than upgradient analyte concentrations. A summary of the results is presented in Table 2. The contaminants identified provide attribution for migration of inorganic contaminants from soil into groundwater, at the Jameco site.

Organic contaminants detected in groundwater samples were not detected in the soil samples collected, providing no attribution for the source of the organic groundwater contamination present at the site. During groundwater sampling, representatives of the NYSDEC and AKRF, Inc. were present and split samples of all groundwater samples collected were collected. The NYSDEC analyzed the samples at an EPA-Certified Contract Laboratory Program (CLP) laboratory. The level of Quality Assurance/Quality Control (QA/QC) of the data generation and validation is unknown for samples analyzed for AKRF, Inc.

On the evening of March 29, 1988, SCHDS personnel responded to a report of chemical discharge at the Jameco facility. Environmental samples collected at the time of the unpermitted discharge, identified the presence of inorganic contaminants in water and soil greater than permitted SPDES levels and background soil concentration levels (i.e. soils analyzed at MW 1). The existence of contaminated soil on the property adjacent to Jameco provided additional analytical data in regards to evaluating the site. The level of QA/QC during data generation and validation, is unknown for the samples analyzed by the SCHDS.

Ref. Nos. 21; 22; 27; 35; 36



SAMPLE LOCATION MAP
JAMECO INDUSTRIES, INC.
WYANDANCH, N.Y.

FIGURE 3

8002-10-1
Rev. No. 1

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
FROM MONITORING WELL SAMPLING, JUNE 1991

SITE NAME: JAMECO INDUSTRIES, INC.
PROJECT#: 8002-10-1
EPA CASE NO.: SH191
CLP LABORATORY: NY TEST ENVIRONMENTAL (For NYSDEC)
PRP LABORATORY: VOLUMETRIC TECHNIQUES, LTD.

VOLATILES	UPGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT	
Sample ID No.	MW-1		MW-2		MW-3		MW-4		MW-5		MW-5 (DUP)		MW-6	
Traffic Report No.	9159-1		9159-2		9159-3		9159-4		9159-5		9159-5 (DUP)		9159-6	
Matrix	AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Dilution Factor	1		1		1		1		1		1		1	
Percent Moisture	—		—		—		—		—		—		—	
	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result
Chloromethane												NR		
Bromomethane												NR		
Vinyl Chloride												NR	10	
Chloroethane												NR		
Methylene Chloride									6		7	NR	4 J	
Acetone	16 B								99 B		110 B	NR	97 B	
Carbon Disulfide												NR		
1,1-Dichloroethene												NR		
1,1-Dichloroethane			2 J									NR		
Trans-1,2-Dichloroethene (total)			82						5		5	NR	47	
Chloroform			5									NR		
1,2-Dichloroethane												NR		
2-Butanone												NR		
1,1,1-Trichloroethane	11		12									NR		
Carbon Tetrachloride												NR		
Vinyl Acetate												NR		
Bromodichloromethane												NR		
1,2-Dichloropropane												NR		
cis-1,3-Dichloropropene												NR		
Trichloroethene			5400						17		15	NR	18	
Dibromochloromethane												NR		
1,1,2-Trichloroethane												NR		
Benzene									17		18	NR	10	
trans-1,3-Dichloropropene												NR		
Bromoform												NR		
4-Methyl-2-Pentanone	7 J								46		17	NR	87	
2-Hexanone												NR		
Tetrachloroethene			1500						30		26	NR	12	
1,1,2,2-Tetrachloroethane												NR		
Toluene									14		14	NR	12	
Chlorobenzene									34		34	NR		
Ethylbenzene									2 J			NR		
Styrene												NR		
Xylenes (Total)									5		6	NR	17	

NOTES:

Blank space – compound analyzed for but not detect

E – estimated value

J – estimated value, compound present below CRQL but above IDL

NR – analysis not required

NA – not analysed for

TABLE 1 (cont'd)
SUMMARY OF ANALYTICAL RESULTS
FROM MONITORING WELL SAMPLING, JUNE 1991

SITE NAME: JAMECO INDUSTRIES, INC.
PROJECT#: 8002-10-1
EPA CASE NO.: SH191
CLP LABORATORY: NY TEST ENV. (For NYSDEC)
PRP LABORATORY: VOLUMETRIC TECHNIQUES, LTD.

INORGANICS	UPGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWNGRADIENT		DOWN GRADIENT	
Sample ID No.	MW-1		MW-2		MW-3		MW-4		MW-5		MW-5 (DUP)		MW-6	
Traffic Report No.	9159-1		9159-2		9159-3		9159-4		9159-5		9159-5(DUP)		9159-6	
Matrix	AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS		AQUEOUS	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result	CLP results	PRP result
Aluminum			226		137 J	200	274	240			99.9 J	NR		
Antimony												NR		
Arsenic		10		10					8.5	10	8.6	NR		
Barium	46.8 J	60	83.2 J	100		30		20	1820	2190	1800	NR	200	
Beryllium												NR		
Cadmium												NR		
Calcium	22100	82170	16900	51440	9370	37000	7910	23640	23700	70410	20000	NR	18800	
Chromium										10		NR		
Cobalt		120		110		100		110		130		NR		
Copper		20	246	230	359	390	1490	1520	16.2 J		21.3 J	NR		
Iron	291		2620	2960	390	600	562	900	13900	7860	13800	NR	5170	
Lead												NR	5.3	
Magnesium	3850 J	364470	3230 J	307890		69750		48360	2200 J	223860	2190 J	NR	2120 J	
Manganese	1660	770	1410	680	706	330	204	90	596	290	586	NR	592	
Mercury												NR		
Nickel		510	506	490	328	300	540	530	256	260	245	NR	106	
Potassium	3710 J	2380		1230	2580 J	3950		1267	6900	3361	8560	NR	6420	
Selenium		30		20		30		50		30		NR		
Silver						10						NR		
Sodium	16700	25710	9720	12870	271000	321490	295000	341060	11600	19630	11500	NR	10000	
Thallium					13	570	14.2	790				NR		
Vanadium												NR		
Zinc		30	396	350	52.6	90	167	140	215	110	121	NR	44.8	
Cyanide												NR		

NOTES:
Blank space – compound analyzed for but not detected
E – estimated value
J – estimated value, compound present below CRDL but above IDL
R – analysis did not pass EPA QA/QC
NA – not analysed for
NR – analyses not required

TABLE 2
ANALYTICAL RESULTS OF SOIL SAMPLES
COLLECTED BY AKRF, INC.
FOR JAMECO INDUSTRIES, INC., JUNE 1991

INORGANICS Sample ID No. Depth (feet) Units	MW-1 4-8 mg/L	MW-1 9-11 mg/L	MW-1 14-16 mg/L	MW-1 19-21 mg/L	MW-2 4-6 mg/L	MW-2 9-11 mg/L	MW-2 14-16 mg/L	MW-2 19-21 mg/L	MW-3 4-6 mg/L	MW-3 8-10 mg/L	MW-3 14-16 mg/L	MW-3 18-20 mg/L
Aluminum	1321.36	506.62	779.60	642.59	3183.33	1260.63	1595.25	559.27	829.37	1896.50	876.78	743.16
Antimony												
Arsenic	1.85	8.25	1.42	2.45	2.67	2.52	2.75	1.20	4.50	6.75	8.75	7.70
Barium	6.55	4.12	3.90	3.67	9.36	6.48	5.12	3.19	3.09	6.38	5.92	6.45
Beryllium												
Cadmium												
Calcium	4442.37	276.28	122.59	98.34	3692.98	4289.26	3228.31	437.63	106.57	102.74	119.24	142.37
Chromium (total)	5.87	4.12	3.40	3.51	29.93	33.94	28.62	5.70	2.99	8.13	19.57	27.20
Cobalt	7.35	7.15	5.85	6.75	8.30	7.15	6.30	5.35	6.30	6.95	6.90	6.25
Copper	6.15	6.46	3.25	4.06	76.75	77.71	54.09	14.60	6.15	14.25	40.00	65.40
Iron	3015.13	4342.82	1438.95	2050.42	4702.39	6216.87	7273.60	1814.28	1095.05	3082.47	5624.86	4456.69
Lead												
Magnesium	384.75	131.75	174.65	82.85	1164.60	1284.30	1041.45	218.75	65.75	128.25	92.30	122.00
Manganese	52.70	22.10	20.40	13.50	28.95	30.15	22.60	25.15	21.70	34.20	29.15	19.50
Mercury	0.003	0.001	0.034		0.059	0.068	0.031	0.012	0.028	0.001	0.001	
Nickel	16.19	2.55		28.18	52.70	42.10	60.39	8.46	5.83	18.27	13.42	40.57
Potassium	134.75	110.75	138.85	99.60	148.30	118.00	143.40	88.90	75.85	120.40	107.20	109.95
Selenium	1.31	1.35	2.65	3.41	1.95	2.65	2.30	1.65	5.20	3.55	2.30	3.87
Silver												
Sodium	187.92	147.27	196.40	183.24	230.98	238.90	157.55	180.42	192.65	197.22	151.59	130.62
Thallium	1099.28			750.95	1688.76	2290.98	2923.12		380.37	1040.74	1969.57	1462.74
Vanadium	0.58		3.45		2.94	1.60	5.08			1.06		
Zinc	2.51	2.58	11.00	4.64	32.12	27.89	8.44	11.21	5.03	7.53	12.07	15.51
Hexavalent Chromium	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cyanide (mg/kg)												

NOTES:
Blank Space - compound analyzed for but not detected
NR - analyses not required

TABLE 2 (cont'd)
ANALYTICAL RESULTS OF SOIL SAMPLES
COLLECTED BY AKRF, INC.
FOR JAMECO INDUSTRIES, INC., JUNE 1991

INORGANICS Sample ID No. Depth (feet) Units	MW-4 4-6 mg/L	MW-4 8-12 mg/L	MW-4 14-16 mg/L	MW-4 18-21 mg/L	MW-5 4-6 mg/L	MW-5 9-11 mg/L	MW-5 14-18 mg/L	MW-5 19-21 mg/L	MW-6 4-8 mg/L	MW-6 9-13 mg/L	MW-6 14-16 mg/L	MW-6 19-21 mg/L
Aluminum	2849.97	1083.26	752.75	715.18	2238.59	1406.16	554.58	477.63	2337.35	1256.98	619.48	563.63
Antimony												
Arsenic	2.70	1.88	1.30	0.67	6.52	5.00	3.90	2.55	12.25	4.70	1.75	1.44
Barium	5.72	6.49	9.77	5.90	92.86	4.62	6.49	7.25	8.05	4.89	3.49	5.96
Beryllium												
Cadmium												
Calcium	134.55	121.20	90.41	145.15	2546.17	402.42	99.22	63.92	333.43	150.03	130.48	110.09
Chromium (total)	9.43	57.06	68.15	43.73	118.40	15.96	5.42	3.40	361.30	15.44	27.73	6.09
Cobalt	6.35	4.63	7.30	6.35	8.10	7.75	6.55	7.50	7.85	7.15	5.85	5.20
Copper	3.25	83.05	89.67	90.59	213.61	10.22	12.21	8.13	245.26	29.62	8.98	9.17
Iron	4046.48	2817.17	3311.97	2610.69	4795.17	5600.97	2292.68	1582.63	3088.85	5059.27	1517.37	1707.10
Lead					10.57				41.48			
Magnesium	136.45	128.90	107.15	124.10	397.25	200.15	79.60	78.55	202.65	161.05	125.60	128.50
Manganese	25.40	18.05	17.10	14.00	48.40	42.45	7.85	7.20	21.15	24.60	5.85	7.35
Mercury			0.003	0.044	0.146	0.020	0.140	1.352	0.207		0.023	
Nickel	28.65	33.70	37.90	42.52	80.33	42.11	8.36	20.71	225.60	60.73	13.98	13.18
Potassium	107.85	121.75	110.93	113.65	75.50	94.85	83.25	56.05	136.25	141.25	99.25	57.35
Selenium	3.25	2.70	2.00	1.05	4.00	1.60	1.30	2.75	2.70	1.10	0.98	3.35
Silver												
Sodium	211.76	226.61	255.90	241.57	183.14	11.13	117.72	113.41	158.06	120.09	146.04	160.99
Thallium	1641.42	1124.62	1212.35	1014.05	1579.18		750.03	522.08	960.20	1642.49	495.15	550.57
Vanadium	4.19	1.24	0.54	1.84	0.99	1.50				2.04		
Zinc	16.55	11.94	11.47	11.97	80.56	14.56	19.04	6.85	129.99	13.53	5.03	4.58
Hexavalent Chromium	NR	NR	NR	NR	NR	NR			NR	NR	NR	NR
Cyanide (mg/kg)												

NOTES:
Blank Space - compound analyzed for but not detected
NR - analyses not required

TABLE 2 (cont'd)
ANALYTICAL RESULTS OF SOIL SAMPLES
COLLECTED BY AKRF, INC.
FOR JAMECO INDUSTRIES, INC., JUNE 1991

INORGANICS Sample ID No. Depth (feet) Units	B-7-L 2-4 mg/L	B-7-L 4-6 mg/L	B-7-L 6-8 mg/L	B-8-L 2-4 mg/L	B-8-L 4-6 mg/L	B-8-L 6-10 mg/L	B-9-08 0-4 mg/L	B-10-08 0-4 mg/L	B-11-T 0-3 mg/L	B-12-T 0-5 mg/L	B-13-T 0-4 mg/L	B-14-T 0-4 mg/L	B-15-T 0-4 mg/L
Aluminum	4763.03	3074.47	1897.94	4856.52	3792.69	1078.00	4066.84	6422.91	5650.58	4433.92	4262.37	4631.89	3916.64
Antimony													
Arsenic	5.50	12.25	6.07	1.20	7.80	2.15	9.67	10.75	27.75	9.62	7.42	8.62	8.45
Barium	18.38	15.45	12.04	19.66	22.95	13.02	27.24	24.40	17.99	29.67	61.57	20.27	241.73
Beryllium													
Cadmium													
Calcium	7577.26	6473.47	4943.12	916.12	587.22	184.85	7904.26	4018.80	2360.39	15942.78	8802.91	1992.54	1048.57
Chromium (total)	1046.89	326.85	294.24	114.91	3423.63	119.80	89.81	347.98	0.60	749.51	736.19	44.76	170.53
Cobalt	6.05	7.15	6.55	7.60	9.45	6.00	8.55	7.45	7.35	9.85	7.20	5.55	8.30
Copper	893.35	260.74	241.99	146.89	3375.84	194.30	234.50	283.70	39.65	654.21	646.60	140.28	337.53
Iron	5722.94	4215.78	3607.52	5643.26	3996.49	1820.20	6132.59	6371.80	0.81	10702.65	6112.46	5857.66	4403.32
Lead	87.77	29.36			420.46		21.47	30.70		84.73	71.64		24.16
Magnesium	421.20	374.55	329.50	303.50	152.70	104.65	353.85	357.95	350.65	969.40	412.60	313.85	248.50
Manganese	69.35	51.30	31.75	39.65	21.40	9.55	82.40	23.54	73.80	100.05	60.95	51.10	30.70
Mercury	0.063	0.178	0.016	0.060	0.055	0.012	0.095	0.139	0.066	0.044	0.312	0.071	0.116
Nickel	332.39	111.56	123.79	161.91	962.09	65.38	69.94	469.99	16.89	227.13	378.19	33.10	106.23
Potassium	282.80	319.40	255.50	282.20	346.60	145.00	236.50	655.70	318.70	213.90	523.80	537.30	210.00
Selenium	5.50	4.00	2.70	5.00	1.00	4.80	3.35	2.50	3.35	1.86	2.90	3.50	5.50
Silver													
Sodium	295.01	241.47	232.27	187.05	241.91	52.62	109.40	230.36	272.71	135.35	224.04	194.03	158.83
Thallium						671.20	2123.19		2179.34	3619.69			
Vanadium	2.57	1.96		4.45			3.98	4.51	5.25	4.66	2.22	4.34	3.18
Zinc	375.33	92.36	100.75	71.08	859.16	46.62	185.62	170.85	46.22	290.68	243.71	44.03	128.78
Hexavalent Chromium	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cyanide (mg/kg)					2.02								

NOTES:
Blank Space - compound analyzed for but not detected
NR - analyses not required

TABLE 2 (cont'd)
ANALYTICAL RESULTS OF SOIL SAMPLES
COLLECTED BY AKRF, INC.
FOR JAMECO INDUSTRIES, INC., JUNE 1991

INORGANICS Sample ID No. Depth (feet) Units	B-7-L 2-4 mg/L	B-7-L 4-6 mg/L	B-7-L 6-8 mg/L	B-8-L 2-4 mg/L	B-8-L 4-6 mg/L	B-8-L 6-10 mg/L	B-9-08 0-4 mg/L	B-10-08 0-4 mg/L	B-11-T 0-3 mg/L	B-12-T 0-5 mg/L	B-13-T 0-4 mg/L	B-14-T 0-4 mg/L	B-15-T 0-4 mg/L
Aluminum	4763.03	3074.47	1897.94	4856.52	3792.69	1078.00	4066.84	6422.91	5650.58	4433.92	4262.37	4631.89	3916.64
Antimony													
Arsenic	5.50	12.25	6.07	1.20	7.80	2.15	9.67	10.75	27.75	9.62	7.42	8.62	8.45
Barium	18.38	15.45	12.04	19.66	22.95	13.02	27.24	24.40	17.99	29.67	61.57	20.27	241.73
Beryllium													
Cadmium													
Calcium	7577.26	6473.47	4943.12	916.12	587.22	184.85	7904.26	4018.80	2360.39	15942.78	8802.91	1992.54	1048.57
Chromium (total)	1046.89	326.85	294.24	114.91	3423.63	119.80	89.81	347.98	0.60	749.51	736.19	44.76	170.53
Cobalt	6.05	7.15	6.55	7.60	9.45	6.00	8.55	7.45	7.35	9.85	7.20	5.55	8.30
Copper	893.35	260.74	241.99	146.89	3375.84	194.30	234.50	283.70	39.65	654.21	646.60	140.28	337.53
Iron	5722.94	4215.78	3607.52	5643.26	3996.49	1820.20	6132.59	6371.80	0.81	10702.65	6112.46	5857.66	4403.32
Lead	87.77	29.36			420.46		21.47	30.70		84.73	71.64		24.16
Magnesium	421.20	374.55	329.50	303.50	152.70	104.65	353.85	357.95	350.65	969.40	412.60	313.85	248.50
Manganese	69.35	51.30	31.75	39.65	21.40	9.55	82.40	23.54	73.80	100.05	60.95	51.10	30.70
Mercury	0.063	0.178	0.016	0.060	0.055	0.012	0.095	0.139	0.066	0.044	0.312	0.071	0.116
Nickel	332.39	111.56	123.79	161.91	962.09	65.38	69.94	469.99	16.89	227.13	378.19	33.10	106.23
Potassium	282.80	319.40	255.50	282.20	346.60	145.00	236.50	655.70	318.70	213.90	523.80	537.30	210.00
Selenium	5.50	4.00	2.70	5.00	1.00	4.80	3.35	2.50	3.35	1.86	2.90	3.50	5.50
Silver													
Sodium	295.01	241.47	232.27	187.05	241.91	52.62	109.40	230.36	272.71	135.35	224.04	194.03	158.83
Thallium						671.20	2123.19		2179.34	3619.69			
Vanadium	2.57	1.96		4.45			3.98	4.51	5.25	4.66	2.22	4.34	3.18
Zinc	375.33	92.36	100.75	71.08	859.16	46.62	185.62	170.85	46.22	290.68	243.71	44.03	128.78
Hexavalent Chromium	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cyanide (mg/kg)					2.02								

NOTES:
Blank Space - compound analyzed for but not detected
NR - analyses not required

PART IV. HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.**

Groundwater in the Upper Glacial aquifer has been characterized by the collection of samples from on-site monitoring wells. Analytical results indicate a release to the Upper Glacial aquifer, where contaminants were present in Jameco's downgradient monitoring wells (MW's 2-6) that were either not detected in the upgradient monitoring well (MW 1) or three times or greater than background analyte concentrations. A release to the Magothy aquifer cannot be confirmed as no deep monitoring wells were drilled during the investigation. Organic contaminants that qualify as an observed release to groundwater include: vinyl chloride (10 ppb at MW-6), methylene chloride (7 ppb at MW-5), trans-1,2-dichloroethene (total) (82 ppb at MW-2), tricholoroethene (5400 ppb at MW-2), benzene (18 ppb at MW-5), 4-methyl-2-pentanone (87 at ppb MW-6), tetrachloroethene (1500 ppb at MW-2), toluene (14 ppb at MW-5), chlorobenzene (34 ppb at MW-5), and xylenes (total) (17 ppb at MW-6). Inorganic contaminants that qualify as an observed release include: barium (2190 ppb at MW-5), copper (1520 ppb at MW-4), iron (13,900 ppb at MW-5), lead (5.3 ppb at MW-6), thallium (790 ppb at MW-4), and zinc (396 ppb at MW-2). Refer to Table 1 in Part III of this report for a summary of contaminants detected in groundwater monitoring wells.

All inorganic compounds detected in the groundwater were also detected in the soil samples collected. The organic compounds detected in the groundwater were not detected in the soil samples analyzed for AKRF, Inc. The primary source for contaminants identified, is from chemical substances used during Jameco's operations. These substances were identified during previous investigations and via reporting requirements stipulated by the Department of Fire, Rescue, and Emergency Services, County of Suffolk, in case of a potential emergency situations (fire, explosion, and etc.).

Ref. Nos. 5; 16; 35; 36

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, areas of karst terrain, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

The aquifers of concern are the Upper Glacial and Magothy aquifers, because of an existing hydraulic connection between the two. The Upper Glacial aquifer consists of beds of silt, sand, and gravel deposits of the upper Pleistocene unit of the Quaternary Age of geological events. This aquifer lies directly upon the Magothy aquifer, which is comprised of a mixture of silt, sand, and clay deposits of the Cretaceous Age Magothy Formation.

Underlying the site is a layer of coarse sand and gravel, with a stratigraphic thickness of 87 feet. This layer is the Pleistocene glacial outwash material, which contains the Upper Glacial aquifer. The layer has an estimated permeability of 4.445×10^{-3} cm/sec.

Beneath the initial strata is the upper portion of the Magothy aquifer/Magothy Formation. The upper portion is comprised of intermittent layers of sand, clayey sand, silt, mica, lignite, and grey clay, 173 feet in stratigraphic thickness. The permeability of the material ranges

from 10^{-4} cm/sec for sand to 10^{-7} cm/sec for grey clay. Separating the upper and lower portions of the Magothy Formation is a dark solid clay lense, 28 feet in stratigraphic thickness, with a permeability of 10^{-8} cm/sec. (clay lenses are common throughout the entire Magothy Formation). The lower portion of the Magothy Aquifer/Magothy Formation is comprised of the same intermittent layers stated for the upper portion, with the same associated permeability ranges. The Magothy Formation lies directly upon the Raritan Clay Formation, approximately 750 feet beneath the site.

The Raritan Clay Formation, 300 feet in stratigraphic thickness, separates the Magothy aquifer from the underlying Lloyd aquifer.

The water table beneath the site begins at a depth of 8.6 feet below the surface. Groundwater beneath Long Island is documented to flow toward surface water bodies. Therefore, groundwater beneath the site flows in a southeasterly direction, towards the Belmont Lake.

Ref Nos. 23; 24; 25; 28; 33, pp. 26, 67, 68

3. **Is a designated well head protection area within 4 miles of the site?**

The site is located within a wellhead protection area.

Ref. No. 13

4. **What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?**

Based upon available background information the following was determined:

Depth to groundwater table => 8.6 feet below surface
Depth to bottom of sludge lagoon => 5 feet below surface

Therefore the net difference of 3.6 feet, is the distance between the lowest point of waste disposal and the highest seasonal level of the water table.

Ref. Nos. 28; 33, pg. 26

5. **What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?**

The initial layer of coarse sand and gravel which underlies the site has a permeability value of 4.445×10^{-3} $\frac{\text{cm}}{\text{sec.}}$ or greater (6.3 $\frac{\text{inches}}{\text{hr.}}$ or greater).

Ref. No. 24, pg. 4

6. **What is the distance to and depth of the nearest well that is currently used for drinking purposes?**

A Suffolk County Water Authority (SCWA) public supply well (#S-23848) is located across Wyandanch Avenue, 300 feet north of the site. The depth at which the well is screened is 552 feet below the surface, in the Magothy Aquifer.

Ref. Nos. 19; 23

7. **If a release to groundwater is observed or suspected, determine the number of people that obtain drinking water from wells that are documented or suspected to be located within the contamination boundary of the release.**

There are no drinking water wells currently suspected within the contamination boundary of the observed release. For verification, sampling of public (SCWA #S-23848) and private wells located downgradient would need to occur.

Ref. Nos. 6; 33, pg. 29

8. **Identify the population served by wells located within 4 miles of the site that draw from the aquifer of concern.**

Distance	Population
0 - 1/4 mi	4464
>1/4 - 1/2 mi	0
>1/2 - 1 mi	4464
>1 - 2 mi	22,320
>2 - 3 mi	26,799
>3 - 4 mi	35,727

State whether groundwater is blended with surface water or with groundwater from other wells. Also provide an explanation on how each ring population was determined.

There are two water districts located within 4 miles of the site that draw water from the aquifer of concern and both systems are blended within the districts. The SCWA serves approximately 84,820 people from 19 wells identified within the 4 mile radius. An equal apportionment of 4,464 people per well, was used to determine ring population. The Dix Hills Water district serves approximately 22,400 people from 15 wells. An equal apportionment of 1,493 people per well was used to determine ring population. The following is a summary of the total ring populations;

0 - 1/4 mile => 1 SCWA well (Wyandanch Ave.) => 4,464 people
1/4 - 1/2 mile => No wells
1/2 - 1 mile => 1 SCWA well (Gordon Ave.) => 4,464 people
1 - 2 mile => 5 SCWA wells (August Rd., Prospect Ave., 12th St., Circle Dr., and Adams Ave.) => 22,320
2 - 3 mile => 5 SCWA wells (Brook Ave., Harvest Lane, Sawyer Ave., Albany Ave., and Tenety Ave.) and 3 Dix Hills wells (Plant No. 8 and No. 9) => 26,799 people
3 - 4 mile => 7 SCWA wells (Plymouth St., Industry Ct., Bayshore Rd., Sunrise Highway, Smith St., N. Fifth St., and Albany Ave.,) and 3 Dix wells (Plant No. 5, No. 7, and No. 10) => 35,727 people.

Ref. Nos. 18; 19

9. **Identify uses of groundwater within 4 miles of the site (i.e. private drinking source, municipal source, commercial, irrigation, unusable).**

Within 4 miles of the site groundwater is used as a private and public drinking water source, in addition to being an industrial, commercial, and fire water source.

Ref. Nos. 18; 19; 33, pg. 29

SURFACE WATER ROUTE

10. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.**

    No known surface water (SW) sampling has occurred, therefore no suspected release to a surface water is assumed for the Jameco site. The overland/flood migration SW pathway is via Wyandanch Avenue east, toward the Carlls River. The groundwater to surface water (GW/SW) pathway is via gradient flow beneath the site, in a southeasterly direction towards Belmont Lake. There is a high potential for release of contaminants via the GW/SW pathway, due to the presence of groundwater contamination.

    Ref. Nos. 7; 33, pg. 30

11. **Identify the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

    The nearest downslope surface water is the Carlls River, located approximately 1/2 mile to the east. Drainage from the site, is via Wyandanch Avenue until intersection with the Carlls River, that eventually discharges into Belmont Lake.

    Ref. No. 7

12. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

    The distance to the Carlls River from the site is 5/8 of an mile. The distance along the course that stormwater runoff is expected to flow is the same distance, 5/8 of an mile.

    Ref. No. 7

13. **Determine the type of floodplain that the site is located within.**

    The site is located within a 500-year floodplain.

    Ref. No. 12

14. **Identify drinking water intakes in surface waters within 15 miles downstream of the site. For each intake identify: the distance from the point of surface water entry, population served, and stream flow at the intake location.**

    There are no surface water intakes for drinking water within 15 miles downstream of the site.

    Ref. No. 34

15. **Identify fisheries that exist within 15 miles downstream of the point of surface water entry. For each fishery specify the following information:**

Fishery Name	Water Body Type	Flow (cfs)	Saline/Fresh/Brackish
Carlls River	River	26.4	Fresh
Belmont Lake	Lake	>26.4	Fresh
Southards Pond	Lake	>26.4	Fresh
Memorial Park Lake	Lake	>26.4	Fresh
Great South Bay	Coastal Bay	N/A	Brackish/Saline

Ref. Nos. 30; 31; 32

16. **Identify sensitive environments that exist within 15 miles of the point of surface water entry. For each sensitive environment specify the following:**

Sensitive Environment	Water Body Type	Flow (cfs)	Wetland Frontage (miles)
Wetlands	River (Carlls)	26.4	>4
Wetlands	Lake (Belmont Lake, Southards Ponds, Memorial Park Lake)	>26.4	>2
Wetlands	Great South Bay	N/A	>8
Significant habitat for wildlife	(confidential)	N/A	N/A

Ref. Nos. 8; 29

17. **If a release to surface water is observed or suspected, identify any intakes, fisheries, and sensitive environments from question Nos. 16-18 that are or may be located within the contamination boundary of the release.**

No suspected release to surface water is documented for the site, therefore no intakes, fisheries, and sensitive environments are within a contamination boundary of a release..

Ref. No. 33, pg. 30

SOIL EXPOSURE PATHWAY

18. **Determine the number of people that occupy residences or attend school or day care on or within 200 feet of the site property.**

Fifteen residential dwellings are within 200 feet of the site property (including the contaminated soil on the private residential property). From population data there exists an average of 3.5 persons per home. Therefore, 52.5 people are assumed to occupy residences within 200 feet of the site. There are no schools or day care centers within 200 feet of the site property.

Ref. Nos. 9; 15

19. Determine the number of people that work on or within 200 feet of the site property.

At the present time, 350 people work at the Jameco facility on Wyandanch Avenue. There are no people that work within 200 feet of the site property

Ref. No. 11

20. Identify terrestrial sensitive environments on or within 200 feet of the site property.

No terrestrial sensitive environments were identified on or within 200 feet of the site property.

Ref. No. 29

AIR ROUTE

21. Describe the likelihood of release of contaminants to air as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release define the supporting analytical evidence.

No readings above background were detected in the air by the HNu photoionization meter and there are no supporting analytical data to suggest that an observed release to the air has occurred. Therefore, no suspected release to the air is assumed for the site.

One report of an air release of contaminants, by SCHDS personnel, is documented, but verification (analytical data) is not available.

Ref. Nos. 14; 33, pp. 34-A, 106

22. Determine populations that reside within 4 miles of the site.

Distance	Population
0 - 1/4 mi	440
>1/4 - 1/2 mi	4,772
>1/2 - 1 mi	9,549
>1 - 2 mi	46,214
>2 - 3 mi	57,641
>3 - 4 mi	60,747

Ref. No. 15

23. Identify sensitive environments and wetlands acreage within 1/2 mile of site.

No terrestrial sensitive environments were identified within 1/2 mile of the site property. Wetland/Acreage was identified within the 0-1/2 mile radius ring surrounding the site.

0 - 1/4 mile	1/4 - 1/2 mile
Sensitive Environments/Wetland Acreage	Sensitive Environments/Wetland Acreage
3 Acres	42 Acres

Ref. Nos. 8; 29

24. **If a release to air is observed or suspected, determine the number of people that reside or are suspected to reside within the area of air contamination from the release.**

No release to the air is observed or suspected.

Ref. Nos. 14; 33, pp. 34-A

25. **If a release to air is observed or suspected, identify any sensitive environments, listed in question No. 23, that are or may be located within the area of air contamination from the release.**

No release to the air is observed or suspected.

Ref. Nos. 14; 33, pp. 34-A

ATTACHMENTS

1. Photos

   - o Photograph Log

2. References

   - o All referenced documentation

Sleeve containing PA method score sheets.

ATTACHMENT 1

EXHIBIT A

PHOTOGRAPH LOG

JAMECO INDUSTRIES, INC.
WYANDANCH, SUFFOLK COUNTY, NEW YORK

ON-SITE RECONNAISSANCE: OCTOBER 10, 1991

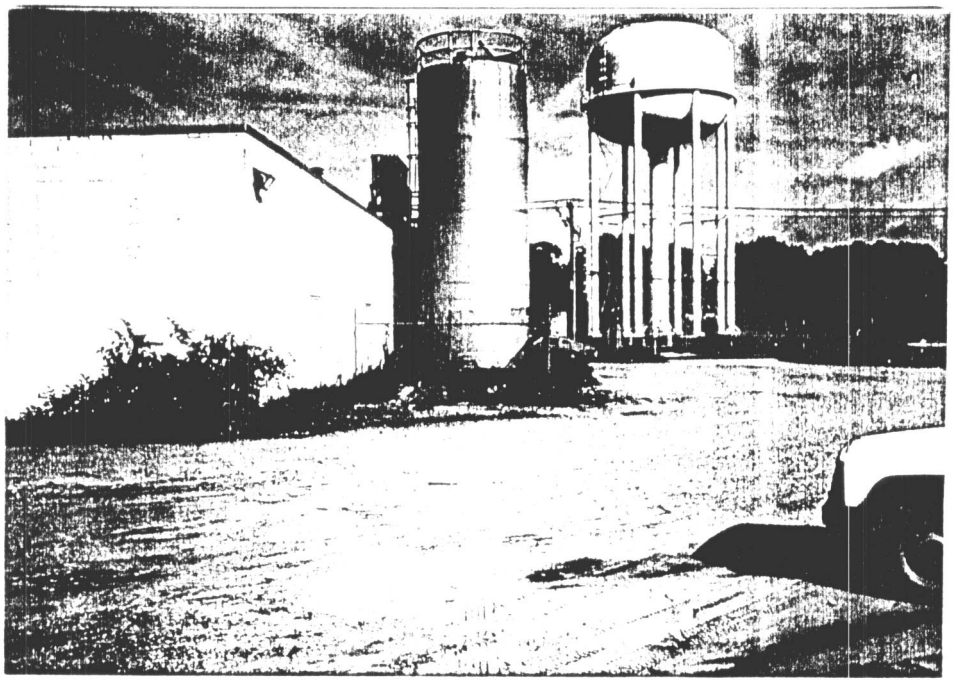
PHOTOGRAPH INDEX

JAMECO INDUSTRIES, INC.
WYANDANCH, NEW YORK
OCTOBER 10, 1991

ALL PHOTOGRAPHS TAKEN BY STEVEN MCNULTY

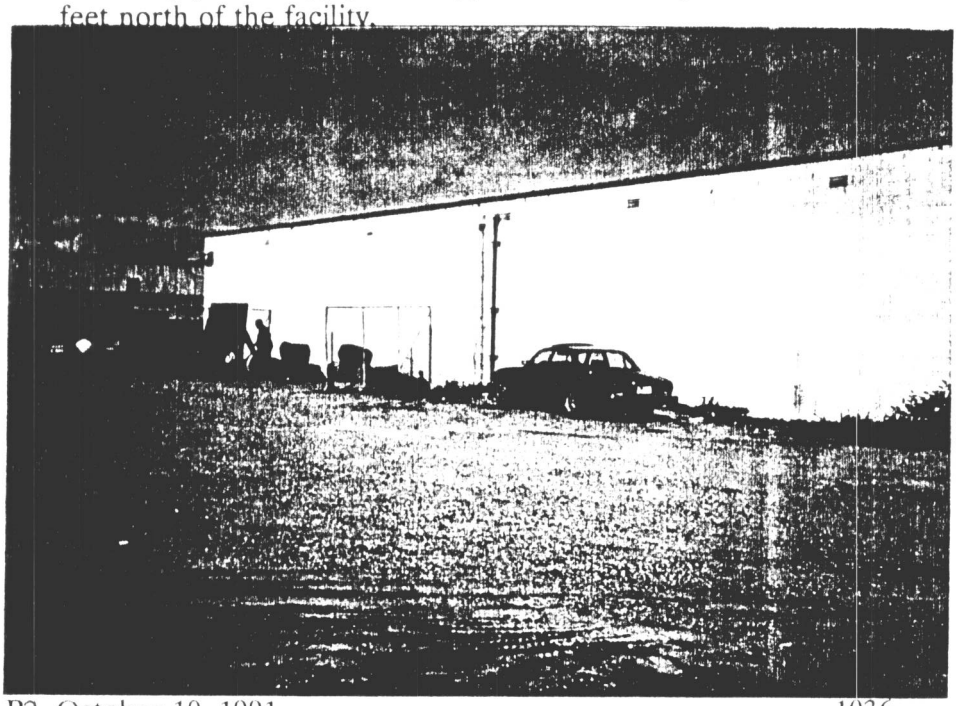
Photo No.	Description	Time
1R-P1	View facing north of the backfilled trench area and the suspected location of the old leaching pool field. The Suffolk County Water Authority public supply wells appear in the background, located 300 feet north of the facility.	1033
1R-P2	View facing northwest of the former primary infiltration lagoon location and the roof drainage pipe which previously discharged to the lagoon.	1036
1R-P3	View facing southwest of a pile of wooden pallets, located above the former location of the secondary infiltration lagoon.	1039
1R-P4	View facing southwest of the suspected old leaching pool field location.	1042
1R-P5	View facing southwest of Monitoring Well #6, located 50 feet southeast of the main building.	1045
1R-P6	View facing southeast of Monitoring Well #5, located 175 feet southeast of the main building.	1046
1R-P7	View facing north of an operational leachpool, which is located in the active leaching pool field, south of the main building.	1048
1R-P8	View facing southwest of the southwest portion of the active leaching pool field. Several leaching pools appear in the print.	1050
1R-P9	View facing southeast of the southeast corner of the active leaching pool field. Several leaching pools, a residential dwelling, and Monitoring Well #4 appear in the print.	1053

Photo No.	Description	Time
1R-P10	View facing southwest of the southern portion of the active leaching pool field. Three leachpools and Monitoring Well #3 appear in the print.	1056
1R-P11	View facing southwest of Monitoring Well #2, located 15 feet south of the main building.	1058
1R-P12	View facing southwest Monitoring Well #1, located 100 feet northwest of the main building.	1107



1R-P1 October 10, 1991 1033

View facing north of the backfilled trench area and the suspected location of the old leaching pool field. The Suffolk County Water Authority public supply wells appear in the background, located 300 feet north of the facility.

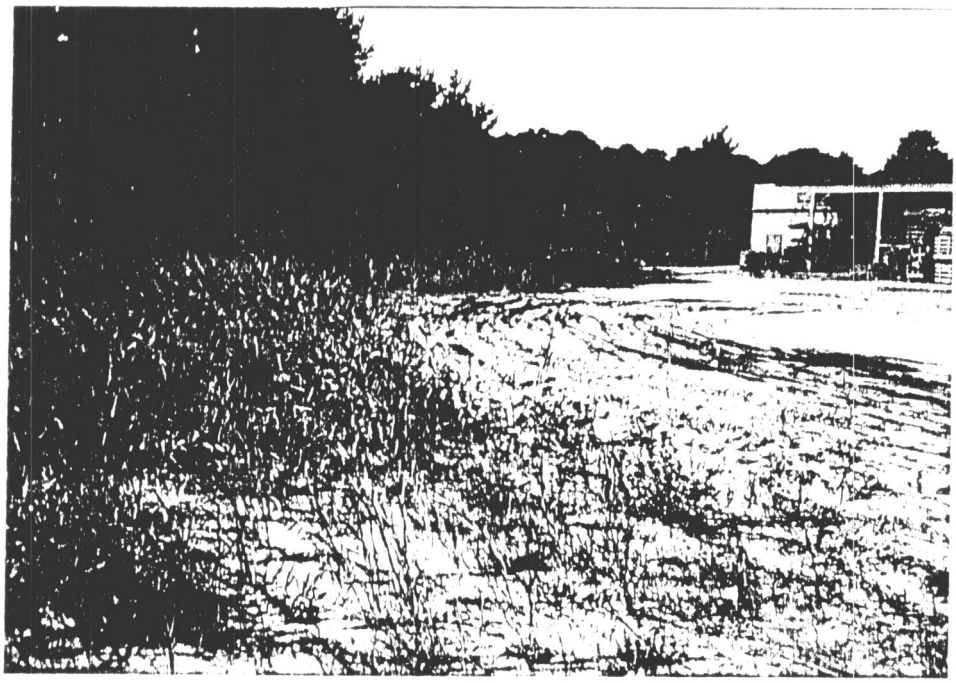


1R-P2 October 10, 1991 1036

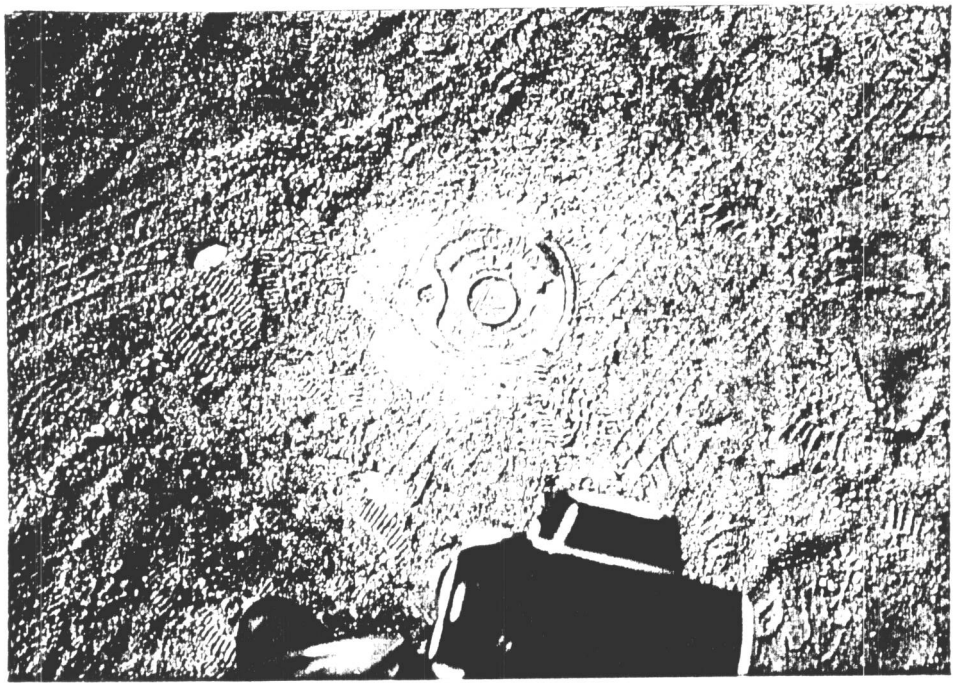
View facing northwest of the former primary infiltration lagoon location and the roof drainage pipe which previously discharged to the lagoon.



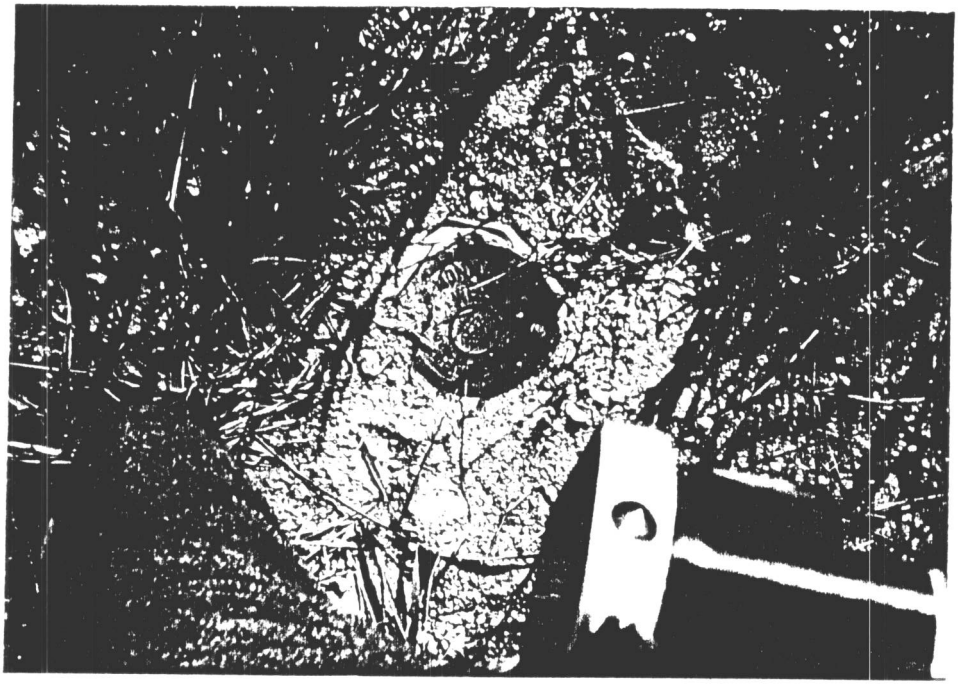
1R-P3 October 10, 1991 1039
View facing southwest of a pile of wooden pallets, located above the former location of the secondary infiltration lagoon.



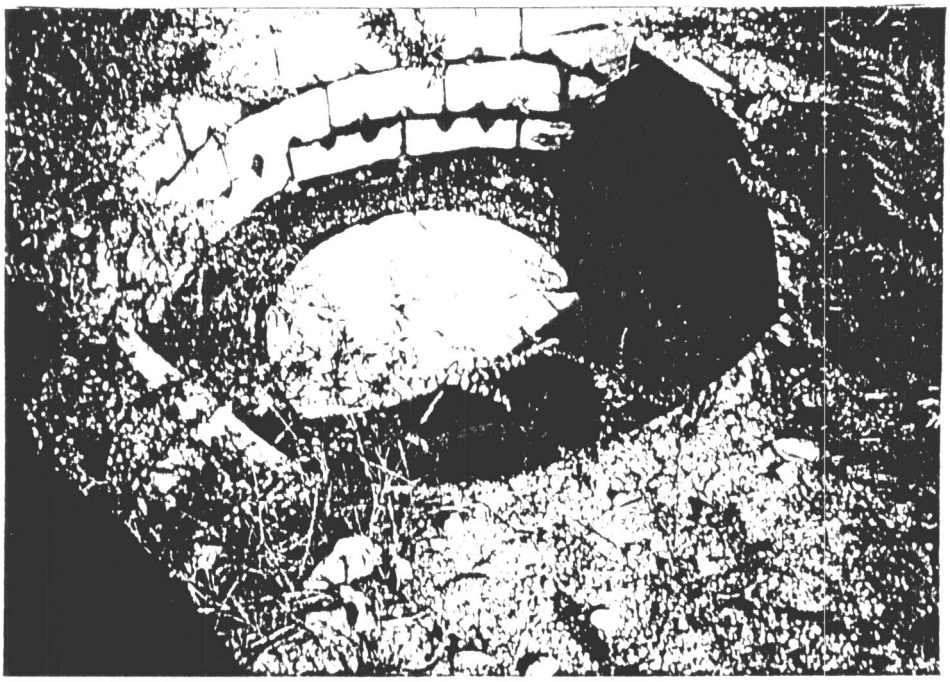
1R-P4 October 10, 1991 1042
View facing southwest of the suspected old leaching pool field location.



1R-P5 October 10, 1991 1045
View facing southwest of Monitoring Well #6, located 50 feet southeast of the main building.



1R-P6 October 10, 1991 1046
View facing southeast of Monitoring Well #5, located 175 feet southeast of the main building.



1R-P7 October 10, 1991 1048
View facing north of an operational leachpool, which is located in the active leaching pool field, south of the main building.



1R-P8 October 10, 1991 1050
View facing southwest of the southwest portion of the active leaching pool field. Several leaching pools appear in the print.



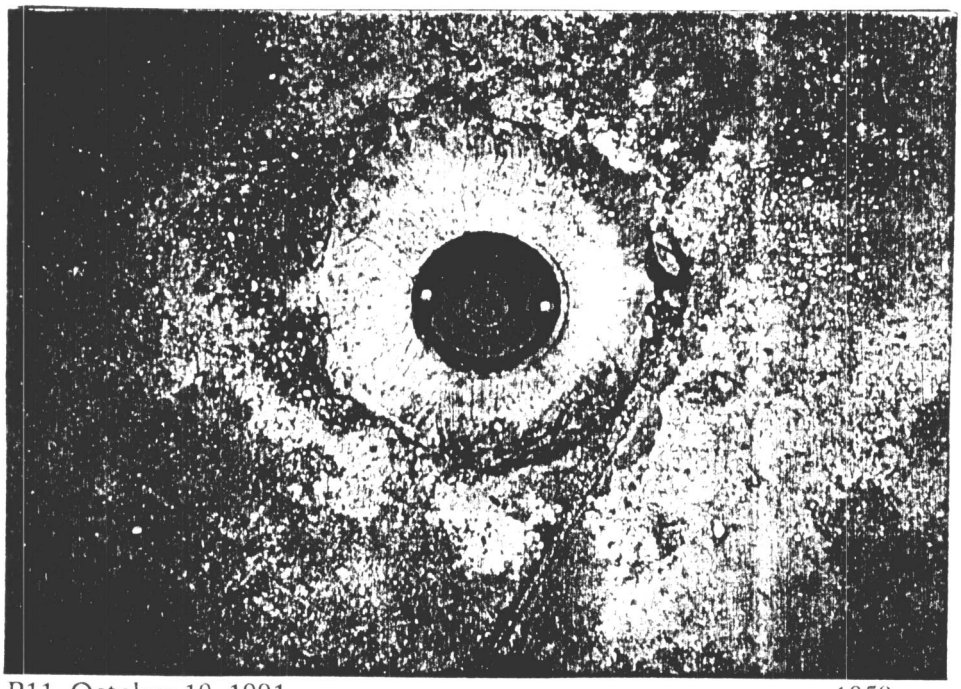
1R-P9 October 10, 1991 1053

View facing southeast of the southeast corner of the active leaching pool field. Several leaching pools, a residential dwelling, and Monitoring Well #4 appear in the print.



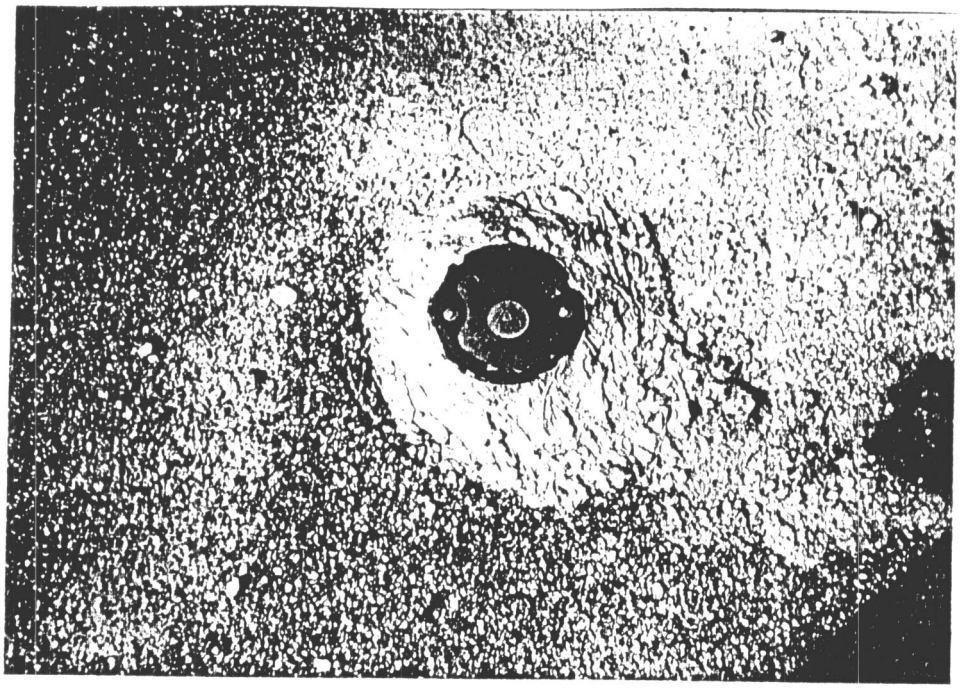
1R-P10 October 10, 1991 1056

View facing southwest of the southern portion of the active leaching pool field. Three leachpools and Monitoring Well #3 appear in the print.



1R-P11 October 10, 1991 1058

View facing southwest of Monitoring Well #2, located 15 feet south of the main building.



1R-P12 October 10, 1991 1107

View facing southwest Monitoring Well #1, located 100 feet northwest of the main building.

ATTACHMENT 2

REFERENCES

1. U.S. EPA Superfund Program, Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS), List 8. Site/Event Listing, Pg. 308, July 1, 1991.

2. Congressional District, Election Division, New York Department of State.

3. Federal Register, 40 CFR Part 300, Hazard Ranking System; Final Rule, December 14, 1990.

4. U.S. EPA, Potential Hazardous Waste Site, Preliminary Assessment of the Jameco Industries, Incorporated Site, prepared by Woodward-Clyde Consultants, Inc., February 17, 1986.

5. U.S. EPA, Potential Hazardous Waste Site, Preliminary Assessment of the Jameco Industries, Incorporated Site, prepared by the U.S. EPA, Environmental Services Division, August 28, 1986.

6. Four-Mile Radius Map for the Jameco Industries, Inc. Site based on USGS Topographic Maps, 7.5 Minute Series, Quadrangles of "Bay Shore West, NY", "Amityville, NY", "Huntington, NY", and "Greenlawn, NY".

7. Fifteen-Mile Surface Water Pathway Map for the Jameco Industries, Inc. Site, based on USGS Topographic Maps, 7.5 Minute Series, Quadrangles of "Bay Shore West, NY", "Bay Shore East, NY", "Amityville, NY", and "West Gilgo Beach, NY".

8. Fifteen-Mile Surface Water Pathway Map for the Jameco Industries, Inc. Site, based on U.S. Department of Interior, Fish and Wildlife Service, National Wetlands Inventory Maps, New York, Quadrangles of "Bay Shore West, NY", "Bay Shore East, NY", "Amityville, NY", and "West Gilgo Beach, NY".

9. Telecon Note: Conversation between Monica Grimsland, Tax Department, Wyandanch, NY, and Steven McNulty, Malcolm Pirnie, Inc.(MPI), August 15, 1991.

10. Telecon Note: Conversation between Jamie Ascher, NYSDEC - Stony Brook, NY, and Steven McNulty, MPI, December 4, 1991.

11. Telecon Note: Conversation between Israel Gajer, Vice President, Jameco Industries, Inc., and Steven McNulty, MPI, November 21, 1991.

12. Telecon Note: Conversation between Kate Finlay, Building Inspector, Town of Babylon, and Steven McNulty, MPI, December 17, 1991.

13. Telecon Note: Conversation between Bill Spitz, NYSDEC - Stony Brook, NY, and Steven McNulty, MPI, December 17, 1991.

14. Field Notebook Number MPI-105, Jameco Industries, Inc., On-site Reconnaissance, MPI, East Brunswick, NJ, October 10, 1991.

15. General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS). Landover, Maryland, 1986.

16. Letter from Warren Horst, Assistant Chief Fire Marshal, Department of Fire, Rescue, and Emergency Services, County of Suffolk, to Steven McNulty, MPI, Subject: Hazardous substances used and stored at Jameco Industries, Inc.

17. Long Island Community Right-to-Know, Follow-up Investigation, prepared for NYSDEC, prepared by Engineering-Science, Inc., May 1991.

18. Telecon Note: Conversation between Ben Bletch, Engineer, Town of Huntington, New York, and Steven McNulty, MPI, December 16, 1991. Subject: Dix Hills Water District, Plan of Water Distribution Map, February 1985.

19. Project Note: Suffolk County Water Authority well locations and service estimates.

20. Memorandum, Suffolk County Department of Health Services, from Alexander M. Santino, P.E., to Aldo Andreoli, P.E. April 8, 1988, Subject: Jameco Industries overflowing leaching pool incident leave March 29, 1988.

21. Letter from Robert Seyfarth, Senior Public Health Sanitarian, Suffolk County Department of Health Services, to Michael P. Lipman, Jameco Industries, Subject: Overflowing industrial pools on March 29, 1988.

22. Telecon Note: Conversation between Robert Seyfarth, Suffolk County Department of Health Services, and Steven McNulty, MPI, November 27, 1991.

23. Completion Report - Long Island Well, Suffolk County Water Authority - Municipal Supply Well located on Wyandanch Avenue, Wyandanch, NY. May 19, 1965.

24. United States Department of Agriculture, Soil Conservation Service, 1975, Soil Survey of Suffolk County, New York.

25. O.L. Franke and N.E. McClymonds, Summary of Hydrologic Situation on Long Island, New York, as a Guide to Water Management Alternatives, United States Government Printing Office, 1972.

26. State Pollutant Discharge Elimination System, Discharge Permit for Jameco Industries, July 12, 1991.

27. Letter from Robert L. Osar, Assistant Attorney General, State of New York - Department of Law, to David Grupp, NUS Corporation, Subject: Order of Consent Agreement for the occurrence of a site investigation at the Jameco Industries facility.

28. Letter from Jill S. Edwards, Geologist, AKRF, Inc., New York, New York, to Steven T. McNulty, MPI, Subject: Well logs in reference to monitoring wells drilled at the Jameco Industries facility.

29. Letter from Burrell Buffington, Significant Habitat Unit, NYSDEC, Latham, New York, to Steven McNulty, MPI, Subject: Sensitive environments surrounding the Jameco Industries site.

30. Letter from Kyle N. Williams, Conservation Biologist, NYSDEC - Stony Brook, New York, to Steven McNulty, MPI, Subject: Existing fisheries in the Carlls River, Long Island, New York.

31. United State Geological Survey Water Data Report NY-89-2, Water Resources Data, New York, Water Year, 1989.

32. Letter from Thomas J. Iwanejko, Senior Marine Resources Technician, NYSDEC - Stony Brook, New York, and Steven McNulty, MPI, Subject: Existing fisheries in the Great South Bay, Long Island, New York.

33. Phase I Investigation Report, Jameco Industries, Inc., prepared for NYSDEC by Woodward-Clyde Consultants, Inc., May 1987.

34. Telecon Note: Conversation between Paul George, NYSDEC, Stony Brook, New York, and Steven McNulty, MPI, December 9, 1991.

35. Project Note: NYTEST Environmental Summary Package and Analytical Data Pack. July 18, 1991.

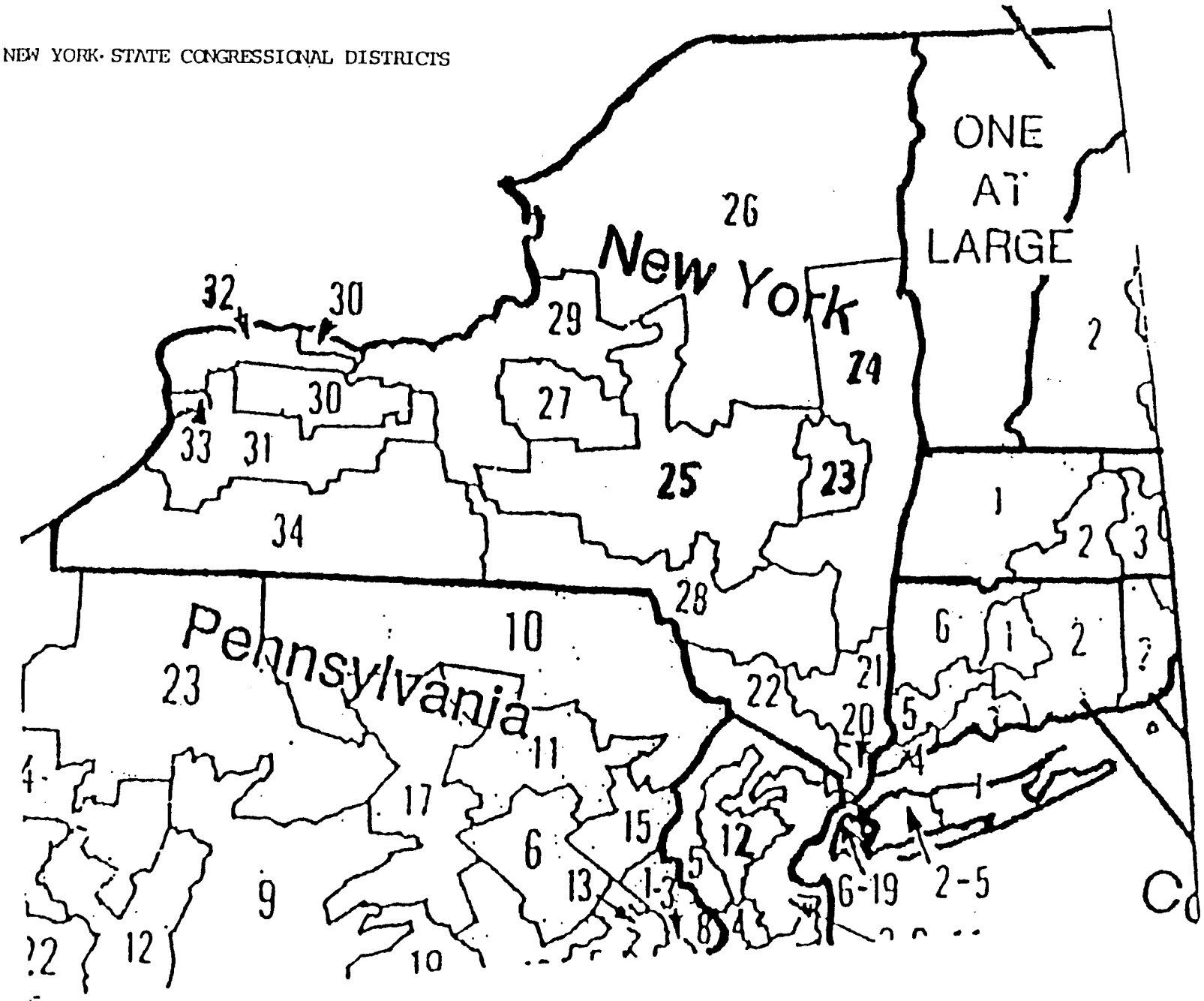
36. Project Note: Volumetric Techniques, Ltd. Summary Package and Analytical Data Pack. August 23, 1991.

REFERENCE NO. 1

EPA ID NO.	SITE NAME / STREET / CITY / COUNTY CODE AND NAME	STATE	ZIP CODE	DISTRICT CODE	OPERABLE UNIT	EVENT TYPE	EVENT LEGAL	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEGAL
NYD032270919	JACK THE STRIPPER 999 TROY SCHENECTADY RD. LATHAM 001 ALBANY	NY	12110		00	051			04/19/86	EPA (FUND)
NYD986534923	JACKSON FARM 2754 AQUEDUCT RD NISKAYUNA 093 SCHENECTADY	NY	12309		00	051 PA1 PA2	BLANK BLANK	05/20/91	02/01/86 05/31/90 06/18/91	EPA (FUND) STATE(FUND) STATE(FUND)
NYD982191380	JAGGER LANE SITE JAGGER LANE WESTHAMPTON 103 SUFFOLK	NY	11977		00	IR1 051 PA1	BLANK	05/03/85 05/04/87	09/12/86 03/20/87 05/11/87	EPA (FUND) EPA (FUND) EPA (FUND)
NYD002415404	JAMECO INDUSTRIES INC 248 WYANDANCH AVE WYANDANCH 103 SUFFOLK	NY	11798		00	051 PA1 PA2	BLANK BLANK	09/05/86	01/24/86 09/24/86 07/09/87	EPA (FUND) EPA (FUND) STATE(FUND)
NYD089103840	JAMES BURN INT'L DIV. OF STANDEX CO. 265 COTTAGE ST. POUGHKEEPSIE 027 DUTCHESS	NY	12602		00	051 PA1	NO FURTHER REMOL ACT PLND		06/06/89 09/27/89	EPA (FUND) EPA (FUND)
NYD980760205	JAMES FOX LANDFILL GUMANS ROAD ANGOLA 029 ERIE	NY	14006		00	051 PA1 PA2 SI1	BLANK BLANK BLANK	03/26/90 02/16/87	02/05/86 03/20/86 05/24/90 02/23/87	EPA (FUND) EPA (FUND) STATE(FUND) EPA (FUND)
NYD981034874	JAMES MEYGANT PROPERTY BULL ROAD NEW WINDSOR 071 ORANGE	NY	10992		00	051 PA1 SI1	BLANK BLANK	05/01/85	09/24/87 09/25/87 05/31/85	STATE(FUND) STATE(FUND) STATE(FUND)
NYD002233112	JARDINE BRONZE & AL 80 EAST GENESSEE ST BALDWINSVILLE 067 ONONDAGA	NY	13027		00	051 PA1 SI1	HIGH PRIORITY HRS SCORING NOT RECOMMEND	02/25/87 10/01/90	05/01/79 03/06/87 12/28/90	EPA (FUND) STATE(FUND) EPA (FUND)

REFERENCE NO. 2

NEW YORK· STATE CONGRESSIONAL DISTRICTS



NEW YORK

Congressional District Identification

Table 2. COUNTIES

County	Congressional district
ALBANY	23
ALLEGANY	34
BRONX	8,17-19
BROOME	28
CATTARAUGUS	31,34
CAYUGA	29
CHAUTAUQUA	34
CHEMUNG	34
CHENANGO	25
CLINTON	26
COLUMBIA	24
CORTLAND	25
DELAWARE	25,28
DUTCHESS	21,24
ERIE	31-33
ESSEX	26
FRANKLIN	26
FULTON	26
GENESEE	30
GREENE	29
HAMILTON	26
HERKIMER	26
JEFFERSON	26
KINGS	10-14
LEWIS	26
LIVINGSTON	30,31
MADISON	25,27
MONROE	29,30,32
MONTGOMERY	23,25
NASSAU	3-5,8
NEW YORK	15-17
NIAGARA	32
ONEIDA	25,29
ONONDAGA	27
ONTARIO	30,31
ORANGE	21,22
ORLEANS	32
OSWEGO	29
OTSEGO	25
PUTNAM	21
QUEENS	6-9
RENSSELAER	23,24
RICHMOND	11
ROCKLAND	22
ST. LAWRENCE	26
SARATOGA	24
SCHENECTADY	21
SCHOHARIE	20
SCHUYLER	34
SENECA	29
STEUBEN	31
SUFFOLK	1-3
SULLIVAN	22
TIOGA	23
TOMPKINS	25,29,34
ULSTER	22
WARREN	24
WASHINGTON	24
WAYNE	29
WESTCHESTER	17-22
WYOMING	31
YATES	30

Table 3. DISTRICTS AND COUNTIES

CONGRESSIONAL DISTRICT 1

SUFFOLK - PART

CONGRESSIONAL DISTRICT 2

SUFFOLK - PART

CONGRESSIONAL DISTRICT 3

NASSAU - PART
SUFFOLK - PART

CONGRESSIONAL DISTRICT 4

NASSAU - PART

CONGRESSIONAL DISTRICT 5

NASSAU - PART

CONGRESSIONAL DISTRICT 6

QUEENS - PART

CONGRESSIONAL DISTRICT 7

QUEENS - PART

CONGRESSIONAL DISTRICT 8

BRONX - PART
NASSAU - PART
QUEENS - PART

CONGRESSIONAL DISTRICT 9

QUEENS - PART

CONGRESSIONAL DISTRICT 10

KINGS - PART

CONGRESSIONAL DISTRICT 11

KINGS - PART

CONGRESSIONAL DISTRICT 12

KINGS - PART

CONGRESSIONAL DISTRICT 13

KINGS - PART

CONGRESSIONAL DISTRICT 14

KINGS - PART
RICHMOND

CONGRESSIONAL DISTRICT 15

NEW YORK - PART

CONGRESSIONAL DISTRICT 16

NEW YORK - PART

CONGRESSIONAL DISTRICT 17

BRONX - PART
NEW YORK - PART

CONGRESSIONAL DISTRICT 18

BRONX - PART

CONGRESSIONAL DISTRICT 19

BRONX - PART
WESTCHESTER - PART

CONGRESSIONAL DISTRICT 20

WESTCHESTER - PART

CONGRESSIONAL DISTRICT 21

DUTCHESS - PART
ORANGE - PART
PUTNAM
WESTCHESTER - PART

CONGRESSIONAL DISTRICT 22

ORANGE - PART
ROCKLAND
SULLIVAN - PART
WESTCHESTER - PART

CONGRESSIONAL DISTRICT 23

ALBANY
FULTON - PART
RENSSELAER - PART
SCHENECTADY

CONGRESSIONAL DISTRICT 24

COLUMBIA
DUTCHESS - PART
GREENE
RENSSELAER - PART
SARATOGA
WARREN
WASHINGTON

CONGRESSIONAL DISTRICT 25

CHENANGO
CORTLAND
DELAWARE - PART
MADISON - PART
MONTGOMERY - PART
ONEIDA - PART
OTSEGO
SCHOHARIE
TOMPKINS - PART

CONGRESSIONAL DISTRICT 26

CLINTON
ESSEX
FRANKLIN
FULTON
HAMILTON
HERKIMER
JEFFERSON
LEWIS
ST. LAWRENCE

CONGRESSIONAL DISTRICT 27

MADISON - PART
ONONDAGA

CONGRESSIONAL DISTRICT 28

BROOME
DELAWARE - PART
SULLIVAN - PART
TIOGA
TOMPKINS - PART
ULSTER

CONGRESSIONAL DISTRICT 29

CAYUGA
MONROE - PART
ONEIDA - PART
OSWEGO
SENECA
WAYNE

CONGRESSIONAL DISTRICT 30

GENESEE
LIVINGSTON - PART
MONROE - PART
ONTARIO - PART

CONGRESSIONAL DISTRICT 31

CATTARAUGUS - PART
ERIE - PART
LIVINGSTON - PART
ONTARIO - PART
WYOMING

CONGRESSIONAL DISTRICT 32

ERIE - PART
MONROE - PART
NIAGARA
ORLEANS

CONGRESSIONAL DISTRICT 33

ERIE - PART

CONGRESSIONAL DISTRICT 34

ALLEGANY
CATTARAUGUS - PART
CHAUTAUQUA
CHEMUNG
SCHUYLER
STEUBEN
TOMPKINS - PART
YATES

NEW YORK

Congressional District Identification

Table 1. MUNICIPALITIES

Municipality	County	Congressional district
ADAMS VILLAGE	JEFFERSON	26
ADDISON VILLAGE	STEUBEN	34
AFTON VILLAGE	CHENANGO	25
AKRON VILLAGE	ERIE	31
ALBANY CITY	ALBANY	23
ALBION VILLAGE	ORLEANS	32
ALDEN VILLAGE	ERIE	31
ALEXANDER VILLAGE	GENESEE	30
ALEXANDRIA BAY VILLAGE	JEFFERSON	26
ALFRED VILLAGE	ALLEGANY	34
ALLEGANY VILLAGE	CATTARAUGUS	34
ALMOND VILLAGE	ALLEGANY	34
	STEUBEN	34
ALTAMONT VILLAGE	ALBANY	23
ALTMAR VILLAGE	OSWEGO	29
AMES VILLAGE	MONTGOMERY	25
AMITYVILLE VILLAGE	SUFFOLK	2
AMSTERDAM CITY	MONTGOMERY	23
ANDES VILLAGE	DELAWARE	28
ANDOVER VILLAGE	ALLEGANY	34
ANGELICA VILLAGE	ALLEGANY	34
ANGOLA VILLAGE	ERIE	31
ANTWERP VILLAGE	JEFFERSON	26
ARCADE VILLAGE	WYOMING	31
ARDSLEY VILLAGE	WESTCHESTER	22
ARGYLE VILLAGE	WASHINGTON	24
ARKPORT VILLAGE	STEUBEN	34
ASHAROKEN VILLAGE	SUFFOLK	1
ATHENS VILLAGE	GREENE	29
ATLANTIC BEACH VILLAGE	NASSAU	5
ATTICA VILLAGE	GENESEE	30
	WYOMING	31
AUBURN CITY	CAYUGA	29
AURORA VILLAGE	CAYUGA	29
AVOCA VILLAGE	STEUBEN	34
AVON VILLAGE	LIVINGSTON	30
BABYLON VILLAGE	SUFFOLK	2
AIRMONT VILLAGE	ROCKLAND	27
BALDWINSVILLE VILLAGE	ONONDAGA	27
BALLSTON SPA VILLAGE	SARATOGA	24
BARKER VILLAGE	NIAGARA	32
BARNEVELD VILLAGE	ONEIDA	25
BATAVIA CITY	GENESEE	30
BATH VILLAGE	STEUBEN	34
BAXTER ESTATES VILLAGE	NASSAU	3
BAYVILLE VILLAGE	NASSAU	3
BEACON CITY	DUTCHESS	21
BELLEROSE VILLAGE	NASSAU	5
BELLE TERRE VILLAGE	SUFFOLK	1
BELLPORT VILLAGE	SUFFOLK	1
BELMONT VILLAGE	ALLEGANY	34
BEMUS POINT VILLAGE	CHAUTAUQUA	34
BERGEN VILLAGE	GENESEE	30
BINGHAMTON CITY	BROOME	28
BLACK RIVER VILLAGE	JEFFERSON	26
BLASDELL VILLAGE	ERIE	31
BLOOMINGBURG VILLAGE	SULLIVAN	22
BLOOMINGDALE VILLAGE	ESSEX	26
BOLIVAR VILLAGE	ALLEGANY	34
BOONVILLE VILLAGE	ONEIDA	25
BREWSTER VILLAGE	PUTNAM	21
BRIARCLIFF MANOR VILLAGE	WESTCHESTER	20
BRIDGEWATER VILLAGE	ONEIDA	25
BRIGHTWATERS VILLAGE	SUFFOLK	2
BROADALBIN VILLAGE	FULTON	26
BROCKPORT VILLAGE	MONROE	30,32
BROCTON VILLAGE	CHAUTAUQUA	34
BRONXVILLE VILLAGE	WESTCHESTER	20
BROOKVILLE VILLAGE	NASSAU	3
BROWNVILLE VILLAGE	JEFFERSON	26
BRUSHTON VILLAGE	FRANKLIN	26
BUCHANAN VILLAGE	WESTCHESTER	21
BUFFALO CITY	ERIE	32,33
BURDETT VILLAGE	SCHUYLER	34
BURKE VILLAGE	FRANKLIN	26
CALEDONIA VILLAGE	LIVINGSTON	30
CAMBRIDGE VILLAGE	WASHINGTON	24
CAMDEN VILLAGE	ONEIDA	29
CAMILLUS VILLAGE	ONONDAGA	27
CANAJOHARIE VILLAGE	MONTGOMERY	25
CANANDAIGUA CITY	ONTARIO	31
CANASERAGA VILLAGE	ALLEGANY	34
CANASTOTA VILLAGE	MADISON	27
CANDOR VILLAGE	TIOGA	58
CANISTEO VILLAGE	STEUBEN	34
CANTON VILLAGE	ST. LAWRENCE	48
CAPE VINCENT VILLAGE	JEFFERSON	26
CARTHAGE VILLAGE	JEFFERSON	26
CASSADAGA VILLAGE	CHAUTAUQUA	34
CASTILE VILLAGE	WYOMING	31
CASTLETON-ON-HUDSON VILLAGE	RENSSELAER	20
CASTORLAND VILLAGE	LEWIS	26
CATO VILLAGE	CAYUGA	29
CATSKILL VILLAGE	GREENE	20
CATTARAUGUS VILLAGE	CATTARAUGUS	34
CAYUGA VILLAGE	CAYUGA	29
CAYUGA HEIGHTS VILLAGE	TOMPKINS	23
CAZENOVIA VILLAGE	MADISON	27
CEDARHURST VILLAGE	NASSAU	5
CELORON VILLAGE	CHAUTAUQUA	34
CENTRAL SQUARE VILLAGE	OSWEGO	29
CENTRE ISLAND VILLAGE	NASSAU	3
CHAMPLAIN VILLAGE	CLINTON	21
CHATEAUGAY VILLAGE	FRANKLIN	26
CHATHAM VILLAGE	COLUMBIA	20
CHAUMONT VILLAGE	JEFFERSON	26
CHERRY CREEK VILLAGE	CHAUTAUQUA	34
CHERRY VALLEY VILLAGE	OTSEGO	25
CHESTER VILLAGE	ORANGE	22
CHITTENANGO VILLAGE	MADISON	27
CHURCHVILLE VILLAGE	MONROE	30
CLAYTON VILLAGE	JEFFERSON	26
CLAYVILLE VILLAGE	ONEIDA	25
CLEVELAND VILLAGE	OSWEGO	29
CLIFTON SPRINGS VILLAGE	ONTARIO	30,31
CLINTON VILLAGE	ONEIDA	25
CLYDE VILLAGE	WAYNE	29
COBLESKILL VILLAGE	SCHOHARIE	25
COHOCTON VILLAGE	STEUBEN	34
COHOES CITY	ALBANY	23
COLD BROOK VILLAGE	HERKIMER	20
COLD SPRING VILLAGE	PUTNAM	21
COLONIE VILLAGE	ALBANY	23
CONSTABLEVILLE VILLAGE	LEWIS	26
COOPERSTOWN VILLAGE	OTSEGO	25
COPENHAGEN VILLAGE	LEWIS	26
CORFU VILLAGE	GENESEE	30
CORINTH VILLAGE	SARATOGA	24
CORNING CITY	STEUBEN	34
CORNWALL ON HUDSON VILLAGE	ORANGE	21
CORTLAND CITY	CORTLAND	25
COVE NECK VILLAGE	NASSAU	3
COXSACKIE VILLAGE	GREENE	29
CROGHAN VILLAGE	LEWIS	26
CROTON-ON-HUDSON VILLAGE	WESTCHESTER	21
CUBA VILLAGE	ALLEGANY	34
DANNEMORA VILLAGE	CLINTON	26
DANSVILLE VILLAGE	LIVINGSTON	31
DEFERIET VILLAGE	JEFFERSON	26
DELANSON VILLAGE	SCHENECTADY	23
DELEVAN VILLAGE	CATTARAUGUS	31
DELMI VILLAGE	DELAWARE	25
DEPEW VILLAGE	ERIE	33
DEPOSIT VILLAGE	BROOME	28
	DELAWARE	28
DERING HARBOR VILLAGE	SUFFOLK	1
DE RUYTER VILLAGE	MADISON	27
DEXTER VILLAGE	JEFFERSON	26
DOBBS FERRY VILLAGE	WESTCHESTER	22
DOLGEVILLE VILLAGE	FULTON	26
	HERKIMER	26
DRESDEN VILLAGE	YATES	34
DRYDEN VILLAGE	TOMPKINS	25
DUNDEE VILLAGE	YATES	34
DUNKIRK CITY	CHAUTAUQUA	34
EARLVILLE VILLAGE	CHENANGO	25
	MADISON	27
EAST AURORA VILLAGE	ERIE	31
EAST BLOOMFIELD VILLAGE	ONTARIO	30
EAST HAMPTON VILLAGE	SUFFOLK	1

REFERENCE NO. 3

12-14-90
Vol. 55 No. 241

Federal Register

Friday
December 14, 1990

Book 2

United States
Government
Printing Office
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OF DOCUMENTS
Washington, DC 20402

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SECOND CLASS NEWSPAPER

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(ISSN 0097-6326)

TABLE 3-6.—HYDRAULIC CONDUCTIVITY OF GEOLOGIC MATERIALS

Type of material	Assigned hydraulic conductivity [a] (cm/sec)
Clay; low permeability till (compact unfractured till); shale; unfractured metamorphic and igneous rocks	10^{-6}
Silt; loesses; silty clays; sediments that are predominantly silts; moderately permeable till (fine-grained, unconsolidated till, or compact till with some fractures); low permeability limestones and dolomites (no karst); low permeability sandstone; low permeability fractured igneous and metamorphic rocks	10^{-5}
Sands; sandy silts; sediments that are predominantly sand; highly permeable till (coarse-grained, unconsolidated or compact and highly fractured); peat; moderately permeable limestones and dolomites (no karst); moderately permeable sandstone; moderately permeable fractured igneous and metamorphic rocks	10^{-4}
Gravel; clean sand; highly permeable fractured igneous and metamorphic rocks; permeable basalt; karst limestones and dolomites	10^{-3}

[a] Do not round to nearest integer.

TABLE 3-7.—TRAVEL TIME FACTOR VALUES [a]

Hydraulic conductivity (cm/sec)	Thickness of lowest hydraulic conductivity layer(s)[b] (feet)			
	Greater than 3 to 5	Greater than 5 to 100	Greater than 100 to 500	Greater than 500
Greater than or equal to 10^{-3}	35	35	35	25
Less than 10^{-3} to 10^{-5}	35	25	15	15
Less than 10^{-5} to 10^{-7}	15	15	5	5
Less than 10^{-7}	5	5	1	1

[a] If depth to aquifer is 10 feet or less or if, for the interval being evaluated, all layers that underlie a portion of the sources at the site are karst, assign a value of 35.

[b] Consider only layers at least 3 feet thick. Do not consider layers or portions of layers within the first 10 feet of the depth to the aquifer.

Determine travel time only at locations within 2 miles of the sources at the site, except: if observed ground water contamination attributable to sources at the site extends more than 2 miles beyond these sources, use any location within the limits of this observed ground water contamination when evaluating the travel time factor for any aquifer that does not have an observed release. If the necessary subsurface geologic information is available at multiple locations, evaluate the travel time factor at each location. Use the location having the highest travel time factor value to assign the factor value for the aquifer. Enter this value in Table 3-1.

3.1.2.5 *Calculation of potential to release factor value.* Sum the factor values for net precipitation, depth to aquifer, and travel time, and multiply this sum by the factor value for containment. Assign this product as the potential to release factor value for the aquifer. Enter this value in Table 3-1.

3.1.3 *Calculation of likelihood of release factor category value.* If an observed release is established for an aquifer, assign the observed release factor value of 550 as the likelihood of release factor category value for that aquifer. Otherwise, assign the potential to release factor value for that aquifer as the likelihood of release value. Enter the value assigned in Table 3-1.

3.2 *Waste characteristics.* Evaluate the waste characteristics factor category for an aquifer based on two factors: toxicity/mobility and hazardous waste quantity. Evaluate only those hazardous substances available to migrate from the sources at the site to ground water. Such hazardous substances include:

- Hazardous substances that meet the criteria for an observed release to ground water.
- All hazardous substances associated with a source that has a ground water containment factor value greater than 0 (see sections 2.2.2, 2.2.3, and 3.1.2.1).

3.2.1 *Toxicity/mobility.* For each hazardous substance, assign a toxicity factor value, a mobility factor value, and a combined toxicity/mobility factor value as specified in the following sections. Select the toxicity/mobility factor value for the aquifer being evaluated as specified in section 3.2.1.3.

3.2.1.1 *Toxicity.* Assign a toxicity factor value to each hazardous substance as specified in Section 2.4.1.1.

3.2.1.2 *Mobility.* Assign a mobility factor value to each hazardous substance for the aquifer being evaluated as follows:

- For any hazardous substance that meets the criteria for an observed release by chemical analysis to one or more aquifers underlying the sources at the site, regardless of the aquifer being evaluated, assign a mobility factor value of 1.
- For any hazardous substance that does not meet the criteria for an observed release by chemical analysis to at least one of the aquifers, assign that hazardous substance a mobility factor value from Table 3-8 for the aquifer being evaluated, based on its water solubility and distribution coefficient (K_d).
- If the hazardous substance cannot be assigned a mobility factor value because data on its water solubility or distribution coefficient are not available, use other hazardous substances for which information is available in evaluating the pathway.

TABLE 3-8.—GROUND WATER MOBILITY FACTOR VALUES [a]

Water solubility (mg/l)	Distribution coefficient (K_d) (ml/g)			
	Karst [c]	≤10	>10 to 1,000	>1,000
Present as liquid [b]	1	1	0.01	0.0001
Greater than 100	1	1	0.01	0.0001
Greater than 1 to 100	0.2	0.2	0.002	2×10^{-4}
Greater than 0.01 to 1	0.002	0.002	2×10^{-5}	2×10^{-7}
Less than or equal to 0.01	2×10^{-5}	2×10^{-5}	2×10^{-7}	2×10^{-9}

[a] Do not round to nearest integer.

[b] Use if the hazardous substance is present or deposited as a liquid.

[c] Use if the entire interval from the source to the aquifer being evaluated is karst.

REFERENCE NO. 4

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD003415404

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Jameco Industries, Inc.	248 Wyandanch Avenue				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Wyandanch	NY	11798	Suffolk		

09 COORDINATES LATITUDE	LONGITUDE
40 44 31.0	073 21 37.0

10 DIRECTIONS TO SITE (Starting from nearest public road)
East on Southern State Parkway, exit NE onto Straight Path, continue for almost one mile and turn right (east) onto Wyandanch Avenue. Site is located approximately 0.5 mile on right.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
Jameco Industries, Inc.	248 Wyandanch Avenue			
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**	
Wyandanch	NY	11798	(516) 643-5300	

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)			
Israel Gajer, Vice President	same as above			
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**	
			( )	

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☐ YES ☒ NO DATE 1/8/85 (MONTH DAY YEAR)
On-site inspection refused

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☒ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): Woodward-Clyde Consultants, Inc.

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1964 (BEGINNING YEAR) | present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Substances of primary concern include heavy metals and volatile organic compounds.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Potential ground-water contamination and resultant public health threat for population using the water.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER
Jim Finn	Suffolk County Dept. of Health Services		(516) 451-4633
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
L. Wade		Woodward-Clyde Consultants Inc.	(212) 926-2875	2/17/86 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD 002415484

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A SOLID
- ☐ B POWDER, FINES
- ☒ C SLUDGE
- ☐ D OTHER (Specify)
- ☐ E SLURRY
- ☒ F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown
CUBIC YARDS: Unknown
NO OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F INFECTIOUS
- ☐ G FLAMMABLE
- ☐ H. IGNITABLE
- ☒ I. HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

III. WASTE TYPE

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

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE, DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Chromium (total, hexavalent)				
	Nickel				
	Zinc				
	Iron				
SOL	tetrachloroethylene				
	trichloroethylene				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

NYS Department of Law Files (NYSDOL)
Suffolk County Department of Health Services Files (SCDHS)
Bay Shore West, NY Quadrangle, USGS, 1979 (USGS)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD003415404

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000 within 3-mile radius
02 [X] OBSERVED (DATE _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Ground-water contamination exists in the immediate site area (1976, 1979, 1981, 1984). It has been reported that the on-site production well at Jameco is contaminated with volatile organics. Analytical data is available regarding levels of contamination in Jamaica discharged to on-site lagoons.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Belmont Lake is approximately 0.5 mile from the Jameco site.

01 [X] C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE 9-20-79) [ ] POTENTIAL [X] ALLEGED
04 NARRATIVE DESCRIPTION

During an inspection conducted by the SCDHS, a plume of yellow gas was observed from a stack at the Jameco facility.

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No Information Available (NIA)

01 [ ] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

NIA

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 [X] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION 1974, 1981, 1984

On-site soil contamination observed on more than one occasion. (Chemical analysis)

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000 within 3-mile radius.
02 [ ] OBSERVED (DATE _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Contaminated wastewater has been discharged to onsite leaching pools. Contamination of private wells is known to exist in site area.

01 [ ] H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

NIA

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Greater than 100,000 people depend on ground water as a sole source of potable supply within a 3-mile radius of site.

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD002415404

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

N/A

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include name(s) of species)
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

N/A

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☒ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Overflowing industrial waste leaching pools (1979); sludge sp. 11 (1975)

01 ☒ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED

It has been alleged that on-site leaching pools overflowed on occasion to neighboring property. Adequate documentation for this allegation is lacking.

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

N/A

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION
02 ☒ OBSERVED (DATE: 1979) ☐ POTENTIAL ☐ ALLEGED

Hazardous wastes discharged to leaching pools on site.

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

Potential for ground water and surface water contamination.

III. TOTAL POPULATION POTENTIALLY AFFECTED: Over 100,000 people reside within a 3-mile radius of site

IV. COMMENTS

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

NYSDOL Files
NCDHS Files

EPA FORM 2070-12 (7-81)

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

EPA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD032 [illegible]

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Jameco Industries, Inc.	248 Wyandanch Avenue				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Wyandanch	NY	11798	Suffolk		

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
40 44 31.0	073 21 21.0	☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
OFF-SITE 1, 8, 85 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1964 (BEGINNING YEAR) | Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply) Off-site inspection (On-site inspection refused).

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)

☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Woodward-Clyde Consultants Inc. (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
C. Motta	Staff Geologist	Woodward-Clyde Consultants	(212) 926-2878

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
			( )
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☐ PERMISSION ☐ WARRANT		

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
J. Pim	Suffolk County Dept. of Health Services	(516) 451-4633

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
L. Wade		Woodward-Clyde Consultants Inc.	(212) 926-2878	2, 17, 86 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD(1)12 5H14

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☒ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: unknown
- CUBIC YARDS: unknown
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☒ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

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

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Chromium (total hexavalent)				
	Nickel				
	Zinc				
	Iron				
SOL	tetrachloroethylene				
	trichloroethylene				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

NYS Department of Law (NYS DOL) Files
Suffolk County Department of Health Services (SCDHS) Files
Bay Shore West, NY Quadrangle, USGS, 1979 (USGS)

EPA FORM 2070-13(7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	NYD 00214464

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000 w/in 3 mile radius — 04 NARRATIVE DESCRIPTION

Ground-water contamination exists in the immediate site area (1976, 1979, 1981, 1984) It has been reported that the on-site production well at Jamco is contaminated with volatile organics. Analytical data is available regarding level of contamination in wastewater discharged to on-site leaching pools.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Belmont Lake is approximately 0.5 mile from the Jamco site.

01 ☒ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

During an inspection conducted by the SCDHS, a plume of yellow gas was observed from a stack at the Jamco facility.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

No Information Available (NIA)

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

NIA

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION 1974, 1981, 1984

On-site soil contamination observed (chemical analytical data) on more than one occasion.

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000 w/in 3-mile radius — 04 NARRATIVE DESCRIPTION

Contaminated wastewater has been discharged to on-site leaching pools. Contamination of private wells is known to exist in site area.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

NIA

01 ☒ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Greater than 100,000 people depend on ground water as a sole source of potable supply within a 3-mile radius of site.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: NYD980761744

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids/Leaking drums) — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

Overflowing industrial waste leaching pools (1979); sludge spill (1975).

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

It was alleged that on-site leaching pools overflowed on occasion to neighboring property. Adequate documentation for this allegation is lacking.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☒ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☒ OBSERVED (DATE 1979) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Hazardous wastes discharged to leaching pools on site.

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

Inadequate drum storage area; improper storage of chrome plating solution outside of building (1979); on-site sludge spill; allegations of overflow of leaching pools on site; and violations of SPDES permit.

III. TOTAL POPULATION POTENTIALLY AFFECTED: Over 100,000 people reside within a 3-mile radius of site.

IV. COMMENTS

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

NYSDOL Files
SCDHS Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD 980541540

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify) SPDES	NY-0051540			
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☒ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☒ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE

~ 6 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

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

On-site lagoons without proper lining.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Fence around site.

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

NYSDOL Files

SCDHS Files

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: NY0002345410

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☒	A. ☒	B. ☐	C. ☒	A. < 0.05 (mi)
NON-COMMUNITY	C. ☐	D. ☒	D. ☒	E. ☐	F. ☐	B. < 0.05 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: Greater than 100,000 within 3 mile radius

03 DISTANCE TO NEAREST DRINKING WATER WELL: < 0.05 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
Less than 10 (ft)	E - SE	between 5 - 10 (ft)	_____ (gpd)	☒ YES ☐ NO

09 DESCRIPTION OF WELLS (including useage, depth, and location relative to population and buildings)
On-site production and diffusion well
SCWA deep water supply wells within 200 - 300 feet of site
Private wells.

10 RECHARGE AREA	COMMENTS	11 DISCHARGE AREA	COMMENTS
☒ YES ☐ NO	Belmont Lake in direction of ground-water flow.	☒ YES ☐ NO	Discharge area believed to be approximately 0.5 mile from site.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Carlls River	☐	< 0.5 (mi)
Belmont Lake	☐	~ 0.5 (mi)
	☐	- (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	FOUR (4) ~~THREE (3)~~ MILES OF SITE
A. 13794 NO OF PERSONS	B. 61985 NO OF PERSONS	C. 183,635 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: ~ .03 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
> 17,490	~ .03 (mi)

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

The site is located within a densely populated area of Suffolk County. Few industries exist in the site area. Belmont Lake State Park is less than 0.5 mile from Jameco Industries, Inc.

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: NYD002415404

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☒ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
~1350 (ft)	Possibly at least 5-10 (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
15 (in)	3 (in)	<1 %	S-SE	<1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. N/A (mi)	B. < 0.2 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
N/A (mi)
ENDANGERED SPECIES _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. <.05 (mi)	B. ~.02 (mi) Adjacent-residential	C. N/A (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is relatively flat. Site is at higher elevation than Belmont Lake State Park. Site slope is towards Belmont Lake.

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

NYSDOL Files
SCDHS Files
USGS, 1979
Donnelley Marketing (population data)
Jensen and Soren, 1974
NYSDEC
NYS Dept. of Agriculture and Markets
HRS Users Manual

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD002047580

II. SAMPLES TAKEN

SAMPLE TYPE		01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	X		See Appendix B of this Report	
SURFACE WATER				
WASTE				
AIR				
RUNOFF				
SPILL				
SOIL	X		See Appendix B	
VEGETATION				
OTHER	X		See Appendix B	

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	N/A

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☐ AERIAL

02 IN CUSTODY OF _____ (Name of organization or individual)

03 MAPS ☐ YES ☐ NO

04 LOCATION OF MAPS _____

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

The Suffolk County Department of Health Services and the NYS Department of Law has information regarding sampling and analysis for the Jamaica site.

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

NYS Department of Law Files
SCDHS Files

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD 002154484

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Tampro Industries, Inc.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
548 Wyandanch Avenue	

05 CITY	06 STATE	07 ZIP CODE
Wyandanch	NY	11798

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

06 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

06 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

06 CITY	06 STATE	07 ZIP CODE

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

SCDHS Files
NYS DOL Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD 002415414

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Israel Gojer (Vice President)	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
248 Wyandanch Avenue	

05 CITY	06 STATE	07 ZIP CODE
Wyandanch	NY	11798

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

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

SCDHS Files

NYS DOL Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	NYD980744484

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Jamaica Industries, Inc.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
248 Wyandanch Avenue	

05 CITY	06 STATE	07 ZIP CODE
Wyandanch	NY	11798

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

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

NYS Department of Law Files

SCDHS Files

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: NYD002415474

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ E. CONTAMINATED SOIL REMOVED — 02 DATE April 1975 — 03 AGENCY _____
04 DESCRIPTION In 1975 sludge from on-site lagoons was reportedly excavated and hauled off site.

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA FORM 2070-13 (7-81)

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	NYD[illegible]

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ Z. AREA EVACUATED — 02 DATE April 1975 — 03 AGENCY _____
04 DESCRIPTION Lagoon area excavated and sludge reportedly hauled off site.

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

NYS Department of Law Files
SCDHS Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	[illegible]

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

Complaint, 1981

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

NYS Department of Law Files

EPA FORM 2070-13 (7-81)

REFERENCE NO. 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
EDISON, NEW JERSEY 08837

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

Site Name: Jameco Industries

Address: 248 Wyandanch Avenue, Wyandanch, NY 11798

County: Suffolk

EPA I.D. No.: NYD002415404

Summary:

Jameco Industries is an active producer of fittings, traps, tubes, and other plumbing fixtures. Jameco electroplates, cleans, and finishes metal parts thus producing various hazardous wastes. The hazardous wastes Jameco produces include spent plating and solvent solutions, process wastewater, and waste oils. Process wastewater is treated by an in-house system before being discharged to the groundwater. Other wastes are manifested to a hazardous waste scavenger.

The potential for soil and groundwater contamination exists from two unlined lagoons present behind the Jameco site prior to 1974 that were used for the disposal of heavy metal sludges and/or wastewater. It is not known exactly what kind of wastes were disposed of in this lagoon. According to Jameco, the lagoons were dug out in 1974 and their contents disposed of in an undisclosed location. Also, analyses performed in 1985 on the wastewater treatment effluent discharged to the groundwater revealed concentrations of 1,1,2 trichloroethylene and tetrachloroethylene.

The major potential for hazard is groundwater and soil contamination.

Priority for Inspection:
High ___
Medium X
Low ___
None ___

Recommendations:

Because of Suffolk County's dependency on groundwater for a drinking supply and the proximity of a Suffolk County Water Authority well field and pumping station (approximately 1000 feet to the west), the site is given a medium priority.

Sampling areas should include soil from the former lagoon area and nearby wells. Samples should be analyzed for metals and volatile organics.

Prepared by: Carol Price, Environmental Scientist
U.S. EPA, Environmental Services Division

Date: August 28, 1986

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
C1 STATE: NY | C2 SITE NUMBER: D002415404

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Jameco Industries	248 Wyandanch Avenue				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Wyandanch	NY	11798	Suffolk	103	1
09 COORDINATES LATITUDE: 40 44 28.__	LONGITUDE: 73 21 19.__				

10 DIRECTIONS TO SITE (Starting from nearest public road)
Take the Southern State Parkway to exit 37. Take Mount Avenue to Wyandanch Avenue and make a right. Continue along Wyandanch Avenue to 248.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Mr. Michael Lippman	248 Wyandanch Avenue		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Wyandanch	NY	11798	(516) 643-5300
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Israel Gajur	248 Wyandanch Avenue		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Wyandanch	NY	11798	(516) 643-5300

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☒ A. RCRA 3001 DATE RECEIVED: 8/18/80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 8/16/83 (MONTH DAY YEAR)
3/5/86
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
~~Unknown~~ (BEGINNING YEAR) | ~~Current~~ (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
The facility generates spent solvents, corrosive liquids, amd sludge from the treatment of wastewater from metal plating baths. The facility may also have generated spent metal plating baths containing cyanide at one time.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Two unlined lagoons were used for wastewater disposal prior to 1974. These were removed but groundwater and soil contamination may remain. Solvents have also been found in the effluent being discharged to the groundwater. Suffolk County is highly dependent on groundwater as a drinking water supply.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Diana Messina	EPA/ESD/SMB/Superfund Support Section			(201) 321-6776
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Carol Price	EPA	ESD/SMB/Super.	(201) 321-6714	8/29/86 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002415404

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☒ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS _____
- CUBIC YARDS _____
- NO. OF DRUMS 30

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☒ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	7000	Gallons	Wastewater treatment sludge
OLW	OILY WASTE			
SOL	SOLVENTS	1650	Gallons	Spent solvents from parts cleaning
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	Trace		Possible from plating paths
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Trace		From wastewater prior to 1974

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Nickel		Wastewater/lagoon	Unknown	N/A
MES	Hexavalent Chromium		"	"	"
MES	Chromium		"	"	"
IOC	Cyanide		"	"	"
SOL	1,1,2-trichloroethylene		"	"	"
SOL	Tetrachloroethylene		"	"	"

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	See attached list		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

USGS Geological Survey Quadrangle Maps, Bay Shore West Quad.
USEPA RCRA 3001 Notification
USEPA RCRA Permits files
New York State Dept. of Env. Conservation files (Region 1 & Albany)
Suffolk County Dept. of Health files

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D002415404

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Not known — 04 NARRATIVE DESCRIPTION
Heavy metals and possibly cyanide may have leached from the lagoons located on site prior to 1974. Solvents have been found in the effluent being discharged into the groundwater.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 179,363 — 04 NARRATIVE DESCRIPTION
Ther is a small potential. the site is approximately half a mile from Carlls Creek and Belmont lake.

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
There is a potential for air contamination from chlorinated solvents used at the site.

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [ ] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: .25 (ACRES) — 04 NARRATIVE DESCRIPTION
Heavy metals, solvents, and possibly cyanide may have contaminated soil around and underneath the former lagoons. Solvents have been found in the effluent being discharged to the groundwater. Residual metals contamination may remain.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Not known — 04 NARRATIVE DESCRIPTION
Suffolk County depends on groundwater as a drinking water supply. A Suffolk County well field and pumping station is located 1000 feet west of the Jameco site. Heavy metals, solvents, and possibly cyanide may be present in the groundwater.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [X] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 179,363 — 04 NARRATIVE DESCRIPTION
Surface and groundwater contamination may affect the 179,363 people who live within four miles of the site.

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D002415404

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names(s) of species)

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

F

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for damage to off-site wells exists.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The potential exists. No record of where the sludge dug out of the lagoons in 1974 was disposed of was found.

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: 179,363 people live within 4 miles of the site

IV. COMMENTS

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

(cont.)
Suffolk County Water Authority Distribution Maps

EPA FORM 2070-12 (7-81)

hm 83-14

JAMECO INDUSTRIES INC.
WYANDANCH, NEW YORK

TABLE 1

CHEMICAL INVENTORY LISTING - PLATING CHEMICALS

	DESCRIPTION	CONTAINER SIZE	MONTHLY USE
1.	Soak Cleaner #309	450 lb. Drum - Dry	750 lbs.
2.	Electro Cleaner #390	450 lb. Drum - Dry	500 lbs.
3.	Buffing Compund Remover #815	450 lb. Drum - Dry	1500 lbs.
4.	Acid Salts #977	450 lb. Drum - Dry	1000 lbs.
5.	Nickel Sulfate	50 gal. Drum - Liquid	100 gal.
6.	Nickel Chloride	50 gal. Drum - Liquid	100 gal.
7.	BCR Water Displacement	55 gal. Drum - Liquid	110 gal.
8.	Muriatic Acid	13 gal. Carboy - Liquid	104 gal.
9.	Bright Dip Solution 50/50 Nitric/Sulphuric	13 gal. Carboy -Liquid	120 gal.
10.	Trichlorethylene	475 gal. Tank - Liquid	400 gal.
11.	Brass Descaler #979	13 gal. Carboy - Liquid	130 gal.
12.	Nickel Brightener ZD-100	1 gal. Container - Liquid	50 gal.
13.	Nickel Brightener ZD-220	1 gal. Container - Liquid	80 gal.
14.	AntiPitting (NPA)	1 gal. Container - Liquid	50 gal.
15.	Wetting Agent #62-A	1 gal. Container - Liquid	50 gal.
16.	Chromic Acid	100 lb. Drum - Dry	1000 lbs.
17.	Sulphuric Acid	5 gal. Carboy - Liquid	10 gal.
18.	Filter Bestos	50 lb. Carton - Dry	50 lbs.
19.	Filter Aid	50 lb. Bag - Dry	50 lbs.
20.	Activated Carbon	50 lb. Bag - Dry	50 lbs.
21.	Boric Acid	100 lb. Bag - Dry	250 lbs.
22.	Rochelle Salts	100 lb. Bag - Dry	75 lbs.

JAMECO INDUSTRIES INC.
WYANDANCH, NEW YORK

TABLE 2

CHEMICAL INVENTORY LISTING - OILS AND SOLVENTS

	DESCRIPTION	CONTAINER SIZE	MONTHLY USE
1.	Cooks Solvent B-20	55 gal. Drum - Liquid	--
2.	Hydraulic Oil 10-W	55 gal. Drum - Liquid	--
3.	Cylinder Oil 600-W	55 gal. Drum - Liquid	--
4.	Motor Oil 30-W	55 gal. Drum - Liquid	--
5.	Transmission Oil	55 gal. Drum - Liquid	--
6.	Cook-Cut 5068 Ind. Lube	55 gal. Drum - Liquid	--
7.	Metal Forming Lube 7233	55 gal. Drum - Liquid	--
8.	Mobil DTE 26 Lube Oil	55 gal. Drum - Liquid	--
9.	Cook-Cool 1235 Ind. Lube	55 gal. Drum - Liquid	--
10.	Patclin 885-2 Lube	5 gal. Drum - Liquid	--
11.	Amoco Motor Oil 30-W	55 gal. Drum - Liquid	--

CHEMICAL INVENTORY LISTING - WASTE TREATMENT CHEMICALS

	DESCRIPTION	CONTAINER SIZE	MONTHLY USE
1.	Sodium Hydrosulfite	250 lb. Drum - Dry	250 lbs.
2.	Sodium Bisulfite	100 lb. Bag - Dry	1000 lbs.
3.	Caustic Soda (Sodium Hydroxide)	100 lb. Bag - Dry	1800 lbs.
4.	Soda Ash (Sodium Carbonate)	100 lb. Bag - Dry	500 lbs.
5.	Separan-10	100 lb. Bag - Dry	100 lbs.

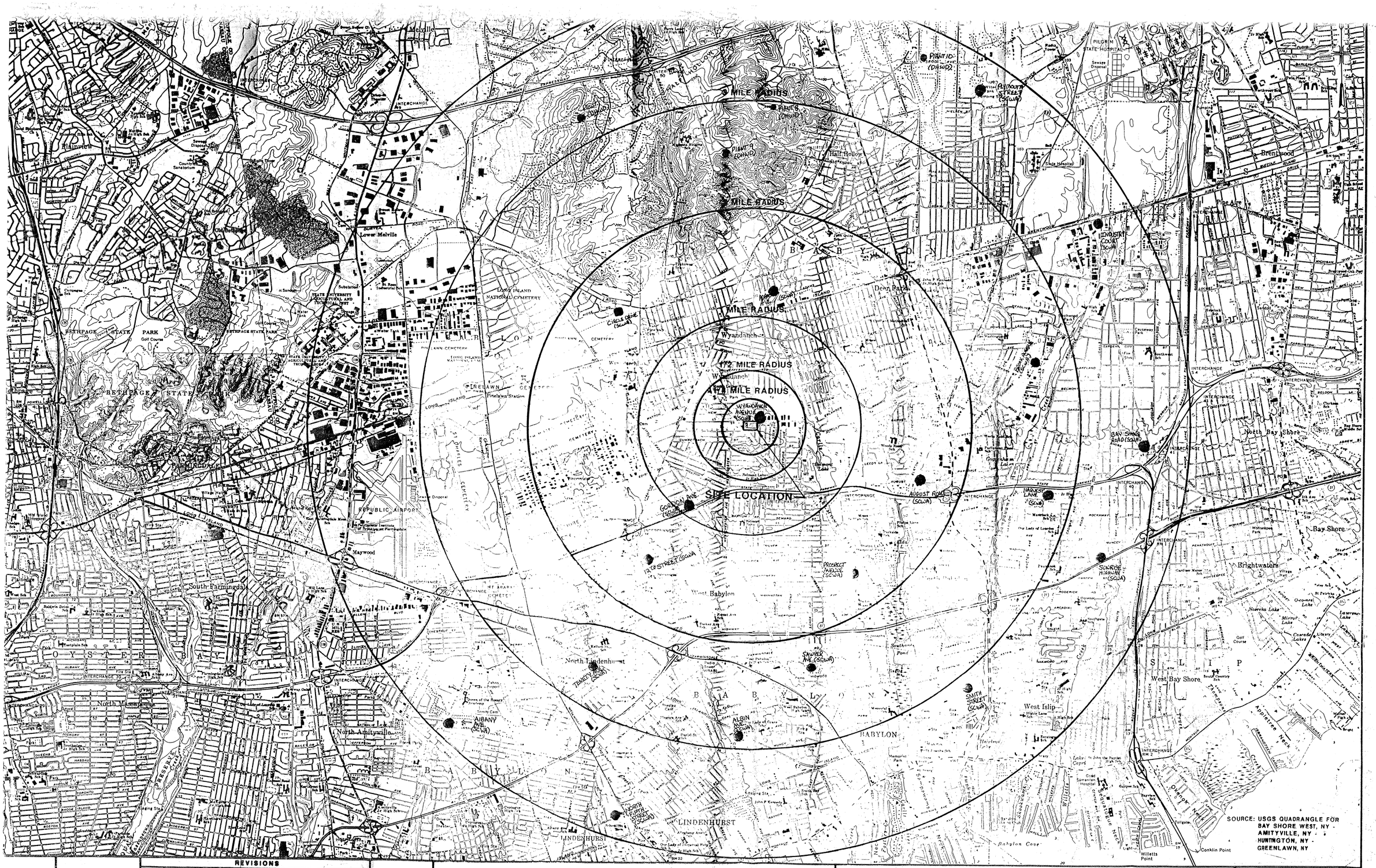
JAMECO INDUSTRIES INC.
WYANDANCH, NEW YORK

TABLE 3

CHEMICAL INVENTORY LISTING -
BOILER TREATMENT, CLEANING AND MISCELLANEOUS CHEMICALS

	DESCRIPTION	CONTAINER SIZE	MONTHLY USE
1.	Boiler Feed Treatment	55 gal. Drum - Liquid	--
2.	Steam Solvent Steam Cleaner	5 gal. Container - Liquid	--
3.	Fresh Bowl Cleaner	1 qt. Container - Liquid	--
4.	Bacteriostatic Gloss Clean	1 qt. Container - Liquid	--
5.	Ammonia	1 gal. Container - Liquid	--
6.	Bob-o Cleaner w/Bleach	1 lb. Container - Dry	--
7.	Control (Soap) Floor Cleaner	55 gal. Drum - Liquid	--
8.	Sheila Shine Cleaner	1 gal. Container - Liquid	--
9.	Argosheen Carpet Cleaner	1 gal. Container - Liquid	--
10.	Contrast Weed Killer	1 gal. Container - Liquid	--
11.	Floor Sealer	30 gal. Drum - Liquid	--
12.	Floor Finish	30 gal. Drum - Liquid	--
13.	Lotion Soap (Pink)	1 gal. Container - Liquid	--
14.	Pax Solv (White)	1 gal. Container - Liquid	--
15.	Detergent Soap Lube	50 lb. bag - Dry	--
16.	BC Gray S-52 Buffing Compound	340 lb. Drum - Dry	1700 lbs.
17.	K-52 Red Buffing Compound	525 lb. Drum - Dry	8000 lbs.
18.	ABS Plastic Cement	1 gal. Container - Liquid	--
19.	PVC Clear Plastic Cement	1 gal. Container - Liquid	--
20.	X-Pando Pipe Compound	1/2 gal. Container - Liquid	--
21.	PVC Primer	1 gal. Container - Liquid	--
22.	Propane Gas Canisters	50 lb. Container - Gas	--

REFERENCE NO. 6



SOURCE: USGS QUADRANGLE FOR BAY SHORE WEST, NY - AMITYVILLE, NY - HUNTINGTON, NY - GREENLAWN, NY

REVISIONS			
NO.	BY	DATE	REMARKS
			SUFFOIK COUNTY WATER AUTHORITY WELL (SCWA)
			DIX HILLS WATER DISTRICT WELL (DHWD)

DES .....
DWN .....
CKD .....

JAMECO INDUSTRIES, INC.
WYANDANCH, NEW YORK

scale 1 0 1 MILE

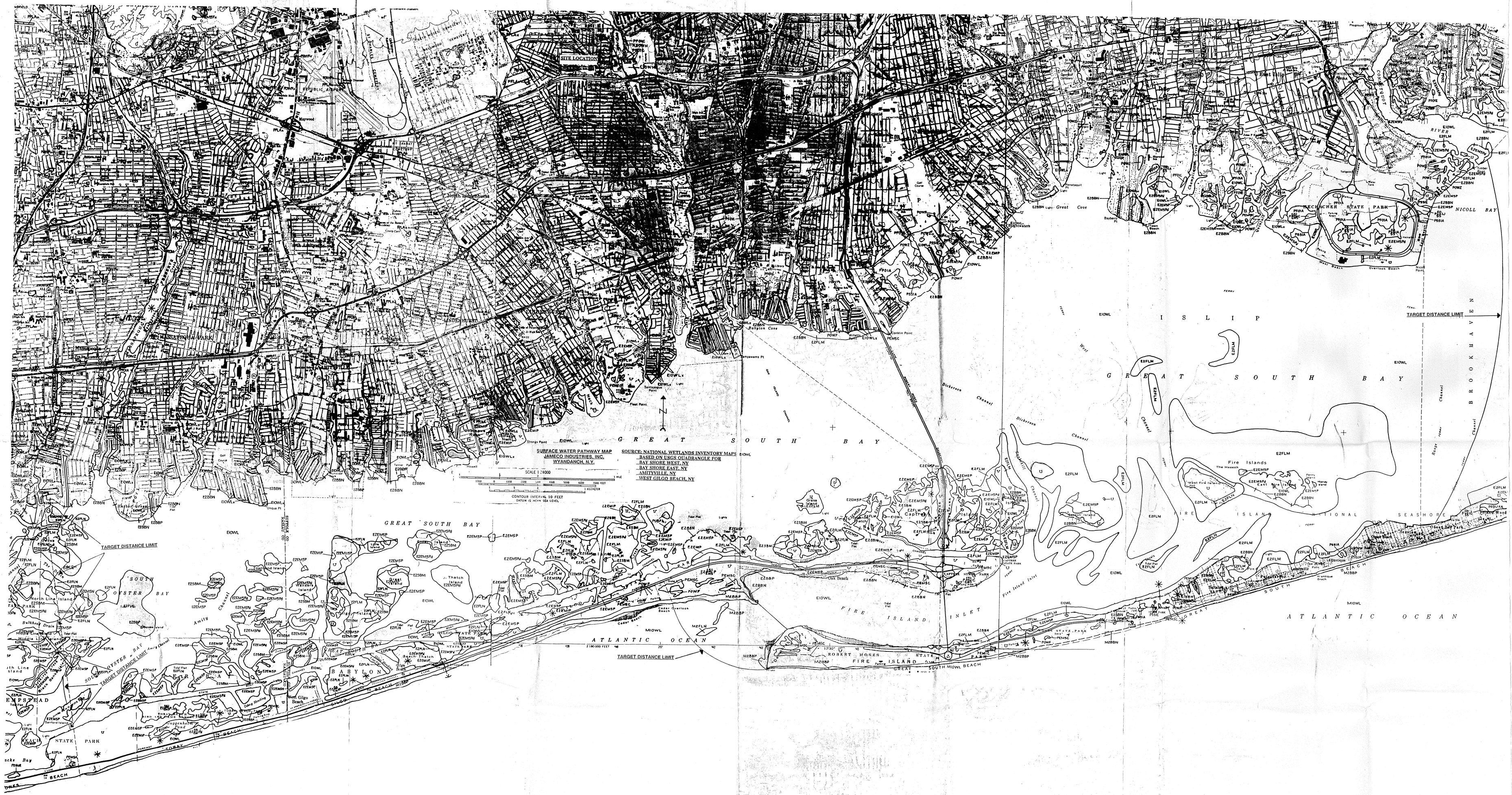
4 MILE RADIUS MAP

DATE .....
SHEET ..... OF .....
DWG NO. PLATE 1

REFERENCE NO. 7


SITE LOCATION
SURFACE WATER PATHWAY MAP
JAMECO INDUSTRIES, INC.
WYANDANCH, N.Y.
1:24000
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
SOURCE: USGS QUADRANGLE FOR
BAY SHORE WEST, NY
BAY SHORE EAST, NY
AMITYVILLE, NY
WEST GILGO BEACH, NY
TARGET DISTANCE LIMIT
TARGET DISTANCE LIMIT
TARGET DISTANCE LIMIT
GREAT SOUTH BAY
ATLANTIC OCEAN
ISLIP
FIRE ISLAND NATIONAL SEASHORE
Fire Islands
The Havens
East Fire Island
Captree Island
Captree State Park
Oak Beach
Cedar Island
Gilgo Island
Gilgo State Park
Robert Moses State Park
Fire Island Inlet
Great South Beach
Jones Beach State Park
Babylon Cove
Conklin Point
Great Cove
Nicoll Point
Overlook Beach
West Beach
Connetquot River
Brookhaven
Nassau Co.
Suffolk Co.
Massapequa
Massapequa Creek
Amity Harbor
Bulkhead Drain
Middle Line Island
Squaw Island
Oyster Bay
Cedar Beach
Gilgo Beach
Beach Thatch
Oak Island
Seganos Thatch
Great Island
Thatch Island
Townsend Island
Goose Island
Elder Flat
Clam Pond
Penataquit
Wrightswars
Republic Airport
Bethpage
Seaford
Wantagh
Merrick
Freeport
Baldwin
Oceanside
Long Beach
Lido Beach
Point Lookout
Jones Beach
Tobay Beach
Tobay Beach Bird and Game Sanctuary
Guggenheim Pond
West Gilgo Beach
Tobay Bathing
Gilgo Beach
Gilgo Station
Gilgo Light
Oakdales Creek
Beach Basin Island
Stanford Island
Jacks Bay
Ocean Beach
Ocean Parkway
Meadowbrook State Pkwy
Sunrise Highway
Merrick Road
Montauk Highway
Wantagh State Pkwy
Southern State Pkwy
Belt Pkwy
Captree Bridge
Fire Island Light
Fire Island Lighthouse
Robert Moses Causeway
Robert Moses Bridge
Fire Island Pines
Cherry Grove
Water Island
Sailors Haven
Davis Park
Watch Hill
Smith Point Bridge
Smith Point County Park
Old Inlet
Old Inlet Channel
Dickerson Channel
Shoal Channel
Range
Channel
Fire Island Inlet
Captree Island
Captree State Park
Oak Beach
Cedar Island
Gilgo Island
Gilgo State Park
Robert Moses State Park
Great South Beach
Jones Beach State Park
Babylon Cove
Conklin Point
Great Cove
Nicoll Point
Overlook Beach
West Beach
Connetquot River
Brookhaven
Nassau Co.
Suffolk Co.
Massapequa
Massapequa Creek
Amity Harbor
Bulkhead Drain
Middle Line Island
Squaw Island
Oyster Bay
Cedar Beach
Gilgo Beach
Beach Thatch
Oak Island
Seganos Thatch
Great Island
Thatch Island
Townsend Island
Goose Island
Elder Flat
Clam Pond
Penataquit
Wrightswars
Republic Airport
Bethpage
Seaford
Wantagh
Merrick
Freeport
Baldwin
Oceanside
Long Beach
Lido Beach
Point Lookout
Jones Beach
Tobay Beach
Tobay Beach Bird and Game Sanctuary
Guggenheim Pond
West Gilgo Beach
Tobay Bathing
Gilgo Beach
Gilgo Station
Gilgo Light
Oakdales Creek
Beach Basin Island
Stanford Island
Jacks Bay
Ocean Beach
Ocean Parkway
Meadowbrook State Pkwy
Sunrise Highway
Merrick Road
Montauk Highway
Wantagh State Pkwy
Southern State Pkwy
Belt Pkwy
Captree Bridge
Fire Island Light
Fire Island Lighthouse
Robert Moses Causeway
Robert Moses Bridge
Fire Island Pines
Cherry Grove
Water Island
Sailors Haven
Davis Park
Watch Hill
Smith Point Bridge
Smith Point County Park
Old Inlet
Old Inlet Channel
Dickerson Channel
Shoal Channel
Range
Channel
Fire Island Inlet

REFERENCE NO. 8


SITE LOCATION
SURFACE WATER PATHWAY MAP
JAMECO INDUSTRIES, INC.
WYANDANCH, N.Y.
SOURCE: NATIONAL WETLANDS INVENTORY MAPS
BASED ON USGS QUADRANGLE FOR
BAY SHORE WEST, NY
BAY SHORE EAST, NY
AMITYVILLE, NY
WEST GILGO BEACH, NY
SCALE 1:24000
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
TARGET DISTANCE LIMIT
GREAT SOUTH BAY
SOUTH OYSTER BAY
ATLANTIC OCEAN
FIRE ISLAND INLET
ISLIP
BROOKHAVEN
NICOLL BAY
Fire Islands
BABYLON
EMPSTEAD
NTATK PARK
ROBERT MOSES STATE PARK
FIRE ISLAND NATIONAL SEASHORE
Great Gull Island
Little Gull Island
Plum Island
Gardiners Island
Shinnecock Bay
Moriches Bay
Fire Island Inlet
Jones Inlet
Captree State Park
Oak Beach
Overlook Beach
Great Outlook Beach
West Gilgo Beach
Great South Beach
Republic Airport
Long Island MacArthur Airport
Bayport
Bay Shore
Islip
Babylon
Amityville
Lindenhurst
North Babylon
Wyandanch
Deer Park
Brentwood
Central Islip
Hauppauge
Commack
Smithtown
Kings Park
Northport
Huntington
Huntington Station
Dix Hills
Melville
Farmingdale
Bethpage
Plainview
Old Bethpage
Hicksville
Levittown
Wantagh
Seaford
Massapequa
Massapequa Park
North Massapequa
Amityville
Copiague
Lindenhurst
Babylon
Lynbrook
Freeport
Baldwin
Merrick
Bellmore
North Bellmore
Wantagh
Seaford
Oceanside
Island Park
Long Beach
Point Lookout
Lido Beach
Atlantic Beach
Woodmere
Cedarhurst
Valley Stream
Rockville Centre
Baldwin
Freeport
Roosevelt
Uniondale
Garden City
Mineola
Westbury
Carle Place
Old Westbury
Jericho
Syosset
Woodbury
Plainview
Oyster Bay
Locust Valley
Glen Cove
Sea Cliff
Glenwood Landing
Roslyn
Port Washington
Manhasset
Great Neck
Kings Point
Sands Point
Port Washington North
Roslyn Harbor
Flower Hill
Old Westbury
Jericho
Syosset
Woodbury
Plainview
Oyster Bay
Locust Valley
Glen Cove
Sea Cliff
Glenwood Landing
Roslyn
Port Washington
Manhasset
Great Neck
Kings Point
Sands Point
Port Washington North
Roslyn Harbor
Flower Hill

REFERENCE NO. 9

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. _____
Date: 3/15/91 Time: 200 [] AM; [X] PM

[] Incoming Call From: _____ Telephone No.
Affiliation: _____

[] Outgoing Call To: Monica Grimsland 1-516-957-3004 Telephone No.
Affiliation: Tax Department, Wyandanch, NY

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [] AGREEMENT:

Ms. Grimsland supplied the following information in reference to the Janeco SI

Owner: HM Realty
248 Wyandanch Ave
Wyandanch, NY 11798

District 0100, Section 82, Block 2, Lot 37.5
Area 7.4 Acres

A copy of the tax map in reference to the Janeco site will be forwarded to MPI-CNJ office.

Follow-up Action: I telephoned back for information concerning 50 Oswego Place the residence of Mrs. Agustine Norris. The residence is at District 0100, Section 82, Block 2, Lot 34
(Specify)

Action By: Steven T. McNulty 11/27/91
Name Action Due Date

Copy to: _____

[] Continued

1

MALCOLM PIRNIE, INC. PROJECT NOTES

To: File
Date: 12/23/91
From: Steven T. McNulty
Project Number: 8002-10-1
Subject: Tax Map
Site Name: Jameco Industries, Inc.

Enclosed in this reference is a Tax Map which outlines Jameco Industries property boundaries and the residential lots to the immediate south of the Facility. Additionally the map shows the location of the Suffolk County Water Authority well field, across Wyandanch Avenue to the north.

REFERENCE NO. 10

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No.
Date: 12/4/91 Time: 1130 [X] AM; [ ] PM

[ ] Incoming Call From: _____ Telephone No.
Affiliation: _____

[X] Outgoing Call To: Jamie Ascher 1-516-751-4078 Telephone No.
Affiliation: NYSDEC - Stony Brook

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [ ] AGREEMENT:

Mr. Ascher informed me that the site investigation report by AKRF, INC. (Jameco Consultant) is to be delivered by 12/15/91. At that time, it is probable on the Jameco site will potentially be reclassified to Class 2 status under the NYS Superfund program. An attempt to negotiate a consent order for an Remedial Investigation/Feasibility Study would then commence, if Class 2 status is obtained.

Follow-up Action: _____
(Specify)

Action By: _____
Name Action Due Date

Copy to: _____

[ ] Continued

1

REFERENCE NO. 11

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No.
Date: 11/21/91 Time: 1100 [X] AM; [] PM

[] Incoming Call From: _____ Telephone No.
Affiliation: _____

[X] Outgoing Call To: Israel Gajer, VP 1-516-643-5300 Telephone No.
Affiliation: Jameco Industries, Inc

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [] AGREEMENT:

Mr Gajer stated that approximately 350 people work ~~at~~ so at the Wyandanch Ave Facility and that of those 350 people, 50 are office workers.

Follow-up Action: _____
(Specify)

Action By: _____
Name Action Due Date

Copy to: _____

[] Continued

1



UNLESS DRAWN OTHERWISE, ALL PROPERTIES ARE WITHIN THE FOLLOWING DISTRICTS

SCHOOL	9.3	SEWER	
FIRE	13.15	HYDRANT	
LIGHT	99	WATER	
PARK		REFUSE	

NOTICE

MAINTENANCE, ALTERATION, SALE OR DISTRIBUTION OF THIS DIVISION OF THE SUFFOLK COUNTY TAX MAP IS PROHIBITED WITHOUT WRITTEN PERMISSION OF THE REAL PROPERTY TAX SERVICE AGENCY

Legend

Property or R/W Line		Fire District Line	—F—	Hydrant District Line	—H—
Denotes Common Owner		Water District Line	—W—	Refuse District Line	—R—
Subdivision Lot Line		Light District Line	—L—	Block No.	(8)
Railroad		Park District Line	—P—	Parcel No.	23
Stream		Sewer District Line	—S—	Subdivision Block No.	(21)
County Line				Subdivision Lot No.	(34)
Town Line				Deed Dimension	62'
Village Line				Scaled Dimension	62'±
Block Limit				Deed Area	12A (±)
School District Line	—SCH—			Calculated Area	12A (±)

KEY MAP

080	083	
081	082	110
105	106	

SCALE IN FEET 0 100 200

Prepared By
MICHAEL BAKER, JR.
N.Y.P.E. 24112
Consulting Engineer
Rochester, Pennsylvania

© COUNTY OF SUFFOLK
Real Property Tax Service Agency
County Center
Riverhead, L. I., New York

TOWN OF BABYLON
VILLAGE OF
DISTRICT NO. 0100
Date of Compilation

SECTION NO. 082

PROPERTY MAP

REFERENCE NO. 12

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No.
Date: 12/17/91 Time: 1030 [X] AM; [ ] PM

[ ] Incoming Call From: _____ Telephone No.
Affiliation: _____

[X] Outgoing Call To: Kate Fiday - Bldg. Inspector 1-576-957-7429 Telephone No.
Affiliation: Town of Babylon

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [ ] AGREEMENT:

Ms. Fiday informed me that the Janeco site is within the 500-year floodplain.

Follow-up Action: _____
(Specify)

Action By: _____
Name Action Due Date

Copy to: _____

[ ] Continued

1

REFERENCE NO. 13

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. _____
Date: 12/17/91 Time 0845 [X] AM; [ ] PM

[ ] Incoming Call From: _____
Telephone No.
Affiliation: _____

[X] Outgoing Call To: Bill Spitz 1-516-751-7725
Telephone No.
Affiliation: NYSDEC - Stony Brook

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [ ] AGREEMENT:

Mr. Spitz confirmed that the EMR Circuits, Sheridan Chemical, and Jamaco Industries, Inc sites are located above a Wellhead Protection Area designated by the deep flow recharge basin of the Magothy / Lloyd Aquifers. The Merrick Landfill site will follow the Wellhead Protection program guidelines for the Upper Glacial Aquifer

Follow-up Action: _____
(Specify)

Action By: _____
Name Action Due Date

Copy to: _____

[ ] Continued

1

REFERENCE NO. 14

JAMECO Industries, Inc.
Site Inspection
10/10/91
Malcolm Pirnie, Inc.

Index

Title Page	1
Index	2
Site Maps	3
Field Notes	4-7

Site Map

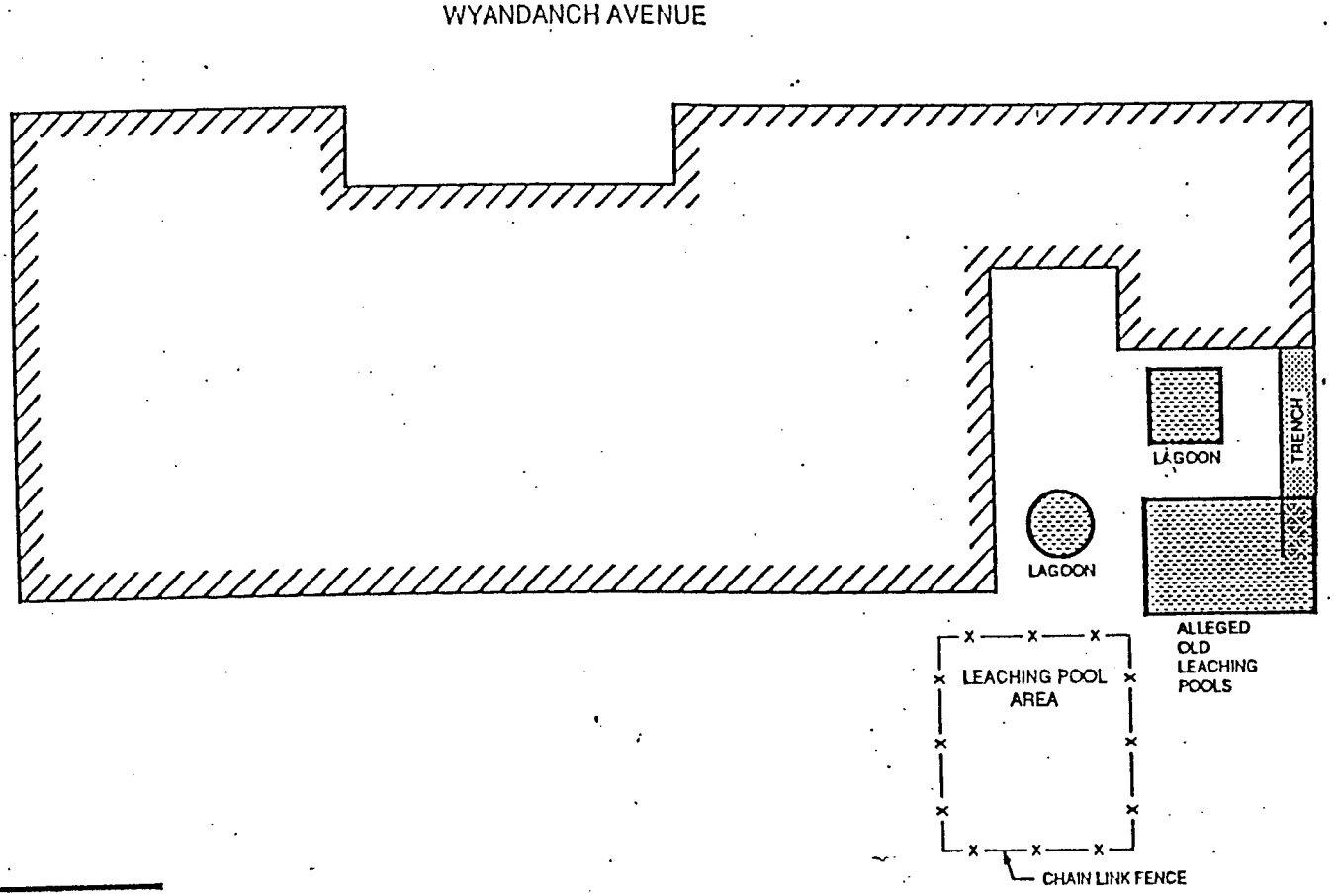


Figure _

Previously Existing Structures

JAMECO INDUSTRIES

ameco Industries, Inc representatives

Israel Gajer – Vice President
Donald Bowden – Plant Manager

AKRF, Inc.

Arnold F. Fleming, P.E.
President

212/340-9713

Environmental Consultants
117 East 29th Street • New York, NY 10016 • 212/340-9825

– Consulting Engineer

Wyandanch
Long Island, NY

Site Inspection
Jameco Industries, Inc.
8002-10-1

10/10/91

0700: Left MPI CNJ Office

0930: Arrive at site

Weather: SUNNY, clear, 68-70 Degrees
Wind from the south 5-10mph
Gusts 15-20mph

Site team: John Rieckhoff
Steven T. McNulty
Rickey Kampfer

0934: Health + Safety Mtg.
Air monitoring with HNu + OVA
Background levels on OVA + HNu equal to Level D.

0942: Meeting with Jameco Industries representatives

Topics discussed:
1. Spdes permits
2. Air permits, exhausts → SCHD.
3. Sludge removal in 1975
4. RCRA manifests – 3 quarters requested
5. MW, soil, sludge samples taken in June, 1991. NYSDEC Region 1
Soil boring logs

1018: Meeting Ends

4

HNu Calibration 9.8 Span

1030: Move truck to back of plant
Setting up instruments HNu + Rad meter operational
OVA Non-operational

P+S
1033: IR-~~P&S~~1 Old long leachpool area - North 0°
sm
40' x 20'

1036: IR - P+S 2 Old rectangle leachpool - Northwest
40' x 40' excluding berm 320°

1039: IR - P+S 3 Pile of Skids ~~20~~ above former largest 6
leachpool Southwest 281°
sm

1042: IR - P+S 4 Former 14 leach pool area Southwest 257°

1045: IR - P+S 5 Monitoring Well #6 SW 225°

1046:	1R-P+S6	Monitoring Well	SE 130°
		Near back fence, in grass covered area	
1048:	1R-P+S7	1st New (operational) leachpool	
		1 leachpool	N 5°
1050:	1R-P+S8	2nd New leachpools	SW 260°
		Several leaching pools in mounded dirt area	
1053:	1R-P+S9	3rd New leachpools	SE 135°
		MW #4 + House (Private) included in picture	
		1 leachpool	
1056:	1R-P+S10	4th New leachpools	SW 250°
		3 leachpools + MW #3	
1058:	1R-P+S11	Monitoring Well #2	SW ~~25°~~ 240°
		Back of Building	
1107:	1R-P+S12	Monitoring Well #1	SW 265°

1115: Production well located within the building (Northside) across from the parking lot, for the employees. Not in use !!!

1130: Leave Site

1300: Arrive at MPI CNJ.

SM
10/10/91
1300

REFERENCE NO. 15

GSC-T83645

GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

VOLUME 2. MODELING

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 3-2
Contract No. 68Ø23970
Project Officer: Russell Kinerson
Task Manager: Loren Hall

Prepared by:

GENERAL SCIENCES CORPORATION
8401 Corporate Drive
Landover, Maryland 20785

Submitted: December 1, 1986

I

JAMECO INDUSTRIES
LATITUDE 40:44:28 LONGITUDE 73:21:19 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	440	4772	9549	46214	57641	60747	179363
RING TOTALS	440	4772	9549	46214	57641	60747	179363

I

JAMECO INDUSTRIES
LATITUDE 40:44:28 LONGITUDE 73:21:19 1980 HOUSING

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	109	1211	2444	12988	16743	17837	51332
RING TOTALS	109	1211	2444	12988	16743	17837	51332

Average Population $\Rightarrow \frac{17963}{51332} \cong 3.5 \frac{\text{persons}}{\text{per House}}$

REFERENCE NO. 16

COUNTY OF SUFFOLK

PATRICK G. HALPIN
COUNTY EXECUTIVE

DEPARTMENT OF FIRE, RESCUE AND EMERGENCY SERVICES
OFFICE OF THE FIRE MARSHAL

ALFRED J. JARDIN
COMMISSIONER

DAVID H. FISCHLER
CHIEF FIRE MARSHAL

August 14, 1991

Mr. Steve McNulty
Macolm Pirnie Engineering, Inc.
197 Route 18
East Brunswick, NJ 08816

Dear Mr. McNulty:

Please find enclosed, as requested, a copy of the contents of this office's file on Jameco Industries at 248 Wyandanch Avenue, Wyandanch, NY.

As you can see, the information is minimal and has not been updated since their initial submission in 1987.

I trust the enclosed will prove to be useful to you. Should there be any questions, please feel free to contact me at (516) 345-6358.

Sincerely,

Warren Horst
Assistant Chief Fire Marshal

P.O. BOX 85 ■ YAPHANK, NEW YORK 11980-0085 ■ (516) 345-6359, 50



JAMECO

246 WYANDANCH AVE

October 16, 1987

Mr. Frank Petrone
Emergency Response Commission
Suffolk County Executive Office
H. Lee Dennison Building
Hauppauge, NY 11788

RE: TITLE III SUPERFUND AMENDMENTS
AND REAUTHORIZATION ACT (SARA)

Dear Mr. Petrone:

Jameco Industries meets the requirements of SARA, and we offer our apologies for not notifying you on or before April 17, and again on September 17, 1987, with the name of our Facility Emergency Coordinator, the undersigned.

Accompanying this letter is a list of hazardous substances used and stored at our facility.

We are presently awaiting a comprehensive guideline and up-to-date information on this freestanding legislative program known as the Emergency Planning and Community Right-to-Know Act of 1986.

We hope this will satisfy our October 17, 1987 requirements. If additional information is required, please do not hesitate to contact me.

Very truly yours,

JAMECO INDUSTRIES, INC.

Kenneth Peterman
Facility Emergency Coordinator

KP:ms

V Hazardous Material Listing (attach additional sheets if necessary)

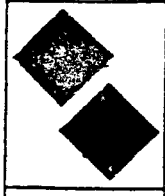
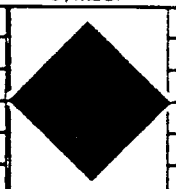
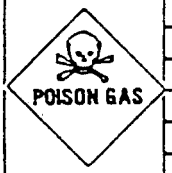
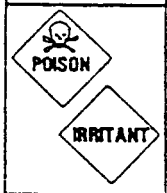
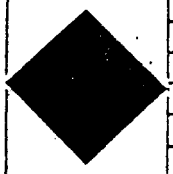
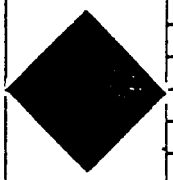
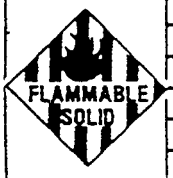
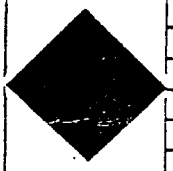
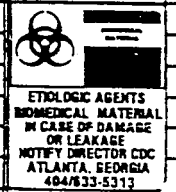
Note: Definitions of symbols are on the second page of the instruction sheet.

Identifying Symbol	Material Description & Proper Shipping Name	Total Amount
POISON GAS		
POISON / IRRITANT		
FLAMMABLE SOLID	- Gray Compound ✓Sodium Hydrosulfite	700 gal 500 lbs
NON-CLASSIFIED	✓Sodium Bisulfite - Rochell Salts - Nickel Chips - Diatomite/Hyflo Super-Cel - Filterbestos - Activated Carbon	1000 lbs 50 lbs 12000 lbs 50 lbs 50 lbs 30 lbs

Identifying Symbol	Material Description & Proper Shipping Name	Total Amount
OXIDIZER	✓Copper Activator/Patclin #977 ✓Chromic Acid ✓Chrome Reducer/Patclin #394	1000 lbs 1000 lbs 50 lbs
ORGANIC PEROXIDE		
RADIOACTIVE		
CORROSIVE	✓Soak Cleaner #309 Patclin ✓Hi-Grade #29-AW Soldering Flux/ Hydrazine Mono Hydrobromide ✓Chromic Acid ✓Electro Cleaner/Patclin #390 ✓Sodium Hydroxide/Caustic Soda	500 lbs 120 gal 1000 lbs 500 lbs 1000 lbs
DANGEROUS WHEN WET	✓Sodium Hydrosulfite	500 lbs
ETIOLOGIC AGENTS BIOMEDICAL MATERIAL IN CASE OF DAMAGE OR LEAKAGE NOTIFY DIRECTOR CDC ATLANTA, GEORGIA 404/633-5313		
NON-CLASSIFIED	✓Tripoli ✓Green Buffing Compound ✓Trichloethylene ✓Nickel Chloride ✓Sodium Carbonate/Soda Ash ✓401 Nickel Brightener ✓402 Nickel Brightener ✓405 Nickel Brightener ✓Wetting Agent ✓Buff Tripoli ✓Whiting Powder ✓Chrome Rouge	1100 gal 100 lbs 800 gal 150 gal 500 lbs 60 gal 45 gal 50 gal 45 gal 100 lbs 100 lbs 100 lbs

VI Special Considerations/Remarks:

Note: Definitions of symbols are on the second page of the instruction sheet.

Identifying Symbol	Material Description & Proper Shipping Name	Total Amount	Identifying Symbol	Material Description & Proper Shipping Name	Total Amount
					
					
					
					
					
					
					
			CORROSIVE	✓Sulphuric Acid ✓Chrome Reducer/Patclin #396 ✓Hydrochloric Acid/Muriatic ✓Brass Descaler ✓Boric Acid	60 gal 50 lbs 65 gal 60 gal 50 lbs

VI Special Considerations/Remarks:

REFERENCE NO. 17

LONG ISLAND COMMUNITY RIGHT-TO-KNOW

FOLLOW-UP INVESTIGATION

Prepared For:

NEW YORK STATE DEPARTMENT
OF
ENVIRONMENTAL CONSERVATION

DIVISION OF
HAZARDOUS WASTE REMEDIATION
Albany, New York

Prepared By:

ENGINEERING-SCIENCE, INC.
Two Flint Hill
10521 Rosehaven Street
Fairfax, Virginia 22030

MAY 1991

ENGINEERING-SCIENCE, INC.

TWO FLINT HILL
10521 ROSEHAVEN ST.
FAIRFAX, VA 22030
Tel: (703) 591-7575 Fax: (703) 591-1305

May 1, 1991

Mr. Mike Komoroske
Project Manager
New York State Department
of Environmental Conservation
Division of Hazardous Waste
Remediation
50 Wolf Road
Albany, NY 12233

Dear Mr. Komoroske:

Engineering-Science, Inc. has completed its assimilation of comments from NYSDEC concerning the March 22, 1991, Final Draft Report. Your assistance and comments were most helpful during the course of the field program and during the development of the Report.

The ES Project Team appreciates the opportunity to be of service to you and the NYSDEC. If we may be of further service or if you have questions concerning this report, please feel free to contact us at 703/591-7575.

Sincerely,

ENGINEERING-SCIENCE, INC.

RJ Bowers

R. J. Bowers, P.G.
Project Manager

RJB:jt

cc: Mary Ann Hopkins, ES-Fairfax
Geoff Germann, ES-Fairfax
Don Decker, ES-Cary
Sandy Czarnecki, ES-Cary
Dave Johnson, ES-Syracuse
Pete Petrone, ES-Syracuse

HW/FA561/FJB1165ELTR

SECTION 1

INTRODUCTION

SECTION 1

INTRODUCTION

1.1 BACKGROUND

The Community Right-to-Know (CRTK) program resulted from public concern regarding hazardous materials manufacture, use and disposal in New York State (NYS), which prompted Governor Mario M. Cuomo to issue Executive Order #33 on December 29,1982, requiring the Department of Environmental Conservation (DEC) to update its Industrial Chemical Survey (ICS) of chemicals produced and used in the State and to carry out a survey of hazardous waste management practices since 1952. The purpose of the survey was to identify new inactive hazardous waste sites and to assist the Department with its ongoing investigation of known sites.

DEC retained the NYS Environmental Facilities Corporation (EFC) as a consultant to provide services in executing survey activities and to provide assistance to companies in completing the survey. Questionnaires were developed and distributed to companies identified in the existing ICS system, the State Superfund and Hazardous Waste Regulatory Programs, and the Waste Transport Permit Programs. On March 28, 1984, questionnaires were sent to 10,724 manufacturing facilities and 2,743 waste transporters. A data management system was established to compile and evaluate the data received from companies responding to the questionnaire.

The program results were published in a three volume report on April 1, 1985. Upon project completion, 59% of the companies had responded to the survey and 449 potential disposal sites had been tentatively identified.

Although the CRTK program of 1984-1985 provided much new information regarding past waste disposal practices for facilities in New York State, a number of companies could not provide the location of the disposal sites used for some of the waste disposal activities which they had reported. These sites are currently listed as "unknown" in

the 1985 Community Right-to-Know Report (CRTK Report). An Extended Community Right-to-Know Program (ECRTK) was initiated to investigate these deficiencies. The ECRTK program also strove to obtain information from the remaining nonresponders, survey new potential industrial waste generators (generators) and industrial waste transporters (transporters), survey previous owners of companies which went out of business and find new addresses for companies which could not be located by the U.S. Postal Service.

The ECRTK program was carried out in 1986-1987. The resulting report includes a status report of the potential waste sites identified in the first report. The report also updates some of the information contained in the 1985 report.

In Long Island, the CRTK and ECRTK programs identified many generators of hazardous waste that could not provide the location of the disposal sites used for the waste disposal activities they reported. Due to the isolated geography of Long Island and past documented disposal practices, NYSDEC suspects that this waste may have been disposed of at landfills on Long Island.

1.2 PURPOSE/OBJECTIVES

The purpose of this work assignment was to determine whether landfills in Long Island (NYSDEC Region 1), and in particular 2a classified landfills, received hazardous wastes known to have been generated by industries on Long Island, primarily identified through the Community Right-To-Know surveys. This study does not specifically attempt to identify waste streams operating outside of government licensing or regulations, although these waste streams may exist and would be documented if encountered.

Activities planned to meet the objectives of this work assignment were as follows:

- Search data and records to determine whether or not hazardous waste disposal has taken place at a particular site.
- Interview hazardous waste haulers and landfill operators to determine where the hazardous wastes were accepted for disposal.

- Identify, where possible, landfills in NYSDEC Region 1 which received hazardous waste known to have been generated by industries on Long Island.

- Generate a report documenting the results of the investigations.

CASE STUDY

Joe Wyss
700 Grand Blvd.
Deer Park, New York 11729

ES interviewed Mr. Wyss on November 16, 1990 at the above address. Mr. Wyss was cooperative and was able to supply information about the specific waste disposal activity identified in the CRTK-ECRTK survey results, which listed 15 tons of hazardous waste solids (NOS) picked up by Wyss from Jameco Industries during the years 1964-1975. Mr. Wyss' recollection is of a single incident occurring in the mid- 70's in which he, his son, and a laborer cleaned out sludge from holding tanks at Jameco (Sic) Ind. Mr. Wyss states they spread the semi-solid sludge on the ground on Jameco property. Mr. Wyss notes that other than this incident, their normal business was limited to demolition and land clearing.

Mr. Wyss recalls that Jameco Industries did metal plating, and that the sludge may have been residues from metal plating operations.

Interviewed by: Josh Bowers
Don Decker

The narrative transcription from interview notes follows. Original interview notes appear in Appendix B.

INDUSTRIAL WASTE TRANSPORT

INTERVIEW ACKNOWLEDGEMENT FORM

Waste Transporter: Joseph Wyss, Jr.

Interview Date: 11/16/1990

Address: 700 Grand Boulevard
Deer Park, NY 11729

Phone No.: (516) 667-8722

Permit No.: None

Previous Co. Name(s): Joseph Wyss

Person(s) Interviewed: Joseph Wyss
Title/Position:

Interviewers: D. L. Decker and R. J. Bowers
Engineering-Science, Inc.

Interview Summary:

On November 16, 1990, D. L. Decker and R. J. Bowers interviewed Mr. Joseph Wyss concerning industrial waste handling practices of his facility at 700 Grand Boulevard, Deer Park, New York. Mr. Wyss has been the sole owner of this business since 1951 or 1952 and continues to participate in the business as an advisor and part-time consultant to the present sole owner of the business, his son, Joseph Wyss, Jr.

Primary business activity of this privately owned firm is land clearing and demolition, and disposal of resulting debris. During 1955-56, Mr. Wyss also participated in a residential cesspool cleaning operation, selling off his share of this operation in late 1956. Septage from this activity was taken to the Town of Babylon landfill.

Mr. Wyss states that much of the debris generated in the land clearing and demolition business was disposed of on-site frequently by burning where appropriate. Debris generated in Babylon and taken off site for disposal went to Edison Avenue landfill; debris generated in Islip went to Sonia Avenue landfill.

The CRTK-ECRTK survey results showed that Joseph Wyss was identified by Jameco Industries as transporting 15 tons of hazardous waste solids (NOS) between 1964 and 1975, with no disposal site identified. When questioned about this specific waste disposal activity, Mr. Wyss recalled a single instance in which he cleaned semi-solid sludge from a holding pit on Jameco (Sic) Industries' property; he spread the sludge on the land at the sludge pit site. Other than this instance, Mr. Wyss' work for Jameco Industries concerned land clearing and demolition activities, hauling some of the resulting debris to municipal landfills and disposing of the rest of it on Jameco property by burning.

REFERENCE NO. 18

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No. _____
Date: 12/16/91 Time: 300 [] AM; [X] PM

[] Incoming Call From: _____ Telephone No.
Affiliation: _____

[X] Outgoing Call To: Ben Bletch 1-516-351-3117 Telephone No.
Affiliation: Town of Huntington, Long Island

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [] AGREEMENT:

Mr Bletch informed me of the following, in reference to the Dix Hills water District distribution map.

Plant No. 1 - 2 wells
Plant No. 2 - 0 wells
Plant No. 4 - 1 well ✓
Plant No. 5 - 1 well ✓
Plant No. 6 - 3 wells
Plant No. 7 - 1 well ✓
Plant No. 8 - 1 well ✓
Plant No. 9 - 2 wells ✓
Plant No. 10 - 1 wells ✓

Approximately 8000 services for entire water system.

Plant No. 3 - 3 wells

All wells are part of a blended system.

2 - 2MG

Follow-up Action: _____
(Specify)

Action By: _____
Name Action Due Date

Copy to: _____

[] Continued

1

REVISIONS
OCTOBER 31, 1985
JUNE 14, 1988

PLAN OF WATER DISTRIBUTION SYSTEM
DIX HILLS WATER DISTRICT
TOWN OF HUNTINGTON, SUFFOLK COUNTY, N.Y.
SCALE : 1" = 1000' FEBRUARY 1985

H2M Holzmacher, McLendon and Murrell, P.C.
Consulting Engineers, Planners and Environmental Scientists
575 BROAD HOLLOW ROAD, MELVILLE, NEW YORK 11747

LEGEND

MAIN SIZE
4" & UNDER
6"
8"
10"
12"
16"
DISTRICT BOUNDARY
EXTENSION BOUNDARY
BOOK DIVISION LINE
PRESSURE REGULATING VALVE
HYDRANT
VALVE

BOOK "C"
BOOK "A"
BOOK "B"
PLANT Nº 1
PLANT Nº 2
PLANT Nº 3
PLANT Nº 4
PLANT Nº 5
PLANT Nº 6
PLANT Nº 7
PLANT Nº 8
PLANT Nº 9
PLANT Nº 10
PLANT Nº 11
PLANT Nº 12
SOUTH HUNTINGTON WATER DISTRICT
GREENLAWN WATER DISTRICT
HUNTINGTON WATER DISTRICT

REFERENCE NO. 19

MALCOLM PIRNIE, INC. | PROJECT NOTES

To: File | Date: 12/19/91
From: Steven T. McNulty | Project Number: 8002-10-1
Subject: Suffolk County Water Authority (SCWA) | Site Name: Jameco Industries

On 12/18/91 MPI personnel obtained information concerning the SCWA wells located within the 4-mile radius for the Jameco SI. The well locations were "hand-plotted" onto a 4-mile radius map and the following ~~two~~ three sm sheets of paper are the calculations for the active service estimate of 30293 Home/Businesses/Industries served. All wells are on a blended system which obtains water from the Magothy aquifer beneath Long Island, New York.

1

01-5
6
9
80-3
90-3
00-8
60-0
1
2
80-1
00-7
01-7
90-0
"-4
01-3
01-8
90-1
90-2
03-2
" 6
16-1
-2
-3
-4
-5
-6
00-2
00-3
02-0

132
148
389
420
238
64
256
265
248
430
740
339
314
93
137
306
455
328
176
265
122
119
128
218
157
53
412
370
422

25-0
1
2
3
4
17-3
" 4
25-7
" 8
" 9
26-0
5
6
02-1
[redacted]
22-0
22-3
25-6
02-3
22-1
22-2
25-5
17-5
17-6
26-1
2
3
4
7
8

276
180
184
182
151
147
184
151
142
129
164
161
201
162
[redacted]
234
168
91
258
154
214
226
189
142
124
132
159
181
158
207

06-1
07-8
07-9
08-0
1
2
08[redacted]
06-0
06-2
4
6
7
9
02-6
04-6
04-8
05-1
4-4
5
6
7
8
04-5
07-0
1
2
3
4
5
21-9

86
180
171
125
144
153
109
179
184
167
211
221
55
221
182
119
121
99
135
145
102
150
188
110
105
128
126
[redacted]
[redacted]
-9

07-6
07-7
19-0
" 1
20-4
33-5
" 6
" 7
" 8
" 9
21-0
21-1
33-
" 1
" 2
" 3
" 4
34-1
24-2
02-4
04-7
02-5
04-9
28-0
26-1

172
204
91
198
136
296
120
191
118
173
53
99
105
113
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148
420
461
246
230
146
153

29-2
" 3
30-1
" 2
" 3
" 4
" 5
" 0
" 7
30-9
31-0
31-1
31-4
" 5
" 6
28-0
31-7
31-8
31-9
32-0
" 1
" 2
" 3

134
75
138
187
121
158
184
162
176
116
108
166
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45
191
359
38
90
115
65
112
117
90

03-4
" 5
15-0
" 1
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" 8
15-4
15-5
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16-0
31-0
34-0
35-0
36-0
37-0
38-0
" 1
" 2
" 3
" 4
" 5
39-0
40-0
41-0

98
209
135
108
147
142
115
169
161
104
142
159
105
82
27
234
117
145
133
97
109
80
207
37
133
70
223

30293

25.0	115
25-1	56
26.0	91
27.0	123
28-0	119
29.0	143
1	132
2	35
30-0	108
31-1	52
32.0	128
32-1	58
33-0	138
33-1	111

REFERENCE NO. 20

PATRICK G. HALPIN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

MEMORANDUM

TO: ALDO ANDREOLI, P.E.

FROM: ALEXANDER M. SANTINO, P.E.

DATE: APRIL 8, 1988

RE: JAMECO INDUSTRIES OVERFLOWING LEACHING POOL INCIDENT - MARCH 29, 1988

At approximately 7:05 p.m. I received a phone call at my home from Mr. Ken Hill. Mr. Hill informed me that there was a chemical discharge from an industrial plant in North Babylon. He stated that the discharge occurred at 50 Oswego Place in North Babylon. I responded to the scene and realized as I approached Wyandanch Avenue that the industrial incident involved Jameco Industries which is located at 248 Wyandanch Avenue. The location at 50 Oswego Place is the private residence of Mrs. Augustine Norris who observed large puddles in her backyard and upon closer inspection saw water running underneath her fence from Jameco Industries. According to Mrs. Norris, she called the plant and had them investigate the situation. When the flow did not stop, Mrs. Norris contacted the police.

Upon my arrival I reported to Police Officers Lou Berg and Marty Otten. The police officers escorted me to an area behind Jameco where a series of leaching pools were located. These leaching pools receive the effluent from Jameco's waste treatment plant. The company does have a SPDES permit (#NY008-1540). A copy of this permit is attached.

A cursory inspection revealed that most, if not all, of the 48 leaching pools in this area were flooded. The color of the water standing in the depression which surrounded the pools was blue-green.

Continued . . .

April 8, 1988

The police officers and I returned to the front of the building where we met Mr. Mike Lipman, president of Jameco, Special Investigators John Flynn and Steve Drielak of the D.A.'s office, Medical Lab personnel Rich Holiwell and Frank Amendola, and Mr. John Hoffman of the NYSDEC. We all returned to the leaching pool area to begin a thorough investigation. Mr. Lipman had his technical personnel describe to us the manner in which the effluent water is distributed to the leaching pools. Essentially the water is conveyed by an underground pipe to a valve box. The valve box then directs the flow to a splitter box which distributes the flow among the 48 leaching pools.

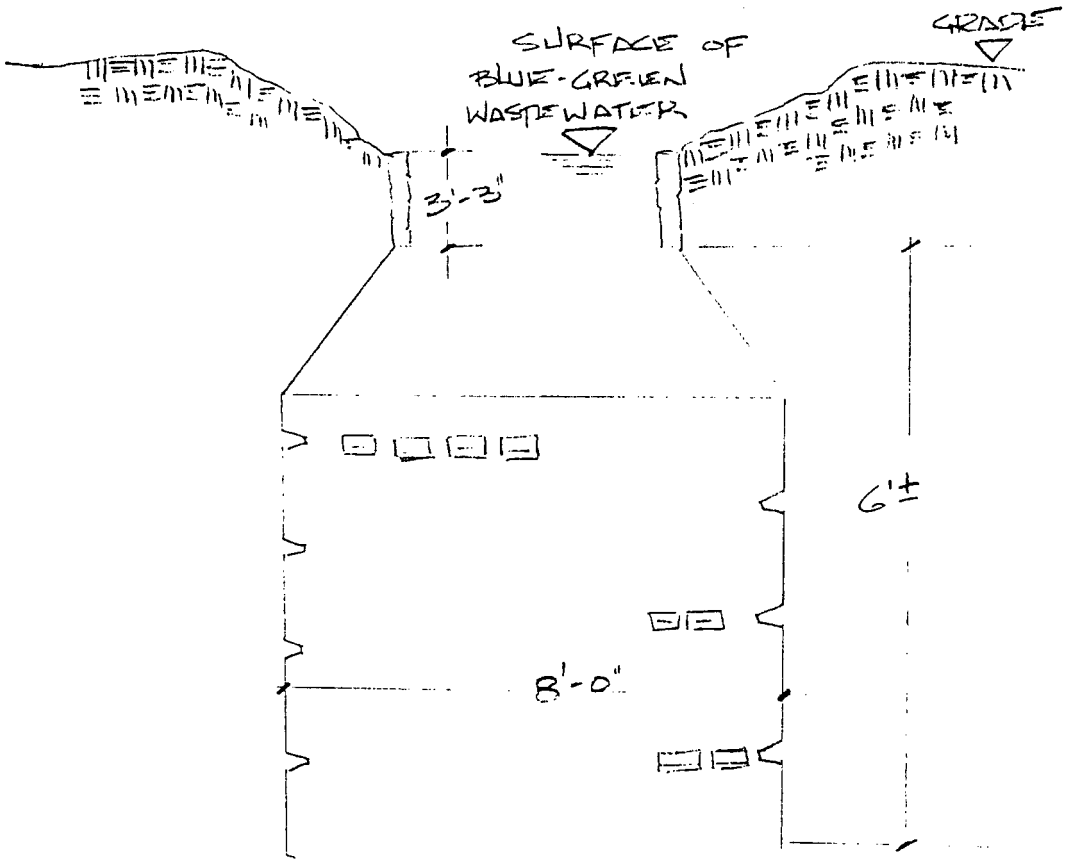
At approximately 9:30 p.m. a sampling team consisting of myself, Frank Amendola and Rich Holiwell proceeded to obtain samples from the flow locations. One sample was taken from a pool of material located next to a wooden box structure just outside the fence surrounding the leaching pool area. This water also had a blue-green tint to it. A second sample was taken from the valve pit which is located against the fence that separates the Jameco property from the Norris residence. The valve pit was completely filled with water which was also blue-green. The third sample was taken from leaching pool B-10. The color of the standing water in this pool was blue-green. We split the samples with Mr. Lipman.

Once the sampling was completed, the team moved to the Norris residence. An inspection of Mrs. Norris' property by myself, Frank Amendola Rich Holiwell, Steve Drielak and John Flynn indicated that a large volume of water did course under the stockade and chainlink fences that separate the two properties, and puddled in a low lying area in her backyard. The running water left erosion marks in the soil, and at the point where it puddled, it discolored the dirt turning it a light blue-green color.

Soil samples were taken at two spots in Mrs. Norris' backyard. The first sample location was the point where the wastewater flowed underneath the fence. The second sampling point was at the spot where the soil had been discolored by the puddled water. The samples were taken by myself and Frank Amendola. Once this was completed, the scene was secured and the samples were transferred to the lab in the Medical Examiner's office.

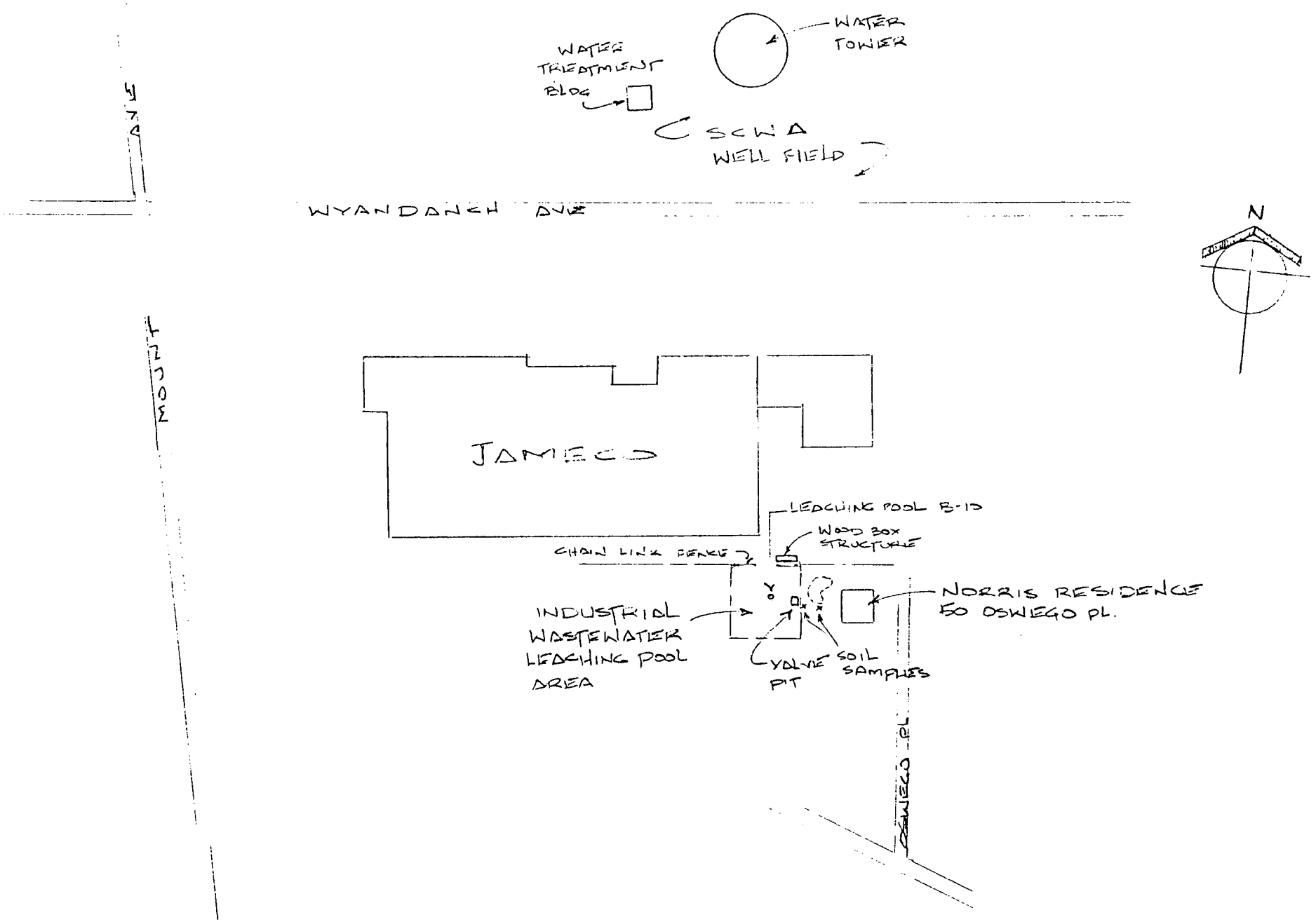
Frank Amendola exercised custody of all samples taken at the scene and I only supervised and assisted Mr. Amendola in obtaining the samples.

AMS:das
Attachments
cc: J. Hoffman
J. Maloney
R. Randall



DETAIL - LEACHING POOL - JAMECO

NOT TO SCALE



JAMECO INDUSTRIES - SITE PLAN

NOT TO SCALE

REFERENCE NO. 21

COUNTY OF SUFFOLK

PATRICK G. HALPIN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

May 23, 1988

CERTIFIED MAIL R.R.R.

Mr. Michael P. Lipman
Jameco Industries
248 Wyandanch Avenue
Wyandanch, New York 11798

Dear Mr. Lipman:

Re: Overflowing Industrial Pools on March 29, 1988
Tax #100-82-2-37.5

On March 29, 1988 samples were collected from the liquid overflowing your SPDES Pool, SPDES Pool B-10, junction box and the neighboring property by representatives of this department. The laboratory analyses revealed the following parameters at concentrations above the maximum allowed in groundwater discharge standards:

VALVE PIT/JUNCTION BOX

Copper	4.6 mg/l
Chromium-Tot	40.0 mg/l
Nickel	7.0 mg/l

PUDDLE OUTSIDE OF RECTANGULAR TANK

Copper	6.0 mg/l
Iron	2.9 mg/l
Chromium-Tot	60.0 mg/l
Nickel	10.0 mg/l
Zinc	6.6 mg/l

SPDES POOL B-10

Copper	1.9 mg/l
Chromium-Tot	15.0 mg/l

50 OSWEGO - SPDES COMPOUND

Copper	60.0 ppm
Chromium-Tot	244.0 ppm
Nickel	80.0 ppm

50 OSWEGO "TEA GARDEN"

Chromium-Tot	332.0 ppm
Copper	124.0 ppm
Nickel	112.0 ppm
Cadmium	49.0 ppm

Due to the toxic nature of this material, you are directed to have all the leaching pools that were receiving discharge from your facility that day immediately pumped of all liquids and sludge by an industrial-waste scavenger. In addition, all soils on your property and the neighbor's property which were contaminated by this overflow are to be excavated and disposed of by a licensed scavenger. Your neighbor's property must also be brought back to its original condition, prior to the discharge. A list of approved scavengers may be obtained by calling the Office of Solid Waste of the New York State Department of Environmental Conservation, telephone number 751-7900. Please be advised that each day these contaminants are allowed to leach into the ground is a separate violation of the Suffolk County Sanitary Code, which carries fines of up to $500 per day. Additional samples will be collected to determine the extent of contamination in the other industrial pools.

You are to notify this office at least two weekdays (Monday through Friday) prior to the cleanup so that an inspector may witness the operation. Please note that the hiring of a cesspool pumping service which is not licensed to haul toxic industrial waste is a violation of state and county law and may subject both you and the non-licensed hauler to civil liability (fines). It is your responsibility to determine if the scavenger is licensed to haul industrial waste.

You should be aware that fees for removal of toxic materials may vary between scavengers; therefore, you may wish to secure written estimates for your cleanout. This, however, is not to be construed that the department will accept delays in this matter.

It is expected that we hear from you regarding the cleanup within the next seven days.

The property owners are being notified with a copy of this correspondence.

Sincerely,

Robert Seyfarth
Senior Public Health Sanitarian
Environmental Engineering and Pollution Control

RS:JHN

H & M Realty
Gail Penny
Ann Augustine-Harris

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 2 FJA 3-29 LAB NO. 3-88-188 DATE COMPLETED 4/7/88 G. Mall

NAME OR FIRM Jameco

ADDRESS OR LOCATION Wyandanch Ave, Wyandanch

POINT OF COLLECTION valve pit / Junction Box inside SCDES compound, east side near fence.

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)			TOTAL SOLIDS	Mg/l	X	COPPER	4.6 Mg/l
	CHLORIDE	~~Mg/l~~		SUSPENDED SOLIDS		X	IRON	.5
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	40.
	COD					X	NICKEL	7.
	TOC					X	ZINC	4.
X	CN-	< .5 ppm				X	LEAD	< .2
						X	CADMIUM	< .02
	NITRATE-N					X	SILVER	< .02
	NITRITE					X	CHROMIUM-+6	< .02
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE - TIME	TO DATE - TIME
1. COLLECTED BY	Francis J Amendola	SCDHS-SEPTIC	3-29-88 DATE	9:45 pm TIME
2. POSSESSION BY			DATE - TIME	TO DATE - TIME
3. POSSESSION BY			DATE - TIME	TO DATE - TIME
4. RECEIVED LAB BY	G. Mall	" "	3/30/88 DATE 11:45	TIME
5. POSSESSION BY			DATE - TIME	TO DATE - TIME
6. POSSESSION BY			DATE - TIME	TO DATE - TIME

EAC 4/7/88 uc

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 2 FJA 3-29 LAB NO. 3-88-188 DATE COMPLETED 4/7/88 bmatt

NAME OR FIRM Tameco

ADDRESS OR LOCATION Wyandanch Ave, Wyandanch

POINT OF COLLECTION valve pit / Junction Box inside SCDES compound. east side near fence.

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)	—		TOTAL SOLIDS	Mg/l		COPPER	~~Mg/l~~
	CHLORIDE	Mg/l		SUSPENDED SOLIDS			IRON	
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	20. ppm
	COD			EP Tox Test →			NICKEL	
	TOC						ZINC	
						X	LEAD	< 5. ppm
						X	CADMIUM	< 1. ppm
	NITRATE-N					X	SILVER	< 5. ppm
	NITRITE						CHROMIUM-+6	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE - TIME	TO DATE - TIME
1. COLLECTED BY	Francis J Amendola	SCDHS-OEHC	3-29-88 DATE	9:45 PM TIME
2. POSSESSION BY			DATE - TIME	TO DATE - TIME
3. POSSESSION BY			DATE - TIME	TO DATE - TIME
4. RECEIVED LAB BY	S. matt	" "	3/30/88 11:45 DATE	TIME
5. POSSESSION BY			DATE - TIME	TO DATE - TIME
6. POSSESSION BY			DATE - TIME	TO DATE - TIME

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 1 FJA 3-29 LAB NO. 3-88-187 DATE COMPLETED 4/7/88 G. Matha

NAME OR FIRM Jameco

ADDRESS OR LOCATION Wyandanch Ave, Wyandanch

POINT OF COLLECTION puddle outside of rectangular tank, behind Bldg, North of SPDES compound.

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH(LAB)			TOTAL SOLIDS	Mg/l	X	COPPER	6. Mg/l
	CHLORIDE	Mg/l		SUSPENDED SOLIDS		X	IRON	2.9
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	60.
	COD					X	NICKEL	10.
	TOC					X	ZINC	6.6
X	CN	<.5 ppm				X	LEAD	<.2
						X	CADMIUM	<.02
	NITRATE-N					X	SILVER	<.02
	NITRITE					X	CHROMIUM-+6	<.02
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION		
1. COLLECTED BY	Francis J Amendola	SCHK-PEHC	3-29-88 DATE	9:30 AM TIME
2. POSSESSION BY			DATE - TIME TO	DATE - TIME
3. POSSESSION BY			DATE - TIME TO	DATE - TIME
4. RECEIVED LAB BY	G. matha		3/30/88 11:45 DATE	TIME
5. POSSESSION BY			DATE - TIME TO	DATE - TIME
6. POSSESSION BY			DATE - TIME TO	DATE - TIME

5

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 1 FJA 3-29 LAB NO. 3-88-187 DATE COMPLETED 4/7/88 S. Matt

NAME OR FIRM Jameco

ADDRESS OR LOCATION Wyandanch Ave, Wyandanch

POINT OF COLLECTION puddle outside of rectangular tank, behind Bldg, North of SPDES compound.

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)			TOTAL SOLIDS	Mg/l	X	COPPER	— Mg/l
	CHLORIDE	Mg/l		SUSPENDED SOLIDS		X	IRON	—
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	46 ppm
	COD			EP Tox Test →		X	NICKEL	—
	TOC					X	ZINC	—
	CN					X	LEAD	< 5 ppm
						X	CADMIUM	< 1 ppm
	NITRATE-N						SILVER	< 5 ppm
	NITRITE					X	CHROMIUM-+6	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION		
1. COLLECTED BY	Francis J. Amendola	SCHK-PEHE	3-29-88 DATE	9:30 AM TIME
2. POSSESSION BY			DATE - TIME TO	DATE - TIME
3. POSSESSION BY			DATE - TIME TO	DATE - TIME
4. RECEIVED LAB BY	S. Matt		3/30/88 DATE 11:45	TIME
5. POSSESSION BY			DATE - TIME TO	DATE - TIME
6. POSSESSION BY			DATE - TIME TO	DATE - TIME

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 3-FJA-3-29 LAB NO. 3-88-189 DATE COMPLETED 4/7/88 b.m.

NAME OR FIRM Jameco

ADDRESS OR LOCATION Wyandanch Avenue, Wyandanch

POINT OF COLLECTION SPDES Pool B-10

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)			TOTAL SOLIDS	Mg/l	X	COPPER	1.9 Mg/l
	CHLORIDE	Mg/l		SUSPENDED SOLIDS		X	IRON	.6
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	15.
	COD					X	NICKEL	2.
	TOC					X	ZINC	1.3
X	CN	<.5 ppm				X	LEAD	<.2
						X	CADMIUM	<.02
	NITRATE-N					X	SILVER	<.02
	NITRITE					X	CHROMIUM-+6	<.02
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION		
1. COLLECTED BY	Francis Greenlaw	SCDHS-PEHC	3-29-88 DATE	10:00 AM TIME
2. POSSESSION BY			DATE - TIME	TO DATE - TIME
3. POSSESSION BY			DATE - TIME	TO DATE - TIME
4. RECEIVED LAB BY	[illegible]	" "	3/30 11:45 DATE	TIME
5. POSSESSION BY			DATE - TIME	TO DATE - TIME
6. POSSESSION BY			DATE - TIME	TO DATE - TIME

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 3-FJA-3-29 LAB NO. 3-88-189 DATE COMPLETED 4/7/88 S Miller

NAME OR FIRM Jameco

ADDRESS OR LOCATION Wyandanch Avenue, Wyandanch

POINT OF COLLECTION SPDES Pool B-10

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)			TOTAL SOLIDS	Mg/l		COPPER	Mg/l
	CHLORIDE	Mg/l		SUSPENDED SOLIDS			IRON	
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	8 ppm.
	COD						NICKEL	
	TOC				EP Tox Test →		ZINC	
						X	LEAD	< 5 ppm.
						X	CADMIUM	< 1. ppm
	NITRATE-N					X	SILVER	< 5. ppm.
	NITRITE						CHROMIUM-HEX	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE	TIME	TO DATE	TIME
1. COLLECTED BY	Francis Quendolo	SCDHS-PEHC	3-29-88	10:18 Am		
2. POSSESSION BY			DATE	TIME	TO DATE	TIME
3. POSSESSION BY			DATE	TIME	TO DATE	TIME
4. RECEIVED LAB BY	S Miller	" "	3/30/88	11:45		
5. POSSESSION BY			DATE	TIME	TO DATE	TIME
6. POSSESSION BY			DATE	TIME	TO DATE	TIME

8

ERC 4/27/88 05

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 4-FJA 3-29 LAB NO. 3-88-190 DATE COMPLETED 4/7/88 G. Miller

NAME OR FIRM Jameco

ADDRESS OR LOCATION Wyandanch Avenue, Wyandanch

POINT OF COLLECTION 50 OSWEGO, backyard of home, by fence bordering SPDES compound. (Soil)

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH(LAB)			TOTAL SOLIDS	Mg/l	X	COPPER	60. ~~Mg/l~~ ppm
	CHLORIDE	Mg/l		SUSPENDED SOLIDS		X	IRON	—
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	244. ppm
	COD					X	NICKEL	80. ppm
	TOC					X	ZINC	—
4	CN^-	< 200 ppm				X	LEAD	< 10 ppm
						X	CADMIUM	< 2 ppm
	NITRATE-N					X	SILVER	< 2 ppm
	NITRITE						CHROMIUM-+6	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE	TIME
1. COLLECTED BY	Francis Rosendale	SCDHS-AEHC	3-29-88	10:20 PM
2. POSSESSION BY			DATE - TIME TO	DATE - TIME
3. POSSESSION BY			DATE - TIME TO	DATE - TIME
4. RECEIVED LAB BY	G. Miller	" "	3/30/88 11:45	
5. POSSESSION BY			DATE - TIME TO	DATE - TIME
6. POSSESSION BY			DATE - TIME TO	DATE - TIME

EKE 4/27/88 OK

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/8:

FIELD NO. 4-FJA 3-29 LAB NO. 3-88-190 DATE COMPLETED 4/7/88 b-Walker

NAME OR FIRM Tameco

ADDRESS OR LOCATION Wyandanch Avenue, Wyandanch

POINT OF COLLECTION 50 OSWEGO, backyard of home, by fence bordering SPDES compound. (Soil)

REMARKS/INSTRUCTIONS

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH(LAB)			TOTAL SOLIDS	Mg/l		COPPER	Mg/l
	CHLORIDE	Mg/l		SUSPENDED SOLIDS			IRON	
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	< 5 ppm.
	COD				EP Tox Test		NICKEL	
	TOC						ZINC	
						X	LEAD	< 5 ppm.
						X	CADMIUM	< 1 ppm.
	NITRATE-N					X	SILVER	< 5 ppm.
	NITRITE						CHROMIUM-+6	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE - TIME	TO	DATE - TIME
1. COLLECTED BY	Francis J Amendola	SCDHS-AEHL	3-29-88 (DATE) 10:20 PM (TIME)		
2. POSSESSION BY					
3. POSSESSION BY					
4. RECEIVED LAB BY	G. Walker	" "	3/30/88 11:45 (DATE)		(TIME)
5. POSSESSION BY					
6. POSSESSION BY					

10

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 5-FSA 3-29 LAB NO. 3-88-191 DATE COMPLETED 4/7/88 G. Mathes

NAME OR FIRM Tameco

ADDRESS OR LOCATION Wyandanch Avenue, Wyandanch

POINT OF COLLECTION 50 OSWEGO, Back yard of home, in "Tea Garden"

REMARKS/INSTRUCTIONS (Soil)

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)			TOTAL SOLIDS	Mg/l	X	COPPER	124 ppm.
	CHLORIDE	Mg/l		SUSPENDED SOLIDS		X	IRON	—
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	332 ppm.
	COD					X	NICKEL	112 ppm
	TOC					X	ZINC	—
X	CN-	< .200 g.M				X	LEAD	49 ppm
						X	CADMIUM	< 2 ppm
	NITRATE-N					X	SILVER	< 2 ppm
	NITRITE					X	CHROMIUM-+6	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE	TIME
1. COLLECTED BY	Frances J Arendale	SCDHS-PETR	3-29-88	10:25 PM
2. POSSESSION BY			DATE - TIME TO	DATE - TIME
3. POSSESSION BY			DATE - TIME TO	DATE - TIME
4. RECEIVED LAB BY	G. Mathes	" "	3/30/88	11:45
5. POSSESSION BY			DATE - TIME TO	DATE - TIME
6. POSSESSION BY			DATE - TIME TO	DATE - TIME

SUFFOLK COUNTY HEALTH SERVICES LABORATORY

CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

18-247: 2/82

FIELD NO. 5-FJA 3-29 LAB NO. 3-88-191 DATE COMPLETED 4/7/88 G. Matt

NAME OR FIRM Tameco

ADDRESS OR LOCATION Wyandanch Avenue, Wyandanch

POINT OF COLLECTION 50 OSWEGO, Backyard of home, in "Tea Garden"

REMARKS/INSTRUCTIONS (Soil)

	TEST	RESULTS		TEST	RESULTS		TEST	RESULTS
	pH (LAB)			TOTAL SOLIDS	Mg/l		COPPER	Mg/l
	CHLORIDE	Mg/l		SUSPENDED SOLIDS			IRON	
	CYANIDE			DISSOLVED SOLIDS			MANGANESE	
	MBAS					X	CHROMIUM-TOT	< 5 ppm
	COD						NICKEL	
	TOC						ZINC	
					EP Tox Test →	X	LEAD	< 5 ppm
						X	CADMIUM	< 1 ppm
	NITRATE-N					X	SILVER	< 5 ppm
	NITRITE						CHROMIUM-+6	
	AMMONIA-N							
	TKN			pH (FIELD)				
				TEMP. (FIELD)				

METHOD OF PRESERVATION ☐ HNO_3 TO pH <2 ☐ COOL 4° C

CUSTODY OF SAMPLE

DURING TRANSPORT OF THE SAMPLE FROM SAMPLING SITE TO LABORATORY, THE CHAIN OF CUSTODY MUST BE UNBROKEN. GENERALLY THIS WILL REQUIRE THAT THE SAMPLE BE DELIVERED BY THE SAMPLE COLLECTOR OR HIS DESIGNATED REPRESENTATIVE WHO WILL SIGN FOR THE RECEIPT, INTEGRITY AND TRANSFER OF THE SAMPLE DURING SHIPMENT.

	NAME	AFFILIATION	DATE	TIME
1. COLLECTED BY	Frances J Amendola	SCDHS-PEHL	3-29-88	10:25 PM
2. POSSESSION BY			DATE - TIME TO	DATE - TIME
3. POSSESSION BY			DATE - TIME TO	DATE - TIME
4. RECEIVED LAB BY	G. Matt	" "	3/30/88 11:45	
5. POSSESSION BY			DATE	TIME
6. POSSESSION BY			DATE - TIME TO	DATE - TIME
			DATE - TIME TO	DATE - TIME

REFERENCE NO. 22

ARCS II CONTRACT 68-W9-0051
MALCOLM PIRNIE, INC.
RECORD OF TELEPHONE CONVERSATION/AGREEMENT

File No.
Date: 11/27/91 Time: 1015 [X] AM; [ ] PM

[ ] Incoming Call From: _____ Telephone No.
Affiliation: _____

[X] Outgoing Call To: Robert Seyfarth 1-516-854-2504 Telephone No.
Affiliation: Suffolk County Department of Health Services

Malcolm Pirnie Staff: Steven T. McNulty 1-908-214-2637
(Receiving or Calling) Name Telephone No.

SUMMARY OF [X] CONVERSATION [ ] AGREEMENT:

Mr. Seyfarth informed myself of additional soil samples collected downgradient of the Janeco Ind. site. He stated that he will search for the information and call me later today. Mr. Seyfarth also informed that the soil contamination at Mrs. Augustine Norris (50 Oswego Place) was never removed or remediated.

Follow-up Action: Mr. Seyfarth located the soil sampling data and will Fax it to (Specify) MPI Central New Jersey office.
SM 11/27/91 300pm

Action By: Steven T. McNulty
Name Action Due Date

Copy to: _____

[ ] Continued

1

COUNTY OF SUFFOLK

PATRICK G. HALPIN
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

DAVID HARRIS, M.D., M.P.H.
COMMISSIONER

FARMINGVILLE FAX MACHINE COVER SHEET

FAX NUMBER (516) 854-2505

FROM:

DATE: 12-4-91

NAME: BOB SEYFARTH

PHONE NUMBER: 516-821-0271

NUMBER OF PAGES: 4

TO:

NAME: STEVEN M CAULTY

COMPANY: _____

FAX NUMBER: 1-908-846-1999

VERIFY NUMBER: _____

15 HORSEBLOCK PLACE • FARMINGVILLE, NEW YORK 11738-1220 • (516) 451-

H2M LABS, INC.
575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040
ENVIRONMENTAL and INDUSTRIAL ANALYTICAL SERVICES

Inorganic Form I

NYSDEC Bureau of Technical Services & Research
50 Wolf Road Room 317
Albany, New York 12233-0001

SMC. ID# 1 BW8/3M

E188-4081-51001.
NYSDEC Sample No.

JAMECO PROPERTY

08/03/88
Date Collected

08/16/88
Date Received

INORGANIC ANALYSIS DATA SHEET

LAB NAME H2M LABS, INC. CASE NO. NYSDEC

LAB SAMPLE ID NO. 866212

Elements Identified and Measured

Concentration: Low X Medium

Matrix: Water Soil X Sludge Other

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	5940	13.	Magnesium	900
2.	Antimony	12	14.	Manganese	240
3.	Arsenic	8.2	15.	Mercury	< .22
4.	Barium	202	16.	Nickel	209
5.	Beryllium	< .56	17.	Potassium	366
6.	Cadmium	1.8	18.	Selenium	< .60
7.	Calcium	1570	19.	Silver	< 1.1
8.	Chromium	630	20.	Sodium	1700
9.	Cobalt	20	21.	Thallium	< 1.1
10.	Copper	370	22.	Tin	
11.	Iron	8620	23.	Vanadium	18
12.	Lead	147	24.	Zinc	220
Cyanide		-	Percent Solids (%)		87

Comments: JAMECO PROPERTY BETWEEN SPLITTER BOX AND FENCE

Date Reported 09/09/88

Lab Manager

3

H2M LABS, INC.
575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040
ENVIRONMENTAL and INDUSTRIAL ANALYTICAL SERVICES

Inorganic Form I

NYSDEC Bureau of Technical Services & Research
50 Wolf Road Room 317
Albany, New York 12233-001

SCDH ID# 2BW 8/3M

E188-4081-51002.
NYSDEC Sample No.

BACKGROUND - CORNER OF PROPERTY

08/03/88
Date Collected

08/16/88
Date Received

INORGANIC ANALYSIS DATA SHEET

LAB NAME H2M LABS, INC. CASE NO. NYSDEC

LAB SAMPLE ID NO. 866213

Elements Identified and Measured

Concentration: Low X Medium

Matrix: Water Soil X Sludge Other

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	3670	13.	Magnesium	1330
2.	Antimony	(6.1	14.	Manganese	48
3.	Arsenic	4.1	15.	Mercury	(.20
4.	Barium	20	16.	Nickel	15
5.	Beryllium	(.51	17.	Potassium	192
6.	Cadmium	.51	18.	Selenium	(.50
7.	Calcium	2450	19.	Silver	(1.0
8.	Chromium	18	20.	Sodium	1400
9.	Cobalt	10	21.	Thallium	(1.0
10.	Copper	43	22.	Tin	
11.	Iron	4080	23.	Vanadium	10
12.	Lead	31	24.	Zinc	200
Cyanide		-	Percent Solids (%)		94

Comments: SOUTH - EAST CORNER OF NORRIS PROPERTY

Date Reported 09/09/88 Lab Manager

4

H2M LABS, INC. 575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

ENVIRONMENTAL and INDUSTRIAL ANALYTICAL SERVICES

Inorganic Form I

NYSDEC Bureau of Technical Services & Research
50 Wolf Road Room 317
Albany, New York 12233-001

SCDH ID# 3BW 8/3M

OSWEGO & ALBANY (BACKGROUND)

E188-4081-51003.
NYSDEC Sample No.

08/03/88
Date Collected

08/16/88
Date Received

INORGANIC ANALYSIS DATA SHEET

LAB NAME H2M LABS, INC. CASE NO. NYSDEC

LAB SAMPLE ID NO. 866214

Elements Identified and Measured

Concentration: Low X Medium

Matrix: Water Soil X Sludge Other

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	8940	13.	Magnesium	1980
2.	Antimony	<11	14.	Manganese	93
3.	Arsenic	7.3	15.	Mercury	< .21
4.	Barium	126	16.	Nickel	14.2
5.	Beryllium	< .52	17.	Potassium	560
6.	Cadmium	1.5	18.	Selenium	
7.	Calcium	3020	19.	Silver	< 1.0
8.	Chromium	19.7	20.	Sodium	1500
9.	Cobalt		21.	Thallium	< 1.0
10.	Copper	31	22.	Tin	
11.	Iron	8420	23.	Vanadium	
12.	Lead	116	24.	Zinc	38
Cyanide		-	Percent Solids (%)		96

Comments: SOIL COLLECTED NEAR SIGN AT INTERSECTION OF OSWEGO AND ALBANY AV

Date Reported 09/09/88 Lab Manager

5

REFERENCE NO. 23

County Suffolk

ORIGINAL—TO COMMISSION

WSA-4710

State of New York
Department of Conservation
Division of Water Resources

Well No. S-23848 (on preliminary report) 2

LOG

Ground Surf., El. .....ft. above s

^
.....ft.
v
Top of Well

COMPLETION REPORT—LONG ISLAND WELL

Owner Suffolk County Water Authority

Address Sunrise Highway, Oakdale, LI, NY

Location of well Wyandanch Ave. Wyandanch, LI, NY

SEE TEST WELL LOG ATTACHED HEREWITH

Dept of well below surface 634'-4 5/8" feet

Depth to ground water from surface 7'-6" feet

CASINGS:

Diameter	16 in.	12 in.	in.	in.
Length	250'-5½" ft.	305' ft.	ft.	ft.
Sealing				
Casings removed				

SCREENS: Make Cook-Everdur Openings #70

Diameter	12 in.	in.	in.	in.
Length	82'-6¼" ft.	ft.	ft.	ft.
Depth to top from top of casing	552± ft.			

PUMPING TEST: Date 5/18/65 Test or permanent pump? Test

Duration of Test days 8 hours

Maximum Discharge 1543 gallons per minute

Static level prior to test 7 ft. 6 in. below top of casing

Level during Max. Pumping 44 ft. 6 in. below top of casing

Maximum Drawdown 37 ft.

Approx. time of return to normal level after cessation of pumping hours 30 minutes

PUMP INSTALLED: (DWT BY OWNER)

Type Turb Make Fairbanks Morse Model No. 12 DC 11

Motive power Elec. Make GE H.P. 150

Capacity 1200 g.p.m. against 176.7 ft. of discharge head

No. bowls or stages 9 235 ft. of total head

DROP LINE:	SUCTION LINE:
Diameter 1" in.	12 in.
Length ft.	9'-7½" ft.

Use of water Municipal Supply

Work started 2/23/65 Completed 5/19/65

Date 15 June 1965 Driller MATHIES WELL & PUMP CO., INC.

License No. 153

NOTE: Show log of well—materials encountered, with depth below ground surface, water bearing beds and water levels in each, casings, screens, pump, additional pumping tests and other matters of interest. Describe repair job.

See Instructions as to Well Drillers' Licenses and Reports—pp. 5-7.

STATE OF NEW YORK WATER RESOURCES COMMISSION RECEIVED JUN 16 1965

MATHIES WELL & PUMP CO., INC.
333 West Hoffman Avenue
Lindenhurst, L.I., N.Y.

S-23,848

TEST WELL LOG

JOB NAME CONTRACT #585 - Wyandanch Avenue

LOCATION Wyandanch, L. I., N. Y. (location sketch on back) W.R.C. WELL NO. S-23848

REFERENCE PT. Service Pipe S. W. L.

DATE STARTED 2/23/65 COMPLETED 3/6/65 DRILLER Jess Tucker

Rotary log LAND SURFACE: 60'± MSL

SAMPLE No.	SAMPLE Actual Depth	Lgth	Blows	Formation	Thickness	Depth	Remark
				Coarse Sand Gravel	80	80	
	U.P.			Coarse Sand Gravel	7	87	
				Fine Gray Sand, Lignite, Mica	13	100	
				Gr. Clay, Streaks of Sd & Lignite	37	137	
				Med. Br. Sd	11	148	
				Gr. Clay	14	162	
				Fi. Br. Sand, Streaks of Clay	18	180	
				Fi. Br. & Yellow Sd. Streaks of Clay	20	200	
				Fi. Br. Sand, Clay Strips, Mica	20	220	
				Fi. Gr. Sand, Yellow Clay Strips	20	240	
				Fi. Gr. Sand Strips, Lignite	20	260	
				Dark Solid Clay	20	280	
				Dark Solid Clay	8	288	
				Fi. Gray Sand, Mica, Dark Clay Strips	12	300	
				Gr. Sd & Streaks of Clay	8	308	
				Gr. Clay	16	324	
				Fi. Gr. Sd. Streaks of Lignite	4	328	
				Fi. Gr. Sd	20	348	
				Fi. Gr. Sd	20	368	
				Dirty Coarse Sand, Gravel	20	388	
				Fi. Gr. Sd, Lignite, Mica	20	408	
				Fi. Gr. Sd, Lignite, Mica	20	428	
				Fi. Gr. Sd, Lignite, Mica	20	448	
				Fi. Gr. Sd, Lignite, Mica	5	453	
				Dark Solid Clay	7	460	
				Dark Solid Clay, Sand Strips	8	468	
				Dark Solid Clay, Sand Strips, Lignite, Mica	20	488	
				Fi. Gr. Sd, Streaks of Lignite	11	499	
				Gr. Clay, Streaks of Sand	15	514	

88'± (see electric log)

Magothy (2) Correlation estimated from driller's log. Plotted on well location map)

2

MATHIES WELL & PUMP CO., INC.
333 West Hoffman Avenue
Lindenhurst, L.I., N.Y.

TEST WELL LOG

JOB NAME CONTRACT #585 - Wyandanch Avenue

LOCATION Wyandanch, L. I., N. Y.

REFERENCE PT. _____ W.R.C. WELL NO. S-23848

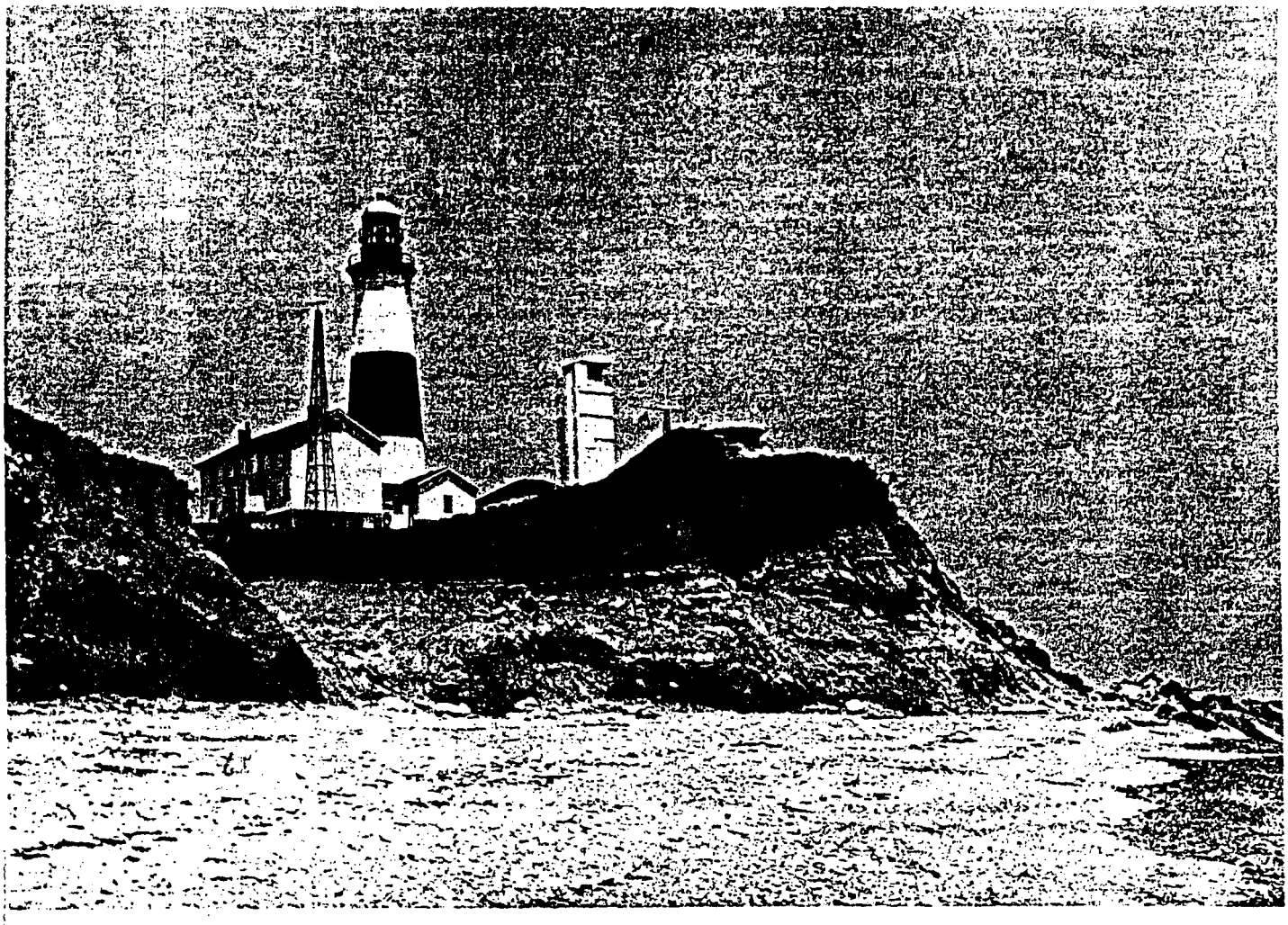
DATE STARTED _____ COMPLETED _____ S. W. L. _____ DRILLER _____

SAMPLE C or F	SAMPLE No.	SAMPLE Actual Depth	Lgth	Blows	Formation	Thickness	Depth	Rem.
					Fi. Br. Sd, Streaks of Sdy Clay	27	569	
					Fi. Clayie Br. Sd	11	570	
					Fi. Clayie Sd, Streaks of Clay	20	590	
					Fi. Gr. Sd, Streaks of Clay, Pyrite, FiGravel	20	610	
					Fi. Gr. Sd, Streaks of Clay, Pyrite, FiGravel	20	630	
					Fi. Gr. Sd, Strips Lignite, Strips Clay	12	642	
					Dark Brown Solid Clay	7	649	
					Dark Brown Solid Clay	9	658	
					Fi. Gr. Sd, Lignite, Mica	11	669	

REFERENCE NO. 24

SOIL SURVEY OF

Suffolk County, New York



United States Department of Agriculture
Soil Conservation Service
in cooperation with
Cornell Agricultural Experiment Station

(Joins sheet 74)



(Joins sheet 84)

(Joins sheet 90)

1 Mile
5 000 Feet
Scale 1:20 000
1 180 000 FEET
1 2 175 000 FEET

N

SITE
Locat

2

TABLE 5.—*Estimated engineering*

Not included in this table, because the characteristics are too variable to estimate, are the miscellaneous land types Bc, CuB, CuC, CuE, it is highly organic and is not suitable for engineering. An asterisk beside the series name in the first column indicates that at least and limitations, and for this reason it is necessary to follow carefully the instructions for referring to other series that appear in the

Soil series and map symbols	Depth to seasonal high water table	Depth from surface (typical profile)	Classification		
			USDA texture	Unified	AASHO
	Feet	*Inches*			
Atsion: At	½–1½	0–27	Sand and loamy sand	SM, SP–SM	A–2–4
		27–56	Stratified sand and gravel or sand.	SM, SP–SM, GP, GP–GM, SP	A–1, A–3
Berryland: Bd	0–½	0–30	Sand and loamy sand	SM, SP–SM	A–2–4
		30–52	Sand or gravelly sand	SP–SM, SM, SP	A–3, A–1
Bridgehampton:					
BgA, BgB	>3	0–56	Silt loam and very fine sandy loam.	ML	A–4
		56–80	Fine gravel and sand	GP–GM, GM, SP–SM, SM, SW–SM	A–1
BhB, BhC	>3	0–48	Silt loam and very fine sandy loam.	ML	A–4
		48–61	Sandy loam or fine sandy loam, gravelly sandy loam.	SM	A–2–4, A–4, A–1
		61–81	Loamy sand or gravelly loamy sand.	SM, SP–SM	A–1, A–2–4
Canadice: Ca	½–1½	0–18	Silt loam or loam	ML, ML–CL	A–4
		18–50	Silty clay, silty clay loam, clay loam.	CL	A–6, A–7
*Carver: CpA, CpC, CpE. For Plymouth part, see the Plymouth series.	>4	0–22	Fine sand to coarse sand	SP–SM, SW–SM	A–3, A–1
		22–60	Coarse sand to gravelly sand	SP, SP–SM	A–3, A–1
Deerfield: De	1½–2	0–25	Sand to fine sand or loamy sand.	SM, SP–SM	A–3, A–1
		25–53	Sand to stratified sand and gravel.	SP, SP–SM	A–1, A–3
Haven:[2] HaA, HaB, HaC, He	>4	0–19	Loam, silt loam, and very fine sandy loam.	ML, ML–CL	A–4
		19–28	Silt loam, very fine sandy loam, and gravelly loam.	ML, SM	A–4, A–2–4 or A–1
		28–55	Gravelly sand, loamy sand, sandy loam, or stratified sand and gravel.	SM, SP, SP–SM or GP	A–1 or A–2–4
Montauk: MfA, MfB, MfC, MkA, MkB, MkC.	>2	0–27	Fine sandy loam, silt loam, loam, or sandy loam.	SM, ML	A–4, A–2–4
		27–40	Sandy loam, fine sandy loam, and loamy sand.	SM, SW–SM	A–2–4, A–4, A–1
		40–60	Loamy sand, gravelly loamy sand, sandy loam, and fine sandy loam.	SM, SP–SM	A–1, A–2–4
Montauk, sandy variants: MnA, MnB, MnC, MnE.	>4	0–24	Loamy sand or sand	SM, SP–SM	A–2–4, A–1
		24–60	Loamy sand and sand	SM, SP–SM	A–2–4, A–1
Plymouth:					
PlA, PlB, PlC, PmB3, PmC3	>4	0–27	Loamy sand, loamy fine sand, gravelly loamy sand, and sand.	SM, SP–SM	A–2–4, A–1
		27–58	Sand and gravel, coarse sand, and gravelly coarse sand.	SP, GP, SP–SM, GP–GM	A–1, A–3
PsA, PsB	>3	0–38	Loamy sand	SM	A–2–4
		38–64	Silt loam	ML	A–4
		64–80	Fine gravel and sand	GP–GM, GM, SP–SM, SM	A–1

See footnotes at end of table.

3

properties of the soils

Du, Es, Fd, Fs, Gp, Ma, Rc, Tm, and Ur and the graded soils Bm, MIB, MIC, RhB, and RhC. Muck (Mu) also is not included, because one mapping unit in that series is made up of two or more kinds of soil. The soils in such mapping units may have different properties first column. Absence of data indicates that no estimate was made. >=greater than <=less than]

Coarse fraction more than 3 inches in diameter	Percentage less than 3 inches passing sieve—				Permeability	Available moisture capacity [1]	Reaction
	No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm).	No. 200 (0.07 mm).			
Percent					*Inches per hour*	*Inches per inch of soil*	*pH value*
----------	95–100	90–100	50–75	10–30	>6. 3	0. 04–0. 08	4. 5–5. 5
----------	45–95	40–95	15–55	0–15	>6. 3	0. 02–0. 04	4. 5–5. 5
----------	85–100	80–100	50–75	10–30	>6. 3	0. 03–0. 08	4. 5–5. 5
----------	75–100	70–100	35–70	0–15	>6. 3	----------	4. 5–5. 5
----------	95–100	90–100	90–100	60–95	0. 63–2. 0	0. 15–0. 20	4. 5–5. 5
----------	45–95	35–95	20–40	5–15	>6. 3	----------	5. 1–6. 0
----------	95–100	90–100	90–100	60–95	0. 63–2. 0	0. 15–0. 20	4. 5–5. 5
0–5	70–95	60–95	40–75	20–40	< 0. 63	----------	4. 5–5. 5
0–5	65–95	60–90	35–70	10–30	>6. 3	----------	4. 5–5. 5
----------	100	100	85–100	65–85	0. 63–2. 0	0. 17–0. 20	5. 1–6. 0
----------	95–100	95–100	90–100	70–95	< 0. 20	0. 13–0. 17	5. 6–6. 5
----------	75–100	70–100	25–65	5–10	>6. 3	0. 03–0. 04	4. 5–5. 5
0–5	55–95	45–95	15–55	0–10	>6. 3	0. 02–0. 04	4. 5–5. 5
----------	95–100	90–100	45–70	5–25	>6. 3	0. 04–0. 06	4. 5–5. 5
0–5	55–90	50–90	25–65	0–10	>6. 3	0. 02–0. 04	4. 5–5. 5
----------	85–100	80–100	70–85	50–80	0. 63–2. 0	0. 14–0. 20	4. 5–5. 5
0–3	60–80	55–75	45–70	25–55	>2. 0	0. 03–0. 14	4. 5–5. 5
0–3	45–95	30–95	5–75	0–30	>6. 3	0. 01–0. 04	4. 5–5. 5
0–5	80–100	75–100	55–95	25–85	0. 63–6. 3	0. 11–0. 20	4. 5–5. 5
0–5	70–95	60–95	40–75	10–40	< 0. 63	0. 08–0. 12	4. 5–5. 5
0–5	65–95	60–90	35–70	10–30	< 0. 63	----------	4. 5–5. 5
0–5	80–95	75–95	40–70	10–25	6. 3	0. 03–0. 07	4. 5–5. 5
0–5	65–95	60–90	30–70	5–25	0. 20–2. 0	0. 02–0. 07	4. 5–5. 5
0–5	75–95	70–95	35–70	5–25	>6. 3	0. 04–0. 08	4. 5–5. 5
0–5	45–95	40–95	15–55	0–10	>6. 3	0. 02–0. 04	4. 5–5. 5
----------	90–100	85–100	50–75	15–30	>6. 3	0. 06–0. 08	4. 5–5. 5
----------	95–100	90–100	90–100	60–95	0. 63–2. 0	----------	4. 5–5. 5
----------	45–95	35–95	20–40	5–15	>6. 3	----------	5. 1–6. 0

TABLE 5.—*Estimated engineering*

Soil series and map symbols	Depth to seasonal high water table	Depth from surface (typical profile)	Classification		
			USDA texture	Unified	AASHO
	Feet	*Inches*			
Raynham: Ra	½–1½	0–51	Silt loam to very fine sandy loam.	ML, ML–CL	A–4
*Riverhead:[2] RdA, RdB, RdC, ReB, ReC, RpE. For Plymouth part of RpE, see Plymouth series.	>4	0–32	Sandy loam and fine sandy loam.	SM	A–4, A–2–4
		32–65	Sand, loamy sand, gravelly sand, and gravelly loamy sand.	SP, SM, SW–SM, SP–SM, GP, GM, GP–GM	A–1
Scio:					
ScB	1½–2	0–38	Silt loam and very fine sandy loam.	ML, ML–CL	A–4
		38–61	Fine sandy loam and gravelly fine sandy loam.	SM, SM–SC, GM, GM–GC	A–4, A–2–4
SdA, SdB	1½–2	0–35	Silt loam and very fine sandy loam.	ML, ML–CL	A–4
		35–51	Gravelly sand and sand	SP, SM, SW–SM, SP–SM, GP, GM, GP–GM	A–1, A–3, A–2–4
Sudbury: Su	1½–2	0–24	Sandy loam and fine sandy loam.	SM	A–2–4, A–4
		24–51	Loamy sand, sand and gravel	SP, SM, SP–SM	A–1, A–3, A–2–4
Wallington: Wa	½–1½	0–18	Silt loam and very fine sandy loam.	ML, ML–CL	A–4
		18–38	Silt loam and very fine sandy loam.	ML, ML–CL	A–4
		38–47	Silt loam and very fine sandy loam.	ML, ML–CL	A–4
		47–60	Fine sandy loam, sandy loam, gravelly fine sandy loam, gravelly sandy loam, and loamy sand.	SM, GM, SM–SC, GM–GC, SW–SM	A–1, A–2–4, A–4
Walpole: Wd	½–1½	0–26	Sandy loam and fine sandy loam.	SM	A–2, A–4
		26–52	Sand and gravelly sand	SP, SP–SM, SM	A–1, A–3, A–2–4
Wareham: We	½–1½	0–29	Loamy sand to sand	SM	A–2, A–4
		26–52	Sand and gravelly sand	SP, SP–SM, SM	A–1, A–3, A–2–4
Whitman: Wh	0–½	0–14	Sandy loam and loam	ML, ML–CL, SM, SM–SC	A–4, A–2–4
		14–37	Sandy loam and loam	ML, ML–CL, SM, SM–SC	A–4, A–2–4
		37–50	Sandy loam, loamy sand, gravelly sandy loam, and gravelly loamy sand.	SM, SM–SC, GM, GM–GC	A–2–4, A–1

[1] Available moisture capacity is usually calculated to a depth of approximately 30 inches.
[2] Unit He has a surface layer of accumulated silty inwash material, 12 to 30 inches thick, that has a slightly higher content of organic

properties of the soils—Continued

Coarse fraction more than 3 inches in diameter	Percentage less than 3 inches passing sieve—				Permeability	Available moisture capacity [1]	Reaction
	No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm).	No. 200 (0.07 mm).			
Percent					*Inches per hour*	*Inches per inch of soil*	*pH value*
----------	90–100	85–100	75–95	50–80	0. 20–2. 0	0. 14–0. 20	4. 5–5. 5
0–5	80–100	75–100	55–75	20–45	2. 0–6. 3	0. 11–0. 15	4. 5–5. 5
0–5	45–95	40–90	15–45	0–15	>6. 3	0. 02–0. 07	4. 5–5. 5
----------	90–100	85–100	75–95	50–80	0. 63–2. 0	0. 14–0. 20	4. 5–5. 5
0–5	45–90	45–85	35–70	20–45	0. 20–. 63	----------	4. 5–5. 5
----------	90–100	85–100	75–95	50–80	0. 63–2. 0	0. 14–0. 20	4. 5–5. 5
0–5	45–90	45–85	25–60	0–15	>6. 3	----------	4. 5–5. 5
----------	85–100	80–100	50–75	25–45	0. 63–6. 3	0. 12–0. 16	4. 5–5. 5
----------	60–90	50–85	25–60	0–15	>6. 3	0. 02–0. 06	4. 5–5. 5
----------	95–100	90–100	80–100	50–80	0. 63–2. 0	0. 15–0. 20	4. 5–5. 5
----------	95–100	90–100	80–100	50–80	<0. 63	0. 08–0. 12	4. 5–5. 5
----------	95–100	90–100	80–100	50–80	0. 63–2. 0	----------	4. 5–5. 5
0–5	55–90	50–85	30–70	10–40	0. 20–2. 0	----------	4. 5–5. 5
----------	85–100	80–100	55–80	25–50	2. 0–6. 3	0. 12–0. 15	4. 5–5. 5
----------	70–90	65–90	35–65	0–15	>6. 3	0. 03–0. 04	4. 5–5. 5
----------	85–100	80–100	55–80	25–50	2. 0–6. 3	0. 12–0. 15	4. 5–5. 5
----------	70–90	65–90	35–65	0–15	>6. 3	0. 03–0. 04	4. 5–5. 5
0–5	80–95	75–90	45–85	25–65	2. 0–6. 3	0. 12–0. 15	4. 5–5. 5
0–5	85–95	75–90	45–85	25–65	<0. 63	0. 08–0. 12	4. 5–5. 5
0–5	55–95	50–90	25–65	12–35	<0. 63	----------	4. 5–5. 5

matter to greater depths than the typical profile.

[1] Units ReB, ReC, and RpE contain 1.5 to 50 cubic yards of stones or boulders per acre foot.

part of the county along the north shore are being used as homesites. Capability unit VIIs-1; woodland suitability group 5s2.

Cut and Fill Land

Cut and fill land is made up of areas that have been altered in grading operations for housing developments, shopping centers, and similar nonfarm uses. Generally, the initial grading consists of cuts and fills for streets or parking lots. During this phase, excess soil material is stockpiled for final grading and topdressing around houses or other buildings.

Areas of Cut and fill land contain deep cuts in or near the sandy substratum of the soil or sandy fills of 28 inches or more. Generally, cuts are so deep or fills so thick that identification of soils by series is not possible. The soil material making up the upper 40 inches of this unit contains as much as 12 inches of sandy loam, loam, or silt loam in some places. The 28 inches that remain are loamy fine sand or coarser textured material. Cut and fill land is generally associated with Carver and Plymouth soils.

The soil material that remains after grading operations are completed has low available moisture capacity, is droughty, and is low to very low in natural fertility.

The areas of Cut and fill land have severe limitations to use in establishing and maintaining lawns and landscaping. The areas are not suited to farming operations because of the alteration of existing soil material and the presence of buildings and other works of man.

Cut and fill land, gently sloping (CuB).—This unit is made up of level to gently sloping areas that have been cut and filled for nonfarm uses. Slopes range from 1 to 8 percent; and because of final grading around houses and other buildings, slopes generally are complex. The areas generally are large, but some areas are about 5 acres in size.

Cut and fill land makes up at least 75 percent of this unit. Texture is dominantly loamy fine sand or coarser textured material throughout. The 25 percent that remains consists of areas of soils of the Carver, Haven, Plymouth, or Riverhead series. The areas of these soils are smaller than 5 acres.

Included with this land type in mapping are small areas of Riverhead and Haven soils, graded, 0 to 8 percent slopes, and small areas that have more than 12 inches of sandy loam, loam, or silt loam in the upper 40 inches.

This land type has few, if any, limitations to use as building sites. Capability unit not assigned; woodland suitability group not assigned.

Cut and fill land, sloping (CuC).—This unit is made up of moderately sloping areas that have been graded for building sites. Slopes range from 8 to 15 percent. Individual areas are generally small, often following the side slopes of drainage channels. The smallest area mapped is 5 acres.

Cut and fill land makes up 60 to 70 percent of this unit. Its texture is dominantly loamy fine sand or coarser textured material. Making up the remaining percentage of this unit are soils of the Carver, Haven, Plymouth, or Riverhead series. Because of moderate slopes on some areas of Riverhead and Haven soils, cuts and fills are deep enough that the soil material that remains after grading is dominantly loamy fine sand, or coarser textured material, throughout the upper 28 inches. For this reason, this unit is as commonly associated with Riverhead and Haven soils as with Carver and Plymouth soils. Grading on these sloping soils generally is restricted to sites for buildings and to areas immediately surrounding the houses.

This land type has limitations for most nonfarm uses because of slope. Capability unit not assigned; woodland suitability group not assigned.

Cut and fill land, steep (CuE).—This unit is made up of moderately steep or steep areas that have been graded for building sites or of areas where excess soil material from excavations has been stockpiled. Slopes range from 15 to 35 percent. The areas of this unit are small. The smallest area mapped is 5 acres.

Cut and fill land makes up 60 to 70 percent of the unit. The remaining 30 to 40 percent is made up of soils of the Carver and Plymouth series. Texture throughout is loamy fine sand or coarser textured material. This unit occurs where deep cuts have been made into hillsides to establish level areas for homesties. The material removed from cuts is used to fill and grade yards. Most areas between building sites are ungraded. Areas that have not been used as homesites are severely limited for most nonfarm purposes because of slope. Capability unit not assigned; woodland suitability group not assigned.

Deerfield Series

The Deerfield series consists of deep, moderately well drained, coarse-textured soils that formed in sand or loamy sand materials over deep layers of sand or sand and gravel. This nearly level soil is throughout the county in depressional areas, or it is adjacent to wetter soils that form the borders around lakes, ponds, or tidal marshes. It is primarily on outwash plain. Native vegetation is white pine, pitch pine, white oak, and red oak and huckleberry bushes.

A representative profile has a thin layer of black organic matter on the surface about 3 inches thick. Below this is a surface layer of gray sand about 6 inches thick. The subsoil, to a depth of about 25 inches, is dark reddish-brown, friable sand in the upper 2 inches. Below this it is olive-yellow and light yellowish-brown, very friable sand. The substratum, to a depth of 53 inches, is light-gray loose sand.

Deerfield soils have very low available moisture capacity in the surface layer and upper part of the subsoil; however, deeper rooted plants can draw moisture from the water table. Permeability is rapid throughout the surface layer and subsoil. A seasonal high water table is at a depth of about 18 to 24 inches. Reaction is strongly acid to very strongly acid throughout. Natural fertility is low. Crop response to applications of lime and fertilizer is fair. The root zone is mainly in the upper 25 to 30 inches.

Representative profile of Deerfield sand, wooded, one-fourth mile north of intersection of Swamp Road and State Route 114, in the Town of East Hampton:

O1—3 to 2 inches, loose hardwood leaves and pine needles.
O2—2 inches to 0, decomposed leaves and twigs; many roots.

layers in such areas are thicker than those in the profile described.

Fill land, sandy is mostly along the waterfront and is used as building sites. It is not suited to most other uses. Onsite investigation is needed to determine the suitability of individual areas for building sites. Because of droughtiness on thicker fills and low fertility of most fill material, limitations are severe on this land type for establishing and maintaining lawns and landscaping. Ground water pollution is a hazard where thinner fills provide little or no filter material between the bottoms of cesspools and the water table. Capability unit not assigned; woodland suitability group not assigned.

Gravel Pits

Gravel pits (Gp) are open excavations that have been made for the purpose of mining sand and gravel. These pits range in depth from 8 or 10 feet to more than 100 feet. The sides of the pits generally are left nearly vertical, and the bottoms are level.

Abandoned pits are not suited to farming. Most of these areas are in a cover of native vegetation. Houses have been built in some of the larger pits. Capability unit not assigned; woodland suitability group not assigned.

Haven Series

The Haven series consists of deep, well-drained, medium-textured soils that formed in a loamy or silty mantle over stratified coarse sand and gravel. These soils are present throughout the county, but most areas are on outwash plains between the two terminal moraines. Slopes range from 0 to 12 percent, but they generally are 1 to 6 percent. Native vegetation consists of black oak, white oak, red oak, scrub oaks, and pitch pine.

In a representative profile a thin layer of leaf litter and decomposed organic matter is on the surface in wooded areas. Below this is the surface layer of dark grayish-brown loam about 3 inches thick. In cultivated areas the surface layer is mixed with the material formerly in the upper part of the subsoil, and a plow layer of brown or dark-brown loam, about 10 inches thick, is present. The subsoil is dark-brown to strong-brown, friable loam to a depth of about 19 inches. The lower part, to a depth of 28 inches, is yellowish-brown, friable gravelly loam. The substratum, to a depth of 55 inches, is yellowish-brown to brownish-yellow loose sand and gravel.

Haven soils have high to moderate available moisture capacity. Reaction is strongly acid to very strongly acid throughout. Natural fertility is low. The response of crops to lime and fertilizer is good. Internal drainage is good. Permeability is moderate in the surface layer and subsoil and rapid or very rapid in the substratum. The root zone is 25 to 35 inches thick.

Representative profile of Haven loam, 0 to 2 percent slopes, in a wooded area, on Gerrard Road, 1½ miles north of Sunrise Highway in Brookhaven:

O1—3½ to 1½ inches, loose pine needles, leaves, and twigs.
O2—1½ inches to 0, black (5YR 2/1) humified organic material.
A1—0 to 3 inches, dark grayish-brown (10YR 4/2) loam; weak, fine and medium, granular structure; friable; many fine and coarse roots; many pores; very strongly acid; abrupt, smooth boundary.
B21—3 to 10 inches, brown to dark-brown (7.5YR 4/4) loam; weak, fine and medium, subangular blocky structure; friable; common roots; many pores; a few root channels filled with dark grayish-brown loam; very strongly acid; clear, wavy boundary.
B22—10 to 19 inches, strong-brown (7.5YR 5/6) loam; weak, fine and medium, subangular blocky structure; friable; common roots; many pores; 5 percent gravel ¼ to ½ inch in diameter; very strongly acid; gradual, wavy boundary.
B23—19 to 28 inches, yellowish-brown (10YR 5/6) gravelly loam; weak, medium and fine, subangular blocky structure; friable; a few fine roots; 20 percent fine gravel; very strongly acid; abrupt, wavy boundary.
IIC—28 to 55 inches, yellowish-brown (10YR 5/4) to brownish-yellow (10YR 6/6) gravelly sand; single grain; loose; 30 percent gravel ¼ to 1 inch diameter; very strongly acid.

Depth to strongly contrasting sand and gravel ranges from 18 to 36 inches, depending on the thickness of the solum. The content of gravel ranges from 2 to 15 percent in all horizons above any B23 or IIB3 horizons that are present. Reaction is strongly acid or very strongly acid throughout.

In the Ap horizon color ranges from very dark grayish brown (10YR 3/2) to brown or dark brown (10YR 4/3). In the A1 horizon color ranges from dark grayish brown (10YR 4/2) to black (10YR 2/1). The Ap horizon has weak or moderate granular structure. It commonly has a firm, platy plowpan in the lower part. If a plowpan is present in the Ap horizon, the material above the plowpan is friable or very friable. The Ap horizon is 8 to 12 inches thick. In places accumulated A horizons range from 12 to 30 inches in thickness.

In the B21 and B22 horizons color ranges from brown or dark brown (7.5YR 4/4) to light olive brown (2.5Y 5/6). The texture of these horizons ranges from very fine sandy loam to silt loam. It is massive or structure is weak, subangular blocky. Consistence is very friable or friable. Where a B23 horizon is present, it has the same range of characteristics as the B21 and B22 horizons, except that the content of gravel ranges from 15 to 35 percent.

In the strongly contrasting IIC horizon, color ranges from yellowish brown (10YR 5/4) to olive yellow (2.5Y 6/6). This horizon is coarse or medium sand, and typically is stratified. The content of gravel is 10 to 50 percent.

In places is a transitional B3 or IIB3 horizon that ranges from sandy loam to gravelly sand in texture. It is 2 to 5 inches thick. The content of coarse fragments in this horizon ranges from 1 to 20 percent.

Haven soils are near Riverhead, Scio, Bridgehampton, and Montauk soils. Haven soils are similar to Riverhead soils, but they have less sand in the B2 horizon. They are similar to Scio soils, but lack the colors that indicate wetness in those soils. They are similar to Bridgehampton soils, but have a thinner solum, are less silty, and lack the bisequum color profile of the Bridgehampton soils. They are similar to Montauk soils, but lack the fragipan and the till substratum typical of those soils.

Haven loam, 0 to 2 percent slopes (HoA).—This soil has the profile described as representative of the series. It is mostly nearly level and generally is on outwash plains. Some areas of this soil are on moraines and generally are on the top of low-lying hills. Some of these areas are slightly undulating. Most areas of this soil are large, but on moraines the areas are smaller and are irregular in shape.

Included with this soil in mapping are small areas of Scio soils and some crescent-shaped, gravelly areas. Also included are soils that have a moderately coarse textured surface layer and a medium-textured subsoil. In many areas of this soil that are mapped in association with

Bridgehampton soils, the soil is deeper and siltier than that described as representative of the series. Bridgehampton soils generally are included in mapping in these areas. Also included, on moraines, are areas of Montauk soils that have a very weak fragipan. Montauk soils formed in loose, sandy till.

The hazard of erosion is slight on this Haven soil. Primary management concerns are keeping the soil from crusting after rain, maintaining tilth, and reducing the plowpan.

This soil is used extensively for crops, and it is well suited to all crops commonly grown in the county. Potatoes are the main crop, but cauliflower, cabbage, corn, onion, and sod crops are also grown. Because of the nearly level slope and ease of excavation, most areas of this soil in the western part of the county are being used for housing developments and industrial parks. Capability unit I–1; woodland suitability group 3o1.

Haven loam, 2 to 6 percent slopes (HaB).—This soil is on outwash plains and moraines, commonly along shallow, intermittent drainage channels. Slopes are short. In larger areas this soil is mostly undulating. Most areas of this soil are smaller than the areas of Haven loam, 0 to 2 percent slopes.

In cultivated areas this soil is 2 or 3 inches shallower to sand and gravel than the soil described as representative of the series, and it contains a larger amount of gravel. Otherwise the two profiles are similar.

Included with this soil in mapping are small areas of Riverhead and Bridgehampton soils, some of which are in a complex pattern with the dominant Haven soil. These included soils generally are in the larger areas of this soil. Also included are Montauk silt loams that have a very weak fragipan. In places areas of this soil that are mapped near Montauk soils have layers of till deep in the substratum. Also included are areas along the bottom of narrow drainage channels that have a silty surface layer that is thicker than that in the profile described.

The hazard of erosion is moderate to slight on this Haven soil. Management concerns are controlling runoff and erosion and keeping the surface loose and free from crusting.

This soil is well suited to all crops commonly grown in the county. It generally is farmed the same as adjoining areas of nearly level soils. Crops commonly grown are potatoes, cauliflower, cabbage, and corn. Most areas in the western part of the county are used for housing developments. Capability unit IIe–1; woodland suitability group 3o1.

Haven loam, 6 to 12 percent slopes (HaC).—This soil is on moraines where slopes generally are complex or on the short side slopes along drainage channels. Areas on moraines are large and are irregular in shape. Areas on outwash plains are long and narrow and follow drainage channels that cut into the plains.

The profile of this soil is similar to that of the soil described as representative of the series, except that in cultivated areas this soil is 5 or 6 inches shallower to sand and gravel and contains more gravel.

Included with this soil in mapping are small areas of Bridgehampton silt loam, 6 to 12 percent slopes. Most of these areas are north of Scuttlehole Road and Millstone Road in Southhampton. Also included are narrow areas of Haven soils that have a thick surface layer. These areas are along the bottom of intermittent drainage channels. Included on moraines are small areas of Riverhead soils that are in a complex with the dominant Haven soils or have textures that are transitional. Montauk silt loams that have a very weakly expressed fragipan are also included. In places, in areas that are mapped adjacent to Montauk soils, this Haven soil has layers of till deep in the substratum.

The hazard of erosion is moderate to severe on this Haven soil. In places small gravelly areas limit the growing and harvesting of some truck crops.

This soil is suited to potatoes and to most crops commonly grown in the county, but only a small acreage is in potatoes. This soil is better suited to hand-harvested crops or to crops that can be planted and harvested by small machines. Some areas are used for crops, but most areas that were formerly cultivated have now reverted to grass or brush. In the western part of the county, most areas adjoining large residential areas of less sloping soils are being used as homesites. Capability unit IIIe–2; woodland suitability group 3o1.

Haven loam, thick surface layer (He).—This soil is mainly on outwash plains throughout the county. It occupies the bottom of the larger drainage channels or closed depressions where silty material has accumulated from surrounding areas. Slope is less than 3 percent. Areas of this soil generally are quite small. They are mostly long and narrow, but in closed depressions the areas are nearly round.

This soil has the profile described as representative of the series, except that the content of organic matter in the surface layer increases with depth, and the surface layer ranges from about 12 to 30 inches in thickness. Also, in most places the surface layer contains more silt than the soil described as representative of the series, and in some places the subsoil is loam or silt loam.

Included with this soil in mapping are small areas of soils that have a surface layer less than 1 foot thick or more than 2½ feet thick. These included soils are on the same landform and in close association with this soil. Also included are small areas of Scio soils, on the wetter sites, and areas of coarser textured soils that have thick accumulations on the surface. Areas of somewhat poorly drained or wetter soils are shown on the map by the conventional symbol for wet spots.

The hazard of erosion is slight on this Haven soil, except where the soil receives large amounts of water from adjoining sloping soils. Summer crops in closed depressions are damaged if heavy rain falls during the growing season.

Most areas of this soil are well adapted to most crops commonly grown in the county. In closed depressions, however, wheat and rye are frequently damaged by ponding. Areas of this soil generally are used along with adjoining areas of Haven, Bridgehampton, and Riverhead soils. Most areas are cleared and are used for crops or, in the western part of the county, for homesites. Capability unit IIw–2; woodland suitability group 3o1.

gently undulating moraines. Areas are narrow and long on short side slopes along drainage channels. Areas that have complex slopes make up the larger acreages.

Included with this soil in mapping are areas of soils that have a weak fragipan. These soils are similar to Plymouth soils, except that they have firm bands in the substratum. Also included are areas that have a fragipan at a depth of more than 40 inches and areas that contain as much as 25 percent gravel and cobblestones. Very stony or stony areas are indicated on the detailed map by the conventional symbol for stoniness.

The hazard of erosion is slight on this Montauk sandy variant. This soil is moderately well suited to the crops commonly grown in the county. The main concerns of management are droughtiness and low fertility. Most of this soil is wooded, but a few areas are cleared and are used for pasture or homesites. Capability unit IIIs–1; woodland suitability group 4s1.

Montauk loamy sand, sandy variant, 8 to 15 percent slopes (MnC).—This unit is on moraines along drainage channels and on large areas of complex, undulating to rolling topography where the dominant slope is 8 to 15 percent.

The profile of this soil is similar to the one described as representative for the series, except that it has more gravel in the upper 2 feet in some areas.

Included with this soil in mapping are areas that have a weak fragipan that intergrade to soils of the Plymouth series. Also included are sandy soils without stones that are underlain by till. These small included areas appear to be aeolian in nature and are scattered throughout the unit. Also included on complex slopes are a few areas of Montauk loamy sand, sandy variant, 3 to 8 percent slopes.

The hazard of erosion is moderate to severe in areas that are cleared for cultivation. This soil is not well suited to most crops commonly grown in the county, because slopes are steep, available moisture capacity is low or very low, and fertility is low. Growing crops in longer rotations helps to control runoff and erosion. Almost all of this soil is in woodland. A few areas are used as sites for summer homes. Capability unit IVs–1; woodland suitability group 4s1.

Montauk loamy sand, sandy variant, 15 to 35 percent slopes (MnE).—This soil is on the complex topography of the moraine on the eastern end of the south fork. Most areas of this soil are large. Only a few small areas have simple slopes. Deep kettle holes and low steep-sided ridges and mounds are characteristic in areas of this soil.

The profile of this soil is similar to the profile of the soil described as representative of the series, except expression of the fragipan is variable. Also, more areas of this soil contain as much as 15 percent coarse fragments, and more boulders are on the surface of this soil, especially east of Montauk.

Included with this soil in mapping are Montauk and Bridgehampton, till substratum soils that have slopes of more than 15 percent. These soils are underlain by till, and they make up less than 5 percent of the unit. Also included are many small areas of Carver, Plymouth, and Riverhead soils that are too small to map separately. In places these soils have till below a depth of 4 feet. Small knobs, ridges, and hogbacks included with this unit contain from 15 to 30 percent gravel and cobblestones. These gravelly areas generally are small, and they are in a complex pattern with nongravelly soil. Small areas of gently sloping and moderately sloping Montauk sandy variant soils are also included.

The hazard of erosion is moderate to severe on this Montauk sandy variant. This soil is not suited to crops commonly grown in the county, because of steepness of slope and droughtiness. This soil is suited to woodland, and most of it is used for that purpose. A few less sloping areas are used as sites for homes. Capability unit VIIs–1; woodland suitability group 4s2.

Muck

Muck (Mu) is made up of very poorly drained organic soils that formed in partly decomposed or almost completely decomposed woody or herbaceous plants. The areas generally are nearly level and occur in the bottom of closed depressions or kettle holes and along a few of the larger streams. Most areas are along the Peconic River and near Montauk in many depressions that are irregular in shape. A few areas, however, are between tidal marshes and areas of better drained upland soils.

Muck is made up of 16 to 48 inches of spongy, black or dark-reddish organic material over loose sand and gravel. The amount of partly decayed plants in the organic layer varies. The water table is at or near the surface most of the year. Several inches of water are on the surface late in winter and in spring.

Included with this land type in mapping are small areas that are muck to a depth of more then 48 inches and a few areas of fresh-water marsh along the Peconic River that are under water throughout the year.

Muck is suited to cranberries in some places; however, most areas are small, and it is not economically feasible to develop them. Almost all of this land type is in woodland or marsh grass. It is better suited to habitat for wetland wildlife than to other uses. Capability unit VIIw–1; woodland suitability group not assigned.

Plymouth Series

The Plymouth series consists of deep, excessively drained, coarse-textured soils that formed in a mantle of loamy sand or sand over thick layers of stratified coarse sand and gravel. These nearly level to steep soils are throughout the county on broad, gently sloping to level outwash plains and on undulating to steep moraines. Native vegetation consists of white oak, black oak, pitch pine, and scrub oak.

In a representative profile the surface layer is very dark grayish-brown loamy sand, about 4 inches thick, in wooded areas. In cultivated areas the surface layer is mixed with material formerly in the upper part of the subsoil, and there is a brown to dark-brown plow layer of loam about 10 inches thick. The subsoil is yellowish-brown and brown, very friable and loose loamy sand to a depth of about 27 inches. The substratum, to a depth of about 58 inches, is yellowish-brown, loose gravelly coarse sand.

Plymouth soils have low to very low available moisture capacity. Natural fertility is low. The response of

crops to lime and fertilizer is fair. Reaction is strongly acid to very strongly acid throughout the profile of most of these soils, but it is strongly acid to medium acid in the lower substratum of soils in the silty substratum phase. The root zone is confined mainly to the upper 25 to 35 inches. Internal drainage is good. Permeability is rapid in all of these soils except in those of the silty substratum phase. Permeability is moderate in the silty layer of soils in the silty substratum phase.

Representative profile of Plymouth loamy sand, 0 to 3 percent slopes, in a wooded area, in Heckscher State Park:

A1—0 to 4 inches, very dark grayish-brown (10YR 3/2) loamy sand; very weak, medium, granular structure; very friable; many fine roots; 5 percent fine gravel; many clean white sand grains; very strongly acid; clear, wavy boundary.

B21—4 to 10 inches, yellowish-brown (10YR 5/4) loamy sand; single grain to very weak, medium, subangular blocky structure; very friable; common roots; 5 percent fine gravel; material similar to that in the A1 horizon makes up 20 percent of the mass; very strongly acid; gradual, wavy boundary.

B22—10 to 17 inches, yellowish-brown (10YR 5/6) loamy sand; single grain; loose; common roots; 5 percent fine gravel; very strongly acid; gradual, wavy boundary.

B23—17 to 27 inches; brown (7.5YR 5/4) loamy sand; single grain; very friable; a few roots; 10 percent gravel; very strongly acid; clear, wavy boundary.

IIC—27 to 58 inches, yellowish-brown (10YR 5/6) gravelly coarse sand; single grain; loose; a few very fine roots; 30 percent rounded pebbles 1 inch and less in diameter; very strongly acid.

The solum in uneroded profiles ranges from 20 to 36 inches in thickness and corresponds with the depth to underlying coarse sand and gravel. The content of gravel or boulders in the solum ranges from about 2 to 20 percent, by volume. The content of gravel and cobblestones in the substratum ranges from 10 to 40 percent, by volume. Reaction ranges from strongly acid to very strongly acid.

The A1 and Ap horizons range from very dark grayish brown (10YR 3/2) to brown or dark brown (7.5YR 4/2). In undulating areas a thin, light-colored, weak A2 horizon is present below the A1 horizon in some profiles. Texture in the A horizon ranges from sand to loamy sand and gravelly loamy sand. It is massive or the structure is weak or very weak granular. Consistence is very friable or loose. The Ap horizon, if present, ranges from 8 to 12 inches in thickness.

The B horizon ranges from dark yellowish brown (10YR 4/4) to strong brown (7.5YR 5/6). Texture ranges from sand to loamy sand and loamy fine sand, and in some places, it is gravelly. It is single grain or has very weak, subangular, blocky structure; the latter is in profiles that have higher proportions of fine and very fine sand. Consistence ranges from friable to loose. In places a coarse sand or loamy coarse sand B3 horizon is present and ranges from 4 to 7 inches in thickness.

The C horizon ranges from yellowish brown (10YR 5/6) to light yellowish brown (2.5Y 6/4). Texture is mainly gravelly coarse sand or coarse sand, but in some areas silt loam layers are below a depth of 40 inches to a depth of 5 to 8 feet. Pebbles in the C horizon generally range from ½ inch to 3 inches in diameter, but a few cobblestones are present in some profiles.

Plymouth soils are near Carver, Deerfield, Haven, Riverhead, Wareham, and Montauk loamy sand, sandy variant soils. Plymouth soils are similar to these soils. Plymouth soils are mapped as an undifferentiated unit with Carver soils. They are similar to Carver soils in texture, but Plymouth soils lack the leached A2 horizon and the B21 horizon, made up of iron and humus accumulation, of Carver soils. Plymouth soils contain more sand in the solum than the Riverhead and Haven soils, and they lack the seasonal high water table that is characteristic of Deerfield and Wareham soils. Plymouth soils lack the fragipan and till substratum of Montauk, sandy variant soils.

Plymouth loamy sand, 0 to 3 percent slopes (PlA).—This soil has the profile described as representative of the series. It is mainly on outwash plains south of the Ronkonkoma moraine. It is also on flat hilltops and in drainageways on morainic deposits. The areas generally are nearly level, but they are somewhat undulating in some places. Areas on outwash plains are large and uniform, and areas on the moraine are small and irregular.

Included with this soil in mapping are small areas of Riverhead soils that have a texture that is marginal to loamy sand. Also included are some loamy sands that have a profile similar in appearance to the soils of the Carver series. On moraines, scattered areas of Montauk sandy variant soils that have a weak fragipan and loose underlying till layers are included. These areas intergrade between Plymouth loamy sands and Montauk loamy sand, sandy variants. In the larger areas of this unit, small acreages of Carver and Plymouth sands are included. Scattered throughout the county and on Fishers Island are areas that are dominantly fine sand.

The hazard of erosion is slight on this Plymouth soil. This soil is fairly well suited to crops commonly grown in the county. Many areas were formerly cleared for farming, but most of these areas are idle or are in brush or trees. Small areas that are in large tracts with Riverhead or Haven soils are the only areas used for farming. In the western part of the county, most of this soil is used for housing developments and as industrial sites. Capability unit IIIs–1; woodland suitability group 4s1.

Plymouth loamy sand, 3 to 8 percent slopes (PlB).—This soil is on moraines and outwash plains. Slopes are undulating, or they are single along the sides of intermittent drainageways. The undulating areas generally are large. The areas along intermittent drainageways are narrow and long, and they follow the course of the drainage channel.

Included with this soil in mapping are small areas of Riverhead soils that are marginal to loamy sand in texture. Also included are loamy sands that have profiles similar to those of soils in the Carver series. Other inclusions on moraines are Montauk loamy sand, sandy variant soils that have a weak fragipan or areas that are too small to map separately. These are intergrades between Plymouth loamy sand and Montauk loamy sand, sandy variant soils. Small gravelly areas less than about 2 acres in size are included. Included are a few small areas, particularly on Fishers Island, that are dominantly fine sand.

The hazard of erosion is slight on this Plymouth soil. This soil tends to be droughty.

This soil is fairly well suited to the crops commonly grown in the county. Some areas were formerly used for farming, but most such areas are in brush or are idle. In the western part of the county, this soil is used mainly for housing developments. Capability unit IIIs–1; woodland suitability group 4s1.

Plymouth loamy sand, 8 to 15 percent slopes (PlC).—This moderately sloping soil is on moraines and outwash plains. Where it occurs on moraines, slopes are rolling in many places, and the surface is broken by closed depressions. On outwash plains this soil is on the short side slopes along intermittent drainageways. Areas on

These differences do not seriously alter their usefulness and behavior.

Raynham soils are associated with Scio and Walpole soils. They are similar to Scio soils in texture, but they have a higher seasonal water table and are more poorly drained, as is indicated by the grayer color in the solum. Also, Raynham soils lack the till substratum of some of the Scio soils, and they are thicker over sand and gravel than the sandy substratum phase of Scio soils. The B horizon of Raynham soils contains more silt and very fine sand than that of Walpole soils. Although Raynham soils are not associated with Wallington soils, the two are similar, but Raynham soils lack the fragipan and the compact till substratum of Wallington soils.

Raynham loam (Ro).—This is the only Raynham soil mapped in the county. This nearly level soil is in low-lying areas beside marshes and creeks. In many places it forms a transition between poorly drained areas and better drained areas on uplands. It is on outwash plains and moraines. Areas generally are small and irregular.

Included with this soil in mapping are wet spots of Berryland soils and a very poorly drained silt loam soil. Also included are soils that have a water table at a similar depth as Raynham soils, but they lack the gray color of Raynham soils, have a slightly coarser subsoil, and have sand and gravel below a depth of 30 inches.

The hazard of erosion is slight on this Raynham soil. If this soil is used for farming, artificial drainage is needed.

This soil is not well suited to crops commonly grown in the county unless it is artificially drained. Because of its position on the landscape, it is difficult to locate adequate drainage outlets. Near Southhampton, small areas of this soil were formerly cleared and used for crops, but most of these areas are idle and are in brush. Most of the other areas of this soil are wooded. This soil is better suited to woodland and to recreational areas than to other uses. In places, areas of this soil have been filled and used as homesites. As demand for building lots increases, more areas will be filled for use as building sites. Capability unit IIIw–1; woodland suitability group 4w1.

Recharge Basin

Recharge basin (Rc) is made up of basins that vary in size or of dugouts that have been dug into a porous sand and gravel substratum. These basins provide for the disposal of surface water by acting as catchments and by allowing the water to infiltrate the sand and gravel and recharge the ground water supply. Recharge basins are used to catch runoff from areas such as highways (fig. 13), housing developments, or parking lots.

Small basins less than 2 acres in size are indicated on the detailed map by a spot symbol, and basins larger than 2 acres are delineated and identified by the symbol Rc. Capability unit not assigned; woodland suitability group not assigned.

Riverhead Series

The Riverhead series consists of deep, well-drained, moderately coarse textured soils that formed in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. These soils occur throughout the county in rolling to steep areas on moraines and in level to gently sloping areas on outwash plains. These soils range from nearly level to steep; however, they generally are nearly level to gently sloping. Native vegetation consists of black oak, white oak, red oak, and scrub oak.

In a representative profile the surface layer is brown to dark brown sandy loam about 12 inches thick. The upper part of the subsoil, to a depth of about 27 inches, is strong-brown, friable sandy loam. The lower part of the subsoil is yellowish-brown, very friable loamy sand to a depth of about 32 inches. Below is yellowish-brown, friable gravelly loamy sand to a depth of about 35 inches. The substratum is very pale brown and brown loose sand and gravel or sand to a depth of 65 inches.

Riverhead soils have moderate to high available moisture capacity. Internal drainage is good. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum. Natural fertility is low. Reaction is strongly acid to very strongly acid throughout. The response of crops to lime and fertilizer is good. The root zone is mainly in the upper 25 to 35 inches. In many places where these soils have been farmed, a plowpan is in the lower part of the surface layer and in the upper part of the subsoil.

Representative profile of Riverhead sandy loam, 0 to 3 percent slopes, 0.9 mile south of State Route 25, 0.3 mile north of junction of County Road 21 and Longwood Road in Brookhaven, "Camp Wilderness, Boy Scouts of America":

Ap—0 to 12 inches, brown to dark-brown (10YR 4/3) sandy loam; weak, fine, granular structure; friable; many fine roots in upper part; moderate to strong, platy, firm plowpan in lower 4 inches; strongly acid; abrupt, smooth boundary.

B2—12 to 27 inches, strong-brown (7.5YR 5/6) sandy loam; very weak, medium, subangular blocky structure that parts to weak, fine granular; friable; a few fine roots; many fine pores; less than 5 percent gravel; strongly acid; clear, wavy boundary.

B31—27 to 32 inches, yellowish-brown (10YR 5/4) loamy sand; very weak, fine, granular structure; very friable; a few fine roots; 10 percent gravel; strongly acid; abrupt, smooth boundary.

IIB32—32 to 35 inches, yellowish-brown (10YR 5/4) gravelly loamy sand; massive; friable; a few fine roots; 30 percent gravel; strongly acid; abrupt, smooth boundary.

IIIC1—35 to 40 inches, brown to dark-brown (7.5YR 4/4) sand; single grain; loose; 10 percent fine gravel; strongly acid; abrupt, smooth boundary.

IIIC2—40 to 65 inches, very pale brown (10YR 7/4) coarse and medium sand that contains 2-inch layers of gravel, 8 to 24 inches apart; single grain; loose; strongly acid.

The solum ranges from 22 to 36 inches in thickness. It corresponds in depth to the upper boundary of the underlying coarse sand and gravel. The content of gravel or stones ranges from 2 to 15 percent, by volume, in the upper part of the solum and from 5 to 35 percent in the substratum. The content of gravel in the solum is higher in soils that have a thin solum. In places the solum is more than 30 inches thick, and streaks and pockets of olive-gray colors are present immediately above the sand or sand and gravel substratum. Reaction ranges from strongly acid to very strongly acid throughout.

In places these soils have an Ap horizon that ranges from very dark grayish brown (10YR 3/2) to brown or dark brown (10YR 4/3). The A1 horizon ranges from black (10YR 2/1) to dark grayish brown (10YR 4/2).

The B horizon ranges from brown or dark brown (7.5YR 4/4) to light olive brown (2.5Y 5/6). Texture is dominantly sandy loam, but it ranges to fine sandy loam. Structure is massive, or very weak subangular blocky. Consistence ranges from friable to very friable.



Figure 13.—Recharge basin that catches runoff from adjoining highway. Water comes into the basin through the pipe at the back corner.

Many Riverhead soils have a thin loamy sand horizon in the lower part of the B horizon. This horizon has the same color range as the upper part of the B horizon, and it is as much as 35 percent coarse fragments.

The C horizon ranges from brown or dark brown (7.5YR 4/4) to yellow (2.5Y 7/6). Texture is sand or sand and gravel, and it is generally stratified.

Riverhead soils are near Haven, Plymouth, Sudbury, and Walpole soils. Riverhead soils are sandier throughout the solum than Haven soils, and they are less sandy throughout the solum than Plymouth soils. Sudbury soils are moderately well drained, and Walpole soils are somewhat poorly drained or poorly drained.

Riverhead sandy loam, 0 to 3 percent slopes (RdA).—This soil has the profile described as representative of the series. It generally is on outwash plains, and the areas are large and uniform. Where this soil occurs on outwash plains, it generally has slope characteristics of this landform. Slopes are undulating in places. A few small, irregular areas are on moraines.

Included with this soil in mapping are small areas of Sudbury soils that are less than 1 to 2 acres in size. Also included are areas of soils near Bridgehampton that have a profile similar to that of this soil, except that at a depth of about 30 inches they have layers of gray and strong-brown silt loam 1 to 2 feet thick. Also included are areas of Haven and Plymouth soils that have a texture marginal to sandy loam and areas of soils that have a loam or fine sandy loam surface layer and a sandy loam subsoil. Areas of Montauk soils on moraines that have a very weak fragipan formed in loose sandy till are included.

The hazard of erosion is slight on this Riverhead soil. This soil is limited only by moderate droughtiness in the moderately coarse textured solum. It tends to develop a plowpan if it is intensively farmed.

This soil is well suited to all crops commonly grown in the county, and it is used extensively for that purpose. Most areas in the western part of the county, however,

13

are used for housing developments and industrial parks. Capability unit IIs–1; woodland suitability group 3o1.

Riverhead sandy loam, 3 to 8 percent slopes (RdB).—This soil is on moraines and outwash plains. It generally is in areas along shallow, intermittent drainageways. Slopes generally are moderately short, but large areas on moraines are undulating.

The profile of this soil is similar to the one described as representative of the series, though in cultivated areas this soil is likely to be 2 to 3 inches shallower to coarse sand and gravel, and the surface layer is likely to contain a slightly larger amount of gravel.

Included with this soil in mapping are small areas of Bridgehampton, Haven, and Plymouth soils in a complex pattern. The texture of these soils is marginal to sandy loam. These included soils generally are on large separations. Near Bridgehampton are included areas of Riverhead soils that have gray and strong-brown silt loam layers at a depth of 26 to 30 inches. Also included are narrow strips of Haven loam, thick surface layer, along intermittent drainageways, and soils that have a surface layer of loam or fine sandy loam and a subsoil of sandy loam. Included with this soil on moraines are Montauk soils that have a very weak fragipan that formed in loose, sandy till.

The hazard of erosion is moderate to slight on this Riverhead soil. The main concerns of management are controlling runoff and erosion and providing adequate moisture.

This soil is well suited to all crops commonly grown in the county, and it is used mainly for this purpose. Most areas in the western part of the county, however, are used for housing developments and as industrial sites. Capability unit IIe–2; woodland suitability group 3o1.

Riverhead sandy loam, 8 to 15 percent slopes (RdC).—This soil is in narrow bands on outwash plains along the side slopes of deep, intermittent drainageways. Slopes are short. On the Harbor Hill moraine and on the Ronkonkoma moraine east of the Shinnecock Canal, the areas of this soil are larger than in other places in the county and they generally are rolling.

The profile of this soil is similar to the one described as representative of the Riverhead series, but in cultivated areas this soil generally is 3 to 4 inches shallower to coarse sand and gravel, and it is as much as 15 percent gravel, by volume.

Included with this soil in mapping are eroded and gravelly areas too small to map separately. Also included in a complex pattern with this Riverhead soil are Haven and Plymouth soils that have a texture marginal to sandy loam. These soils generally are in large separations on moraines. Along the bottom of intermittent drainageways, strips of Haven loam, thick surface layer, that are too narrow to map separately are also included. Other inclusions are Montauk soils that have a very weak fragipan that formed in loose sandy till and some areas that have a sand and gravel substratum, 1 to 2 feet thick, underlain by till at a depth of more than 42 inches.

The hazard of erosion is moderately severe on this Riverhead soil. Controlling erosion is the main concern of management. This soil is limited by droughtiness and by the difficulty of applying irrigation water. The response of crops to applications of lime and fertilizer is good. Slope limits the use of large farm machines.

This soil is suited to crops commonly grown in the county; however, the hazard of erosion reduces its usefulness for farming. Most areas of this soil are in trees or brush. A few small tracts were formerly cleared and farmed along with adjoining less sloping soils, but many of these areas are now in grass or brush because the use of heavy farm equipment on these areas is impracticable. Many of the larger areas of this soil are used for housing developments where large lots are needed. These rolling areas are in the western part of the county. Capability unit IIIe–1; woodland suitability group 3o1.

Riverhead very stony sandy loam, 3 to 8 percent slopes (ReB).—This gently sloping Riverhead soil is on Fishers Island. It is on morainic deposits, and the areas are complex and undulating, characteristic of moraines. Areas of this soil are small, and they make up a very small part of the total acreage of the county.

The profile of this soil is similar to the one described as representative of the series, except that it has many stones larger than 10 inches in diameter scattered over the surface. In addition, this soil contains more fine sand than the soil described as representative of the series.

Included with this soil in mapping are small areas that have no stones or that have too few stones to be classified stony. A very small acreage of Plymouth soils that are very stony are included.

The hazard of erosion is moderate to slight on this Riverhead soil. The stones on the surface of this soil limit its use to woodland or pasture.

This soil is pooorly suited to farming. Some areas are cleared, but they are not farmed. These areas have been left idle, and most of them are reverting to woodland. Areas on Fishers Island are mainly used as sites for large estates. This soil has little value for uses other than woodland or hunting areas. Capability unit VIs–1; woodland suitability group 3o1.

Riverhead very stony sandy loam, 8 to 15 percent slopes (ReC).—This soil is on Fishers Island. It is on morainic deposits. Many closed depressions or kettle holes are on the surface. The areas of this soil are small to medium.

The profile of this soil is similar to the one described as representative of the series, except that many stones larger than 10 inches in diameter are scattered over the surface or are imbedded in the soil. Also, this soil contains more fine sand than the soil described as representative of the series.

Included with this soil in mapping are small areas that have no stones or that have too few stones to be classified stony. In addition, areas of Plymouth soils, 8 to 15 percent slopes, that are very stony make up about 10 percent of this unit.

The hazard of erosion is moderate on this Riverhead soil. The stones on the surface of this soil limit its use to woodland or to pasture.

This soil is poorly suited to crops. Some areas are cleared, but most areas have been allowed to revert to brush or trees. This soil has little value for uses other than woodland and hunting areas. Capability unit VIs–1; woodland suitability group 3o1.

Riverhead and Haven soils, graded, 0 to 8 percent slopes (RhB).—This mapping unit consists of areas of Riverhead sandy loam, of Haven loam, or of both. The

areas have been altered by grading operations for housing developments, shopping centers, industrial parks, and similar nonfarm uses. In the western part of the county, the areas of this mapping unit are very large, and large acreages are used as sites for housing developments (fig. 14).

Originally, the Riverhead and Haven soils in this unit each had the profile described as representative of its respective series, but grading operations have left a man-made profile that is significantly different. In places the surface layer and the upper part of the subsoil have been removed, but in other places they have been left undisturbed. Undisturbed areas have been filled with soil material cut from adjoining high spots, but the Riverhead and Haven soils can be identified because sufficient diagnostic characteristics of the respective series remain. In some areas Riverhead and Haven soils that have not been graded make up as much as 25 percent of this unit. In places another 10 to 15 percent has been so deeply cut or filled that the upper 40 inches is sandy and contains no diagnostic horizons of the respective series.

Included with these soils in mapping are areas in which most or all diagnostic horizons have been destroyed, but these areas contain at least 12 inches of loam, silt loam, or sandy loam in the upper 40 inches. In places this 12 inches of material is in one layer, and in others it is in several thinner layers. Also included are small areas of Cut and fill land and Montauk soils, graded.

These soils are suited to most grasses and shrubs generally used for lawns and landscaping. In places very deeply cut or filled areas are slightly droughty and need supplemental irrigation. The response of plants to applications of lime and fertilizer is good. The practice generally is to build on the soils immediately after grading; therefore, the number of existing buildings on areas of the soils in this unit is the main factor in determining their future uses. Capability unit not assigned; woodland suitability group not assigned.



Figure 14.—Housing development on an area of Riverhead and Haven soils, graded, 0 to 8 percent slopes. Density and pattern are typical of other developments on graded soils and on Cut and fill land, gently sloping.

Riverhead and Haven soils, graded, 8 to 15 percent slopes (RhC).—This mapping unit consists of areas of Riverhead sandy loam, of Haven loam, or of both. These soils have been altered by grading operations for housing developments, shopping centers, industrial parks, and similar nonfarm uses. Most areas of this unit are small, and are along moderate slopes. These areas are within large areas of level Riverhead and Haven soils that are being shaped.

Originally, the Riverhead and Haven soils in this unit each had the profile described as representative of its respective series, but grading operations have left a man-made profile that is significantly different. The surface layer and most of the subsoil have been removed by cutting or these layers have been buried by fill material, but sufficient diagnostic characteristics remain, so that the Riverhead and Haven soils can be identified according to their respective series. Because of slope, more extensive cuts and fills have been made on this unit than on Riverhead and Haven soils, graded, 0 to 8 percent slopes. In places areas of Riverhead and Haven soils that have not been graded make up 25 to 30 percent of this unit. In other places 15 to 20 percent has been so deeply cut or filled that no diagnostic horizons of the respective series remain in the upper 40 inches of the soil material.

Included with these soils in mapping are soils that contain at least 12 inches of loam, silt loam, or sandy loam in the upper 40 inches, but they do not have horizons characteristic of Riverhead and Haven soils. In places this 12 inches of material is in one layer, but in other places it is in several thinner layers. Also included are small areas of Cut and fill land.

These soils are suited to most grasses and shrubs generally used for lawns and landscaping. If they are used for this purpose, however, a cover of plants is needed to protect sloping areas from erosion. Areas in which there are deep cuts and fill generally are droughty and low in natural fertility; therefore, supplemental irrigation and heavy applications of lime and fertilizer are needed. Generally, the number of buildings on a site determines the future use of these soils. Capability unit not assigned; woodland suitability group not assigned.

Riverhead and Plymouth very bouldery soils, 15 to 35 percent slopes (RpE).—These very bouldery soils are only on Fishers Island. The areas consist of Riverhead soils, of Plymouth soils, or of a combination of the two. The surface layer of these soils is sandy loam or loamy sand. These soils have either short, steep, single slopes or complex slopes that have numerous depressions or kettle holes. Most areas are medium to large in size.

Riverhead and Plymouth soils both have a profile similar to that described as representative of their respective series, except that many large boulders several feet in diameter are scattered over the surface and imbedded in the soil.

Included with these soils in mapping are small areas that are less bouldery than the areas of the soils in this unit. Also included are small areas of very bouldery soils that have slopes of less than 15 percent. These areas generally are in large areas where the topography is complex. Narrow bands of extremely bouldery soils are included along short steep breaks.

15

IIIC3—36 to 51 inches, pale-brown (10YR 6/3) stratified sand and gravel; single grain; loose; 25 percent fine gravel; strongly acid.

The solum ranges from 20 to 40 inches in thickness. Depth to underlying sand and gravel ranges from 20 to 40 inches. The content of coarse fragments ranges from 0 to 10 percent in the solum and from 10 to 35 percent in the substratum. Reaction ranges from strongly acid to very strongly acid throughout. Texture ranges from fine sandy loam to sandy loam in all horizons of the solum except in the B3 horizon. Texture in the substratum is coarse sand, loamy sand, or stratified sand and gravel.

The A1 horizon ranges from very dark brown (10YR 2/2) to brown or dark brown (10YR 4/3). Structure ranges from weak to moderate, fine, granular. Consistence is friable or very friable.

In cultivated areas an Ap horizon ranges from brown or dark brown (10YR 4/3) to dark grayish brown (10YR 4/2). It ranges from 8 to 10 inches in thickness.

The A2 horizon ranges from dark gray (10YR 4/1) to gray (10YR 5/1). Structure ranges from weak to moderate, fine granular. Consistence is very friable or friable. In places the A2 horizon has a very thin brown to dark-brown (7.5YR 4/4) horizon that contains an accumulation of iron and humus.

The B21 horizon ranges from yellowish brown (10YR 5/6) to light olive brown (2.5Y 5/4). The B22 horizon ranges from yellowish brown (10YR 5/4) to olive (5Y 5/4). Distinct brownish and grayish mottles are present at a depth of 15 to 18 inches. The B horizon is massive and has weak, coarse, subangular blocky structure. Consistence is friable or very friable.

The thin, transitional loamy sand C1 and C2 horizons are grayish brown (2.5Y 5/2) to olive (5Y 5/3). They are massive or single grain. Consistence ranges from friable to loose. The lower part of the C horizon ranges from pale brown (10YR 6/3) to gray (10YR 5/1). They are single grain. Consistence is loose.

Sudbury soils are slightly more olive in the upper part of the B horizon than the defined range for the series. This difference does not alter their usefulness or behavior.

Sudbury soils are associated with Riverhead, Scio, and Walpole soils. Sudbury soils are similar to these soils, but Riverhead soils lack the seasonal high water table and the distinct mottles in the B horizon of Sudbury soils. They are similar to Scio soils in drainage, but they have a sandier solum. Walpole soils are not so well drained as Sudbury soils, and they are grayer throughout the solum.

Sudbury sandy loam (Su).—This is the only Sudbury soil mapped in the county. This nearly level soil is between areas of more poorly drained soils and adjoining well-drained soils of the Riverhead series. In a few places this soil is in the bottom of closed depressions in large tracts of Riverhead sandy loams. Most areas are small.

Included with this soil in mapping are small areas of Walpole soils in wet spots and of well-drained Riverhead soils on higher elevations. Gently sloping, moderately well drained sandy loams are also included.

The hazard of erosion is slight on this Sudbury soil. If the included wet areas are cultivated, artificial drainage is needed. Because of wetness, this soil warms slowly in spring and cannot be plowed as early as well-drained soils. In depressional areas this soil ponds in winter, and winter crops are damaged.

This soil is well suited to all crops commonly grown in the county. The only areas that have been cleared for farming are spots isolated in large tracts of well-drained soils. Most large areas that are next to soils where drainage is poor are wooded. This soil is used for building sites if it is part of a larger development area. Capability unit IIw–1; woodland suitability group 3o1.

Tidal Marsh

Tidal marsh (Tm) is made up of wet areas that are throughout the county around the borders of calmer embayments and tidal creeks. These level areas are not inundated by daily tide flow, but they are subject to flooding during abnormally high moon or storm tides. The areas range from about 2 to several hundred acres.

Tidal marsh has an organic mat on the surface that ranges from a few inches to several feet in thickness. The organic mat overlies pale-gray or white sand. In many places the profile of the marsh is made up of alternating layers of sand and organic material as a result of sand deposited on the organic mat during abnormally high storm tides.

Included with this land type in mapping are areas of tidal marsh that adjoin dunes. Sand that blows from the dunes covers these areas. In many of these places, the dunes have completely encircled the marsh, and the marsh is no longer directly connected to a body of salt water.

These very poorly drained areas are not suited to any kind of farming. They are best suited to use as habitat for certain types of wildlife. Capability unit VIIIw–1; woodland suitability group not assigned.

Urban Land

Urban land (Ur) consists of areas that are more than 80 percent covered by buildings and pavements. Examples are parking lots, business districts of larger villages, and densely developed industrial parks. Examination and identification of the soils in these areas are impractical. Capability unit not assigned; woodland suitability group not assigned.

Wallington Series

The Wallington series consists of deep, somewhat poorly drained, medium-textured soils that have a fragipan at a depth of 18 to 24 inches. They formed in a mantle of silty material over thick deposits of moderately coarse textured or coarse textured material. These soils are in the Montauk Point area of the county and are in low-lying areas along drainageways and near perennial ponds. Slopes are 0 to 5 percent. Native vegetation consists of shadbush, blueberry, and alder.

In a representative profile of a till substratum phase, a thin layer of leaves and organic matter is on the surface in wooded areas. Below this layer is a surface layer of very dark gray silt loam about 2 inches thick over a subsurface layer of grayish-brown to light brownish-gray silt loam that has a few distinct mottles. The subsurface layer extends to a depth of about 10 inches. The upper part of the subsoil, to a depth of about 18 inches, is mottled, grayish-brown, friable silt loam. The lower part of the subsoil, to a depth of 38 inches, is mottled light olive-brown silt loam that makes up a firm and brittle fragipan. The substratum to a depth of 47 inches is mottled gray to light-gray, friable silt loam. Below, to a depth of about 60 inches, the substratum consists of firm, strong-brown fine sandy loam glacial till.

Wallington soils have a high water table within 6 inches of the surface during wet periods, but it drops to

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Summary of the Hydrologic Situation on Long Island, New York, as a Guide to Water-Management Alternatives

By O. L. FRANKE *and* N. E. McCLYMONDS

HYDROLOGY AND SOME EFFECTS OF URBANIZATION ON LONG ISLAND, NEW YORK

GEOLOGICAL SURVEY PROFESSIONAL PAPER 627-F

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CONTENTS

	Page
Abstract	F1
Introduction	1
Background, purpose, and scope of the water-budget study	1
Purpose and scope of this report	2
Location and general geographic features of the area	2
Location and extent of area	2
Topographic and general physiographic features	4
Summary of climatic conditions	4
Population and land use	4
Related investigations	6
Acknowledgments	7
The natural hydrologic system	7
How and where the water occurs	8
Bodies of surface water	8
Zone of aeration	8
Ground-water reservoir	10
Hydrogeologic features of the ground-water reservoir	10
Boundaries of the fresh ground-water reservoir	11
Size of the fresh ground-water reservoir	15
Source of the water and inflow to the hydrologic system	16
Precipitation	16
Disposition of precipitation	19
Direct runoff	19
Evapotranspiration	19
Infiltration to the zone of aeration	20
Recharge to the ground-water reservoir	20
Movement within the ground-water reservoir	22
Discharge from the ground-water reservoir	25
Streamflow and springflow	25
Ground-water evapotranspiration	29
Subsurface outflow of ground water	30
Summary of relations between components of the hydrologic system	33
Water quality	34
How man has modified the natural hydrologic system	F37
History and present stage of development	37
Effects of man's activities on the movement and discharge of water	38
Disposal of direct runoff	39
Recharge basins	39
Streams	41
Pumping and distribution of ground water	42
Pumping of ground water	42
Leaky water pipes	42
Exported water	44
Lawn sprinking and irrigation	44
Disposal of used water	44
Recharge wells	44
Cesspools and septic tanks	45
Sanitary sewers	45
Summary of effects of man's activities on the movement and discharge of water	48
Summary of artificial recharge	48
Loss of water from the hydrologic system as a result of man's activities	48
Effects of man's activities on the quality of the water	49
Water-management implications of the hydrologic analysis	51
The present dilemma	51
Some concepts related to water management	51
Principle of continuity	51
Yield of the system	52
Conservation of ground water	52
Water-management alternatives	52
Increase inflow to the hydrologic system	52
Salvage outflow from the hydrologic system	53
Permit a planned decrease of fresh ground water in storage	53
Maintain approximate balance between inflow and outflow by means of artificial recharge	54
Concluding comments on water-management alternatives	55
Selected references	56
Tentative water budgets	58

ILLUSTRATIONS

		Page
FIGURES	1–4. Map showing—	
	1. Location and general geographic features of Long Island, N.Y.	F2
	2. Location of areas and subareas used in this report	3
	3. Landforms, location of major surface-water bodies, and location of start of flow in selected streams in June 1967	5
	4. Average population density in 1965	6
	5. Graph showing land use in the early 1960's	7

CONTENTS

'GURE

Page

6. Graph showing distribution of depths to the water table in the water-budget and adjacent nearshore areas based on ground-water levels in September 1965
7. Map showing depth to water table in southeastern Nassau County, in October 1961 — F8
8. Generalized section showing geologic features of ground-water reservoir — 9
9. Estimated average position of the water table under natural conditions — 10
10. Geohydrologic section showing occurrence of salty ground water in southwestern Nassau County in 1961 — 13
11. Contour map of the bedrock surface — 14
12. Map showing thickness of unconsolidated deposits saturated with fresh ground water in 1965 — 15
13. Flow diagram of the hydrologic system under natural conditions — 15
14. Maps showing (*A*) average annual, (*B*) average cool-season, and (*C*) average warm-season precipitation, water years 1951–65 — 17
15. Graph showing composite average monthly precipitation for selected stations for the normal period 1931–60 — 18
16. Graphs showing daily precipitation, average water content in the soil profile at one measuring site, and depth to water in an adjacent well, Brookhaven National Laboratory in 1966 — 19
17. Idealized cross section showing potential and flow lines in part of a homogeneous ground-water reservoir — 21
18. Map showing water-table contours near Massapequa Creek in October 1961 — 22
19. Diagrammatic cross section of the southern half of the ground-water reservoir showing the part of the reservoir with primarily two-dimensional flow and the part of the reservoir with three-dimensional flow to streams — 23
20. Geohydrologic section of the ground-water reservoir in northeastern Nassau County in March 1961 — 24
21. Geohydrologic section of the ground-water reservoir in southwestern Suffolk County in October 1960 — 24
22. Profiles of the water table and piezometric surfaces at the base of the Magothy aquifer and in the Lloyd aquifer in 1963 — 25
23. Graph of magnitude and frequency of annual average discharge of streams from the water-budget area — 26
24. Graph showing estimated duration curve of daily streamflow from the water-budget area — 27
25. Hydrographs of composite average monthly ground-water levels in selected wells and composite average monthly discharge of selected streams in Nassau County for the period 1940–50 — 27
26. Graph of average monthly discharge of selected streams and average monthly ground-water levels in selected wells in Nassau County for the period 1940–50 — 28
27. Graph of relation between average monthly discharge of selected streams and average monthly ground-water levels in selected wells in Nassau County for the period 1940–50 — 29
28. Summer and winter recession curves for Carmans River — 30
29. Maps showing estimated transmissivity of (*A*) upper glacial aquifer, (*B*) Magothy aquifer, and (*C*) Lloyd aquifer — 30
30. Graph of relation between a modified specific capacity factor (Q/sL) and the percentage of total number of wells for the principal aquifers — 31
31. Block diagram showing changes in the chemical quality of the water under natural conditions — 32
32. Map showing status of water development in 1966 — 34
33. Flow diagram of the hydrologic system in Nassau and Suffolk Counties in the 1960's — 38
34–36. Graph of— — 39
    34. Relation between rainfall and inflow to the Westbury recharge basin, Nassau County, 1966–67
    35. Cumulative curves of annual direct runoff in East Meadow Brook and annual precipitation at Mineola — 40
    36. Relation between rainfall and runoff for individual storms in the East Meadow Brook drainage area, Nassau County, for urban (1964–66) and preurban (1934–43) periods — 41
37. Graph showing total treated sewage effluent discharged from Nassau and Suffolk Counties for the period 1950–65 — 43
38. Maps showing ground-water levels in Kings and Queens Counties in (*A*) 1903, (*B*), 1936, and (*C*) 1965 — 46
39. Graph showing estimated discharge of water from Nassau and Suffolk Counties as a result of man's activities, 1940–65 — 47

— 49

TABLES

'ABLE

Page

1. Population by county and total population of Long Island, N.Y., 1900–65 — F4
2. Summary of the rock units and their water-bearing properties, Long Island, N.Y. — 12
3. Estimated volume of fresh ground water in storage beneath parts of Long Island, N.Y. — 16
4. Average annual and average seasonal precipitation on Long Island, N.Y., and the water-budget area, water years 1951–65 — 19
5. Mean and extreme values of precipitation at Setauket, Long Island, N.Y., water years 1888–1967 — 19
6. Annual direct runoff of selected streams on Long Island, N.Y., whose drainage areas closely approximate natural conditions, water years 1958 and 1964 — 19

4

TABLE Page

7. Relation of depth to the water table and average time lag in response to recharge in till-covered areas of northeastern Nassau County, Long Island, N.Y. F22
8. Surface drainage areas and average flows of the 19 continuously gaged streams in the water-budget area of Long Island, N.Y., water years 1940–65 27
9. Average transmissivity of the principal aquifers for the water-budget area, Long Island, N.Y. 32
10. Estimated average subsurface outflow of ground water from the principal aquifers and total average subsurface outflow from the northern part, the southern part, and the entire water-budget area of Long Island, N.Y. 33
11. Water budgets of the northern and southern parts and the entire water-budget area of Long Island, N.Y., water years 1940–65 33
12. Selected chemical analyses of natural water on Long Island, N.Y. 36
13. Annual direct runoff of the 19 continuously gaged streams on Long Island, N.Y., for water years 1958 and 1964 42
14. Gross ground-water pumpage in Nassau and Suffolk Counties, Long Island, N.Y., 1940–65 42
15. Selected chemical analyses of water contaminated by man's activities on Long Island, N.Y. 50
16. Water budget of the northern part of the water-budget area within Nassau County, Long Island, N.Y., water years 1940–65 59
17. Water budget of the northern part of the water-budget area within Suffolk County, Long Island, N.Y., water years 1940–65 59
18. Water budget of the southern part of the water-budget area within Nassau County, Long Island, N.Y., water years 1940–65 59
19. Water budget of the southern part of the water-budget area within Suffolk County, Long Island, N.Y., water years 1940–65 59

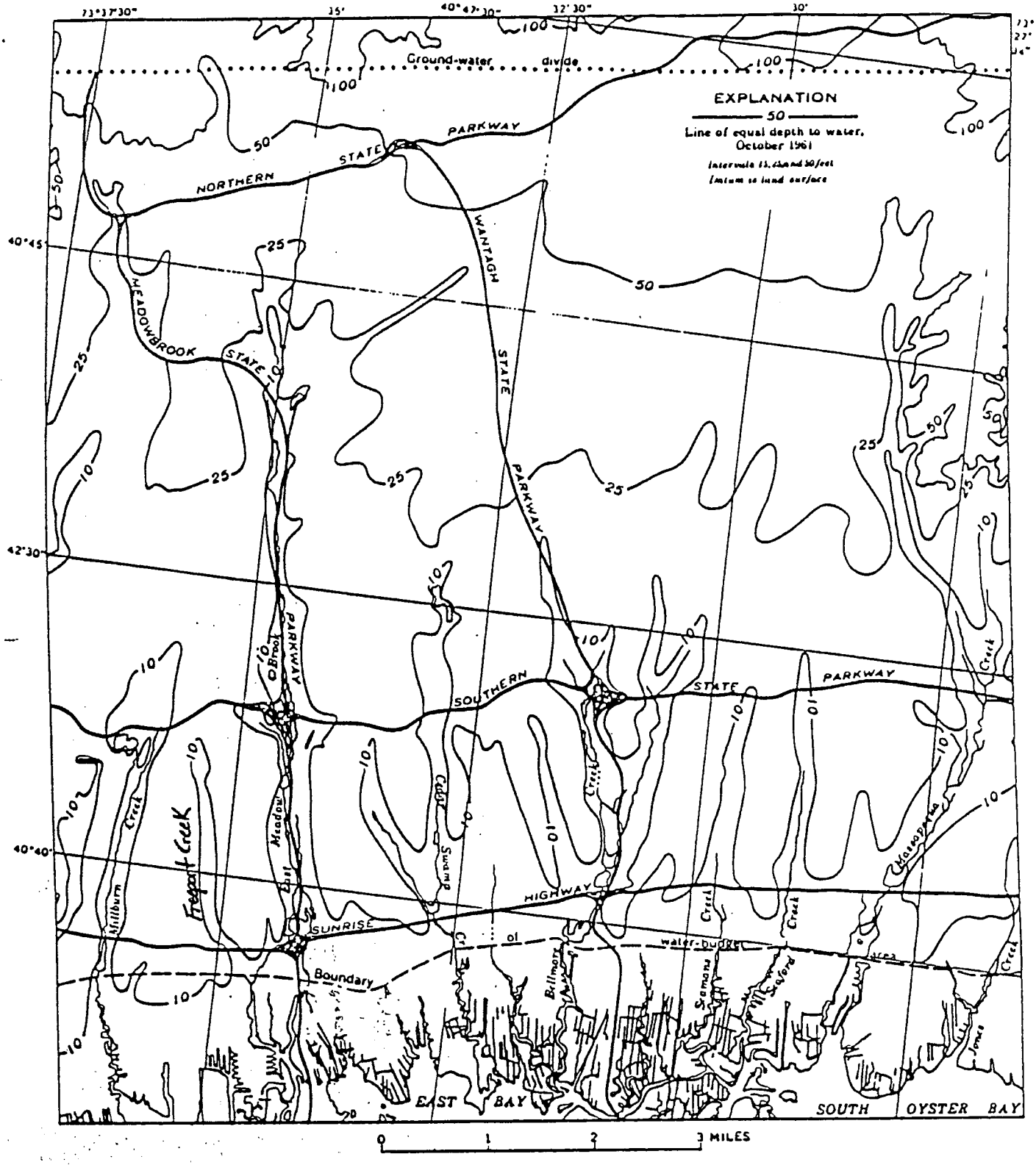


FIGURE 7.—Depth to the water table in southeastern Nassau County in October 1961.

underlain by terminal-moraine deposits, the depth to the water table is more than 50 feet, and in small areas the depth to the water table is more than 200 feet. Depths to the water table near the northern coast of the island generally are more than 20 feet, except adjacent to stream channels or in narrow bands near the shoreline.

GROUND-WATER RESERVOIR

HYDROLOGIC FEATURES OF THE GROUND-WATER RESERVOIR

The overall hydrogeologic setting of Long Island was described in considerable detail by Veatch (1906), Fuller (1914), and Suter, De Laguna, and Perlmutter (1949). The geology and related hydrology of several smaller areas of Long Island have been studied in greater detail by others, including De Laguna (1963), Isbister (1966), Lubke (1964), Lusczynski and Swarzenski (1966), Perlmutter and Geraghty (1963), Pluhowski and Kantrowitz (1964), and Swarzenski (1963).

Long Island is underlain by consolidated bedrock, which, in turn, is overlain by a wedge-shaped mass of unconsolidated rock materials (fig. 8).[1] These materials, which constitute Long Island's ground-water reservoir, consist primarily of a series of Pleistocene glacial deposits and Cretaceous fluvial or deltaic deposits composed of gravel, sand, silt, clay, and mixtures thereof. The Cretaceous deposits were eroded by

[1] The actual dip of the upper bedrock surface is slightly less than 1° to the southeast. The much greater inclination of the bedrock surface and the Magothy aquifer shown in figure 8 is due to the large vertical-scale exaggeration of this cross section.

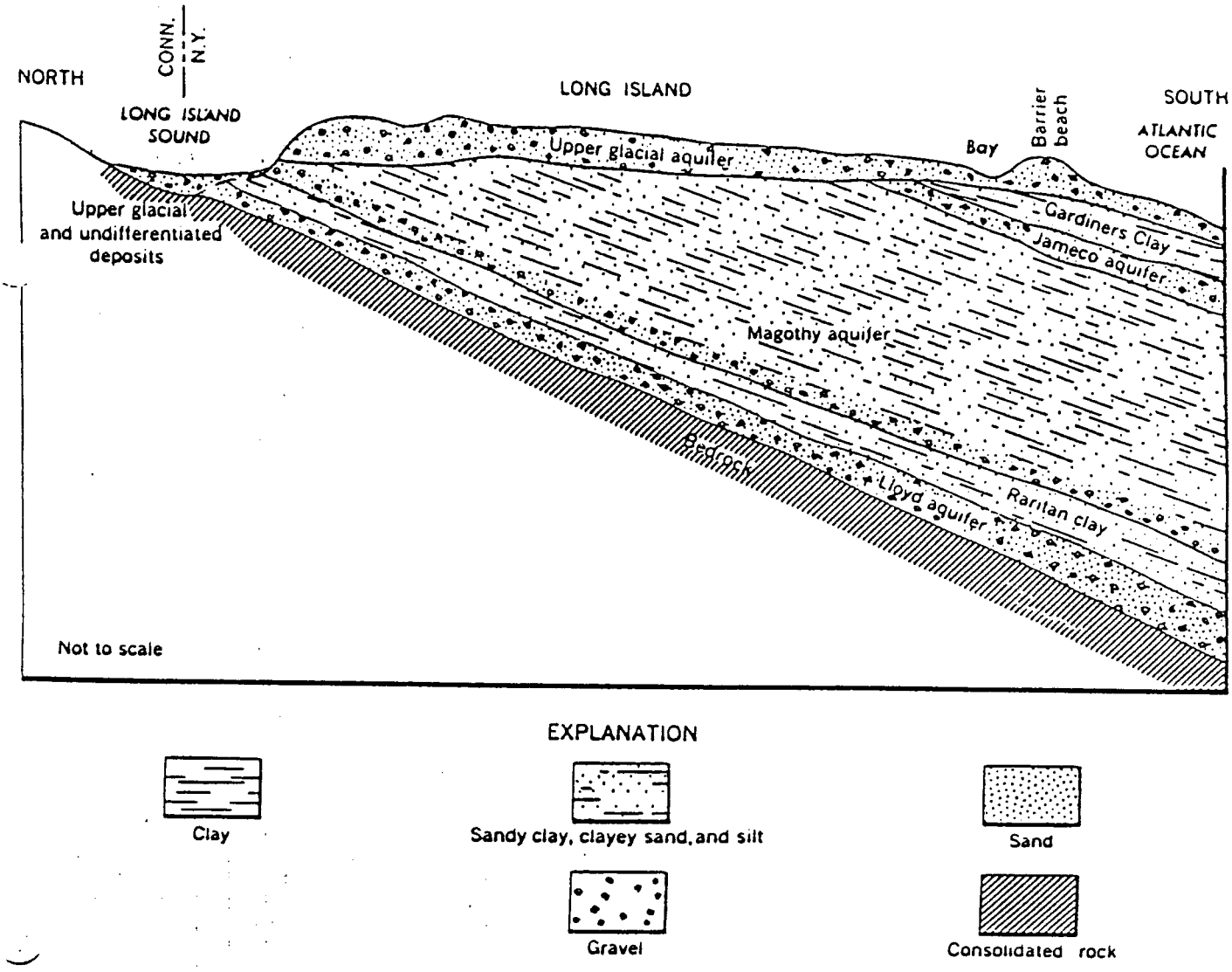


FIGURE 8.—Geologic features of the ground-water reservoir.

streams and glaciers so that the Pleistocene deposits on an irregular Cretaceous surface, and in places the Pleistocene deposits fill valleys cut by preglacial and glacial streams. These valleys have been fairly well defined in Kings and Queens Counties and along the northern margin of the island eastward to the middle of Suffolk County. In eastern Suffolk County, however, data on the contact between the Pleistocene and the Cretaceous are very sparse.

The upper surface of the Cretaceous deposits is above sea level in a large area in northern Nassau and western Suffolk Counties, and in all but a few small areas, the Pleistocene deposits cover the Cretaceous deposits throughout Long Island. Pertinent information concerning the principal hydrogeologic units within the ground-water reservoir are briefly summarized in table 2.

Ground water in the uppermost part of the zone of saturation on Long Island (mainly in the upper glacial aquifer, but locally also in the Magothy aquifer) is generally under water-table conditions. Artesian conditions predominate in most of the other parts of the ground-water reservoir of Long Island, where the saturated deposits are overlain and confined by silty and clayey layers of low hydraulic conductivity. The hydraulic head in the confined aquifers ranges from several feet below the water table to nearly 20 feet above it. At places along the north and south shores and on the barrier beaches, the head in the Lloyd aquifer is high enough to cause some wells which penetrate this aquifer to flow.

In addition to the Raritan clay, which confines water in the Lloyd aquifer, the other major well-defined confining layer in the ground-water reservoir is the Gardiners Clay. This unit locally confines water in the Jameco and Magothy aquifers. Numerous clayey and silty layers in the Magothy aquifer and clay beds in the glacial deposits also are significant confining layers. Normally, the degree of confinement in the Magothy aquifer increases with depth as more and more clayey layers intervene between the deep zone and the water table.

BOUNDARIES OF THE FRESH GROUND-WATER RESERVOIR

The boundaries of the fresh ground-water reservoir are the water table, the fresh-salt water interface, and the bedrock surface. The estimated average position of the water table under natural conditions is shown in figure 9. The position of the contours is based on a map of the water table in Kings, Queens, and Nassau Counties in 1903 (prepared by Veatch in 1906), and on later water-table maps of Suffolk County. Major features of this map are the two areas of highest ground-water altitude (represented by closed 80-ft and 60-ft contours) which extend approximately westward in the north-central parts of Nassau and Suffolk Counties. Also noteworthy are the steep water-level gradients near the north shore of Long Island compared to the gradients near the south shore.

The water table, which is the upper boundary of the ground-water reservoir, is a dynamic (moveable) feature. Present information indicates that recharge to the water table occurs throughout virtually all of Long Island. Therefore, the water table is not, from the point of view of potential theory, a stream surface. It is instead a surface characterized by a constantly varying potential which is equal to the altitude of the water table at any point. Because the water table on Long Island is largely a recharging potential boundary of the ground-water reservior, streamlines flow perpendicularly from the water table into the ground-water reservoir. Locally, as near the shorelines where ground water is lost by evapotranspiration, the water table is a discharging potential boundary.

The ground-water reservoir is bordered laterally by a second moveable boundary—the fresh-salt water interface. The position of this interface (or these interfaces) is fairly accurately known only in southwestern Nassau and southeastern Queens Counties as a result of an intensive investigation by Lusczynski and Swarzenski (1966). A north-south cross section through the ground-water reservoir in this area (fig. 10) shows three separate salt-water wedges—a shallow wedge in the glacial aquifer and intermediate and deep wedges in the Magothy aquifer. Furthermore, a fourth wedge exists in the Lloyd aquifer somewhere seaward of the barrier beaches.

The occurrence of fresh ground water in the Lloyd aquifer below salty ground water in the lower part of the Magothy aquifer has never been adequately explained. However, this occurrence must be related in some way to the relatively impermeable Raritan clay overlying the Lloyd aquifer. At least four separate wedges of salty ground water with relative positions approximately as indicated in figure 10 probably occur for a considerable distance eastward from western Nassau County (on the order of tens of miles) along the south shore of Long Island.

Very scanty information indicates that the Lloyd aquifer and the deep Magothy aquifer contain salty ground water beneath the Forks of Long Island. The fresh ground water beneath the Forks occurs in a lens ranging in thickness from a few feet to several hundred feet.

8

TABLE 2.—*Summary of the rock units and their water-bearing properties, Long Island, N.Y.*—Continued

System	Series	Geologic unit	Hydrogeologic unit	Approximate maximum thickness (feet)	Depth from land surface to top (feet)	Character of deposits	Water-bearing properties
		Unconformity					
Cretaceous	Upper Cretaceous	Raritan Formation — Clay member	Raritan clay	300	70–1,600	Clay, solid and silty; few lenses and layers of sand; little gravel. Lignite and pyrite are common. Colors are gray, red, and white, commonly variegated.	Poorly to very poorly permeable; constitutes confining layer for underlying Lloyd aquifer. Very few wells produce appreciable water from these deposits.
		Raritan Formation — Lloyd Sand Member	Lloyd aquifer	600	200–1,800	Sand, fine to coarse, and gravel, commonly with clayey matrix; some lenses and layers of solid and silty clay; contains thin lignite layers and iron concretions locally. Locally, has gradational contact with overlying Raritan clay. Sand and most of gravel are quartzose. Colors are yellow, gray, and white; clay is red locally.	Poorly to moderately permeable. Specific capacities of wells in the Lloyd generally range from 1 to about 2.5 gpm per foot of drawdown, rarely are as much as 50 gpm per ft. Water is confined under artesian pressure by overlying Raritan clay; generally of excellent quality but has high iron content locally. Has been invaded by salty ground water locally in necks near north shore, where aquifer is mostly shallow and overlying clay discontinuous. Called deep confined aquifer in some earlier reports.
		Unconformity					
Precambrian		Bedrock	Bedrock	.....	0–2,700	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. A soft clayey zone of weathered bedrock locally is more than 100 ft thick.	Poorly permeable to virtually impermeable; constitutes virtually the lower boundary of ground-water reservoir. Some hard, fresh water is contained in joints and fractures, but is impracticable to develop at most places; however, a few wells near the western edges of Queens and Kings Counties obtain water from the bedrock.

The fresh-salt water interface is not a sharp oundary. The horizontal distance over which the dissolved-solids content of ground water changes from completely fresh to completely salty is generally on the order of 2–3 thousand feet near the south shore of Long Island. Over this distance, the dissolved-solids content of the ground water increases at first gradually in the direction of the salty ground water and then more rapidly.

The fresh-salt water interface is a complex streamline surface, and fresh ground water discharging into the ocean and bays moves parallel to the interface and not across it. The hydrodynamics of a stable interface and, to an even greater degree, an unstable interface that changes position in response to changes in head within the ground-water reservoir, is complicated and beyond the scope of this report. (See Lusczynski, 1961; Cooper, 1964; and Kohout, 1964.)

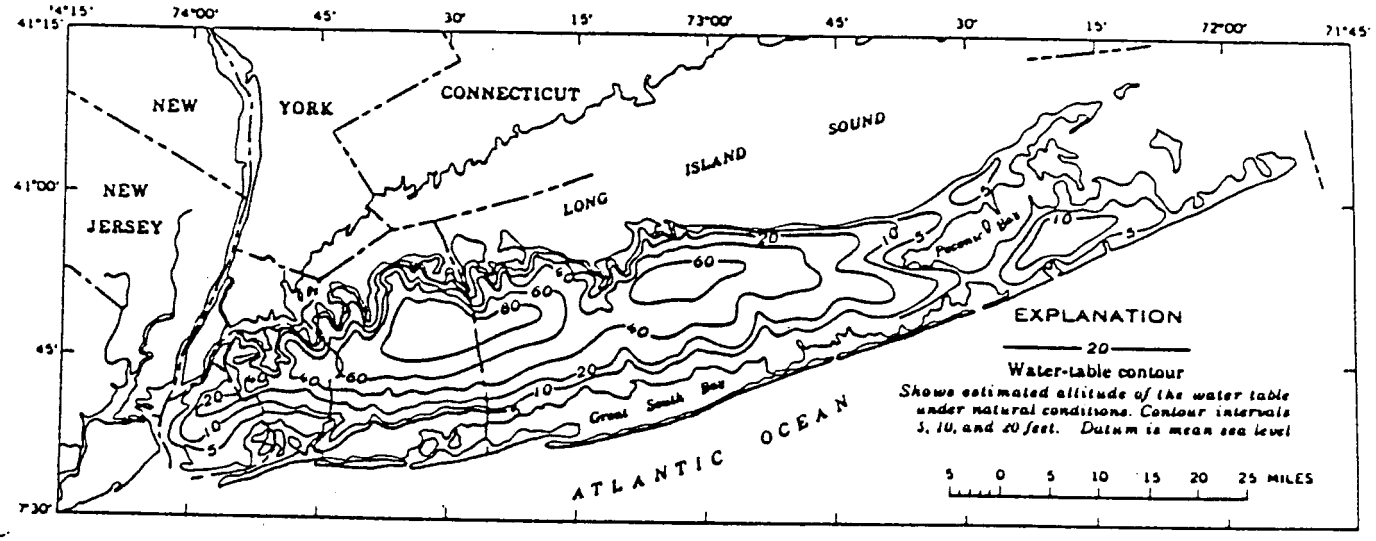


FIGURE 9.—Estimated average position of the water-table under natural conditions.

TABLE 7.—*Relation of depth to the water table and average time lag in response to recharge in till-covered areas of northeastern Nassau County, Long Island, N.Y.*

[After Isbister (1966, table 10)]

Depth to water table (feet)	Average response time (months)	Depth to water table (feet)	Average response time (months)
0–10	0–1	80–100	5–6
10–25	1–2	100–120	6–7
25–40	2–3	120–140	7–8
40–60	3–4	140–160	8–9
60–80	4–5	160–180	9–10

feet often show a marked water-level response within hours or within a day or two after a large storm.

MOVEMENT WITHIN THE GROUND-WATER RESERVOIR

An idealized cross section of part of a ground-water reservoir is shown in figure 17. The dimensions of the cross section are similar to the Long Island ground-water reservoir in a north-south cross section south of the ground-water divide. The potential and flow lines in figure 17 were derived in part from an electric-analog model using graphite paper as the conducting medium (Wyckoff and Reed, 1935). In this model and in figure 17, the vertical exaggeration is about 15 to 1 compared to the Long Island ground-water reservoir. The water table was simulated by 10 discrete potential drops from the maximum potential in the system at the water-table divide (designated arbitrarily as 1000 in figure 17) to base level (zero potential or ground). No attempt was made to model a salt-fresh water interface.

The flow pattern in figure 17 was constructed for the following idealized conditions: (1) The flow was two dimensional, (2) the flow medium was homogeneous, (3) the upper boundary of the flow system (the water table) was a constant source of recharge, and (4) the lower boundary (impermeable bedrock) was a stream surface. Despite the idealized assumptions used to construct this flow net, several significant observations concerning the Long Island flow system can be made from the net. Except for narrow areas near the left- and right-hand margins of figure 17, the predominant directional component of flow is horizontal. In a model without vertical exaggeration the horizontal character of the flow would be even more pronounced. Furthermore, the flow line originating at the water-table divide follows a path nearest the bedrock and discharges farthest from the shoreline. The flow lines originating progressively shoreward of the water-table divide penetrate less deeply into the flow system and discharge nearer the shoreline.

Another significant observation from figure 17 is that, with the particular geometry and potentials fixed in the model, some discharge (electrical output) from the system occurs landward of the shoreline. Because this model is reasonably analogous to the flow system of the Long Island ground-water reservoir, the results suggest that some discharge mechanism may also be acting in this area in the prototype. On Long Island this discharge mechanism is largely associated with the flowing parts of the streams.

Seepage of ground water to the streams is a major factor in modifying the two-dimensional flow pattern in the shallow part of the ground-water reservoir in figure 17. East-west flow components that are perpendicular to the idealized flow section in figure 17 are clearly indicated in figure 18, which is a water-table contour map of the southeastern part of Nassau County. North of the flowing parts of the

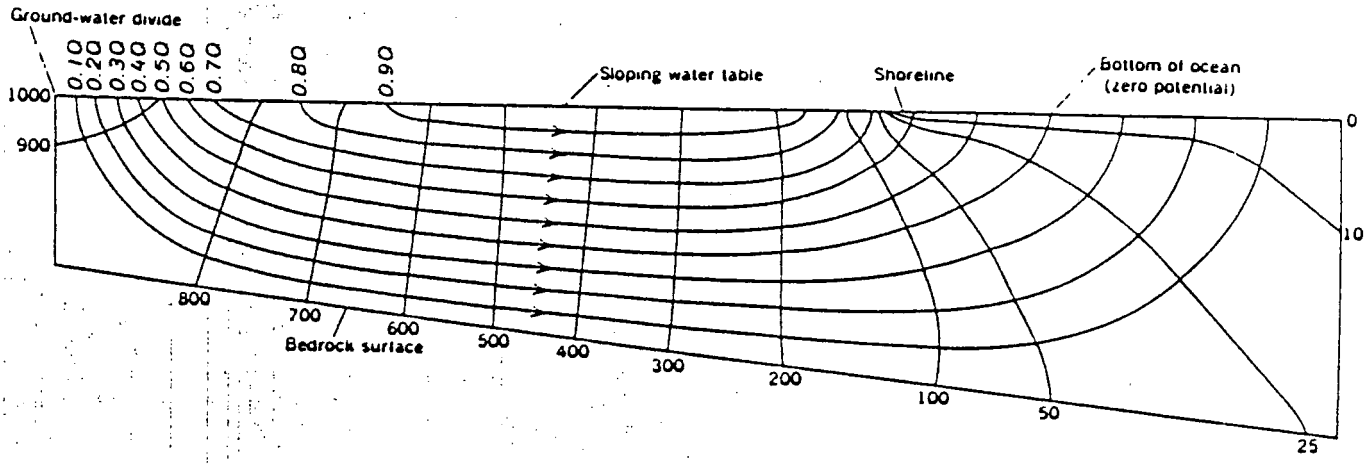


FIGURE 17.—Idealized cross section showing potential and flow lines in part of a homogeneous ground-water reservoir. Q is total discharge through system.

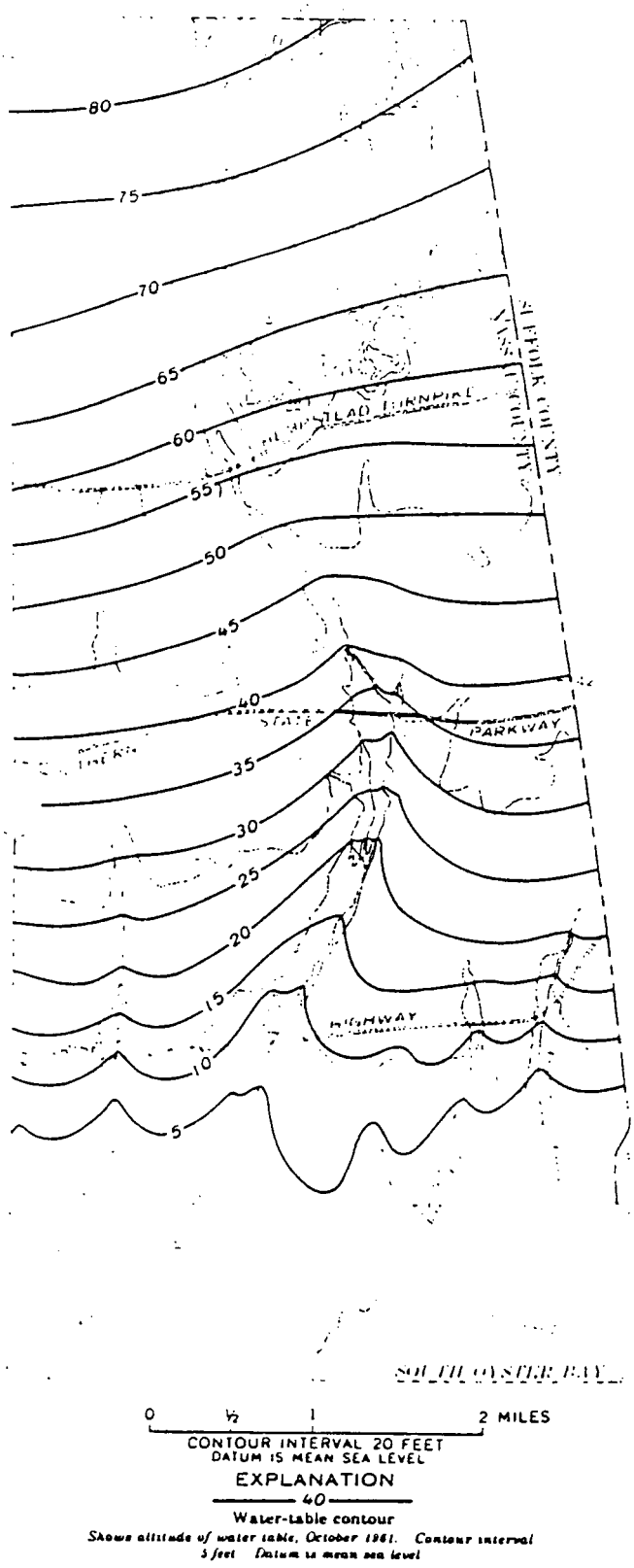


FIGURE 18.—Water-table contours near Massapequa Creek in October 1961.

streams, the water-table contours show relatively even and slight curvatures. In the neighborhood of their flowing parts, however, the water-table contours are bent sharply towards the streams, which clearly indicates that ground water discharges into them.

The ground-water system on Long Island can be divided into two general subsystems—a shallow circulating subsystem and a deep circulating subsystem. Ground water in the shallow subsystem, which is particularly well developed south of the main water-table divide, discharges mainly into the streams; ground water in the deep subsystem discharges into the bays, the Atlantic Ocean, and Long Island Sound. Flow paths in the deep subsystem range in length from one to several miles, and the flow is generally two dimensional (fig. 19). On the other hand, flow paths in the shallow subsystem range from a few feet to several thousand feet, and the flow is generally three dimensional.

Representative geohydrologic sections of the natural flow system in the northern and southern parts of Long Island are shown in figures 20 and 21, respectively. These sections show some of the principal geologic features of the ground-water reservoir that are responsible for modifying the idealized flow pattern shown in figure 17. The presence of almost horizontal and poorly permeable beds in the flow section tends to accentuate the horizontal components of flow, except near the ground-water divide and in discharge areas near the shorelines. Despite the obvious differences in detail, most of the major features of the flow pattern in figures 20 and 21 clearly are similar to those of the flow pattern in figure 17.

Profiles of heads in the major aquifers (fig. 22) show that a relatively small head difference occurs between the water table and the base of the Magothy aquifer as compared to the difference in head between the base of the Magothy aquifer and the Lloyd aquifer. This relatively large difference in head between the base of the Magothy aquifer and the Lloyd aquifer reflects the low hydraulic conductivity of the intervening Raritan clay, the principal confining layer of the Lloyd aquifer. Upward components of flow exist near the bottom of the Magothy aquifer seaward of the intersection of the piezometric surface at the bottom of the Magothy aquifer and the water table. Similarly, upward components of flow exist seaward of the intersection of the piezometric surface of the Lloyd aquifer and the piezometric surface at the bottom of the Magothy aquifer.

Another modification of the idealized flow pattern in figure 17 is caused by the salty ground water that

REFERENCE NO. 26

91-20-2 (1/89)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

State Pollutant Discharge Elimination System (SPDES)

DISCHARGE PERMIT

Special Conditions (Part I)

Industrial Code: 3471
Discharge Class (CL): 01
Toxic Class (TX): T
Major Drainage Basin: 17
Sub Drainage Basin: 01
Water Index Number:
Compact Area:

SPDES Number: NY-0081540
DEC Number: 1-4720-00188/00001-0
Effective Date (EDP): 08/01/91
Expiration Date (ExDP): 08/01/96
Modification Date(s):
Attachment(s): General Conditions (Part II) Date: 11/90

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act as amended, (33 U.S.C. Section 1251 et. seq.)(hereafter referred to as "the Act").

PERMITTEE NAME AND ADDRESS

Attention: Israel Gajer

Name: Jameco Industries Inc.
Street: 248 Wyandanch Avenue
City: Wyandanch State: NY Zip Code: 11798
is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: Jameco Industries Inc.
Location (C,T,V): Babylon (T) County: Suffolk
Facility Address: 248 Wyandanch Avenue
City: Wyandanch State: NY Zip Code: 11798
NYTM - E: 638.6 NYTM - N: 4511.1
From Outfall No.: 001 at Latitude: 40° 44' 28" & Longitude: 73° 21' 19"
into receiving waters known as: Groundwater Class: GA
and; (list other Outfalls, Receiving Waters & Water Classifications)
002 Groundwater GA

SCTM 0100-082.0-02.0-037.005

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in Special Conditions (Part I) and General Conditions (Part II) of this permit.

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: Jameco Industries Inc.
Street: 248 Wyandanch Avenue
City: Wyandanch State: NY Zip Code: 11798
Responsible Official or Agent: Donald Dowden Phone: (516)643-5300

This permit and the authorization to discharge shall expire on midnight of the expiration date shown and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for a permit renewal no less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

Christine J. Costopoulos
DEPUTY REGIONAL PERMIT ADMINISTRATOR
Address:
BLDG. 40 - SUNY, STONY BROOK, NY 11794
Signature: Christine J. Costopoulos Date: 7/12/91

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning 08/01/91

and lasting until 08/01/96

the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations Daily Avg.	Daily Max.	Units	Minimum Monitoring Requirements Measurement Frequency	Sample Type
001 Sanitary					
No monitoring required. Sanitary waste only, no industrial wastes shall be allowed.					
002 Process Water					
Flow	NA	25,000	gpd	Daily	Recorded
Chromium, Hexavalent	NA	.1	mg/l	Bi-Weekly	Grab
Chromium, Total	NA	1	mg/l	Bi-Weekly	Grab
Copper, Total	NA	1	mg/l	Bi-Weekly	Grab
Cyanide, Total	NA	.4	mg/l	Bi-Weekly	Grab
Iron, Total	NA	.6	mg/l	Bi-Weekly	Grab
Lead, Total	NA	.05	mg/l	Bi-Weekly	Grab
Nickel, Total	NA	2	mg/l	Bi-Weekly	Grab
Zinc, Total	NA	5	mg/l	Bi-Weekly	Grab
Total Nitrogen (as N)	NA	10	mg/l	Bi-Weekly	Grab
Solids, Total Dissolved	NA	1000	mg/l	Bi-Weekly	Grab
MBAS	NA	1.5	mg/l	Bi-Weekly	Grab
COD	NA	150	mg/l	Bi-Weekly	Grab
pH (Range)	6.5 - 8.5		SU	Bi-Weekly	Grab
Tetrachloroethylene	NA	5	µg/l	Monthly	Grab
Trichloroethylene	NA	5	µg/l	Monthly	Grab
Benzene	NA	ND(1)	µg/l	Monthly	Grab
Chloroform	NA	100	µg/l	Monthly	Grab
Methylene Chloride	NA	5	µg/l	Monthly	Grab
Toluene	NA	5	µg/l	Monthly	Grab
Trans-1,2-Dichloroethylene	NA	5	µg/l	Monthly	Grab
1,1,1-Trichloroethane	NA	5	µg/l	Monthly	Grab
Xylene	NA	5	µg/l	Monthly	Grab

(1) Not detectable by USEPA Method 602 (.2 µg/l).

003 Cooling Water - deleted - cooling water recirculated as of July 1, 1987).

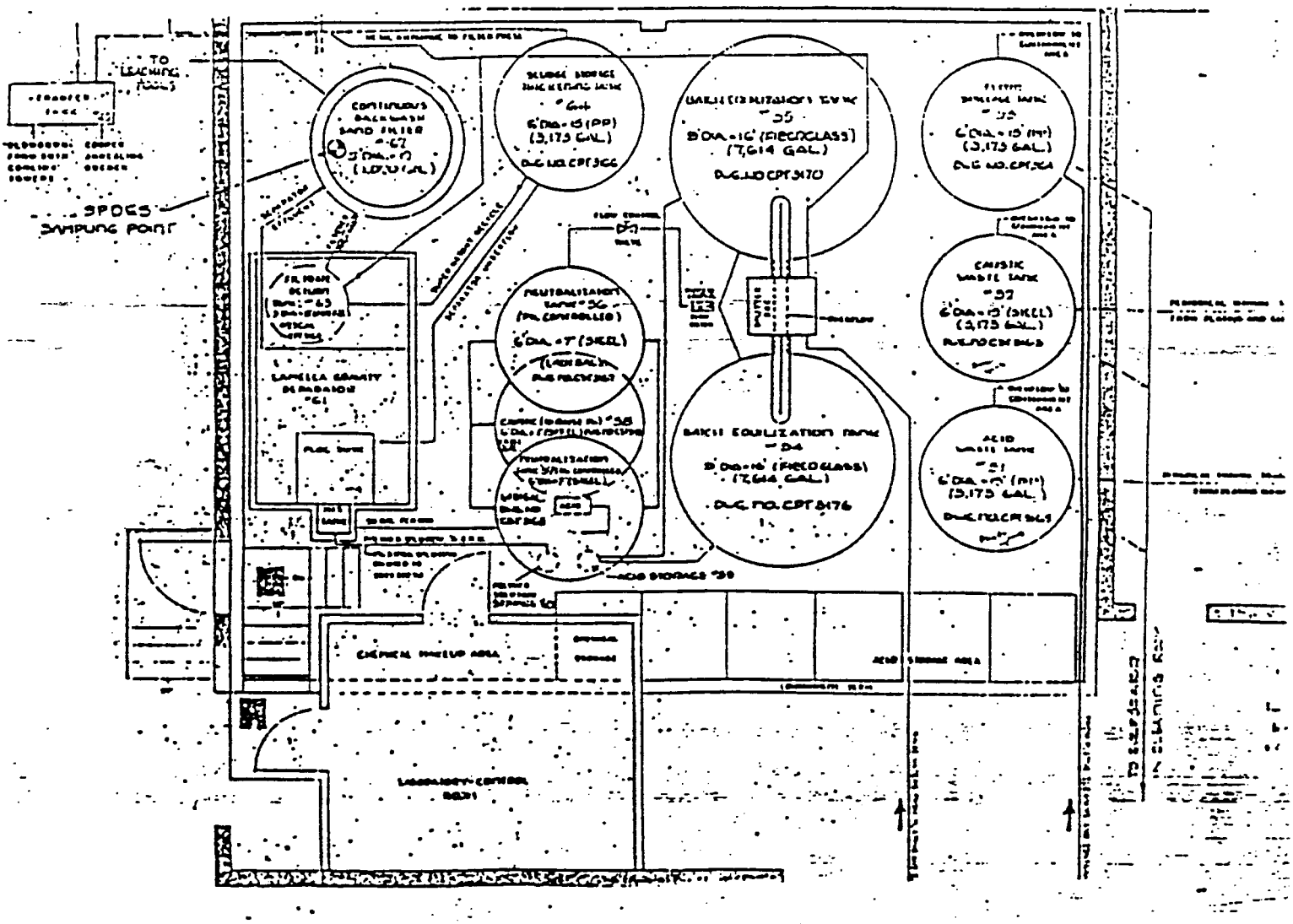
DEFINITIONS OF DAILY AVERAGE AND DAILY MAXIMUM

The daily average discharge is the total discharge by weight or in other appropriate units as specified herein, during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges in appropriate units as specified herein divided by the number of days during the calendar month when measurements were made.

The daily maximum discharge means the total discharge by weight or in other appropriate units as specified herein, during any calendar day.

MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) indicated below: (Show sampling locations and outfalls with sketch or flow diagram as appropriate).



RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

a) The permittee shall also refer to the General Conditions (Part II) of this permit for additional information concerning monitoring and reporting requirements and conditions.

b) The monitoring information required by this permit shall be summarized, signed and retained for a period of three years from the date of the sampling for subsequent inspection by the Department or its designated agent. **Also;**

[X] (if box is checked) monitoring information required by this permit shall be summarized and reported by submitting completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

Send the **original** (top sheet) of each DMR page to:

Department of Environmental Conservation
Division of Water
Bureau of Wastewater Facilities Operations
50 Wolf Road
Albany, New York 12233-3506

Phone: (518) 457-3790

Suffolk Co. Dept. of Health
15 Horseblock Place
Farmingville, NY 11738
ATTN: J. Maloney, P.E.

Send the **first copy** (second sheet) of each DMR page to:

Department of Environmental Conservation
Regional Water Engineer
Region 1
NYS SUNY
Stony Brook, New York 11790

c) A monthly "Wastewater Facility Operation Report..." (form 92-15-7) shall be submitted (if box is checked) to the [ ] Regional Water Engineer and/or [ ] County Health Department or Environmental Control Agency listed above.

d) **Noncompliance** with the provisions of this permit shall be reported to the Department as prescribed in the attached General Conditions (Part II).

e) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

f) If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording on the Discharge Monitoring Reports.

g) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit

h) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.

i) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approvalpursuant to section five hundred two of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be sent to the Environmental Laboratory Accreditation Program, New York Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockerfeller State Plaza, Albany, New York 12201

REFERENCE NO. 27

STATE OF NEW YORK
DEPARTMENT OF LAW
120 BROADWAY
NEW YORK, NY 10271

ROBERT ABRAMS
Attorney General

JAMES A. SEVINSKY
Assistant Attorney General in Charge
Environmental Protection Bureau

(212) 341-2461

April 4, 1991

David Grupp
NUS Corp.
1090 King George Post Road
Suite 1103
Edison, NJ 08837

Re: Jameco Industries

Dear Mr. Grupp:

Please find enclosed the Stipulation and attached site work plan agreed to by Jameco and the State for the above referenced site. The plan will supplement and seek to confirm a previous investigation performed by Jameco without State participation. If this phase of this investigation finds that further work is required, the Stipulation provides a mechanism for future work to be performed.

If you have any questions, please call.

Sincerely,

ROBERT L. OSAR
Assistant Attorney General

Enclosures

RLO:hb d/grupp.ltr

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF SUFFOLK
----------x

THE STATE OF NEW YORK,

Plaintiff,

Suffolk County
Index No. 81-22558

-against-

JAMECO INDUSTRIES, INC.,

STIPULATION OF SETTLEMENT

Defendant.
----------x

SUPREME COURT OF THE STATE OF NEW YORK
ALBANY COUNTY
----------x

In the Matter of the Application of
JAMECO INDUSTRIES, INC.,

Petitioner,

Albany County
Index No. 7172-87

For A Judgment Pursuant To Article
78 of the CPLR

-against-

THOMAS C. JORLING, as COMMISSIONER OF THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, and THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,

Respondents.

----------x

WHEREAS, the State of New York (the "State") by its Attorney General, Robert Abrams, has brought a civil action in the Supreme Court, County of Suffolk, against the defendant, Jameco Industries, Inc. ("Jameco"), alleging certain violations arising from Jameco's discharge of wastewater at its place of business at 248 Wyandanch Avenue, Wyandanch, New York (the "Site"), and has also alleged that Jameco failed to dig up and remove sludge

pursuant to a permit requirement, and has requested an investigation and remedial program to address certain soil and groundwater conditions at the Site, and the defendant Jameco having interposed denials and affirmative defenses (hereinafter: "New York v. Jameco"), and

WHEREAS, Jameco and the State commenced settlement negotiations regarding the aforesaid civil complaint in February 1982, and

WHEREAS, during the course of those negotiations Jameco modified and refurbished its wastewater treatment plant in order to reduce and/or eliminate certain of its discharge upsets, excursions, and irregularities, and Jameco estimates said modifications and refurbishments to its system cost more than one quarter million dollars; and

WHEREAS, on April 9, 1984, the New York State Department of Environmental Conservation ("DEC") proposed a draft State Pollution Discharge Elimination System ("SPDES") permit, which was revised and reissued as a final permit on or about June 15, 1987, and

WHEREAS, Jameco found the terms of the draft Permit proposed on April 9, 1984 to be generally acceptable, but it objected to some of the terms and conditions of the final permit issued June 15, 1987, and on or about August 10, 1987 commenced an Article 78 proceeding in the Supreme Court, Albany County, (hereinafter: "Matter of Jameco v. Jorling"), and

WHEREAS, Jameco has made further modifications and changes to its SPDES system and has proposed further changes in order to reduce and/or eliminate certain of its discharge upsets, excursions, and alleged irregularities, and

WHEREAS, Jameco and the State have developed a plan of soil and groundwater investigation for the Site, and the State and Jameco desire to resolve the issues in both above-captioned litigations;

IT IS HEREBY STIPULATED AND AGREED, by and between the respective parties that:

RESOLUTION OF WASTEWATER DISCHARGE ALLEGATIONS

1. Jameco's installation of a closed loop ion exchange chrome purification system as set forth in the letter of John S. Connors and Associates to Mr. James Harrington at DEC, dated March 10, 1988 shall be confirmed in the following manner:

Within thirty (30) days of the effective date of this Stipulation, Jameco will submit:

(a) an "as built" letter certifying that the closed loop ion exchange chrome purification system was installed in accordance with the final engineering Report previously submitted to Mr. Harrington at the Central Office of DEC at Albany, New York, and to Philip Barbato at the Region I Office of DEC at Stony Brook, New York; and

(b) an "as built" letter for the closed loop cooling water system certifying that the system has been installed in accordance with the final plans.

2. In the event that the closed loop ion exchange system was not installed in accordance with the Report, the "as built" letter shall specify in what way or ways the installation varied from the Report. Any further modification of the wastewater treatment system shall be submitted to DEC for review in accordance with the requirements of Jameco's SPDES Permit prior to the installation of any such modification.

3. Jameco shall submit a report to the Region One Regional Water Engineer and a copy to the Director of Wastewater Facilities Design within the DEC Division of Water at its Central Office in Albany, New York, detailing the improvements and modifications to the Jameco facility that affect wastewater treatment.

4. A Report, in the form of a letter, shall also be submitted on the first and second anniversary of the effective date of this Stipulation, and shall certify that the improvements and modifications referred to in the initial Report remain in place and are functioning properly and effectively.

5. DEC shall issue to Jameco, within thirty (30) days of the effective date of this Stipulation, a revised draft SPDES permit which shall contain the following proposed modifications to Jameco's existing permit:

(a) A bar to any further discharge of cooling water to

groundwater;

(b) Discontinuance of the practice of mixing cooling water blow down with process water;

(c) Elimination of the use of outfall #003; and

(d) In recognition of the agreement in New York v. Jameco, set forth below, the revised permit shall eliminate the condition that relates to a field investigation work plan "to determine the quality of soil and groundwater contamination underlying the permittee's Site."

6. DEC shall cause notice of the draft revisions to the SPDES permit to be published in the Environmental Notice Bulletin. If within thirty (30) days after publication of this notice, DEC has not received any comments with respect to the revisions set forth in paragraph "5" from the public, or has received comments that do not raise any substantive and significant issues which require a major modification to the aforesaid revisions contained in paragraph "5", DEC shall issue a draft permit in final form within sixty (60) days of the notice appearing in the Environmental Notice Bulletin. If DEC receives comments that raise substantive and significant issues with respect to the proposed revisions, DEC shall continue the administrative process pursuant to the Uniform Procedures Act, Environmental Conservation Law ("ECL") Article 70 and 6 N.Y.C.R.R., Part 621 with respect to the aforesaid revisions.

7. Nothing herein shall prevent Jameco from obtaining more or less than 75% of its process water flow from municipal public

water supply wells. In the event that Jameco intends to obtain more than 25% of its process flow from groundwater, Jameco shall inform the Department of this change prior to its implementation. As a permit condition, Jameco shall state on the discharge monitoring report ("DMR") for each month the percentage and amount of municipal water used that month. However, this provision is not intended to relieve Jameco of any obligation to adhere to the conditions imposed by the SPDES permit in force or the engineering plans and specifications submitted to and approved by DEC.

8. After the effective date of this Stipulation, any future violations of the effluent limitations of the revised SPDES permit after the date of its issuance shall be governed by the provisions of the ECL Article 71.

9. The State shall not commence any administrative or judicial action against Jameco in any manner for any known violations of its SPDES permit or violations of the provisions of ECL Article 17, Title 7 and 8 or the regulations issued thereunder that arose prior to the effective date of this Stipulation.

10. Matter of Jameco Industries v. Jorling, is hereby discontinued on the merits with prejudice and without costs. The parties will execute a separate Stipulation reflecting this discontinuance to be filed in the Albany County Clerk's Office.

11. The "first," "second," "third" and "eleventh" causes of action in New York v. Jameco, are hereby dismissed, with

prejudice and without costs.

12. So much of the remaining causes of action of New York v. Jameco, that relate to the discharge and disposal of effluent discharges, improper use of excessive effluent discharges, maintenance and cleaning of the waste system, and discharge of hazardous substances or any substance in excess of SPDES permits are hereby dismissed with prejudice and without costs, except as specifically retained in paragraph "22(b)" infra.

13. Jameco shall pay to the State the sum of Sixty Five Thousand ($65,000) Dollars, subject to the following terms and conditions: (a) Ten Thousand ($10,000) Dollars within thirty (30) days of the effective date of this Stipulation; (b) Fifteen Thousand ($15,000) Dollars within six (6) months of the Effective Date of this Stipulation; Fifteen Thousand ($15,000) Dollars within twelve (12) months of the Effective Date of this Stipulation and (c) Twenty-Five Thousand ($25,000) Dollars upon Jameco's default, if any, under any condition relating to the execution of the terms of paragraphs "1" through "4" of this Stipulation.

RESOLUTION OF SLUDGE ALLEGATIONS

14. Jameco shall perform the field investigation as specified in the annexed "Jameco Site Investigation Plan of Work," which is annexed hereto as Exhibit "A" (the "Work Plan"). Implementation of the Work Plan shall commence within sixty (60) days of the Effective Date of this Stipulation, and shall be pursued continuously with all reasonable diligence until completed.

15. The State shall be provided notice (normally, at least ten (10) business days in advance), and a schedule well in advance of all Work Plan activities to be performed, and shall be provided access to the Site to inspect and monitor all such activities, and be provided an opportunity to obtain splits of all samples, as requested, and be allowed to take such samples as necessary, and shall provide opportunity for Jameco to obtain splits of any samples taken by the State.

16. Jameco shall furnish the State with all laboratory analyses obtained pursuant to the Work Plan within twenty (20) days of receipt; and the State shall furnish Jameco with any laboratory analysis it may obtain within twenty (20) days of receipt of such results from its laboratory.

17. During the implementation of the Work Plan relating to the investigation of the former sludge lagoon area and field adjacent thereto, areas which by visual inspection or analytical results can be identified by agreement of Jameco and State

representatives as sludge, shall be excavated and properly disposed by Jameco. Jameco shall provide, as part of the plan of work, a Health and Safety Plan for sludge excavation acceptable to the State. If the sludge cannot be immediately sent to a proper disposal facility it will be properly stored, and all necessary steps, including sampling and analysis, will be taken by Jameco, so that proper disposal will be performed as quickly as practicable. Any such storage of sludge on the Site must meet all substantive and relevant Federal, State, and local regulatory requirements for the storage of sludge. If the parties cannot agree that an area is sludge by visual inspection and/or review of analytical results, the area need not be excavated at that time, and the parties will reserve all legal claims and defenses with respect to the remediation of those areas.

18. Upon completion of the tasks undertaken pursuant to the Work Plan, Jameco will cause its consultants to submit a Report summarizing the results of its field investigation (the "Report"). The Report will contain references to laboratory analysis which shall have been provided to the State, and will contain diagrams adequate to identify the levels of cleanliness or contamination referred to in the Report. The Report shall be divided into two distinct parts to be designated as "Part One" and "Part Two". Part One shall review and analyze the data collected pursuant to the Work Plan with respect to the area next to the plant where the former sludge lagoon referred to in the 1975 SPDES permit existed. Part Two shall review all the data

and analytical results obtained pursuant to the Work Plan for the purposes of evaluating the need or lack thereof for further investigation or remediation.

19. The State will review Jameco's analytical results and its Report, and make any observations or comments relating to the accuracy or validity of the Report's conclusion that are material within thirty (30) days of the transmission of the Report to the State. Jameco may request a conference with the State to discuss the State's comments, and the State shall grant such a request within thirty (30) days of said request, and shall cause qualified personnel to attend the meeting with Jameco for the purpose of discussing the analytical results and the Report. Thereafter, Jameco may file a Revised Report.

20. In the event that Part One of the Report or the Revised Report demonstrates that the sludge referred to in the 1975 SPDES permit has been removed from the Site, the State shall dismiss the "fourth," "fifth," "seventh" causes of action and the portion of the "tenth" cause of action relating to sludge, of New York v. Jameco, with prejudice and without costs qualified only by the provisions of paragraphs "22(b)" hereto.

21. In the event that Part One of the Report or Revised Report fails to reflect such sludge removal, or in the event that Part I of the Report or Revised Report reflects such sludge removal, but the State indicates in writing within thirty (30) days of the transmission of Part One of the Report or Revised Report to the State that it does not agree with the ultimate

conclusions of Part One of the Report or Revised Report, then the State may proceed to litigate the remaining causes of action of New York v. Jameco, upon its transmission of its reasons for not accepting the conclusion of Part One of the Revised Report. In such event, the State shall designate an employee, agent or contractor with knowledge of the facts relating to those sludge removal causes of action, and with knowledge of the reasons for its disagreement with the Report or the Revised Report, and such designated person (or persons) shall be made available for an oral deposition within thirty (30) days of the State's election to proceed with the litigation of the fraud cause of action. Nothing herein is intended to otherwise abridge the parties' rights pursuant to the CPLR, except that the State shall not advance any objections to the admissions in evidence of the facts and data set forth in Part One of the Report or Revised Report, if it is offered in evidence, other than those set forth in writing as provided in this paragraph and paragraph "19" above, or which may arise from newly discovered facts relating to its reliability.

22.(a) In the event that Part Two of the Report or Revised Report concludes that further investigation and remediation are not required, and the State rejects such conclusion, the State shall set forth its reasons in writing within thirty days of receipt of Part Two of the Report or Revised Report. In the event that Jameco disagrees with the State's analysis of Part Two of the Report or Revised Report, and

the parties cannot resolve their disagreement, the litigation of these remedial causes of action shall proceed. If Jameco agrees with such reasons as set forth by the State, the State and Jameco will continue with the process initiated pursuant to the Work Plan, to determine what, if any, further investigation and/or remediation of the Site is required. That process shall continue until the investigation and required remediation of the Site is concluded, or the State and Jameco can no longer agree as to the next step to be taken. At any point in this process, the State may dismiss, with the consent of Jameco, the portions of the complaint which request the investigation and the remediation of the Site. Such causes of action will be dismissed when the State and Jameco agree to the final remedial solution (including no action, if appropriate) required for the Site. Any dismissal of these causes of action in the complaint will be without prejudice to the State's jurisdiction over the Site pursuant to Article 27, Title 13, unless explicitly waived in writing. If the State and Jameco cannot agree as to the further investigation and/or remediation of the Site, the litigation of these remedial causes of actions shall proceed.

(b) Notwithstanding any other provision of this Consent Decree, the dismissal of any causes of action relating to past wastewater discharge or sludge removal activities, this Stipulation and the parties' actions in furtherance thereof, does not relieve Jameco of any lawfully imposed requirement to remediate any soil, air, or groundwater conditions which may be

related to such alleged activities. Nothing herein is intended to bar Jameco from asserting any defenses that it might have in this or any subsequent proceeding with respect to any remedial action.

MISCELLANEOUS PROVISIONS

23. The terms of this Stipulation may be modified by a mutual written agreement by the parties.

24. Any notices or communications by the State pursuant to this Stipulation shall be served by regular mail upon Daniel Riesel, Esq., Sive, Paget & Riesel, P.C., 460 Park Avenue, New York, N.Y. 10022, with a copy to Mr. Michael Lipman. Any notice or notification from Jameco to the State required under this Stipulation shall be sent by regular mail to Robert Osar, Esq., Assistant Attorney General, New York State Dept. of Law 120 Broadway, New York, N.Y. 10271, or whomever the State shall designate, and notify Jameco of such designation pursuant to this paragraph.

25. The signatories to the Stipulation represent that they have the authority of their respective clients to enter into the Stipulation.

26. This Stipulation shall be executed first by Jameco and then transmitted to the State for execution. The effective date of this Stipulation shall be the date that the Attorney General mails an executed original of this Stipulation to Jameco, and such date shall be evidenced by an accompanying affidavit of

service.

27. Nothing contained herein is intended to indicate any wrongdoing or violation of law by Jameco, and nothing contained herein is intended to confer any rights upon any persons other than the State or Jameco.

28. This Stipulation shall be binding upon Jameco, its assigns and successors and the State of New York, its agencies and agents.

29. A copy of this Stipulation upon execution may be entered in the Offices of the Clerks of Albany and Suffolk Counties without further notice.

The State of New York
by its Attorney General
Robert Abrams

By: Robert L Osgood AAG

Dated: April 3, 1991

Sive, Paget & Riesel, P.C.
Attorneys for Jameco Industries, Inc.

By: Daniel Riesel

Daniel Riesel
(A Member of the Firm)

Dated: Oct 19 1990

2283-022

JAMECO SITE INVESTIGATION
PLAN OF WORK

Groundwater Survey

Six groundwater monitoring wells will be installed (see the enclosed site plan for locations) to address potential groundwater contamination.

Well Drilling

1. Wells will be drilled using a hollow stem auger, conforming with the attached protocols.

2. Wells will be logged by an experienced geologist or other geotechnical professional.

3. No additives such as drilling fluids or muds will be used.

4. Four split spoon samples will be taken at each well location, the samples to be taken at 5- 10- 15- and 20-foot depths, unless there are significant stratigraphic changes.

5. All wells will be completed at the shallow water table.

6. A properly calibrated HNu, OVA or PID analyzer shall be used to monitor all split spoon samples.

7. All drilling equipment will be steamcleaned, prior to the start of drilling, between borings, and prior to leaving the site.

Well Installation

1. Wells will be constructed of two-inch diameter PVC and will be constructed and completed in accordance with the attached protocol.

2. Fifteen feet of screen will be used, i.e., ten feet into the water table and five feet above to allow for monitoring regardless of water table fluctuations.

3. An appropriate sand pack (not cuttings) around the screen, and grout seal immediately above the screen will be used in completing the well. Groundwater is expected to be present on the site at approximately 10 feet below ground level.

4. A permanent record of the "as built" well will be drafted after installation.

5. Wells in areas of heavy traffic will have no stickup and the caps will be flush with ground surface. Flush wells will be designed to prevent surface water flow contamination. Wells which are not flush will have protective casing.

6. Upon completion, wells will be surveyed and a map prepared showing their location and elevation (horizontal and vertical) relative to a specific datum (if possible, a USGS benchmark). Vertical elevations will be established to 0.01 feet at the ground surface and top of casing. Horizontal control will be to nearby permanent objects, again, preferably, a USGS benchmark.

7. Groundwater elevation will be recorded before and after the development (as depth to water) and the survey (relative to mean sea level).

Well Development

1. Wells must be developed until the pH, conductivity and temperature have stabilized and until the water is sediment-

free. If, in the judgment of field representatives, sediment free water (50 NTUs or less) is not attainable and the wells have been otherwise properly installed, the wells will be pumped until 25 well volumes are removed and pH, conductivity and temperature have stabilized.

Well Sampling and Analysis

1. A minimum of one groundwater sample will be obtained from each well. The well will not be sampled for at least one week after development.

2. Wells must be purged by removing a minimum of 3 well volumes or until the well is dry. Once 3 well volumes have been removed, purging will continue until pH, conductivity and temperature have stabilized and until turbidity readings are 50 NTUs or less. If, in the judgment of the field representatives, this turbidity reading is not attainable, the wells must be pumped until 5 well volumes have been removed and until pH, conductivity and temperature have stabilized. The presence of sediment in the sample will be noted and a laboratory analysis of Total Suspended Solids may be requested.

3. Sampling equipment will be cleaned with a detergent wash, distilled water rinse, hexane rinse, and a second distilled water rinse.

4. Samples will be analyzed for Target Analyte List (TAL) metals, hexavalent chromium, and cyanide.

5. Samples will also be analyzed for Target Compound List (TCL) volatile organic compounds using EPA Method 624 analysis. Additionally, any peak with an area which is 10 percent of the internal standard will be identified and quantified.

6. At the State's request, split samples will be provided. The State or the State's chosen laboratory will provide sampling containers.

7. Conductivity of all samples will be noted; the measurement will be taken in the field. The second round of sampling will be performed three-four months after the first round.

Water Level Measurements

Three synoptic groundwater level measurements will be taken spanning the duration of the investigative program. Contour maps will be generated with this data.

Soil Sampling

The permitted method of treatment prior to 1975 was to chemically precipitate heavy metals from the plating waste with the effluent discharged to infiltration lagoons in the rear yard. The effluent would seep into the soil, filtering the precipitate out, leaving a sludge behind. There were two lagoons, as shown in the site plan. The plant would use one lagoon until the sludge clogged the bottom, whereupon the effluent would be switched to the second lagoon. The first lagoon would then be allowed to dry and the sludge disposed of by a hauler. After 1975, a waste treatment plant with settling tanks replaced the infiltration lagoons.

The infiltration lagoon closest to the warehouse also received roof drainage from the adjacent structure and occasionally, during heavy rain, overflowed into the side and rear yards. Jameco dug a shallow basin on the east side of that infiltration lagoon to capture the occasional overflows to prevent uncontrolled discharges.

There are old drawings of the site showing leaching pools south and east of the infiltration lagoons. Interviews with plant personnel responsible for pre-1975 wastewater operations, however, indicate that no such pools were ever built or utilized

on the site. To confirm this, one of the groundwater/soil sampling locations will be within this area.

The soil sampling program is designed to seek confirmation of the samples taken by Jameco in 1984.

1. A limited sampling effort consisting of five sampling locations will be conducted in Trench 5 by split spoon sampling. (See site plan for locations.) Final locations will be surveyed as per the monitoring wells. These samples cover the overflow basin and the alleged pre-1975 leaching pool area.

The sampling program in 1984 had revealed the presence of a one to two inch deep sludge layer in the shape of the overflow basin. This layer was located approximately three feet below ground level. At each location, a sample of the top four feet will be obtained and analyzed. In addition to the above five samples, one additional sample from within the perimeter of the overflow basin and one from outside the perimeter of the overflow basin will be analyzed.

A sample of the actual sludge - having a "clay-like" consistency and ranging in color from blue/green to brown/grey - will also be collected and analyzed.

2. There will be one boring in each of the two lagoons. Continuous sampling in two foot increments will be performed till groundwater is reached (approximately 10 feet below ground level). Since the 1984 sampling involved analysis of composite samples from a three foot, five foot, and seven to eight foot depth, the corresponding three split-spoon samples will be sent

for analysis. However, the final determination regarding samples to be analyzed will be made upon visual inspection in the field, in concurrence with the State.

3. The four split spoon samples to be taken at MW-1 will be analyzed to provide background concentrations.

All soil samples will be analyzed for TAL metals and cyanide, and TCL volatile organic compounds. These samples will also be analyzed for leachable metals using the Toxic Characteristic Leaching Procedure (TCLP) specified in the March 29, 1990 Federal Register.

This sampling program and results will be evaluated to determine the validity of the 1984 Jameco test results.

Environmental Sampling

1. Soil sediments and water in an off-site down-gradient storm drain will be sampled and analyzed for TAL metals and cyanide, and TCL volatile organic compounds. The water sample will also be analyzed for hexavalent chromium.

2. Production well water will also be sampled at the intake point and analyzed for the same parameters as the groundwater samples.

3. Six representative samples will be taken from the leaching pools. The locations of these samples will be decided upon in the field by the State and Jameco representatives. The samples will be analyzed for TAL metals and cyanide, and TCL volatile organic compounds.

Quality Assurance/Quality Control

1. The protocol attached to the Plan of Work will be used. Water level measurements will be done with an electronic measuring tape.

2. Field instruments will be properly calibrated.

3. Complete chain of custody documentation will be maintained.

4. Preservation of samples and sample holding times will be those specified for the specific EPA analytical methods to be used.

5. A laboratory will be used which is certified by the N.Y. State Department of Health for the analyses required by this plan and is capable of performing these analyses within the QA/QC requirements.

6. A trip blank will be included with each shipment to the laboratory. A field blank will be analyzed for each day of sampling. Trip blanks will be tested for TCL volatile organic compounds. Field blanks will be analyzed for all parameters.

All samples to be tested for organics will be spiked with surrogate standards to confirm acceptable recovery. If the recoveries for the surrogate standard fall outside the limits, the analysis will be repeated, as defined by CLP. The laboratory will test and adjust instrument calibration at intervals set by the CLP.

Method blanks will be analyzed to confirm laboratory methodology.

One matrix spike and one matrix spike duplicate will be analyzed for volatiles and metals.

Health and Safety

The site has been determined to be a Level D site, unless conditions indicate the need for upgrading. A site-specific Health and Safety Plan will be prepared and reviewed by all field personnel before sampling begins. This plan will conform to OSHA and EPA site investigation requirements.

DOCUMENTATION

1. A permanent written (narrative and graphic) daily record of weather conditions, site conditions, and developments of all work performed on the project, including all personnel, machinery, equipment, materials, and procedures utilized on the project, will be maintained.

2. A written record will also be compiled, summarizing observations, details, problems encountered and how problems were dealt with, and specific details relative to the installation of each exploratory boring or monitoring well.

3. Split samples will be provided to the State at the time of sampling as set forth as page 4, Item 6.

Results of laboratory analysis of all soil and groundwater samples will be reported to the State, and all QA/QC data made available on request.

Notification

The State will be notified, through its designated representative(s), at least 10 business days prior to the

commencement of any field activities.

ATTACHMENT 1

1. Drilling

a. General

The Contractor shall progress a borehole through the overburden and at each well site as identified on the project location plans, or as directed by the State representatives to allow for the unobstructed installation of a 2-inch well casing.

All work executed by the Contractor under the provisions of this contract shall be performed by and/or under the supervision of personnel experienced in the drilling and installation of monitor wells.

Each boring is to be drilled straight and plumb and shall be tested for alignment and plumbline.

b. Plumbline and Alignment

Each borehold shall be sufficiently plumb and straight to accommodate installation of temporary and permanent well casing. All permanent casing shall be installed round, plumb and true so that there will be no interference with construction and operation of the well.

c. The drilling equipment will be steam-cleaned prior to the start of drilling, between borings, and prior to leaving the site.

All drill tools, augers, bits, casing, rods, etc., shall be cleaned in the same manner as the drill rig.

2. Formation Sampling

a. Overburden

The method of sampling shall be in accordance with ASTM method D1586.

Immediately after retrieval and examination, formation samples shall be placed in approved plastic or glass containers, securely closed to avoid spillage and contamination, and clearly labeled with the following information:

1. Project
2. Name or number of the well
3. Depth interval represented by the sample
4. Blow counts
5. Date taken.

b. Inadequate Sample

The consultant will redouble his efforts at obtaining an adequate sample if the amounts from his prior attempts were insufficient. He must utilize all appropriate precautions as conditions permit. If conditions do not permit, if the attempt fails or if the sample is so disturbed as to be unsatisfactory, then the borehole should be cleaned out and an acceptable sample obtained from the interval immediately succeeding the location (depth) of the previous attempt.

c. Initial Examination

Samples are to be examined initially in the sampling device or on a surface which allows adequate visual and HNu or

OVA examination of the material. Such examination should include observation of both internal and external features and characteristics of the sample, including color, texture, moisture content, gradation and grain size.

d. Sample Handling

Care is to be exercised in the handling of all samples commensurate with information already available about the site, the materials(s) which may be present at the site and the purpose for which the samples are to be utilized. Prudent judgment is to be employed by all personnel involved in the project, and adjustments made in the field as dictated by the site-specific Health and Safety Plan.

3. Monitoring Well Borehole Details

The diameter of a borehole or the inside diameter of the drive casing or the auger flights is to be a minimum of one and one-half inches larger than the outside diameter of the monitor well assembly (it is required that flush joint casing always be used). Such annular space is needed to convey a sand pack freely to the bottom of the boring to fill the area around the well screen, to allow accurate measurements of the top of the pack as it is being placed, and to allow the use of a tremie pipe to convey the sand, and cement/bentonite grout backfill above the seal.

For example, when installing a nominal two-inch outside diameter monitor well, it is recommended that casing or auger flights of no less than four-inch inside diameter be utilized.

This will enable the use of a one to one and a half inch outside diameter tremie pipe for placing the packs.

A borehole that is to be backfilled to a specific elevation prior to installation of the monitor well assembly is to be backfilled with material of a similar nature to that removed from the interval to be backfilled or by some inert material. For example, for a granular deposit, sand should be utilized; for a silt or clay, silt, clay or bentonite should be utilized. Care is always to be taken to avoid using drill cuttings or introducing contaminants into zones where none existed previously. Consequently, origin of materials used must be carefully documented.

4. Monitoring Well Installation Materials and Procedures

a. Casing

Monitoring well casings are to consist of NSF-approved, threaded, flush-joint, PVC pipe. If other materials such as stainless or galvanized steel, iron or Teflon pipes are to be used, the consultant must receive prior approval from State staff.

Joints, caps and end plugs are to be secured by welds, threads with teflon tape, or force fittings as appropriate to the material being utilized. Glues or other adhesives are not acceptable.

Monitoring well caps are to be vented to allow for proper pressure equilibration.

5. Screen

PVC well screens are to be used in Phase II investigations, unless conditions dictate that some other material should be used. In such a case, the consultant will receive the State's prior approval for a change from PVC.

The slot size of the screen is to be determined on the basis of the grain size characteristics of the water producing zone. If characteristics of the formation are not known and if the screens are to be ordered prior to drilling, it is usually acceptable to order number 10 to 20 slot screens and compatible packing material.

6. Pack

The pack is to consist of a clean, inert, siliceous material of a size compatible with both the natural formation material and the slot size of the screen. The source and size of the packing material are to be identified prior to commencement of the project and compared to formation material (if known) and proposed screen slot size. A gradation analysis will not be required if the packing material is familiar to and acceptable to the supervising agency personnel.

A sample of the pack material is to be retained with the soil samples for further reference and/or analysis.

A sand or gravel pack is to be placed in the annular space surrounding that portion of the well occupied by the well screen and for a minimum distance of two feet above the top of the screen.

The annular space between the outside diameter of the monitoring well casing and the inside diameter of the auger flights, drill casing or borehole wall should be a size sufficient to allow free passage of the packing material to the screened depth. A minimum of one and one-half inch is recommended.

The packing material is to be placed slowly with a tremie pipe to allow the material to settle and to avoid bridging. Frequent checks of the level of the pack within the annular space are to be performed as the pack is being placed.

Sections of the auger flights or drill casing are to be removed periodically to avoid binding of the casing in the borehole. Frequent and careful measurements are to be taken to assure that some portion of the pack is retained within the auger flights or drill casing at all times as they are removed. Measurements are also to be taken to ensure that the monitoring well assembly is not being pulled out of the ground as the augers and/or casing are/is being removed.

7. Grout

A grout mix consisting of cement/bentonite is to be placed in that portion of the annular space between the auger flight, drill casing or borehole wall and the monitoring well assembly, extending from the top of the pack to the surface seal.

The cement/bentonite ratio and the viscosity of the grout mix is to be determined in the field by the consistency of the grout as it is being mixed. The mix is to be dense enough to

set up without being diluted by formation water, and to displace water from within the annular space such that undiluted grout will flow out of the auger flight, drill casing or borehole at the ground surface. The proportions of cement/bentonite/water in the grout mix shall be 94 lbs/3 to 5 lbs/6.5 gallons. A ten percent (10%) by volume hydrated-lime (CaO) may be added to facilitate pumping.

The grout mix is to be tremied, either by gravity or pumped to the bottom of the annular space to be filled by means of a continuous pipe or hose.

Auger flights or drill casing remaining in the borehole are to be removed as the annular space is being filled with the grout mix. Upon removal of such items, additional grout mix is to be added to the borehole to fill the hole to a point no less than two feet below the ground surface.

8. Protective Casing and Surface Well Seal

A protective steel casing, a minimum of two inches in diameter greater than the monitoring well casing, is to be placed over the monitoring well casing and secured in a surface well seal in the upper portion of the borehole. The protective casing is to project a minimum of 3-1/2 feet below the ground surface and high enough above the surface to ensure adequate protection of the well pipe, unless otherwise dictated by field conditions. A locking cap is to be placed on the protective casing, and secured with a padlock, with duplicate keys provided to the DEC personnel in the central office.

During installation of the protective casing, a surface well seal is to be constructed utilizing the cement/bentonite grout mixture or by mounding concrete around the casing to secure the casing in the ground and to provide positive drainage of surface water away from the monitor well assembly. The diameter of this well seal must be a minimum of 2 feet.

Partially completed wells must be secured at the end of a day's work. One method in the use of hollow-stem augers is to leave the auger in place in the hole, but attached to the driveblock assembly. The in-place resistance provided by the hydraulic system will ensure that the flights cannot be removed from the hole without large, heavy duty equipment. If this method cannot be used, then other systems as steel plates will be used to cover the hole. In any case, if the well site is in a depression, well cuttings may be used as a mound to ensure that runoff does not enter the hole.

Upon completion of monitoring well installation, each well will be developed to produce an amount of sediment-free (50 NTUs or less) water sufficient to obtain a sample for physical and chemical analysis. If, in the judgment of the field representatives, such sediment-free water is not attainable and the well has been properly installed, the well will be pumped until 25 well volumes have been removed and until pH, conductivity and temperature have stabilized.

Intermittent flow (a gentle surging action) will be created during the early stages of development to obtain maximum

flushing action. This is to be followed by a period of continuous flow at a rate which produces a stabilization of the natural formation and the pack, such that sediment-free water is obtained from the well.

During development, efforts will be made to circulate water and develop the well throughout the entire vertical screened interval.

Water from outside sources will not to be utilized to develop a low yield well without prior approval.

Well development will be completed immediately after drilling.

If contaminated water is withdrawn during monitor well development, it will be collected, packaged, stored, protected and disposed of in a manner which is acceptable to the State. Methods of handling, storage, protection and disposal will be decided upon prior to the work being commenced.

10. Contaminated Materials

Methods of handling, storage, protection, and disposal of contaminated materials encountered during exploratory boring and monitoring well installation are to be developed and approved prior to work being commenced and are to be clearly outlined in plans, specifications, or procedures and protocols for the project.

Contaminated soil, waste or water generated during the project, is to be collected, packaged, stored, protected, and disposed of, in a manner which is consistent with the plans and

specifications and procedures and protocols and acceptable to the supervising agency personnel. As a general policy, cuttings and drilling fluids from any upgradient borings or wells (if known ahead of time) may be disposed of on site. Materials removed from downgradient borings or wells are to be placed in containers and further treated as a hazardous waste or stored until the results of chemical analysis of samples from the borings or wells are available. The results of such analysis will dictate the appropriate proper method of disposal.

11. Sealing and Abandonment

All abandoned exploratory borings and monitor well boreholes are to be sealed in a manner which precludes cross contamination of soils and/or groundwater within the borehole, and the introduction of contaminants from the surface. Such efforts will require the use of impermeable materials such as clay, bentonite, cement grout, etc., throughout all or some portion of the borehole, depending upon subsurface conditions encountered at each boring location. Abandonment will also require restoration of the work area in accordance with applicable plans and specifications.

13. Documentation

a. Supervision and Record Keeping

Qualified Person-in-Charge

Each drill rig and crew is to have a qualified experienced engineer or geologist assigned by the consultant to oversee the drilling operation and to be responsible for

conformance with all applicable plans, specifications or other requirements.

The consultant will document and ensure that each boring is progressed at a rate commensurate with the capability of the drill rig, the resistance of the material being penetrated and with the ability of the drilling crew to perform their assigned tasks in a professional manner.

Close communication is to be maintained between the consultant and State personnel to identify and document any significant change(s) noted during progression of the boring. Such change(s) should be noted and related to sample conditions and characteristics where possible.

b. Daily Log

A thorough and accurate daily record of all boring/sample/well installation activities is to be entered in a field notebook maintained by the consultant.

Information in the log is to provide a complete daily documentation of all work performed on a task-by-task basis, including observations during drilling, samples taken, as well as sampling intervals, sample description, continuous substrata description, blow counts, numbers assigned in the field, a boring log (subsurface materials descriptions), progress in well installation, weather conditions, visitors to the site, problems encountered, solutions to the problems, modifications implemented, and any other pertinent information.

c. Boring Log

A separate boring log is to be prepared, maintained by the consultant. The log is to provide a clear, continuous documentation of all subsurface conditions encountered during progression of each exploratory and monitoring well boring. The information for the boring log is to be compiled and recorded continuously, and immediately, to avoid the loss of important information (observations, measurements, etc.). Information required for compiling a boring log is to be incorporated into each party's daily log (or kept separately as a boring log). It is to include a continuous lithologic log (description of subsurface materials), blow counts for advancing casing and/or sampling device, water levels in the hole (measured as appropriate, i.e., early a.m. before resuming work), accurate measurements of depths to sampled intervals, and detailed descriptions of all samples collected.

d. Boring/Sampling/Completion Record

A boring/sampling/completion record is to be prepared and provided by the consultant for each exploratory boring or monitor well. These records are formal, clear, concise, and permanent documentation of all information pertaining to a particular boring or well. They are generally presented in reports prepared based upon a field investigation program. They should include at a minimum:

Heading

Include site name and DEC ID number

(i) Name of drilling contractor;

(ii) Name of project;

(iii) Borehole identification number;

(iv) Borehole location (approximate when possible);

(v) Ground surface elevation;

(vi) Type and size (diameter of drilling equipment e.g. rig, casing, augers, bit, rods, etc.);

(vii) Sampling method (split spoon, Shelby tube, bailer, etc.);

(viii) Details of hammer weight and drop distance for split spoon samples (when applicable);

(ix) Date of start and completion of boring/well installation; and

(x) Elevation of top of monitor well casing, ground surface and any other pertinent benchmarks.

e. Body

(i) Record of depths penetrated in feet and tenths of feet;

(ii) Sampling intervals/depths;

(iii) Number of blows on sampler for each six

inches penetrated;

(iv) Recovery of samples in feet and tenths of feet;

(v) Identification and description of materials by geologist/soil scientist in accordance with a recognized classification system that is to be identified;

(vi) Depth to water table during drilling;

(vii) Depth to significant changes in material, geologic strata and rock;

(viii) Pertinent comments by driller relative to significant differences in drilling progress, fluid gain or loss, unusual occurrences, such as equipment loss;

(ix) Pertinent comments by drilling/geologist/soil scientist relative to significant or unusual sample conditions such as appearance, color, odor, behavior, loss of materials, etc.;

(x) Final diameter and depth of hole, method of sealing or backfilling, or other completion, i.e., monitoring well is installed, "as-built" sketch including depths of screen(s), seal(s), pack(s), etc., are to be submitted.

(xi) Amounts/volumes of sand and gallons of grout used.

f. Closing

(i) Name of driller and helper(s);

(ii) Name of geologist/soil scientist; and

(iii) Legend (such as for soil classification system).

14. Surveying

A map is to be prepared showing the location and appropriate elevations (ground surface, top of monitor well casing) for each exploratory boring and monitor well.

A licensed land surveyor is to establish the locations and elevations of each exploratory boring and monitor well, as follows:

Vertical Control - Elevations (0.01 ft.) are to be established for the ground surface at the well, the top of monitor well casing (T.C.), and at least one other permanent object in the vicinity of the boring and well. Elevations are to be relative to a regional, local or project specific datum. Use USGS bench marks whenever available.

Horizontal Control - Exploratory borings and monitor wells are to be located by ties (location and distance) to at least two nearby permanent objects. Using USGS bench marks whenever available.

14. OTHER SPECIFIC RESPONSIBILITIES OF RESPONDENT JAMECO

1. Permits

Prior to commencing work, Jameco is responsible for obtaining all permits, licenses, approvals, etc., required by any and all agencies with jurisdictions over the work to be performed. Jameco must comply with all terms, conditions, provisions, etc., of such approvals and with all directives, both written and verbal, issued by such agencies.

2. Access to Site

Jameco is responsible for confirming that DEC has obtained all necessary rights-of-access, easements, rights-of-way, etc. prior to commencing any activity at a site.

Throughout the period during which the work is progressing, Jameco is responsible for providing reasonable access to the work site for the personnel and equipment performing the work, supervising agency personnel and for any other personnel authorized to be on the site.

3. Work Area, Utilities and Obstructions

Prior to moving equipment on to the site, Jameco is responsible for establishing locations of any necessary office area, equipment and material storage area, maintenance area, drilling locations and roadways to and from such areas. Jameco is responsible for maintaining such buildings and areas in a condition as to be both accessible and usable and for leaving such areas in a satisfactory condition upon completion of the work.

Jameco is responsible for determining the presence and location of any subsurface utilities or obstructions prior to the commencement of work, and for avoiding such features during the performance of the work. Jameco is responsible for repairing, replacing or paying the cost of any such work on any utility or object which is damaged during the performance of the work.

b. Performance

1. General

Jameco is responsible for thorough familiarity with and knowledge of plans, specifications, and work schedule and must be thoroughly prepared to perform the required work in accordance with such plans, specifications and schedule.

Jameco is responsible for performing all work in a professional manner, utilizing experienced and qualified personnel (no substitution without DEC approval), machinery and equipment in good working order, quality materials, procedures and codes in accordance with accepted industry standards and applicable safety codes and requirements.

2. Adherence to Plans, Specifications and Schedules

Jameco is responsible for performing all work in accordance with the plans and specifications and the work schedule agreed upon prior to commencement of the project. If Jameco wishes to deviate from the plans and specifications or work schedule, verbal agreement must be reached with State staff, and such agreement must be confirmed in writing by the State staff no later than five working days after the date of such verbal agreement. Appropriate notes of such verbal agreements must be maintained by both the State and Jameco. Throughout the progress of all work, the consultant must coordinate his efforts with other contractors or workers on the site to ensure that satisfactory progress on the project is maintained.

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3. Equipment and Materials

Jameco is responsible for providing all appropriate equipment and materials in accordance with the plans and specifications; for assuring that such items are functional and of required capacity, dimensions and quality; for maintaining the equipment and materials in a condition suitable for use; and for utilizing such equipment and materials in a professional and safe manner.

The State will provide its staff with equipment, materials and supplies for those aspects of the investigation which come under its responsibility.

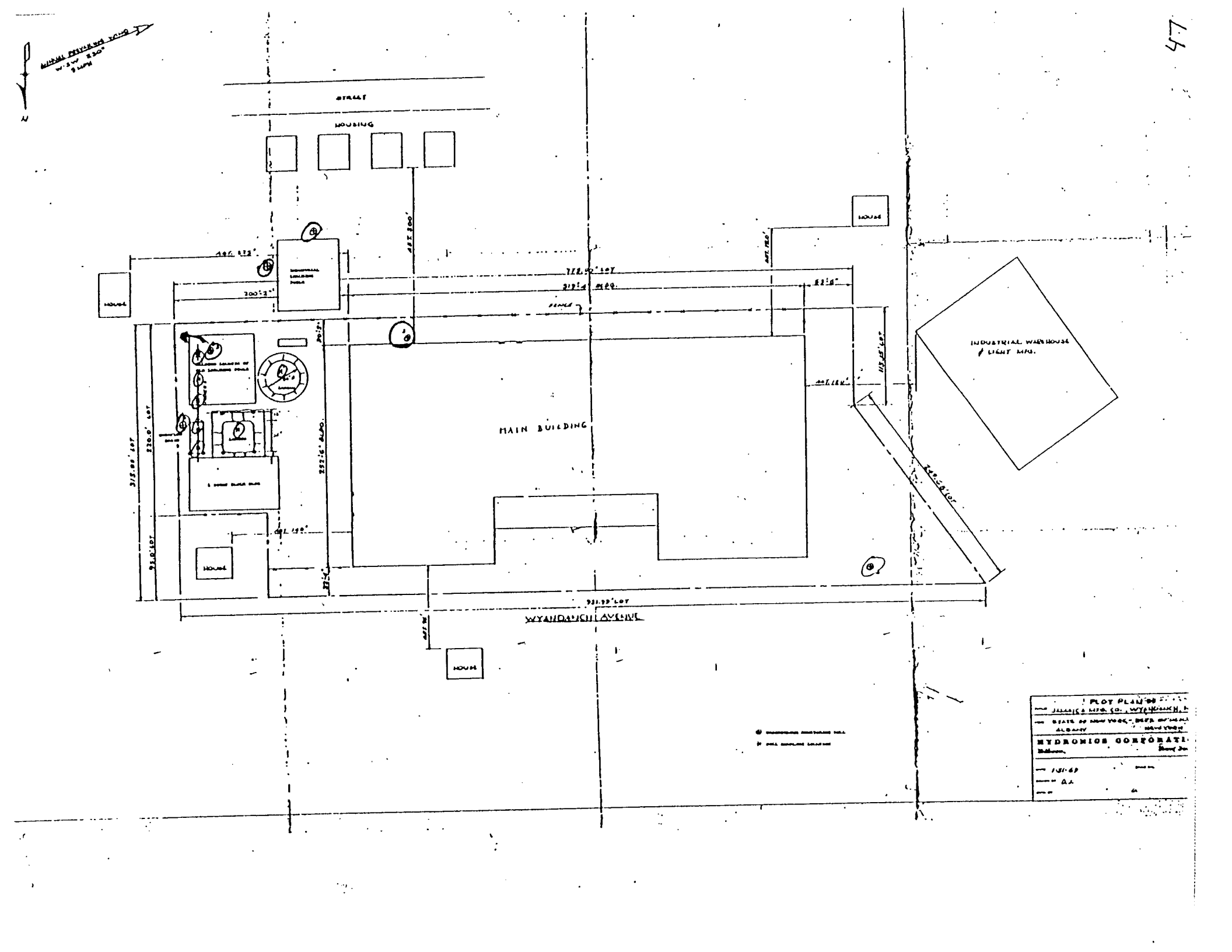
4. Restoration of Disturbed Areas

Jameco is responsible for restoring the project area and all other areas disturbed during the performance of the work to a condition at least equal to that which existed at the time of the commencement of such work (under certain conditions arrangements made prior to ordering performance of the work may dictate that a person other than the consultant is responsible for restoration). Such restoration should, at a minimum, preclude adverse impacts on or danger to the health of persons who may be allowed to have access to the site, impacts to the environment such as erosion, contamination, ponding, etc.

5. Record Keeping

Jameco is responsible for maintaining a complete set of records documenting work performed on the site. Such records include the driller's daily log, a driller's well log, records of materials and quantities use.

BO:FC D:Osar/Jameco.Inv.


STREET
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REFERENCE NO. 28

AKRF, Inc.

Environmental Consultants
117 East 29th Street • New York, NY 10016 • 212/696-0670

FAX Number 212/447-5546

November 21, 1991

Mr. Steven McNulty
Malcolm-Pirney, Inc.
197 Route 18, Suite 3000
East Brunswick, NJ 08816

RE: Jameco Industries
Soil Boring and Well Logs
FILE: 3099-007

Dear Mr. McNulty:

Per your request on behalf of the EPA, please find enclosed a copy of the soil boring and well logs from the field investigation conducted at Jameco Industries by AKRF Inc. Do not hesitate to call me if your require further information or assistance.

Very truly yours,

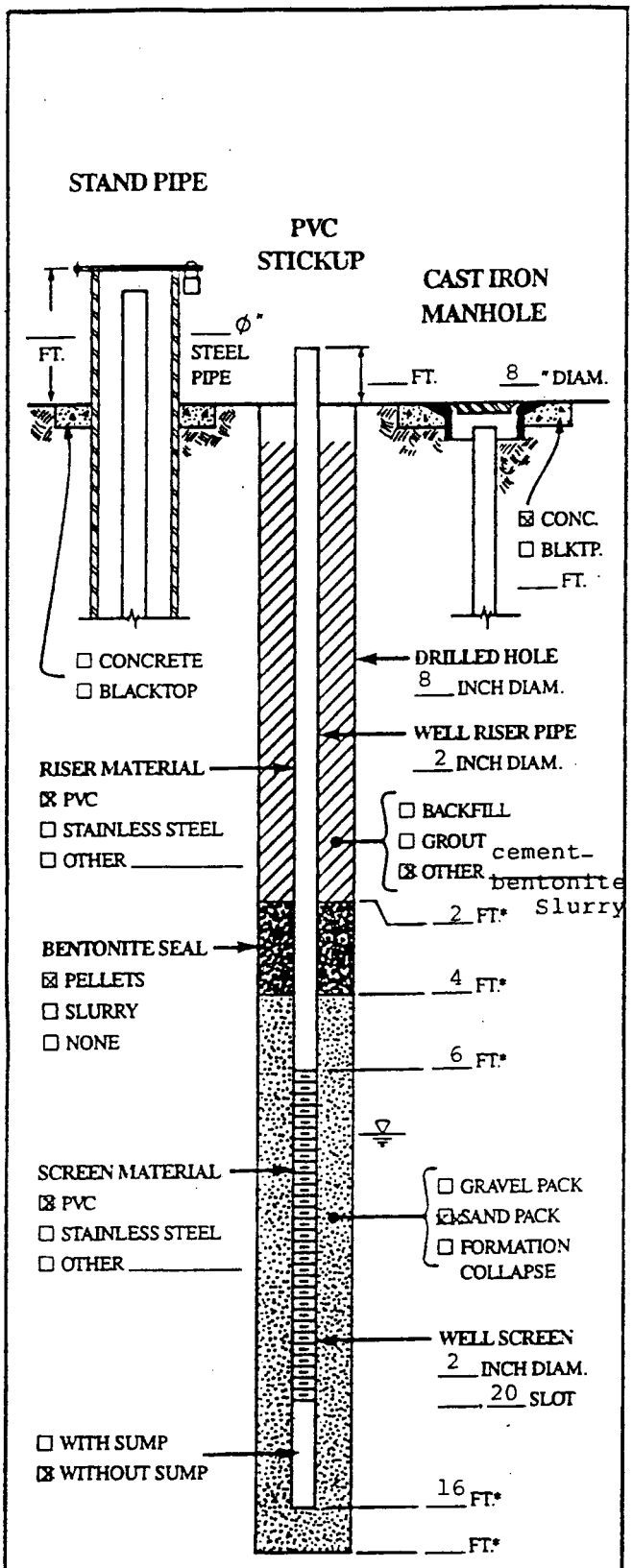
AKRF Inc.

Jill S. Edwards
Geologist

JSE\wp
Encl.

cc w/o encl: Israel Gajer, Jameco
Daniel Riesel, Esq., Sive Paget & Riesel

AKRF, Inc. Well Log



NOTE: MEASURING POINT IS GROUND SURFACE UNLESS OTHERWISE NOTED.

*DEPTH BELOW GROUND SURFACE

Well No. MW-1

Project Name JAMECO INDUSTRIES

Project Number 3099

Location Upgradient

NYSDEC #1-52-006

INSTALLATION

Installation Date 6/4/91

Well-Head Elevation Top of PVC at 50.79'

Depth to Water 9' At development from top of PVC 8.6'

Depth to Well Bottom 16' 16.1'

Length of Water Column 7.5'

Calculated Volume of Water in Well 1.2 gallons

DEVELOPMENT

Development Date 6/7/91

Development Rate GPM 8

Gallons Removed

~~Pump Duration (Minutes)~~ 120

METHOD

☒ Pump

☐ Bailer

☐ Other

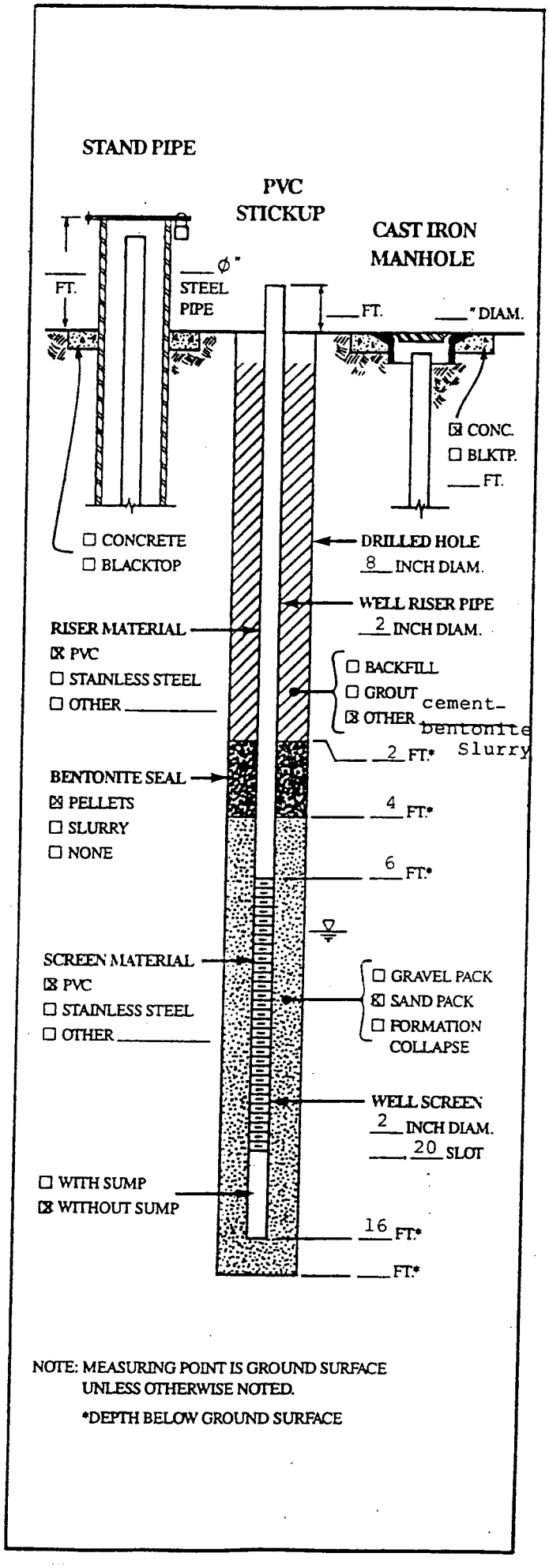
Depth to Water 8.6

Notes Lowest turbidity 10 NTUs

Temperature, pH conductivity stabilized.

Prepared by: Jill Edwards

AKRF, Inc. Well Log



NOTE: MEASURING POINT IS GROUND SURFACE UNLESS OTHERWISE NOTED.

*DEPTH BELOW GROUND SURFACE

Well No. MW-2

Project Name JAMECO INDUSTRIES

Project Number 3099

Location Downgradient-adjacent to building

NYSDEC #1-52-006

INSTALLATION

Installation Date 6/4/91

Well-Head Elevation Top of PVC at 49.32'

Depth to Water 9 At development from top of PVC 8.6'

Depth to Well Bottom 16' 15.5'

Length of Water Column 6.9'

Calculated Volume of Water in Well 1.1 Gallons

DEVELOPMENT

Development Date 6/7/91

Development Rate GPM 8

~~Pump Duration (Minutes)~~ Gallons Removed 100

METHOD

☒ Pump

☐ Bailer

☐ Other

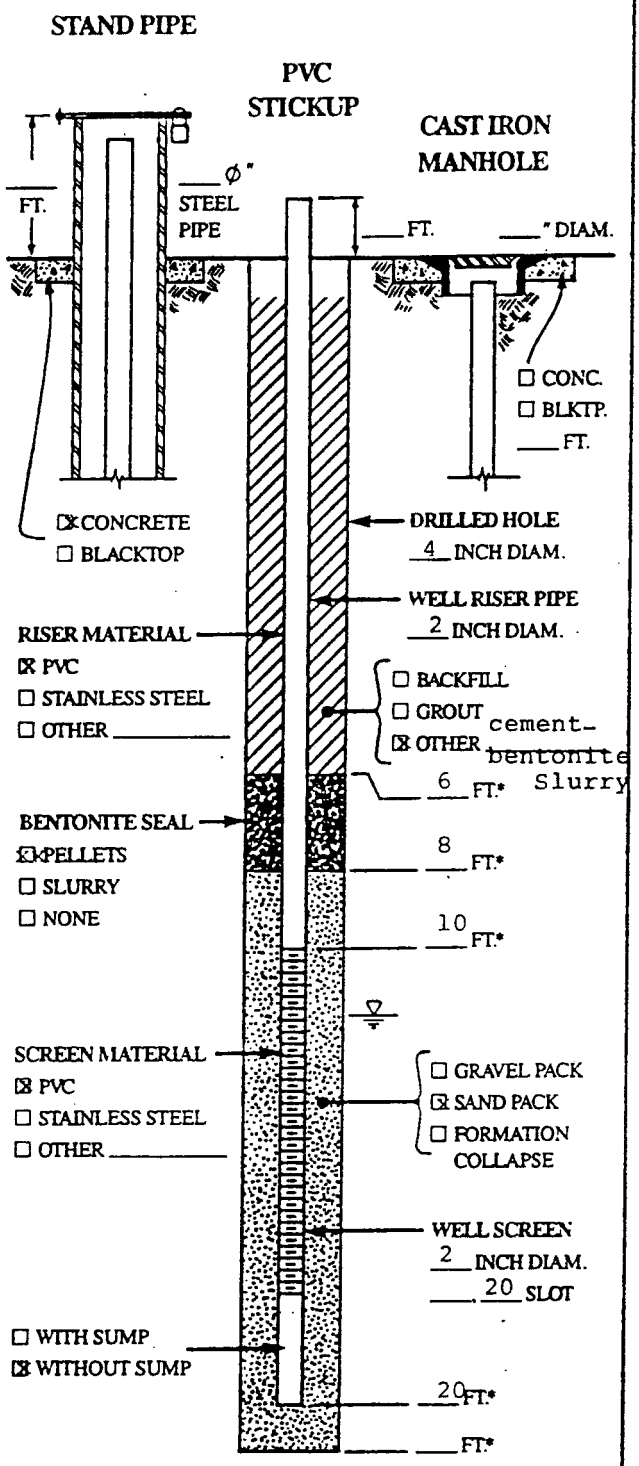
Depth to Water 8.6'

Notes Lowest turbidity 65 NTUs

Temperature, pH, conductivity stabilized

Prepared by:

AKRF, Inc. Well Log



NOTE: MEASURING POINT IS GROUND SURFACE UNLESS OTHERWISE NOTED.

*DEPTH BELOW GROUND SURFACE

Well No. MW-3

Project Name JAMECO INDUSTRIES

Project Number 3099

Location downgradient - leaching pool area

NYSDEC #1-52-006

INSTALLATION

Installation Date 6/5/91

Well-Head Elevation Top of PVC at 52.97'

Depth to Water 13' At development from top of PVC 12.5'

Depth to Well Bottom 20'

Length of Water Column 7.5'

Calculated Volume of Water in Well 1.2 gallons

DEVELOPMENT

Development Date 6/7/91

Development Rate GPM 2

Gallons removed
Pump Duration (Minutes) 40

METHOD

☒ Pump

☐ Bailer

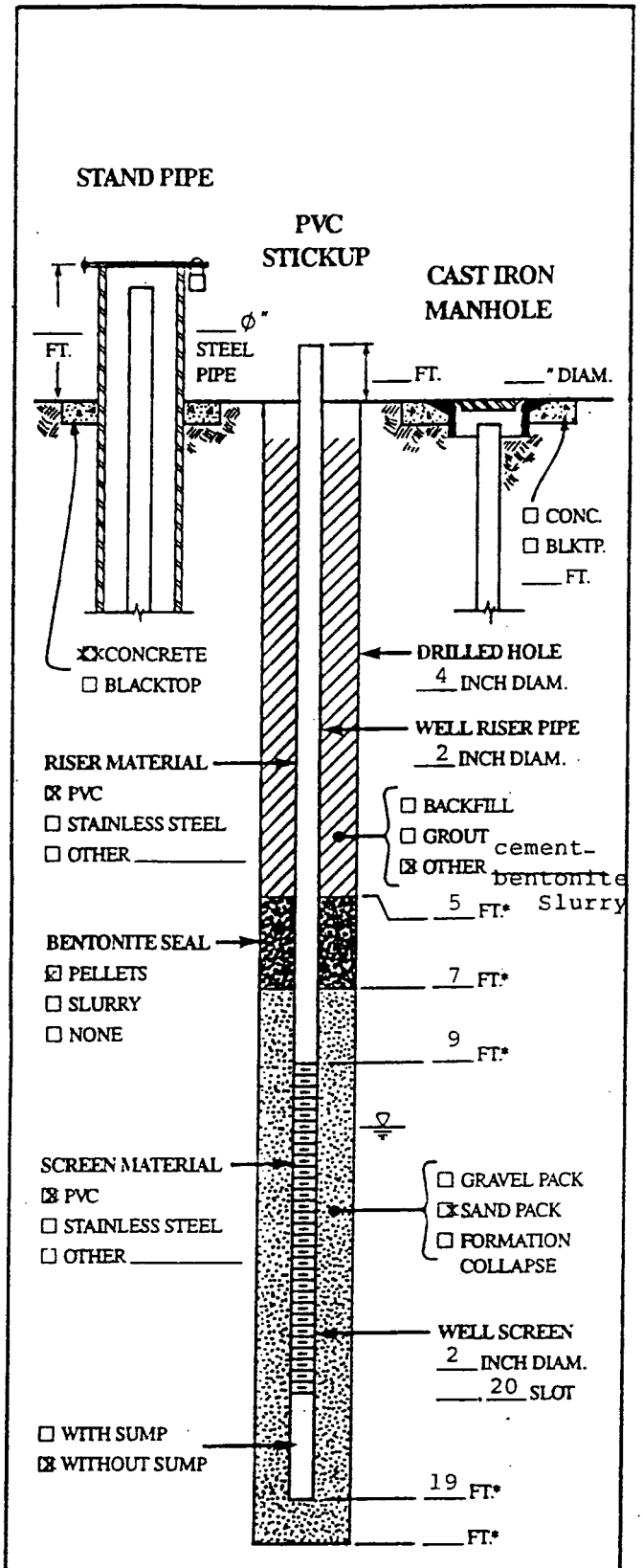
☐ Other

Depth to Water 12.5'

Notes Lowest turbidity 21 NTUs temperature, pH, conductivity stabilized.

Prepared by: Jill Edwards

AKRF, Inc. Well Log



NOTE: MEASURING POINT IS GROUND SURFACE UNLESS OTHERWISE NOTED.

*DEPTH BELOW GROUND SURFACE

Well No. MW-4

Project Name JAMECO INDUSTRIES

Project Number 3099

Location downgradient - leaching pool area

NYSDEC #1-52-006

INSTALLATION

Installation Date 6/4/91

Well-Head Elevation Top of PVC at 52.04'

Depth to Water 10.6' At development from top of PVC 11.7'

Depth to Well Bottom 19'

Length of Water Column 7.3'

Calculated Volume of Water in Well 1.2 gallons

DEVELOPMENT

Development Date 6/7/91

Development Rate GPM 4

Gallons removed ~~Pump Duration (Minutes)~~ 40

METHOD

☒ Pump

☐ Bailer

☐ Other

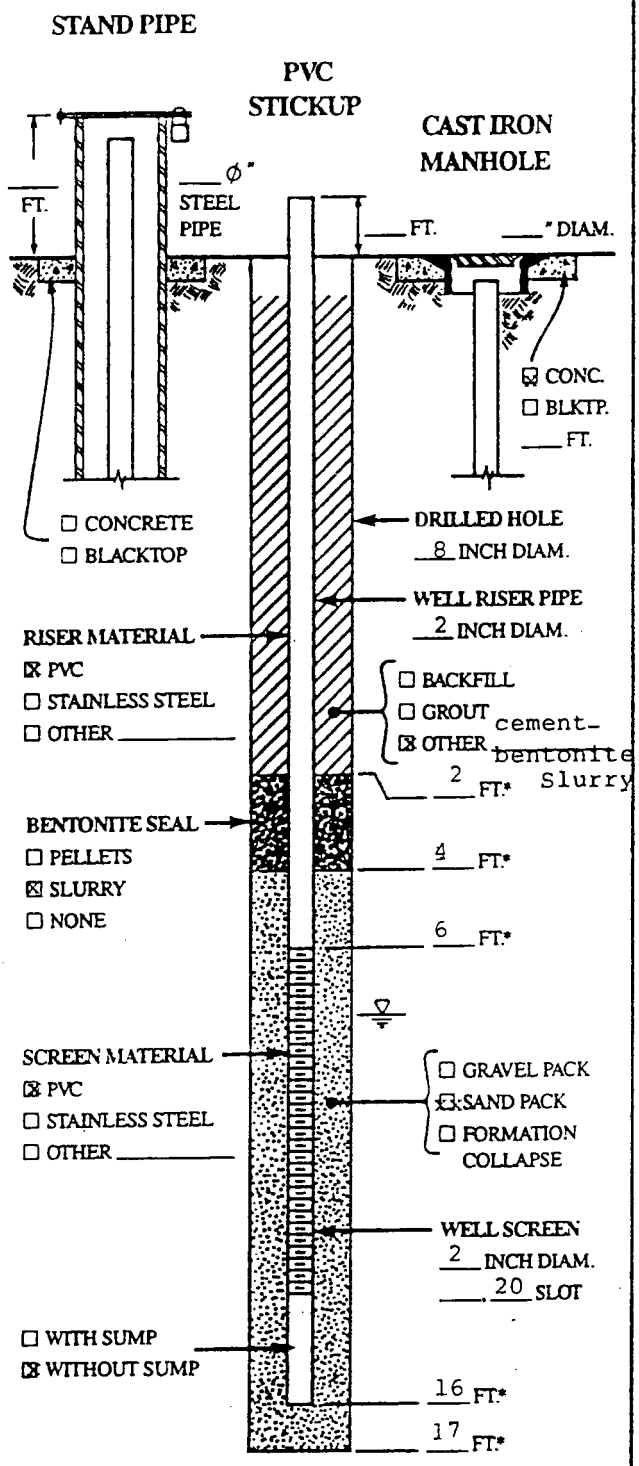
Depth to Water 11.7'

Notes Lowest turbidity 20 NTUs

temperature, pH, conductivity stabilized.

Prepared by: Jill Edwards

AKRF, Inc. Well Log



NOTE: MEASURING POINT IS GROUND SURFACE UNLESS OTHERWISE NOTED.

*DEPTH BELOW GROUND SURFACE

Well No. MW-5

Project Name JAMECO INDUSTRIES

Project Number 3099

Location Downgradient

NYSDEC #1-52-006

INSTALLATION

Installation Date 6/3/91

Well-Head Elevation Top of PVC at 48.50'

		At development
Depth to Water	9' from top of PVC	8.6'
Depth to Well Bottom	16'	15.5'
Length of Water Column	7'	6.9'

Calculated Volume of Water in Well 1.1 gallon

DEVELOPMENT

Development Date 6/7/91

Development Rate GPM 8

~~Pump Duration (Minutes)~~ Gallons removed 100

METHOD

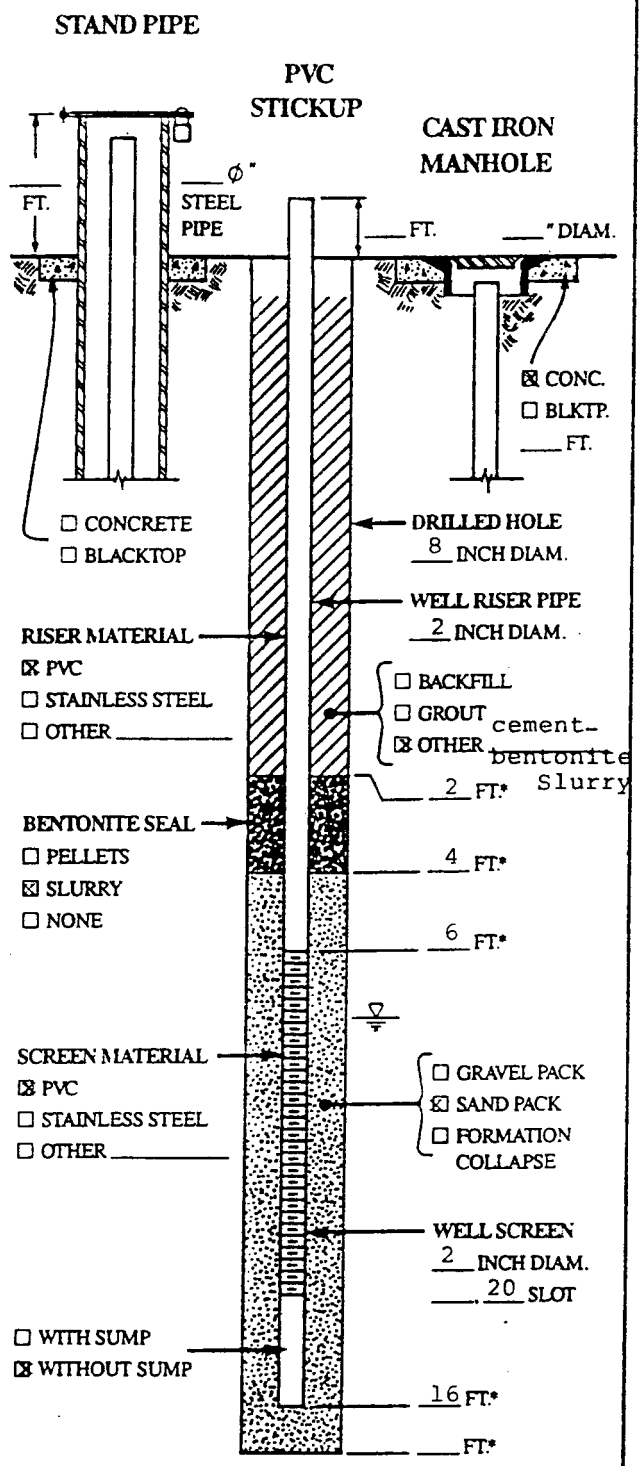
- ☒ Pump
- ☐ Bailer
- ☐ Other

Depth to Water 8.6'

Notes Lowest turbidity 65 NTUs temperature, pH, conductivity stabilized.

Prepared by: Jill Edwards

AKRF, Inc. Well Log



NOTE: MEASURING POINT IS GROUND SURFACE UNLESS OTHERWISE NOTED.

*DEPTH BELOW GROUND SURFACE

Well No. MW-6

Project Name JAMECO INDUSTRIES

Project Number 3099

Location Downgradient

NYSDEC #1-52-006

INSTALLATION

Installation Date 6/3/91

Well-Head Elevation Top of PVC at 48.07'

Depth to Water 9' At development from top of PVC 7.8'

Depth to Well Bottom 16' 15.8'

Length of Water Column 8'

Calculated Volume of Water in Well 1.3 gallons

DEVELOPMENT

Development Date 6/7/91

Development Rate GPM 5

~~Pump Duration (Minutes)~~ Gallons removed 150

METHOD

☒ Pump

☐ Bailer

☐ Other

Depth to Water 8.6

Notes Lowest turbidity 75 NTUs temperature, pH, Conductivity stabilized.

Prepared by: Jill Edwards

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION up gradient well NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL MW-1 BORING _____ LOGGED BY J. Edwards

DATE 6/4/91 ELEVATION 51.00' DRILLED BY SHAWNEE FALCON

DRILLING EQ. Mobile Rig - 8" Augers HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Splitsp

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
4	5	Coarse quartz sand with		6 11	Oppm	MW-1:4-6
5	6	pebbles and gravel		20 18		
9	10	Coarse quartz sand with		17 28	Oppm	MW-1:9-11
10	11	high fraction of pebbles and gravel		35 40		
14	15	Coarse quartz sand with		35 29	Oppm	MW-1:14-16
15	16	pebbles and gravel		19 18		
19	20	Coarse quartz sand		23 21	Oppm	MW-1:19-21
20	21			17 17		

8

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Downgradient Well NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL MW-2 BORING _____ LOGGED BY J. Edwards

DATE 6-4-91 ELEVATION 49.64' DRILLED BY SHAWNEE FALCON

DRILLING EQ. Mobile Rig - 8" Augers HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Split S

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
4	5	Medium sand ---- fill		5 4	Oppm	MW-2: 4-6
5	6			3 7		
9	10	Coarse quartz sand with		14 25	Oppm	MW-2: 9-11
10	11	pebbles and gravel		35 42		
14	15	Medium - coarse quartz sand with		15 15	Oppm	MW-2: 14-16
15	16	pebbles and gravel		16 25		
19	20	Coarse quartz sand with		28 12	Oppm	MW-2: 19-21
20	21	pebbles and gravel		11 15		

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES | LOCATION Downgradient Well | NYSDEC # 1-52-006

PROJECT NUMBER 3099 | WELL MW-3 | BORING | LOGGED BY J. Edwards

DATE 6/5/91 | ELEVATION 51.85' | DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig | HAMMER WEIGHT 140 lbs. | SAMPLER 2"x3' Split sp

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	1	Medium - coarse sand --- fill		1 1		
1	2			2 1		
2	3	Medium - coarse sand --- fill		1 1		
3	4			1 1		
4	5	Medium - coarse quartz sand		1 1	Oppm	MW3: 4-6
5	6	with pebbles		5 3		
6	7	Medium - coarse quartz sand		4 4		
7	8	with pebbles and gravel		5 4		
8	9	Coarse quartz sand with		6 10	Oppm	MW3: 8-10
9	10	pebbles and gravel		8 7		
10	11	Coarse quartz sand with pebbles		5 7		
11	12	and gravel		11 20		
12	13	Medium quartz sand		7 15		
13	14	Gravel and pebbles with sand		25 23		
14	15	Coarse quartz sand with pebbles		28 30	Oppm	MW-3: 14-16
15	16	and gravel		28 26		
16	17					
17	18					
18	19	Coarse quartz sand with		17 20	Oppm	MW-3:18-20
19	20	pebbles and gravel		20 18		

10

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Downgradient well NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL MW-4 BORING _____ LOGGED BY S. Rizvi

DATE 6/4/91 ELEVATION 50.62' DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Slit Sp

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
4	5	Medium - Coarse light brown sand		6 5	Oppm	MW - 4:4-6
5	6	with pebbles		5 5		
6	7	Coarse Light brown sand			Oppm	
7	8					
8	9	Coarse brown sand with a		9 10	Oppm	MW - 4:8-12
9	10	high fraction of pebbles		13 13		
10	11	Very coarse sand with high			Oppm	
11	12	fraction of pebbles				
12	13	Very coarse sand with high			Oppm	
13	14	fraction of pebbles				
14	15	Very coarse sand with		20 24	Oppm	MW - 4:14-16
15	16	pebbles		27 32		
16	17	Coarse sand with pebbles			Oppm	
17	18					
18	19	Coarse sand with gravel		27 31	Oppm	MW - 4:18-21
19	20			34 9		
20	21					

11

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES | LOCATION downgradient well | NYSDEC # 1-52-006

PROJECT NUMBER 3099 | WELL MW-5 | BORING | LOGGED BY J. Edwards

DATE 6/3/91 | ELEVATION 48.83' | DRILLED BY SHAWNEE FALCON

DRILLING EQ. Mobile Rig - 8" Augers | HAMMER WEIGHT 140 lbs. | SAMPLER 2" x 3' Spli Spoo

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
4	5	Brown medium soil. 1" gray sand and pebbles		10 6	Oppm	MW - 5:4-6
5	6	Coarse quartz sand with pebbles and gravel		11 11		
9	10	Coarse quartz sand with pebbles		8 26	Oppm	MW - 5:9-11
10	11	and gravel		x x		
14	15	Coarse quartz sand with pebbles		12 13	Oppm	MW - 5:14-16
15	16	and gravel		14 16		
19	20	Coarse quartz sand with pebbles		10 5	Oppm	MW - 5:19-21
20	21	and gravel		7 6		

12

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Downgradient Well NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL MW-6 BORING _____ LOGGED BY J. Edwards

DATE 6/3/91 ELEVATION 48.45' DRILLED BY SHAWNEE FALCO

DRILLING EQ. Mobile Rig - 8" Augers HAMMER WEIGHT 140 lbs. SAMPLER 2" x 3' Split Spoon

Depth From	Depth To	Lithologic Description	Blow Count	Air Monitoring	Sample Number
4	5	2" Brown med. soil. Coarse quartz sand	6 8	Oppm	MW - 6:4-8
5	6	Coarse quartz sand	10 12		
9	10	Coarse quartz sand with	18 45	Oppm	MW-6:9-13
10	11	gravel and pebbles	36 32		
14	15	Coarse quartz sand with	14 7	Oppm	MW-6:14-16
15	16	gravel with pebbles	11 12		
19	20	Medium - coarse sand with			
20	21	pebbles and gravel	25 9	Oppm	MW-6:19-21

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Lagoon boring NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL _____ BORING B-7L LOGGED BY S. Rizvi

DATE 6/3/91 ELEVATION _____ DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Split Sp

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	2	Coarse sand with gravel and pebbles		90	Oppm	
2	3	Coarse brown sand		18 10	Oppm	B-7-L:2-4
3	4			10 10		
4	5	Coarse brown sand with concrete		3 3	Oppm	B-7-L: 4-6
5	6	and pebbles		4 5		
6	7	Coarse light brown sand		18 10	Oppm	B-7-L:6-8
7	8	Medium brown sand		10 10		
8	9	Very coarse sand with high		35 38	Oppm	
9	10	Fraction of pebbles		49 53		

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES | LOCATION Lagoon Boring | NYSDEC # 1-52-006

PROJECT NUMBER 3099 | WELL _____ BORING B-8-L | LOGGED BY S. Rizvi

DATE 6/3/91 | ELEVATION 49.08' | DRILLED BY SHAWNEE FALCO

DRILLING EQ. Portable Tripod Rig | HAMMER WEIGHT 140 lbs. | SAMPLER 2"x3'

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	1	Medium - coarse brown sand		8 11	Oppm	
1	2	with concrete and pebbles		12 4		
2	3	Medium - coarse brown sand		5 6	Oppm	B-8-L:2-4
3	4			6 6		
4	5	Medium - coarse sand with		3 5	Oppm	B-8-L:4-6
5	6	2" green clayey material at center		6 6		
6	7	Coarse light brown sand		8 10	Oppm	B-8-L:6-10
7	8			10 14		
8	9	Very coarse sand with high		12 12	Oppm	
9	10	fraction of pebbles		16 24		
		Collected a sample of the green clayey				
		material from a boring adjacent to B-8-L				

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES | LOCATION In over flow basin | NYSDEC # 1-52-006

PROJECT NUMBER 3099 | WELL _____ BORING B-9-0B | LOGGED BY S. Rizvi

DATE 6/3/91 | ELEVATION 48.57' | DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig | HAMMER WEIGHT 140 lbs. | SAMPLER 2"x3' Split S

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	2	Medium - coarse brown sand with		160	Oppm	B-9-0B:04
		concrete, gravel and pebbles				
2	4	Fine - coarse sand with gravel		90	Oppm	

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Outside overflow basin NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL _____ BORING B-10-OB LOGGED BY S. Rizvi

DATE 6/3/91 ELEVATION 48.38' DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Split Sp

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	2	Coarse sand with pebbles			Oppm	B-10-OB:0-4
2	4	Coarse sand			Oppm	

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES | LOCATION Trench Boring | NYSDEC # 1-52-006

PROJECT NUMBER 3099 | WELL _____ BORING B-11-T | LOGGED BY S. Rizvi

DATE 6/3/91 | ELEVATION 48.50' | DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig | HAMMER WEIGHT 140 lbs. | SAMPLER 2"x3' Slpit Sp

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	2	Brown coarse sand with gravel		45	Oppm	B-11 T:0-6
2	4	No recovery		41	Oppm	
4	6	Coarse quartz sand with pebbles		20	Oppm	
0	3	Adjacent boring to aquire sufficient				
		sample. Medium - fine brown sand				

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Trench Boring NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL _____ BORING B-13-T LOGGED BY S. Rizvi

DATE 6/3/91 ELEVATION 48.29' DRILLED BY SHAWNEE FALCON

DRILLING EQ. Portable Tripod Rig HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Split S

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	2	Coarse brown sand with gravel		80	Oppm	B-13-T:0-4
2	4	Medium - coarse light brown sand		100+	Oppm	

AKRF, Inc. Soil Boring Log

PROJECT JAMECO INDUSTRIES LOCATION Trench Boring NYSDEC # 1-52-006

PROJECT NUMBER 3099 WELL _____ BORING B-14-T LOGGED BY S. Rizvi

DATE 6/3/91 ELEVATION 48.29' DRILLED BY SHAWNEE FALCON

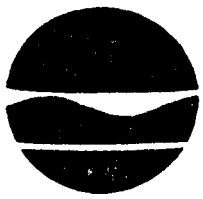
DRILLING EQ. Portable Tripod Rig HAMMER WEIGHT 140 lbs. SAMPLER 2"x3' Split S

Depth From	Depth To	Lithologic Description		Blow Count	Air Monitoring	Sample Number
0	2	Coarse light brown sand with pebbles		30	Oppm	B-14 T:04
2	4	Coarse sand			Oppm	

REFERENCE NO. 29

New York State Department of Environmental Conservation

Wildlife Resources Center
Information Services
700 Troy-Schenectady Road
Latham, New York 12110-2400



Thomas C. Jorling
Commissioner

November 18, 1991

Steven T. McNulty
Malcolm Pirnie
2 Corporate Park Drive, Box 751
White Plains, NY 10602

Dear Mr. McNulty:

We have reviewed the Significant Habitat Unit and the NY Natural Heritage Program files with respect to your request for biological information concerning five hazardous waste sites, as indicated on your maps, located in Nassau County and the New York City environs area of New York.

Enclosed is a computer printout covering the area you requested to be reviewed by our staff. As you are aware, the information contained in this report is confidential and may not be released to the public without permission from the Significant Habitat Unit.

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data which have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. You should contact our regional office, Division of Regulatory Affairs, at the address enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State Law.

If this project is still active one year from now we recommend that you contact us again so that we may update this response.

Sincerely,

Burrell Buffington

Burrell Buffington
Significant Habitat Unit

Encs.

supported in
nservancy

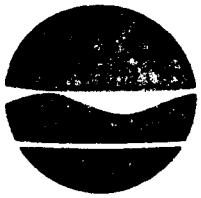
MALCOLM PIRNIE, INC. PROJECT NOTES

To: File
Date: 12/24/91
From: Steven McNulty
Project Number: 8002-10-1
Subject: Sensitive Environments
Site Name: Jameco Industries

After reviewing the information delivered a significant habitat for wildlife was identified along the 15-mile surface water pathway. If verification of the exact location is neccessary, a request can be made to Significant Habitat Unit.

REFERENCE NO. 30

New York State Department of Environmental Conservation
Building 40—SUNY, Stony Brook, New York 11790-2356
(516) 751-5415 Ext. 257
Fax # (516) 751-3839



Thomas C. Jorling
Commissioner

November 29, 1991

Mr. Steve McNulty
Malcome-Pirniy Consultants Inc.
197 Route 18
Suite 3000
East Brunswick, NJ 08816

Dear Mr. McNulty:

Please find enclosed a listing of freshwater fish species documented in the Carlls River and Swan River.

This may not be a complete list, however, it will serve as a base.

I hope this is helpful.

Sincerely,

Kyle Williams /KI

Kyle N. Williams
Conservation Biologist

KNW:ki
Enclosure

CARLLS RIVER (Mouth to P949)
LI GSB 208

Species of Freshwater Fish Present:

Salvelinus fontinalis
Salmo trutta
Oncorhynchus mykiss
Esox niger
Esox americanus a.
Cyprinus carpio
Perca flavescens
Ictalurus nebulosus
Lepomis gibbosus
Lepomis macrochirus
Micropterus salmoides
Etheostoma olmstedi
Anguilla rostrata
Petromyzone marinus
Notemigonus crysoleucas
Carassius auratus
Umbra pygmaea
Fundulus diaphanus
Morone americana
Aphredoderus sayanus

SWAN RIVER (Mouth to P884)
LI PB 184

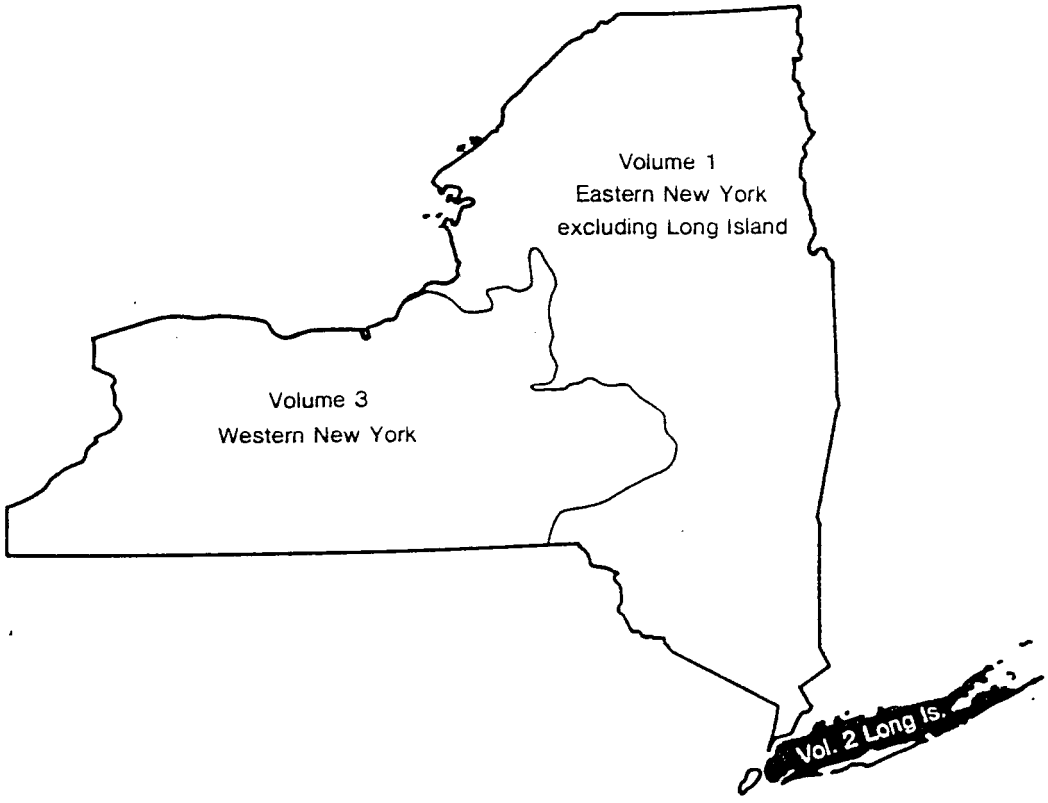
Species of Freshwater Fish Present:

"Same as Carlls River"

REFERENCE NO. 31

Water Resources Data New York Water Year 1989

Volume 2. Long Island



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NY-89-2
Prepared in cooperation with the State of New York
and with other agencies

50272-101

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Volume 2. Long Island

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8. Performing Organization Rept. No.
USGS-WDR-NY-89-2

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U.S. Geological Survey, Water Resources Division
5 Aerial Way
Syosset, New York 11791

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U.S. Geological Survey, Water Resources Division
U.S. Post Office and Courthouse
P.O. Box 1669
Albany, New York 12201

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Annual - October 1, 1988 to September 30, 1989

14.

15. Supplementary Notes
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16. Abstract (Limit: 200 words)

Water resources data for the 1989 water year for New York consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 17 gaging stations; water quality at 17 gaging stations, and 7 wells; and water levels at 225 observation wells. Also included are data for 74 low-flow partial-record stations. Additional water data were collected at various sites not involved in the systematic data collection program, and are published as miscellaneous measurements and analyses. These data, together with the data in Volumes 1 and 3 represent that part of the National Water Data System operated by the U.S. Geological Survey in cooperation with State, Federal, and other agencies in New York.

17. Document Analysis. a. Descriptors
*New York, *Hydrologic data, *Groundwater, *Surface waters, *Water quality, Gaging stations, Streamflow, Flow rates, Lakes, Reservoirs, Chemical analysis, Sediments, Water temperature, Water analysis, Water levels, Water wells, Data collections, Sites.

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(See ANSI-Z39.18) See Instructions on Reverse OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)

CONTENTS

	Page
Preface	iii
List of gaging stations, in downstream order, for which records are published	vi
Introduction	1
Cooperation	2
Summary of hydrologic conditions	2
Special networks and programs	3
Explanation of the records	3
Station identification numbers	3
Downstream order system	3
Latitude-longitude system	3
Records of stage and water discharge	4
Data collection and computation	4
Data presentation	5
Identifing estimated daily discharges	6
Accuracy of the records	7
Other records available	7
Records of surface-water quality	7
Classification of records	7
Arrangement of records	7
On-site measurements and sample collection	8
Water temperatures	8
Sediment	8
Laboratory measurements	9
Data presentation	9
Remarks codes	9
Records of ground-water levels	10
Data collection and computation	10
Data presentation	10
Records of ground-water quality	11
Data collection and computation	11
Data presentation	11
Access to WATSTORE data	11
Definition of terms	12
Publications on techniques of water-resources investigations	19
Gaging station records	34
Discharge at partial-record stations and miscellaneous sites	74
Low-flow partial-record stations	74
Ground-water records	81
Ground-water level records	81
Quality of ground-water records	187
Index	195

ILLUSTRATIONS

Figure 1.	System for numbering wells	4
2.	Hydrographic comparisons, East Meadow Brook at Freeport	21
3.	Hydrographic comparisons, Nissequogue River near Smithtown	22
4.	Hydrograph of water-table observation well S4271 at Riverhead	23
5.	Hydrograph of water-table observation well N1259 at Plainedge	24
6A.	Map showing location of surface-water data collection stations in Kings Queens, and Nassau Counties	25
6B.	Map showing location of surface-water data collection stations in west half of Suffolk County	26
6C.	Map showing location of surface-water data collection stations in east half of Suffolk County	27
7A.	Map showing location of water-level data collection stations in Kings, Queens, and Nassau Counties	28
7B.	Map showing location of water-level data collection stations in west half of Suffolk County	29
7C.	Map showing location of water-level data collection stations in east half of Suffolk County	30
8A.	Map showing location of quality of ground-water data collection stations in Kings, Queens, and Nassau Counties	31
8B.	Map showing location of quality of ground-water data collection stations in west half of Suffolk County	32
8C.	Map showing location of quality of ground-water data collection stations in east half of Suffolk County	33

TABLE

Table 1.	Factors for converting inch-pound units to International System Units (SI)	inside of back cover

GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letter after station name designates type of data: (d) discharge, (e) contents and/or elevation, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment]

STREAMS ON LONG ISLAND

	Page
Glen Cove Creek at Glen Cove (dct)	34
Mill Neck Creek at Mill Neck (dct)	36
Cold Spring Brook at Cold Spring Harbor (d)	38
Nissequogue River near Smithtown (dcts)	39
Peconic River at Riverhead (dct)	44
Carmans River at Yaphank (dcts)	46
Swan River at East Patchogue (dct)	51
Patchogue River at Patchogue (ct)	53
Connetquot Brook at Central Islip (d)	54
Connetquot Brook near Central Islip (d)	55
Connetquot River near Oakdale (dct)	56
Champlin Creek at Islip (ct)	58
Penataquit Creek at Bay Shore (ct)	59
Sampawams Creek at Babylon (dct)	60
Carlls River at Babylon (dct)	62
Santapogue Creek at Lindenhurst (ct)	64
Massapequa Creek at Massapequa (dct)	65
Bellmore Creek at Bellmore (dct)	67
East Meadow Brook at Freeport (dct)	69
Pines Brook at Malverne (dct)	71
Valley Stream at Valley Stream (d)	73

WATER RESOURCES DATA FOR NEW YORK, 1989
Volume 2.--Long Island

INTRODUCTION

Water resources data for the 1989 water year for New York consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; water quality of precipitation; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 17 gaging stations; water quality at 17 gaging stations and 7 wells; and water levels at 225 observation wells. Also included are data for 74 low-flow partial-record stations. Locations of these sites are shown on pages 25-33. Additional water data were collected at various sites not involved in the systematic data collection program, and are published as miscellaneous measurements and analyses. These data together with the data in Volumes 1 and 3 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in New York.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Bldg. 41, Box 25425, Denver, Colorado, 80225.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NY-89-2". These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (518) 472-2457.

01308500 CARLLS RIVER AT BABYLON, NY

LOCATION.--Lat 40°42'31", long 73°19'44", Suffolk County, Hydrologic Unit 02030202, on left bank 130 ft downstream from outlet of Southards Pond in Babylon, and 0.9 mi upstream from mouth. Water-quality sampling site at discharge station.

DRAINAGE AREA.--About 35 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WSP 1141: Drainage area. WRD NY 1972: 1947(m), 1952(m), 1954(m), 1958(m), 1960-63(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 10.63 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation at outlet of Southards Pond.

AVERAGE DISCHARGE.--45 years, 28.4 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 243 ft^3/s Jan. 21, 1979, gage height, 2.26 ft; minimum, 0.05 ft^3/s Sept. 4, 1963, July 6, 1966, Aug. 29, 1972 (result of regulation); minimum gage height, 0.03 ft July 6, 1966, Aug. 29, 1972 (result of regulation); minimum daily, 4.6 ft^3/s July 6, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 241 ft^3/s May 16, gage height, 2.25 ft; minimum, 9.0 ft^3/s Oct. 20, 21, gage height, 0.43 ft..

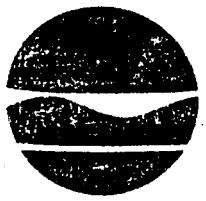
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	32	27	18	18	21	43	29	37	32	27	36
2	11	41	25	18	17	21	29	55	36	31	26	35
3	12	21	24	17	18	20	32	37	34	31	25	32
4	12	17	22	17	17	19	32	30	40	30	24	30
5	11	20	22	15	16	20	29	29	35	84	24	30
6	10	26	22	16	16	22	34	36	47	86	23	29
7	11	18	21	16	16	20	30	29	49	49	26	28
8	24	16	21	20	16	18	58	27	40	50	27	28
9	15	16	20	21	15	18	37	25	54	40	23	27
10	13	15	20	18	14	19	33	40	137	38	23	26
11	12	15	19	17	14	19	29	94	61	41	103	26
12	11	14	18	22	15	19	28	45	50	34	86	25
13	11	18	19	24	14	18	28	37	80	34	72	24
14	10	19	20	19	22	18	27	34	55	33	46	31
15	10	16	20	27	20	18	32	32	59	31	41	38
16	10	15	19	21	21	17	57	136	78	33	38	28
17	10	25	18	19	17	17	35	186	64	82	40	59
18	10	22	18	19	16	18	31	92	69	43	34	32
19	9.8	17	17	19	16	21	30	71	53	37	32	48
20	9.1	70	18	18	16	17	28	61	48	37	31	45
21	10	63	23	17	52	30	27	55	48	36	30	39
22	54	33	22	16	53	21	28	51	45	34	33	35
23	22	28	26	17	30	19	25	49	43	32	29	35
24	16	25	28	17	26	40	25	72	41	30	28	33
25	14	23	25	16	23	74	24	58	39	29	26	29
26	13	22	20	16	23	35	24	46	38	29	25	59
27	13	26	19	18	24	29	23	50	38	28	25	39
28	13	64	21	16	22	28	23	46	37	31	25	33
29	13	35	21	16	---	27	23	40	35	30	126	31
30	12	29	19	22	---	26	35	39	33	29	71	30
31	11	---	18	21	---	46	---	38	---	29	41	---
TOTAL	422.9	801	661	573	587	754	937	1667	1521	1213	1230	1020
MEAN	13.6	26.7	21.0	18.5	21.0	24.3	31.2	53.8	50.7	39.1	39.7	34.0
MAX	64	70	28	27	53	74	58	186	137	86	126	59
MIN	9.1	14	17	16	14	17	23	25	33	28	23	24

CAL YR 1988 TOTAL 6875.6 MEAN 18.8 MAX 74 MIN 7.6
WTR YR 1989 TOTAL 11376.9 MEAN 31.2 MAX 186 MIN 9.1

REFERENCE NO. 32

New York State Department of Environmental Conservation
Building 40—SUNY, Stony Brook, New York 11790-2356
Finfish and Crustacean Unit



Thomas C. Jorling
Commissioner

11/25/91

Malcolm Pirnie (Attn. Steve McNulty)
197 Rt. 18
Suite 3000
East Brunswick, NJ 08816

Dear Sir:

The following information is from the 1990 National Marine Fisheries Service report on commercial landings, by water, by species (run 6, page 5). All pounds are approximate and all values are ex-vessel.

Hard clam 967,000 lbs, valued at $6,100,000, By rakes, dredge, and dug.
Blue claw crab 358,000 lbs, $196,000 by trap and dredge.
Menhaden 187,000 lbs, $19,000gillnet.
Silversides 16,000lbs, $8,000, haul seine.
Eels 15,000 lbs, $38,000 by pots and spearing.
Bluefish 6,000 lbs, $2,200 by gillnet.
Blowfish (swellfish) 4,000 lbs, $2,400 by trap.
Sandlance 3,400 lbs, $1,900 by haul seine.

Plus other species of less occurence or importantance.

Gill net catches of:
400 lbs. of Weakfish and 200 lbs. of Spanish mackeral.

Winter fyke net fishery:
Winter flounder 6,200 lbs, $5,500.
White perch 600 lbs.
Butterfish 2000 lbs.

Also landings of Soft shell clams and muscles of some value. Overall the total landings were 1.6 million pounds with an ex-vessel value of $6,400,000.

Enclosed you will find other articles on the Great South Bay or related areas of information that may be of help. If there is anything else you may need please contact me at (516)-751-8611.

Thomas J. Iwanejko

Thomas J. Iwanejko

Sr. Marine Resources Technician