115884

R-585-9-5-17

NON-SAMPLING SITE RECONNAISSANCE SUMMARY REPORT
OCCIDENTAL CHEMICAL CORPORATION
PREPARED UNDER

TDD NO. F3-8506-21
EPA NO. PA-588
CONTRACT NO. 68-01-6699

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 17, 1985

NUS CORPORATION
SUPERFUND DIVISION

NUS CORPORATION
992 OLD EAGLE SCHOOL ROAD
SUITE 916
WAYNE, PENNSYLVANIA 19087
(215) 687-9510

September 17, 1985
R-585-9-5-17
68-01-6699

Mr. Harold Byer
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107

Subject: Non-sampling Site Reconnaissance Summary Report
TDD No. F3-8506-21
Occidental Chemical Corporation
Lower Pottsgrove Township, Pennsylvania

Dear Mr. Byer:

NUS FIT III was tasked to conduct a Non-sampling Site Reconnaissance for the subject site. Based on our review of available data and the site visit, we have concluded that EPA should consider the following:

- A low-priority site inspection, to include the collection of solid and aqueous environmental samples, should be conducted at the Occidental Chemical Corporation site.

Background Information

The site consists of an old, inactive landfill, 17 acres in size; a new, active landfill, 7 acres in size; 4 inactive, unlined lagoons; and 2 active, lined lagoons. These areas all lie within the 250-acre Occidental Chemical plant in Pottstown, Pennsylvania (see attachment 2, figure 1).

In 1942, a company by the name of Jacobs Aircraft and Engine Company (JAEC) operated a machine shop for the production of aircraft engines at this location. During this period of ownership, JAEC dumped cutting oils and metal fillings at the old landfill site.

In 1945, the Firestone Tire and Rubber Company (FTR) purchased the property and operated a tire manufacturing plant and a chemical plant which produced plastic resins, i.e., polyvinyl chloride (PVC). The FTR landfilled tires, rubber, refinery wastes, pigments, zinc oxide, sulfur dioxide, scrubber wastes, and PVC sludge resins. According to the preliminary assessment prepared for this site by Mr. Thomas Sheehan, of the Pennsylvania Department of Environmental Resources (PA DER), an average of 33 tons of refuse were landfilled per day. The majority of this waste was factory trash and paper. In addition, the PVC sludge, which accumulated in the 4 inactive lagoons, was periodically dredged and disposed of in the landfill. From 1945 to 1960, the old landfill site was operated as an open dump. In 1960, it was converted to a landfill operation. In 1973, FTR received permission to landfill sulfur dioxide, scrubber wastes, and fly ash at this site. In 1974, the state Bureau of Water Quality and Management ordered the use of the 4 unlined lagoons to be discontinued. The 2 lined lagoons were constructed during this same year.

Due to the volume of waste materials being landfilled, FTR sought permission to expand their landfill in 1974. The state of Pennsylvania informed the company that some type of a leachate control system would be necessary prior to approval of the new landfill. FTR determined that it would be impractical to line the existing landfill, and more expensive to line the proposed landfill than to manipulate groundwater flow in the area as a means of leachate control. Therefore, FTR hired Martin and Martin, Incorporated to conduct a detailed hydrogeologic study at the site, which resulted in the initiation of a groundwater recovery system. This study included the drilling of 4 deep wells into bedrock and 22 monitoring wells adjacent to the 2 landfills and the 6 lagoons (see attachment 2, figure 2).

The results of their hydrogeologic study indicated a recharge connection between the shallow aquifer to the bedrock aquifer. In addition, on-site monitoring wells showed the presence of iron (185 ppm). The continuous pumping of the 9 on-site process water wells succeeded in producing a cone of depression which controls the migration of contaminants into the deep aquifer and the Schuylkill River. Well nos. 5, 6, 7, and 8 are sampled quarterly for monitoring purposes. The available well logs for monitoring well nos. 1 to 26, and process water well nos. 1 to 10, can be found in attachment 3. Sample results for monitoring well nos. 5, 6, 7, and 8 can be found in attachment 4.

In December 1980, FTR, having closed the tire manufacturing plant 6 months earlier, sold the chemical plant to Hooker Chemical, Incorporated. Soon thereafter, Hooker Chemical changed their name to Occidental Chemical Corporation.

Occidental Chemical Corporation continues to operate the PVC manufacturing plant. The solids in the effluent are filtered out, mixed with fly ash, and disposed of in the active landfill. The resulting effluent receives some modest aeration and pretreatment and is discharged into the borough sanitary system for complete treatment. The company of Betz, Converse, and Murdock designed a closure plan for the inactive landfill. The plan has been approved by PA DER and is presently underway.

The Occidental Chemical Corporation experienced a trichlorethene (TCE) spill in July 1984, in the vicinity of process water well no. 8. High levels of TCE were observed in well no. 8; the plume extended toward process water well nos. 5 and 10. Occidental Chemical Corporation agreed to drill corings, excavate the contaminated soil, pump well nos. 5, 8, and 10, and test them periodically. The company is phasing out the use of TCE at this facility.

Drinking Water Supply

The Pottstown Borough Water Works (PBWW) supplies drinking water to Occidental Chemical and to surrounding areas north of the Schuylkill River. According to Mr. Kane, of the PBWW, they utilize 3 surface water intakes located on the Schuylkill River. The intakes are an estimated 3 to 4 miles upstream from the site, in the town of Stowe, Pennsylvania. This system supplies an estimated 10,000 customers. There are private wells in Montgomery County; however, no known wells lie within 1 mile north of the site.

The residents of East Coventry Township, south of the site and across the river from the plant, are all on private water. The state preliminary assessment report indicates that there are 10 domestic wells within 1/4 mile of the site.

Groundwater Information

The Occidental Chemical Corporation site is located on the flood plain of the Schuylkill River. The alluvial sands, silts, and gravels of the flood plain contain groundwater, the level of which fluctuates with the changes in the stages of the Schuylkill River.

A second interrelated groundwater system is found within the shale, siltstone, and bedrock underlying the alluvium. The shallower groundwater system of the alluvium provides recharge to the bedrock groundwater system. The flow within the bedrock occurs along joints and bedding planes; intersecting joints and secondary openings store and transmit groundwater within the bedrock.

Depth to groundwater ranges from 1 to 9 feet. The shallow flow direction is expected to be toward the Schuylkill River. The water table is reported to be relatively flat, allowing for only a slow movement of groundwater. It was noted in a consultant's report by Martin and Martin, Incorporated that the pumpage of adjacent deep wells affects groundwater flow in both the deep and the shallow aquifers.

Geology Information

The site lies within the Lowland Section of the Piedmont Physiographic Province. The site itself occupies an alluvial terrace, which is 20 to 25 feet thick. The alluvium consists of thin layers of silt, sand, and gravel.

Underlying the alluvium are the Triassic age Lockatong and Brunswick Formations. These formations reportedly dip approximately 30 degrees toward the southwest.

The Lockatong Formation consists of dark gray to black, thick-bedded argillite with zones of thin-bedded black shale. The argillite lies between claystone and shale in terms of hardness.

The Brunswick Formation consists of red to brown, fine- to coarse-grained quartzose, and sandstone with red shale interbeds. County-wide, this formation ranges from 9,000 to 16,000 feet in thickness.

Summary of Activities

On July 10, 1985, a non-sampling site reconnaissance of the subject site was conducted by NUS FIT III personnel Richard Callahan and Thomas Pearce. The FIT III was accompanied by Mr. Joseph King and Mr. Arthur Schmeck, of Occidental Chemical Corporation. The site visit began with a meeting among the FIT, Mr. King, Mr. Schmeck, Mr. Glenn Grow, plant manager, and Mr. David Baldwin, plant engineer for Occidental Chemical Corporation. This meeting was to explain the FIT's assigned task and to clarify any background information on the site.

The site reconnaissance began at 10:00 AM with a walk along the perimeter of the landfilled areas to locate monitoring wells and potential sampling points. This was followed by a survey of the 4 inactive lagoons and the 2 active lagoons. The weather at the time of the inspection was sunny and the temperature was 75°F.

Observations

- Ponded water was observed along the toe of the old landfill.
- A background HNU reading of 0.8 ppm was recorded.
- No HNU readings above background levels were registered any point on site.
- Heavy equipment was observed grading the old landfill.
- The material in the new landfill was primarily black in color.
- A sedimentation pond was observed adjacent to the east end of the new landfill.
- The area between the site and the river consisted of a damp, wooded creek bottom.
- The 4 abandoned lagoons were readily visible. They were covered with vegetation.
- Two large areas covered with piles of cover material were observed. This material was dredged from the Schuylkill River channel and sifted prior to delivery at the plant (see attachment 2, figure 2).

Conclusions

A site inspection of the Occidental Chemical Corporation site has been recommended due to the contamination of on-site monitoring wells with aluminum, iron, manganese, and sulfates. In addition, the 4 inactive lagoons were used for almost 30 years, placing the plant effluent within 15 feet of the water table. A low priority site inspection has been assigned because the site poses no known imminent threat to public health and the groundwater recovery system appears to be controlling the off-site migration of contaminants.

Proposed Sample Plan

The propose sample location include (see attachment 2, figure 3):

- Seven shallow, on-site monitoring wells should be sampled, including well nos. 5, 6, 7, 8, 16, 19, and 24, in accordance with WPSI-1, Rev. 1, Sections 8.4.3 and 8.4.3.2.
- One sulfite lagoon well and the 4 deep monitoring wells should be sampled in accordance with WPSI-1, Rev. 1, Sections 8.4.3 and 8.4.3.2.
- A sample of the sedimentation pond on the active landfill, both aqueous and sediment, should be taken in accordance with WPSI-1, Rev. 1, Sections 8.4.2 and 8.4.4.
- A sample of ponded water and sediment at the toe of the landfills should be taken in accordance with WPSI-1, Rev. 1, Sections 8.4.2 and 8.4.4.
- Production well nos. 5, 8, and 10 should be sampled in accordance with WPSI-1, Rev. 1, Section 8.4.3.
- A sample of background soil should be taken in accordance with WPSI-1, Rev 1., Section 8.4.5.

The number of samples to be obtained is 14 aqueous and 3 solids, not including blanks and duplicates. Sample analysis will be performed for organics and inorganics tasks 1 and 2, and task 3 for cyanide. Split samples will most likely be requested by the Occidental Chemical Corporation.

If you have any questions, please contact me.

Respectfully submitted,	Reviewed by,	Approved by,
Richard C. Callahan	Thomas W. Fromm	
Richard C. Callahan Environ. Engineer	Thomas W. Fromm Assistant Manager	Garth Glenn Manager, FIT III

RCC/rmk

Attachments

ATTACHMENT 1

1. COST CENTER:	REM/FIT ZONE CONTRACT TECHNICAL DIRECTIVE DOCUMENT (TDD)	2. NO.:
ACCOUNT NO.:		F3-8506-21

3. PRIORITY:	4. ESTIMATE OF TECHNICAL HOURS:	5. EPA SITE ID:	6. COMPLETION DATE:	7. REFERENCE INFO.:
[X] HIGH [ ] MEDIUM [ ] LOW	40	PA-588	7/31/85	[X] YES [ ] NO [X] ATTACHED [ ] PICK UP
	4A. ESTIMATE OF SUBCONTRACT COST:	5A. EPA SITE NAME: Occidental Chemical Lower Pottsgrove Twp. PA		

8. GENERAL TASK DESCRIPTION: Conduct a site recon and develop a sampling plan for the subject site.

9. SPECIFIC ELEMENTS:

1.) Review background information
2.) Contact state and local agencies for relevant information.
3.) Arrange for site access
4.) Conduct a brief on and off site inspection to identify proposed sample locations.
5.) Prepare and submit letter report including proposed sampling plan and rationale, if applicable
6.) All work on this project to be performed according to: WP-PA-1, Rev.1.

10. INTERIM DEADLINES:

11. DESIRED REPORT FORM: FORMAL REPORT [ ] LETTER REPORT [X] FORMAL BRIEFING [ ]

OTHER (SPECIFY):

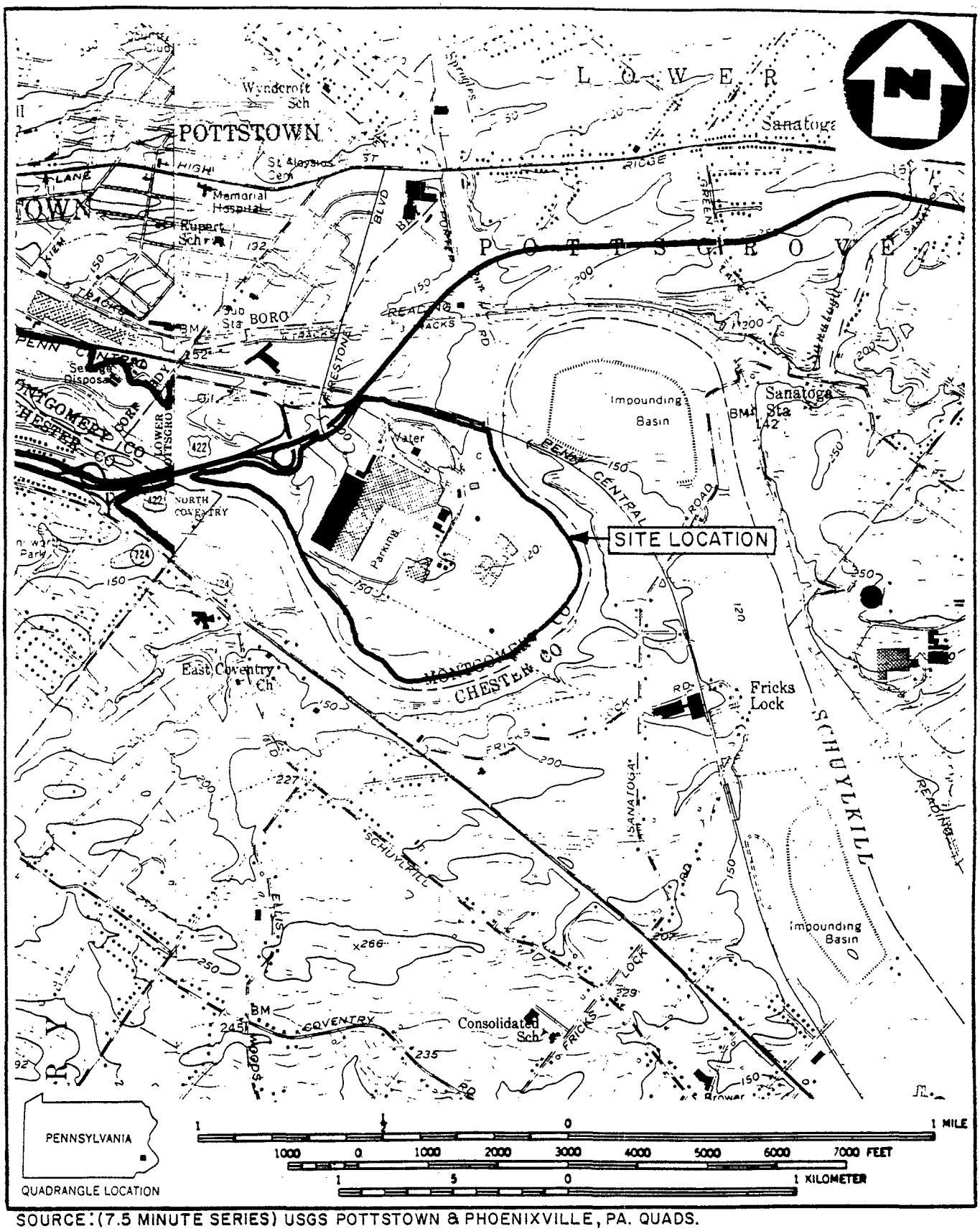
12. COMMENTS:
State Code 042 County Code 091

13. AUTHORIZING RPO: Harold G. Byer (SIGNATURE) 14. DATE: 6/28/85

15. RECEIVED BY: [X] ACCEPTED [ ] ACCEPTED WITH EXCEPTIONS [ ] REJECTED
(CONTRACTOR RPM SIGNATURE) 16. DATE: 7/2/85

Sheet 1 White – FITL Copy
Sheet 2 Canary – DPO Copy
Sheet 3 Pink – Contracting Officer's Copy (Washington, D. C.)
Sheet 4 Goldenrod – Project Officer's Copy (Washington, D. C.)

ATTACHMENT 2



SOURCE: (7.5 MINUTE SERIES) USGS POTTSTOWN & PHOENIXVILLE, PA. QUADS.

FIGURE 1

SITE LOCATION MAP

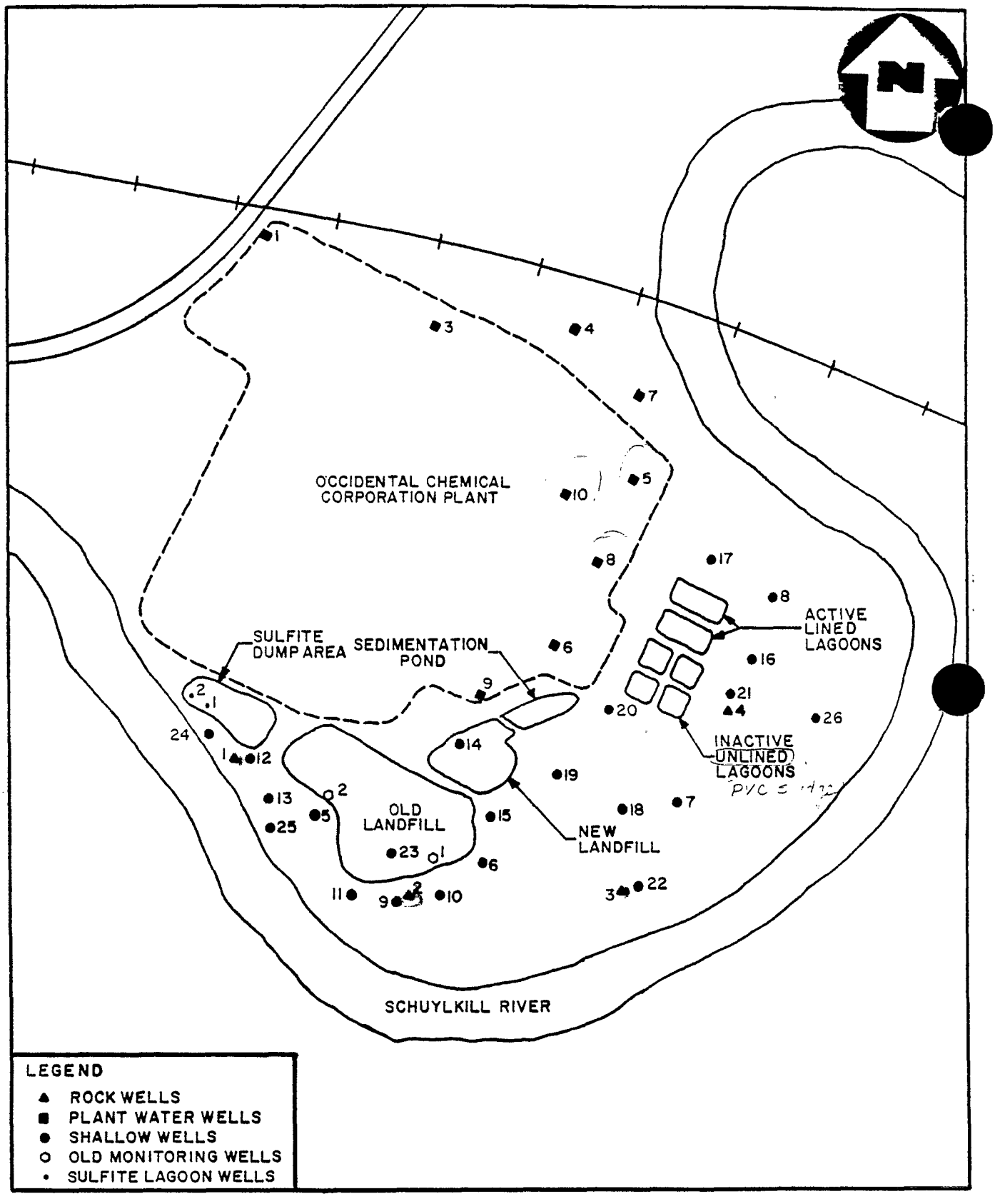
OCCIDENTAL CHEMICAL SITE, POTTSTOWN, PA.

SCALE 1:24000

NUS CORPORATION

A Halliburton Company

AR100434



SITE SKETCH

OCCIDENTAL CHEMICAL SITE, POTTSTOWN, PA.

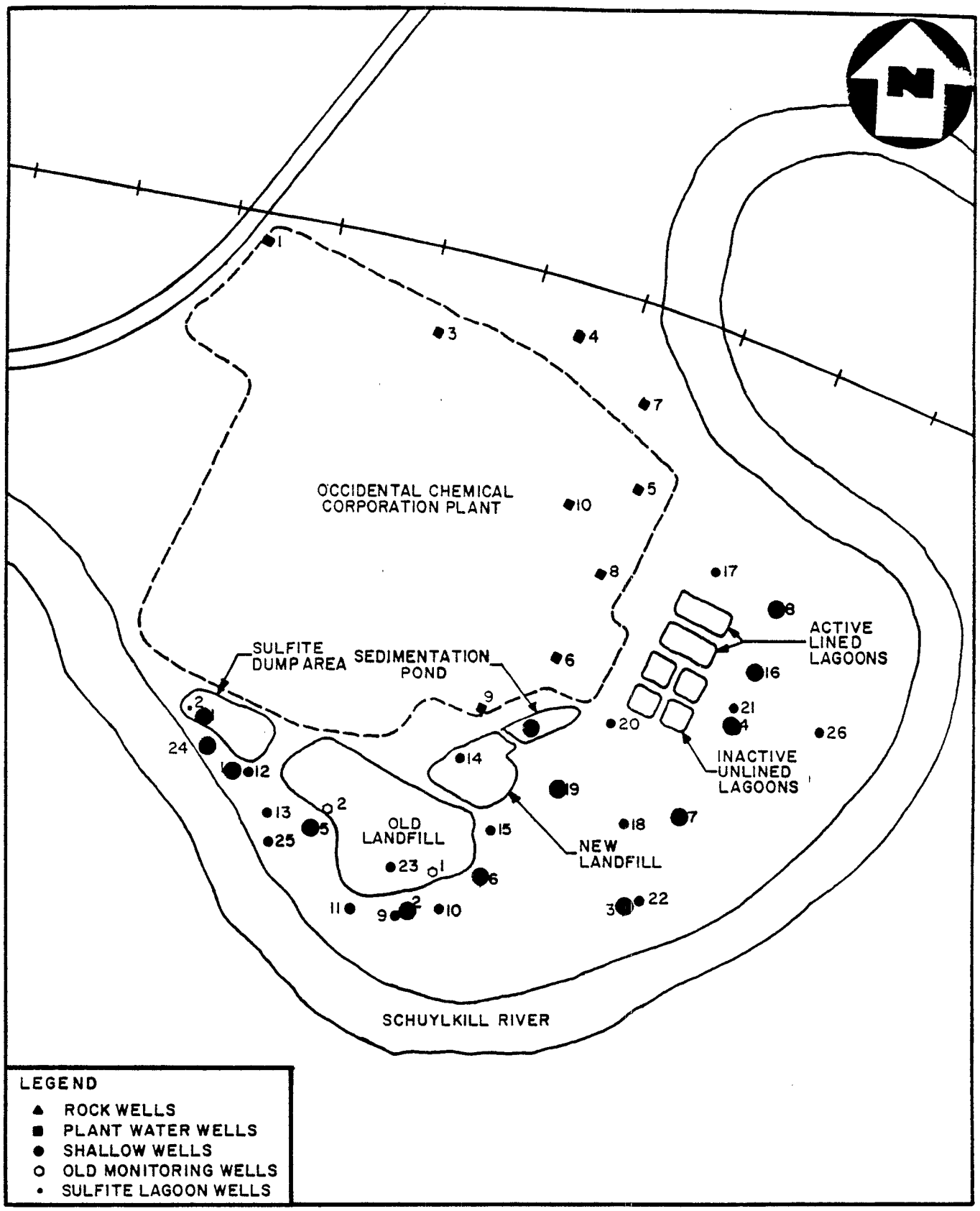
(NO SCALE)

FIGURE 2

NUS CORPORATION

A Halliburton Company

AR100435



PROPOSED SAMPLE LOCATION MAP

OCCIDENTAL CHEMICAL SITE, POTTSTOWN, PA.

(NO SCALE)

FIGURE 3

NUS CORPORATION

A Halliburton Company

AR100436

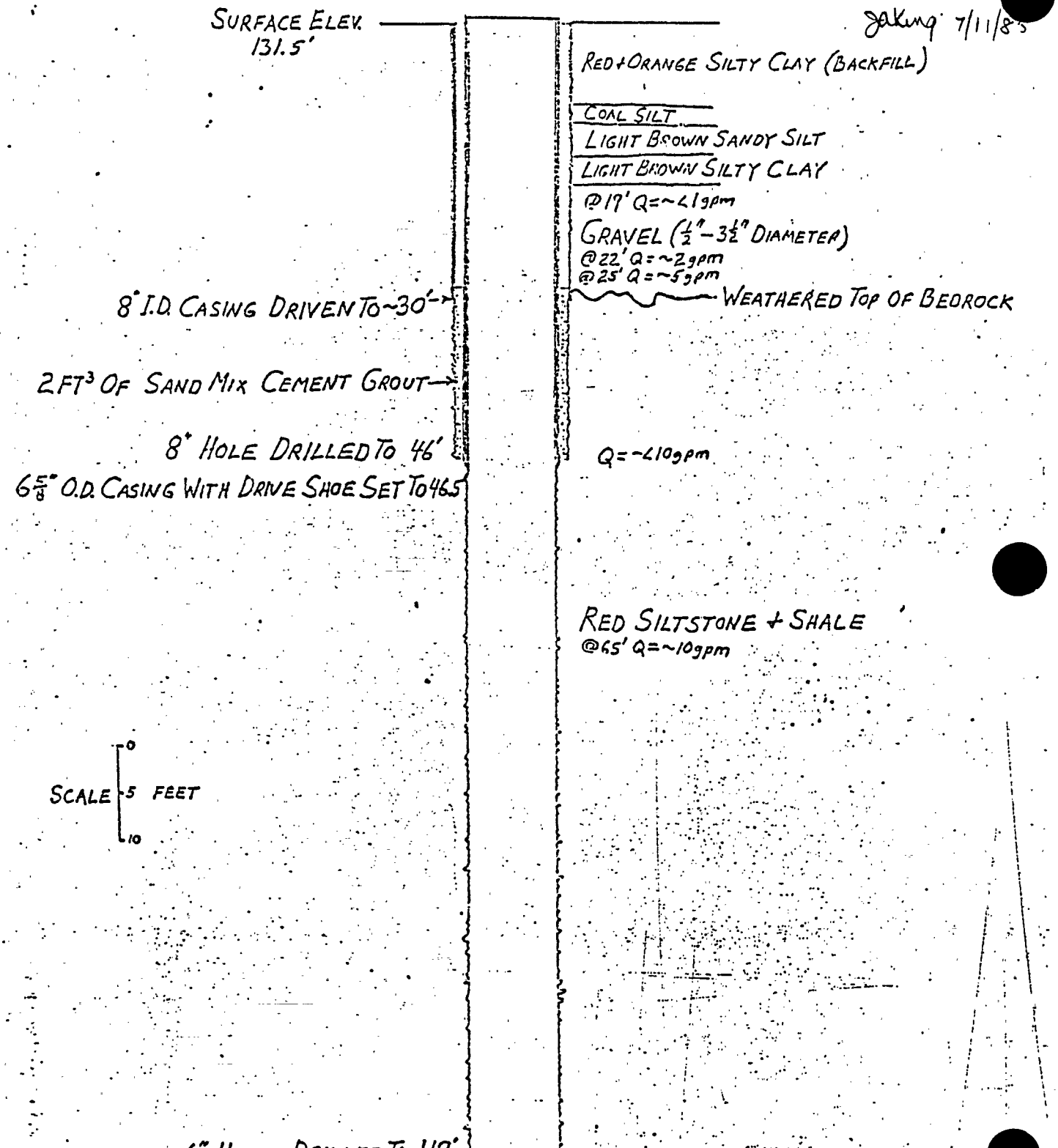
ATTACHMENT 3

ATTACHMENT 4

OBSERVATION WELL 1

"ROCK" WELL #I

Jaking 7/11/85



AR100439

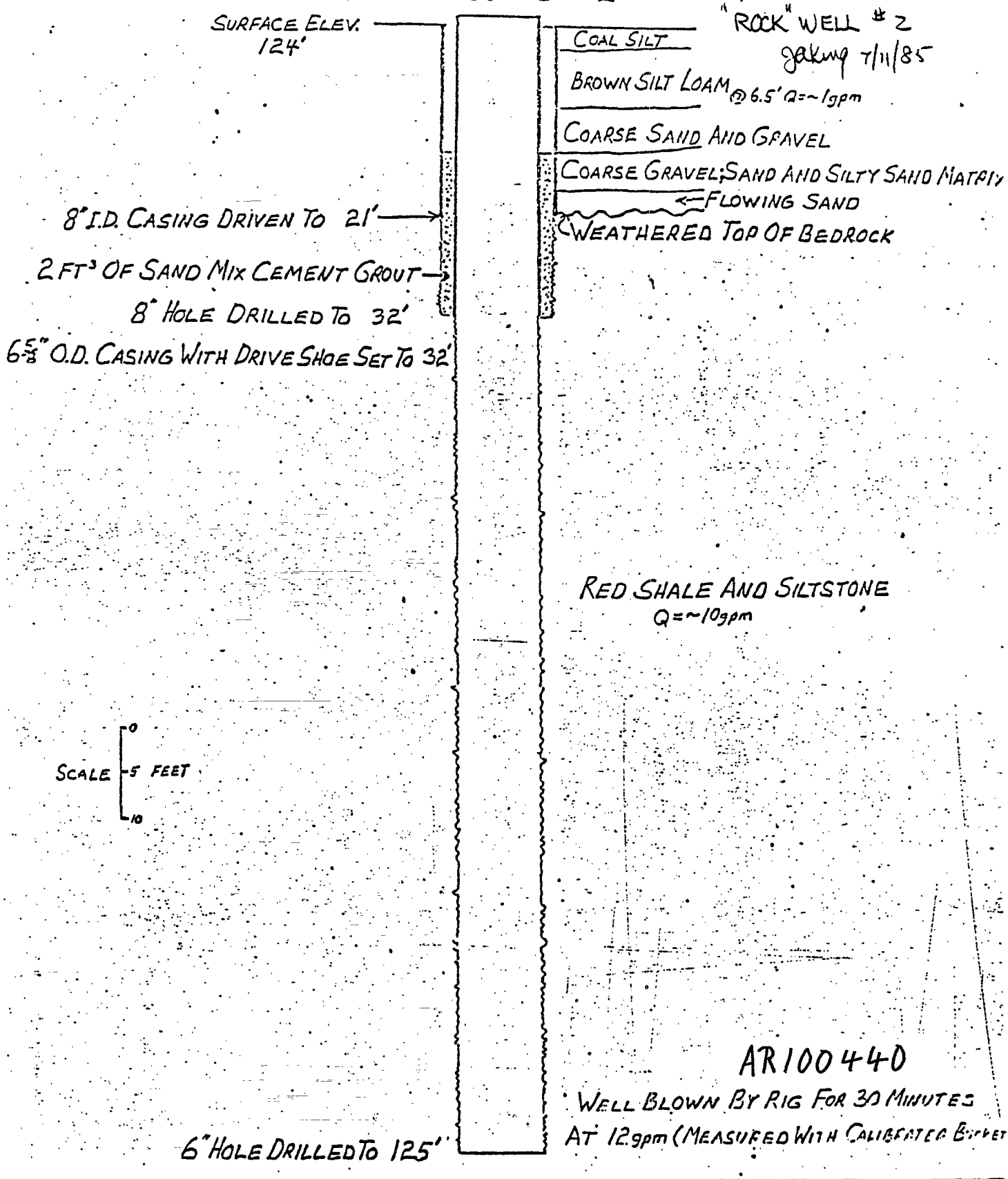
WELL BLOWN BY PIC FOR 20 MINUTES AT 16gpm (MEASURED WITH CALIBRATED BUCKET)

martin and martin, inc

TODD GIDDINGS and ASSOCIATES

AR100439

OBSERVATION WELL 2



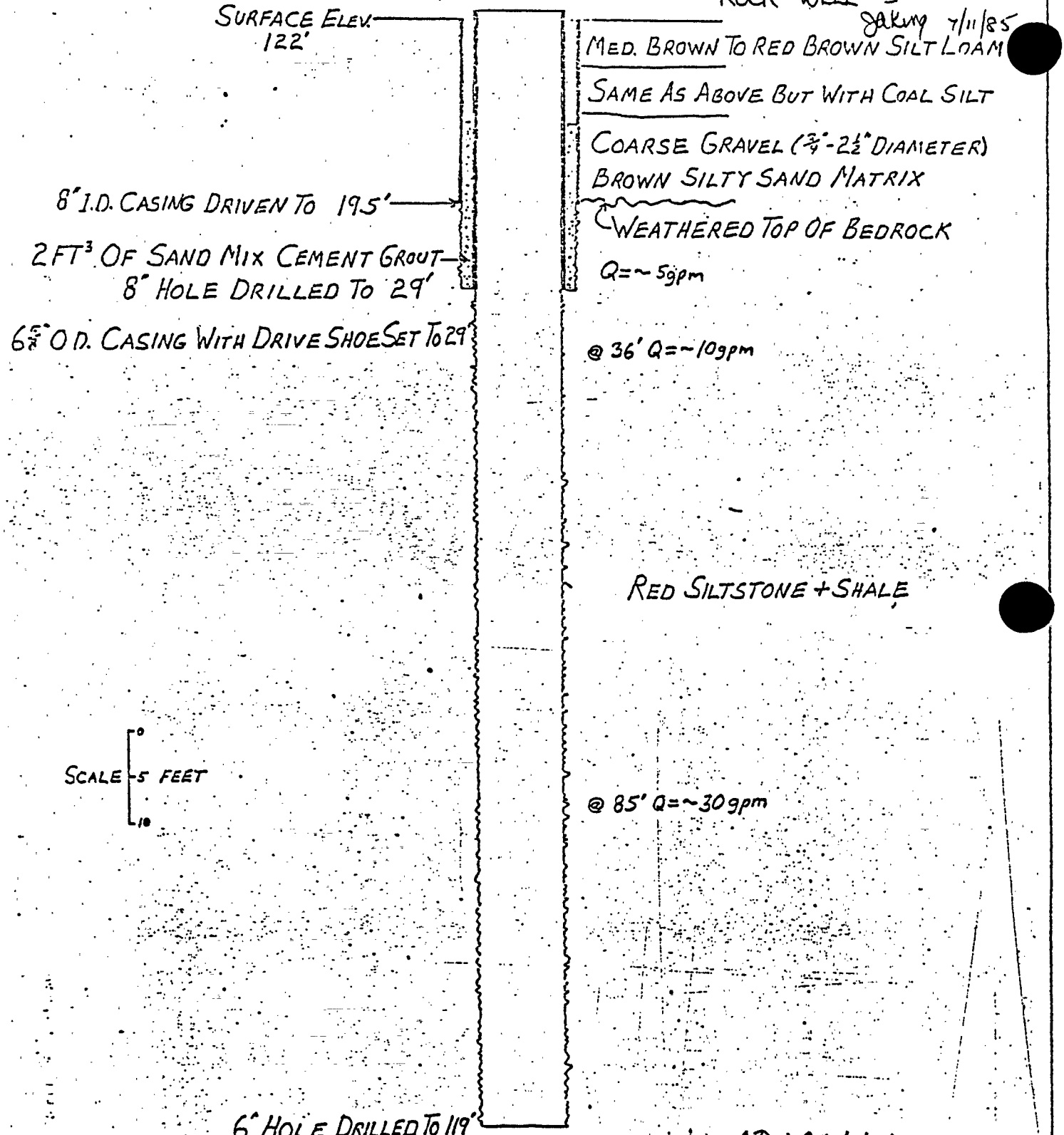
martin and martin, inc

TODD GIDDINGS and ASSOCIATES

OBSERVATION WELL 3

"ROCK" WELL #3

Jaking 7/11/85



AR100441

WELL BLOWN BY RIG FOR 30 MINUTES AT 40gpm (MEASURED WITH CALIBRATED BUCKET)

martin and martin, inc

149 east queen street

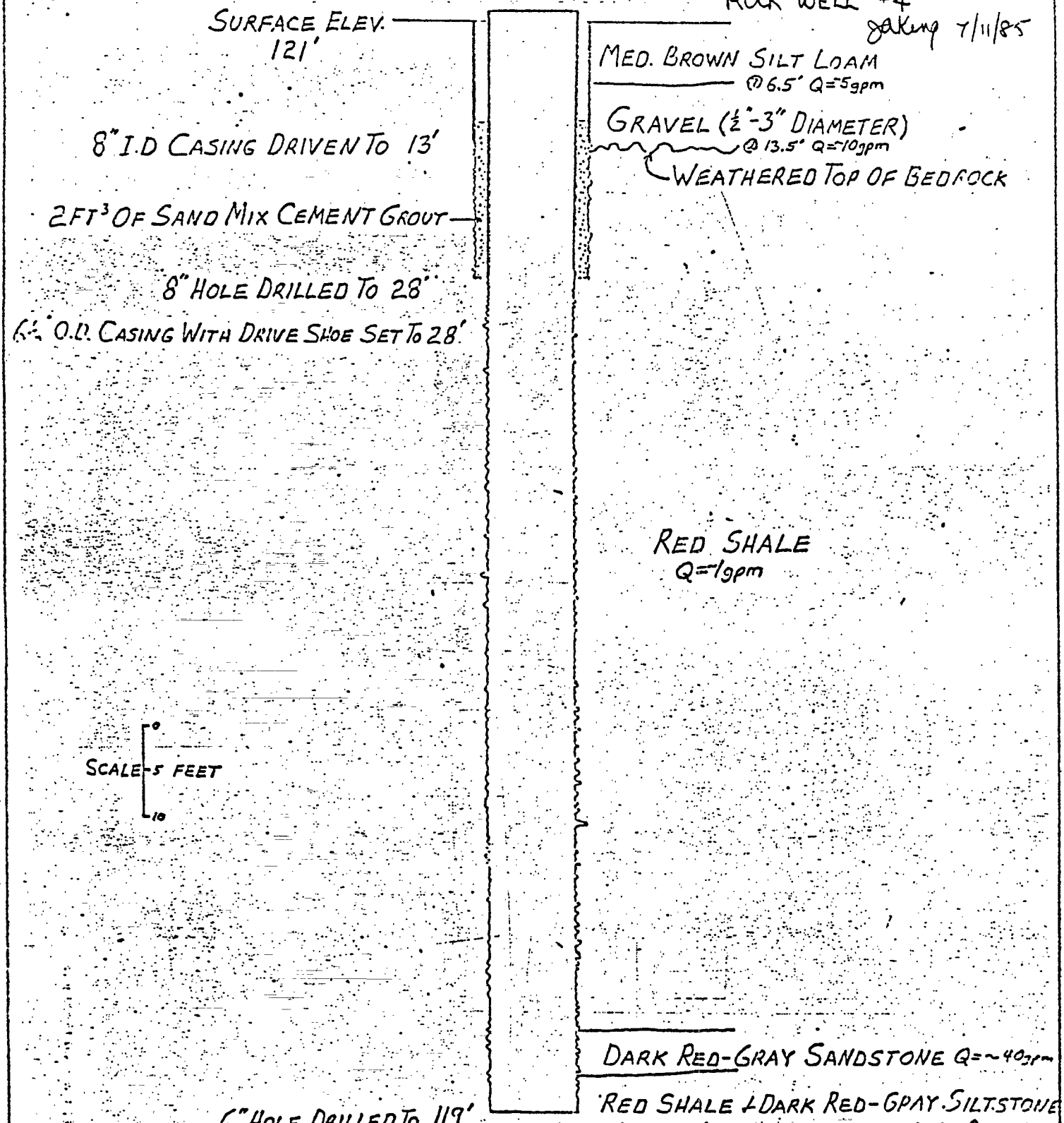
TODD GIDDINGS and ASSOCIATES

CONSULTING HYDROGEOLOGISTS

AR100441

OBSERVATION WELL 4

"ROCK" WELL #4
Jaking 7/11/85



AR100442

WELL BLOWN BY RIG FOR 30 MINUTES AT 43gpm (MEASURED WITH CALIBRATED BUCKET)

martin and martin, inc
149 east queen street

TODD GIDDINGS and ASSOCIATES
CONSULTING HYDROGEOLOGISTS

AR100442

Phones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-5

Sheet No. 1 of 1

Client Martin & Martin

Date Started 3/3/76 Completed 3/3/76

Project Firestone Tire & Rubber Co.

Driller R. Gancarz

Location Landfill

Helper G. Kucowski, R. Stimpson

Ground Surface Elev.

Inspector R. H.

Depth	Ground Water Data: Hour	Date	Hours After Completion
10'			

A – Method of Advancing Boring	Depth
	to
8" Hollow Stem Auger	0 to 20'6"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
5		S-1	5'-7'	3-5-10-12	Brown fine SAND, trace silt.	
10		S-2	10'-12'	15-19-28-28		
15		S-3	15'-17'	33-15-22-53	Orange-brown fine SAND, little silt, trace fine to med. gravel.	
20		S-4	20'-20'6"	100	Red SHALE.	
25					10ft. 2" screen 12ft. 2" pipe 2 bags sand.	
30						
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
—— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW 6

Sheet No. 1 of 1

Client: Martin & Martin

Project: FirestoneTire & Rubber Co.

Location: Landfill

Ground Surface Elev.

Date Started: 3/3/76 Completed: 3/3/76

Driller: R. Gancarz

Helper: R. Stimpson

Inspector: R. H.

Depth	Ground Water Data: Hour	Date	Hours After Completion
10'			

A – Method of Advancing Boring	Depth
	to
8" Hollow Stem Auger	0 to 20'6"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
5		S-1	5'-7'	3-5-6-6	Black gravel & sand, little silt.	
10		S-2	10'-12'	12-25-23-28		
15		S-3	15'-17'	32-39-70-53	Red, brown SAND & gravel.	
20		S-4	20'-20'6"	100	~~Red soft SHALE.~~	
25					Drilled new hole 15ft. west to set screen. 9½' Screen 11' Pipe	
30						
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)
N.R. – No Recovery

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100444

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. GW-7

Sheet No. 1 of 1

Client: Martin & Martin

Date Started: 3/12/76 11:00 Completed: 3/12/76

Project: Firestone Tire & Rubber Co.

Driller: R. Stimpson

Location: 2" in corner of woods.

Helper: A. Burk

Ground Surface Elev.

Inspector

Depth	Ground Water Data: Hour	Date	Hours After Completion
7'			

A – Method of Advancing Boring	Depth
	to
8" Hollow Stem Auger	to
140lb. Hammer	0 to 20'6"
2" Split Spoon	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					COAL fines.	
					Orange-brown silty fine SAND.	
5		S-1	5'-7'	7-10-12-17	Orange-brown SILT, trace clay, trace fine sand, fine gravel bottom.	
10		S-2	10'-12'	12-13-22-30	Brown med. coarse SAND, little fine to med. gravel bottom, 5" red-brown weathered shale.	
15		S-3	15'-16'6"	35-25-123	Med. coarse SAND, fine med gravel, red siltstone, wet soupy sand return.	
20		S-4	20'-20'6"	80	6" red siltstone damp.	
25						
30					10' screen ~~XX½pipe~~ 7½' pipe	
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR GEOLOGIST.....

AR100445

AR100445

Phones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-8

Sheet No. 1 of 1

Client Martin & Martin

Project Firestone Tire & Rubber Co.

Location NE Corner of lagoons 2"

Ground Surface Elev.

Date Started 3/16/76 Completed 3/16/76

Driller R. Stimpson

Helper G. Kucowski

Inspector

Depth	Ground Water Data: Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
8" Hollow Stem Auger	0 to 10'2"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Coal fines & orange brown SILT.	
5		S-1	5'-7'	36-37-30-28	Brown M-C SAND, some F-M gravel, trace silt.	
10		S-2	10'-10'-2"	100+	~~3" Red shale/siltstone~~ dry.	
					Boring ended at 10ft. 2'	
15						
20					Screen 5ft. Pipe 6½'	
25						
30						
35						
40						

AR 100446

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR 100446

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-9

Sheet No. 1 of 1

Client: Martin & Martin

Project: Firestone Tire & Rubber Co. Landfill

Location:

Ground Surface Elev.:

Date Started: 3/5/76 Completed: 3/5/76

Driller: R. Gancarz

Helper: R. Stimpson

Inspector:

Depth	Ground Water Data: Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
	to
	to
6" Hollow Stem Auger	0 to 19'6"
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
5		S-1	5'-7'	6-7-9-9	Brown med. fine SAND, little silt.	
10		S-2	10'-12'	3-7-25-21		
15		S-3	15'-17'	10-37-52-35	Brown coarse to fine SAND, med. fine gravel, some silt.	
		S-4	19'0"-19'6"	100	Auger to 19'6"	
20					1¼" Well.	
25					12ft. pipe 10ft. screen 2 bags sand.	
30						
35						
40						

S – 2" O.D. Split Spoon Sample

U – Undisturbed Sample, 3" Diameter

— Core Drilling

N Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

AR100447

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR GEOLOGIST.....

AR100447

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-10

Sheet No. 1 of 1

Client: Martin & Martin
Project: Firestone Tire & Rubber Co.
Location: Landfill
Ground Surface Elev.

Date Started 3/8/76 Completed 3/8/76
Driller R. Gancarz
Helper R. Stimpson
Inspector R. H.

Ground Water Data		
Depth	Hour Date	Hours After Completion
1¼'		

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 20'7"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
5		S-1	5'-7'	5-6-7-8	Brown SILT, little fine sand.	
10		S-2	10'-12'	3-4-5-12		
15		S-3	15'-17'	24-35-22-33	Brown med. fine SAND, little gravel, trace silt.	
20		S-4	20'-20'7"	84-100	Weathered red SHALE.	
25					10ft. 1¼" screen 12ft. pipe 1½ bags sand.	
30						
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR GEOLOGIST.....

AR100448

A-C BORINGS, INC.

Phones: (609) 298-3565
298-7896

Bordentown, N. J. 08505

Boring No. OW-11

Sheet No. 1 of 1

Client	Martin & Martin	Date Started	3/8/76
Project	Firestone Tire & Rubber Co.	Completed	3/8/76
Location	Landfill	Driller	R. Gancarz
Ground Surface Elev.		Helper	R. Stimpson
		Inspector	R. H.

Depth	Ground Water Data: Hour	Date	Hours After Completion
15'			

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 21'7"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
5		S-1	5'-7'	3-3-4-7	Brown fine SAND, trace silt.	
10		S-2	10'-12'	10-14-22-25	Brown fine SAND, trace silt, small gravel chips.	
15		S-3	15'-17'	16-30-47-100		
20		S-4	20'-21'7"	35-64-90-100	Red Weathered SILT.	
25					10ft. screen 1¼"	
30					12ft. pipe	
					2 bags sand.	
35						
40						

AR 100 449

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100449

Phones: (609) 298-3565
298-7896

A-C BORINGS, inc.

Bordentown, N. J. 08505

Boring No. OW-12

Sheet No. 1 of 1

Client: Martin & Martin
Project: Firestone Tire & Rubber Co.
Location: Landfill
Ground Surface Elev.

Date Started: 3/10/76 Completed: 3/10/76
Driller: R. Stimpson
Helper: G. Kucowski
Inspector

Ground Water Data			
Depth	Hour	Date	Hours After Completion
22'			

A – Method of Advancing Boring	Depth
	to
8" Hollow Stem Auger	0 to 24'6"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
5		S-1	5'-7'	2-3-4-4	Orange-brown SILT, trace fine sand.	
10		S-2	10'-12'	3-3-4-7	Brown fine SAND, little silt.	
15		S-3	15'-17'	17-15-13-17	Orange-brown SILT, fine sand, trace med. fine gravel.	
20		S-4	20'-22'	46-51-47-67	Orange, red & brown coarse to fine SAND, fine gravel, red-brown silt.	
		S-5	24'-24'6"	150+	Red SHALE.	
25						
30					10ft. screen 1¼" 16ft. pipe 2 bags flint shot 2½ buckets gravel.	
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

AR 100450

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100450

Phones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-13

Sheet No. 1 of 1

Client Martin & Martin
Project Firestone Tire & Rubber Co.
Location Landfill
Ground Surface Elev.

Date Started 3/10/76 Completed 3/10/76
Driller C. Burk
Helper R. Gancarz
Inspector

Depth	Ground Water Data: Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 15'9"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
5		S-1	5'-7'	4-5-7-13	Reddish-brown SILT, some fine sand,	
10		S-2	10'-12'	3-5-19-22	Brown-red med. fine SAND, little silt, gravel.	
15		S-3	15'-15'9"	80-100+	Weathered red SHALE.	
20						
25					10' screen 7' pipe	
30						
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

AR100451

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100451

Phones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-14

Sheet No. 1 of 1

Client: Martin & Martin

Project: Firestone Tire & Rubber Co.

Location: Landfill

Ground Surface Elev.

Date Started: 3/10/76 Completed: 3/10/76

Driller: R. Gancarz

Helper: G. Kucowski

Inspector: B. H.

Depth	Ground Water Data: Hour	Date	Hours After Completion
Dry			

A – Method of Advancing Boring	Depth
	to
8" Hollow Stem Auger	0 to 11'3"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Red brown SILT, fine sand, stones, gravel.	
5		S-1	5'-7'	2-2-3-4	* Red stones, weathered shale, drilling fairly hard.	
10		S-2	10'-11'3"	39-51-100+	Weathered red SHALE.	
15						
20					3FT. SCREEN 7ft. pipe Pea gravel.	
25						
30						
35						
40						

AR100452

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100452

ıones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-15

Sheet No. 1 of 1

ient Martin & Martin

oject Firestone Tire & Rubber Co.

ocation Landfill

round Surface Elev.

Date Started 3/10/76 Completed 3/10/76

Driller C. Burk

Helper R. Stimpson

Inspector

Ground Water Data			
Depth	Hour	Date	Hours After Completion
4'			

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 15'2"
	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Coal SILT.	
5		S-1	5'-7'	6-5-6-8	Brown SILT, little very fine sand, some decomposed red shale.	
10		S-2	10'-12'	3-3-3-10	Brown med. fine SAND, little silt.	
15		S-3	15'-15'2½"	100	Weathered red SHALE.	
20						
25					10' screen 6½' pipe	
30						
35						
40						

AR100453

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100453

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW 16

Sheet No. 1 of 1

Client: Martin & Martin

Date Started: 3/11/76 11:30 Completed: 3/11/76 1:45

Project: Firestone Tire & Rubber Co.

Driller: R. Gancarz

Location: Directly E. of Lagoons

Helper: G. Kucowski

Ground Surface Elev.

Inspector

Depth	Ground Water Data: Hour	Date	Hours After Completion
6'			

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 9'
140lb. Hammer	to
2" Split Spoon	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Orange-brown SILT, little clay.	
5		S-1	5'-6'6"	5-12-105	Orange-brown SILT, little clay.	
		S-2	7'-9'	33-46-32-37	Orange-brown SILT, little clay, gravel,	red shale bott
10						
15						
20					5' screen	
25					4½' pipe	
					1 bag sand.	
30						
35						
40						

S – 2" O.D. Split Spoon Sample

U – Undisturbed Sample, 3" Diameter

—— Core Drilling

N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100454

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-17

Sheet No. 1 of 1

Client: Martin & Martin

Project: Firestone Tire & Rubber Co.

Location: N. E. of lagoons

Ground Surface Elev.

Date Started: 3/11/76 2:00 Completed: 3/11/76 3:00

Driller: R. Gancarz

Helper:

Inspector: R. Stimpson

Ground Water Data			
Depth	Hour	Date	Hours After Completion
Dry			

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 11'
140lb. Hammer	to
2" Split Spoon	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black COAL fines, mostly silt.	
5		S-1	5'-7'	13-13-18-20	Orange-brown fine SAND, little silt.	
10		S-2	10'-11'	52-112	10" recovery top 4" broken tan quartzite 6" weathered red shale.	Bottom Damp
15						
20						
25					5' screen 7' pipe	
30					1¼ buckets gravel. Hole open all the way.	
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR GEOLOGIST.....

AR180455

Phones: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-18

Sheet No. 1 of 1

Client: Martin & Martin

Project: Firestone Tire & Rubber Co.

Location: Between landfill & lagoons in woods

Ground Surface Elev.

Date Started 3/12/76 11:15 Completed 3/12/76 12:00

Driller: R. Gancarz

Helper:

Inspector: G. Kucowski

Depth	Ground Water Data: Hour	Date	Hours After Completion
4'6"			

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 11'6"
140lb. Hammer	to
2" Split Spoon	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal SILT.	
					Brown SILT & CLAY.	
5		S-1	5'-7'	4-6-8-11	Orange-brown SILT, some clay, firm.	
10		S-2	10'-11'1"	3-9-100	Orange-brown, med. to coarse SAND w/ some M. gravel at bottom, loose.	
		~~S-3~~	~~11'-11'11½"~~	~~104-100~~	Orange-brown med. to coarse SAND, w/ some m. gravel and red & yellow coatings on sand, trace red silty shale frag. loose.	
15						
20						
25						
30					5' screen 8' pipe 5' gravel to top screen 1/3 bag sand.	
35						
40						

S – 2" O.D. Split Spoon Sample

U – Undisturbed Sample, 3" Diameter

Core Drilling

N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100456

Phones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-19

Sheet No. 1 of 1

Client: Martin & Martin

Project: Firestone Tire & Rubber Co.

Location: Corner of wood near landfill

Ground Surface Elev.

Date Started: 3/12/76 Completed: 3/15/76

Driller: R. Gancarz

Helper: C. Burk

Inspector

Ground Water Data			
Depth	Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
6" Hollow Stem Auger	0 to 15'5"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal fines-SILT.	
5		S-1	5'-7'	4-6-7-9	Mottled tan & brown SILT, bottom fine sand, some silt.	
10		S-2	10'-12'	5-25-38-44		
15		S-3	15'-15'5"	105	Red-brown SILT & CLAY, M-C sand, M-C gravel.	
20					Boring ended at 15ft.5"	
25					10' screen	
30					7' pipe 3 buckets gravel. ½ bag sand.	
35						
40						

S – 2" O.D. Split Spoon Sample

U – Undisturbed Sample, 3" Diameter

Core Drilling

N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

ones: (609) 298-3565
298-7896

A-C BORINGS, Inc.

Bordentown, N. J. 08505

Boring No. OW-20

Sheet No. 1 of 1

t Martin & Martin — Date Started 3/15/76 — Completed 3/15/76

ject Firestone Tire & Rubber Co. — Driller R. Gancarz

cation West edge of unlined lagoons (near fence) — Helper G. Kucowski

ound Surface Elev. — Inspector

Depth	Ground Water Data: Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
	to
6" Hollow Stem Auger	0 to 12'
140lb. Hammer	to
2" Split Spoon	to
	to

Depth	A	Sample No.	Sample Depth	Sample N	Soil Classification	Remarks
					Black coal fines.	Wet
5		S-1	5'-7'	6-8-13-16	Brown F SAND w/trace brown silt. Orange-brown clay & silt at bottom.	Damp
10		S-2	10'-12'	6-12-16-33	Tan M-C SAND with trace gravel. Red silt & weathered silty shale	
15					Boring ended at 12ft.	
20						
25					8' Pipe 5' Screen 1½ buckets gravel. ½ bag sand.	
30						
35						
40						

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100458

es: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-21

Sheet No. 1 of 1

Martin & Martin
:t Firestone Tire & Rubber Co.
ion 20' from rock well # OW4
d Surface Elev.

Date Started 3/15/76 1:45 Completed 3/15/76 3:30
Driller R. Stimpson
Helper G. Kucowski
Inspector

Ground Water Data		
Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
8" Hollow Stem Auger	0 to 13'6"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

Sample No.	Depth	N	Soil Classification	Remarks
			Black coal Fines	
S-1	5'-6½'+½"	7-7-50-100	Tan & brown mottled SILT, little fine sand, red siltstone dust.	
S-2	8'-8'+4"	100	Red SHALE Soupy mud.	
S-3	10'-11'	51-100		
			Boring ended at 13'6"	
			11' Pipe 5' Screen 1 bag sand.	

☐ S – 2" O.D. Split Spoon Sample
☐ U – Undisturbed Sample, 3" Diameter
☐ —— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR GEOLOGIST.....

AR100459

es: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW 22

Sheet No. 1 of 1

Martin & Martin
Firestone Tire & Rubber Co.
on Beside rock well OW 3 on power line.
Surface Elev.

Date Started 3/16/76 Completed 3/17/76
Driller R. Gancarz
Helper G. Kucowski
Inspector

Ground Water Data		
Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
6" Hollow Stem Auger	0 to 17'9"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

A	Sample No.	Depth	N	Soil Classification	Remarks
				Black coal SILT.	
	S-1	5'-7'	5-9-11-14	Orange-brown SILT & CLAY.	
	S-2	10'-12'	7-6-12-16		
	S-3	15'-17'	21-41-62-100	Orange-brown M-C SAND with M-C gravel, trace of Red silt, & weathered red silty shale fragments.	
	S-4	17'-17'9"	32-100		
				Boring ended at 17'9"	
				10' Screen 8' Pipe 2½ buckets gravel. 1/3 bag sand.	

5 10 15 20 25 30 35 40

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
—— Core Drilling
– Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

s: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-23

Sheet No. 1 of 1

Martin & Martin
Firestone Tire & Rubber Co.

n

Surface Elev.

Date Started 3/17/76 Completed 3/17/76

Driller R. Stimpson

Helper G. Kucowski

Inspector

Ground Water Data		
Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
8" Hollow Stem Auger	0 to 37'
140lb. Hammer	to
2" Split Spoon	to
	to
	to

A	Sample No.	Depth	N	Soil Classification	Remarks
				Red-brown fine SAND, little silt, trace M-C sand, cover material, black rubber, paper & Plastic.	
	S-1	5'-7'	3-4-9-24	Black sludge & Paper.	
	S-2	10'-10'5"	150 time?	10½' Refusal! New Hole.	
	S-3	15'-17'	8-14-13-15	Rubber, silt, little fine SAND dominant, black powdered sludge. Red-brown thick silt & waste.	
	S-4	20'-20'4"	100		
	S-5	25'-26'3"	35-100-150	Wood, paper, cloth, gray powder, rubber.	
	S-6	30'-32'	8-13-10-34		
	S-7	35'-37'	9-4-4-6	Red silt, fine sand & some roots.	
				32' Pipe 5' screen	

5 10 15 20 25 30 35 40

] S – 2" O.D. Split Spoon Sample
] U – Undisturbed Sample, 3" Diameter
] —— Core Drilling
– Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100461

s: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-24

Sheet No. 1 of 1

Martin & Martin
Firestone Tire & Rubber Co.
on toward river from M1-M3 sludge wells.

Date Started 3/17/76 Completed 3/17/76

Driller R. Gancarz

Helper G. Kucowski

Inspector

Surface Elev.

Ground Water Data		
Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
6" Hollow Stem Auger	0 to 13'6"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

A	Sample No.	Depth	N	Soil Classification	Remarks
				Red-brown SILT with little fine sand.	
	S-1	5'-7'	8-13-15-18	Black coal SILT, orange brown silt with trace fine sand at bottom.	
	S-2	10'-12'	8-11-27-65	F-C SAND & gravel, little red silt & silty shale fragments.	
	S-3	13'-13'6"	125		
				Boring ended at 13'6"	
				10' Pipe 5' Screen 1¼ buckets gravel. ½ bucket sand.	

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
— Core Drilling
N – Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

AR100462

s: (609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-25

Sheet No. 1 of 1

Martin & Martin
Firestone Tire & Rubber Co.
between #13 & 2" well &
closer to river.

on

Surface Elev.

Date Started 3/18/76 Completed 3/18/76

Driller R. Gancarz

Helper G. Kucowski

Inspector

Ground Water Data		
Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
6" Hollow Stem Auger	0 to 16'3"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

A	Sample No.	Depth	N	Soil Classification	Remarks
				Black coal SILT.	
	S-1	5'-7'	7-10-15-18	Mottled tan & orange-brown SILT with little clay, F-C sand with some M-C gravel.	
	S-2	10'-12'	11-30-33-27	F-C SAND, with some med. gravel, loose red silt & weathered red silty shale fragments.	
	S-3	12'-14'	65-40-33-35		
	S-4	15'-16'3"	18-36-100		
				Boring ended at 16'3"	
				12' Pipe 5' Screen 1 bucket gravel. 1/3 bag sand.	

5 10 15 20 25 30 35 40

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter
—— Core Drilling
– Standard Penetration Resistance per 6" (140 # hammer, 30" drop)

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR A GEOLOGIST.....

(609) 298-3565
298-7896

A-C BORINGS, INC.

Bordentown, N. J. 08505

Boring No. OW-26

Sheet No. 1 of 1

Martin & Martin

Date Started 3/10/76 Completed 3/10/76

Fireston Tire & Rubber Co.
east of unlined lagoons across
field at point of woods.

Surface Elev.

Driller R. Gancarz
Helper R. Stimpson
Inspector

Ground Water Data		
Hour	Date	Hours After Completion

A – Method of Advancing Boring	Depth
6" Hollow Stem Auger	0 to 11'6"
140lb. Hammer	to
2" Split Spoon	to
	to
	to

A	Sample No.	Depth	N	Soil Classification	Remarks
				Black coal SILT.	
	S-1	5'-7'	3-6-21-65	F-C SAND & gravel, loose; red silt & weathered silty shale fragments.	
	S-2	10'-11'6"	35-63-100		
				Boring ended at 11'6"	
				5' screen 7' Pipe 1½ buckets gravel 1/3 bag sand.	

5 10 15 20 25 30 35 40

S – 2" O.D. Split Spoon Sample
U – Undisturbed Sample, 3" Diameter

THE CLASSIFICATION OF SOILS AND/OR ROCKS AS SHOWN HEREON WERE MADE BY THE DRILLER AND HAVE NOT BEEN CHECKED BY A SOILS ENGINEER OR GEOLOGIST.

AR 80464

OCCIDENTAL – POTTSTOWN
DEEP PROCESS WATER WELLS

WELL NO.	DATE INSTALLED	TOTAL DEPTH	SUCTION DEPTH	ROCK FORMATION (SEE NOTE BELOW)
1	1942	406'	380'	RED SAND ROCK, SAND ROCK, SAND ROCK HARD
(2)	(NONE)			
3	1942	355'	250'	RED SAND STONE HARD, SAND STONE
4	1942	266'	230'	SAND ROCK HARD, SAND ROCK
5	1942	276'	250'	SAND STONE, SAND ROCK
6	1942	402'	302'	SAND ROCK
7	1947	371'	292'	TRAP ROCK
8	1947	342'	299'	TRAP ROCK
9	1947	351'	240'	SAND ROCK HARD
10	1947	494'	278'	SAND ROCK HARD

NOTE: FROM PRINT DATED 3/30/51:

"ALL WELLS DUG WITH 16" HOLE TO SOLID ROCK; THEN A 14" STEEL CASING 5 FT INTO SOLID ROCK; THEN A 10" CASING 10 FT INTO SOLID ROCK; THE SPACES BETWEEN WERE FILLED WITH CONCRETE"

THE DESCRIPTIONS OF ROCK FORMATIONS ARE ALL THAT EXIST IN OUR FILES

J A King
7/11/85

AR100465

ATTACHMENT 5

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrove

Facility Number / / / / / /I/D/3/0/0/0/0/1/

Monitoring point number M-5 Check one: spring ____ well X

Monitoring point location: Latitude /4/0°/1'/3/3/5/" Longitude /7/5°/3'/6/5/6/"

Date sample collected /0/2/0/2/8/4/ Time 11:00 AM

Spring flow cu. ft/sec. ____

Depth to water level 14.4 feet

Sampling Depth 21 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / /6/4/

Alkalinity (mg/1)(00410) / / / / /3/6/

Total Iron (ug/1) (01045) / / /8/4/0/0/

/ / / / / / /

/ / / / / / /

Sulfates (mg/1)(00945) / / / /1/2/7/

Total Solids (mg/1)(00500) / / / /3/3/8/

Chlorides (mg/1)(00940) / / / / /2/7/

BOD 5 day (mg/1)(00310) / / / /1/6/ /

COD .25h $K_2 Cr_2 O_7$ (mg/1)(00340) / / / /3/1/

Specific Conductance (Micromhos) (00095) / / / /3/0/1/

/ / / / / / /

/ / / / / / /

For Metals check one: 1. Standard method ____ or 2. Atomic absorption X

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER STREET

POTTSTOWN, PA 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrove

Facility Number / / / / / / / D / 3 / 0 / 0 / 0 / 0 / 1 /

Monitoring point number M-6 Check one: spring ____ well X

Monitoring point location: Latitude 40° 13' 32" Longitude 75° 36' 43"

Date sample collected 10/20/2/84 Time 10 40 AM

Spring flow cu. ft/sec. ____

Depth to water level 5.9 feet

Sampling Depth 20 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / / 5 / 2 /

Alkalinity (mg/1)(00410) / / / / / / / 2 /

Total Iron (ug/1) (01045) / / / 3 / 0 / 0 / 0 /

Sulfates (mg/1)(00945) / / / / / 5 / 0 /

Total Solids (mg/1)(00500) / / / / 2 / 1 / 2 /

Chlorides (mg/1)(00940) / / / / / / / 5 /

BOD 5 day (mg/1)(00310) / / / / / / 8 / /

COD .25h $K_2 Cr_2 O_7$ (mg/1)(00340) / / / / /

Specific Conductance (Micromhos) (00095) / / / / / 6 / 0 /

For Metals check one: 1. Standard method ____ or 2. Atomic absorption X

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name Occidental Chemical Corporation County MONTGOMERY Municipality LOWER POTTSGROVE

Facility Number /1/1/1/1/1/1/D3 0/0/0 0/1/

Monitoring point number M7 Check one: spring ____ well X

Monitoring point location: Latitude 40° 13' 38" Longitude 75° 15' 30"

Date sample collected 10/20/2/84 Time 10 20 AM

Spring flow cu. ft/sec. ____

Depth to water level 9.2 feet

Sampling Depth 16 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) /1/1/1/5/6/

Alkalinity (mg/1)(00410) /1/1/1/1/0/

Total Iron (ug/1) (01045) /1/1/4/3/0/0/

/1/1/1/1/1/1/

/1/1/1/1/1/1/

Sulfates (mg/1)(00945) /1/1/1/1/1/7/

Total Solids (mg/1)(00500) /1/1/1/2/7/0/

Chlorides (mg/1)(00940) /1/1/1/1/1/6/

BOD 5 day (mg/1)(00310) /1/1/1/9/1/

COD .25h $K_2Cr_2O_7$ (mg/1)(00340) /1/1/1/1/

Specific Conductance (Micromhos) (00095) /1/1/2/4/0/

/1/1/1/1/1/1/

/1/1/1/1/1/1/

For Metals check one: 1. Standard method ____ or 2. Atomic absorption X

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER STREET
POTTSTOWN, PA 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrov

Facility Number / / / / / / I/D/3 / 0/0 / 0/0 / 1/

Monitoring point number M-8 Check one: spring ____ well X

Monitoring point location: Latitude /4/0°1'/3/4/5/" Longitude /7/5°3'/6/2/4/"

Date sample collected /0/2/0/2/8/4/ Time 10:00 AM

Spring flow cu. ft/sec. ____

Depth to water level 7.0 feet

Sampling Depth 11 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / /6/1/

Alkalinity (mg/1)(00410) / / / / /1/6/

Total Iron (ug/1) (01045) / /1/2/7/0/0/

/ / / / / / /

/ / / / / / /

Sulfates (mg/1)(00945) / / / / /5/6/

Total Solids (mg/1)(00500) / / /2/2/4/8/

Chlorides (mg/1)(00940) / / / / /1/0/

BOD 5 day (mg/1)(00310) / / / /2/5/ /

COD .25h $K_2 Cr_2 O_7$ (mg/1)(00340) / / / /

Specific Conductance (Micromhos) (00095) / / / /1/6/2/

/ / / / / / /

/ / / / / / /

For Metals check one: 1. Standard method ____ or 2. Atomic absorption X

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER STREET

POTTSTOWN, PA 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgr

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-5 Check one: spring ____ well XX

Monitoring point location: Latitude 4/0/1/3/3/5/ Longitude 7/5/3/6/5/6/

Date sample collected 10/8/0/2/8/4/ Time 0800

Spring flow cu. ft/sec. —

Depth to water level 10.3 feet

Sampling Depth 21 feet

Type of sample Check one: pump ✓ bailer ___

pH (00403) / / / / /5/5/

Alkalinity (mg/1) (00410) / / / / /2/6/

Total Iron (ug/1) (01045) / / /5/0/0/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1) (00945) / / / /4/6/

Total Solids (mg/1) (00500) / / / /3/7

Chlorides (mg/1) (00940) / / / / /1/4

BOD 5 day (mg/1) (00310) / / / / /5/

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / / /

Specific Conductance (Micromhos) (00095) / / / /2/5/0/

/ / / / / /

/ / / / / /

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER ST.

POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsg

Facility Number /I/D/3/0/0/0/0/1/

Monitoring point number M-6 Check one: spring ____ well XX

Monitoring point location: Latitude 40°13'32" Longitude 75°16'43"

Date sample collected 10/8/0/2/8/4 Time 0815

Spring flow cu. ft/sec. -

Depth to water level 4.0 feet

Sampling Depth 20 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) /4.8/

Alkalinity (mg/1) (00410) /1/1/

Total Iron (ug/1) (01045) /1/6/0/0/

Sulfates (mg/1) (00945) /1/6/

Total Solids (mg/1) (00500) /2/

Chlorides (mg/1) (00940) /9/

BOD 5 day (mg/1) (00310) /1/1/

COD .25h $K_2Cr_2O_7$ (mg/1) (00340) /1/

Specific Conductance (Micromhos) (00095) /1/4/7/

For Metals check one: 1. Standard method ____ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgr

Facility Number / / / / / / I/D/3/0/0/0/A/

Monitoring point number M-7 Check one: spring ____ well XX

Monitoring point location: Latitude 40°13'38" Longitude 75°36'38"

Date sample collected 10/8/0/2/8/4 Time 0830

Spring flow cu. ft/sec. —

Depth to water level 7.8 feet

Sampling Depth 16 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / / 4/8/

Alkalinity (mg/1) (00410) / / / / / 1/0/

Total Iron (ug/1) (01045) / / / 2/3/0/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1) (00945) / / / / 4/9/

Total Solids (mg/1) (00500) / / / / 3/3

Chlorides (mg/1) (00940) / / / / / 2/0

BOD 5 day (mg/1) (00310) / / / / / 8/

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / /

Specific Conductance (Micromhos) (00095) / / / 2/2/9/

/ / / / / /

/ / / / / /

For Metals check one: 1. Standard method ____ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER ST.

POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsg

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-8 Check one: spring ____ well XX

Monitoring point location: Latitude 4/0/1/3/4/5/" Longitude 7/5°/3/6/2/4/"

Date sample collected 10/8/0/2/8/4/ Time 0845

Spring flow cu. ft/sec. —

Depth to water level 6.5 feet

Sampling Depth 11 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / /5/7/

Alkalinity (mg/1) (00410) / / / / /1/5/

Total Iron (ug/1) (01045) / / / /1/3/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1) (00945) / / / / /3/3/

Total Solids (mg/1) (00500) / / / /2/

Chlorides (mg/1) (00940) / / / / /1/

BOD 5 day (mg/1) (00310) / / / / /9/

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / /

Specific Conductance (Micromhos) (00095) / / / /1/8/9/

/ / / / /

/ / / / / /

For Metals check one: 1. Standard method ____ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER ST.

POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgro

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-5 Check one: spring ____ well XX

Monitoring point location: Latitude 4/0/1/3/3/5/ Longitude 7/5°3/6'5/6/"

Date sample collected 1/1/0/8/8/4/ Time 1000

Spring flow cu. ft/sec. —

Depth to water level 10.7 feet

Sampling Depth 21 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / / 6/5/

Alkalinity (mg/1)(00410) / / / / / 8/6/

Total Iron (ug/1) (01045) / / / 1/8/0/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1)(00945) / / / / 3/4/

Total Solids (mg/1)(00500) / / / 3/0/

Chlorides (mg/1)(00940) / / / / 2/4/

BOD 5 day (mg/1)(00310) / / / / 1/0/ /

COD .25h $K_2 Cr_2 O_7$ (mg/1)(00340) / / /

Specific Conductance (Micromhos) (00095) / / / 2/5/0/

/ / / / / /

/ / / / / / /

For Metals check one: 1. Standard method ____ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER ST.

POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgro

Facility Number / / / / / /I/D/3/0/0/0/0/1/

Monitoring point number M-6 Check one: spring ____ well XX

Monitoring point location: Latitude 4 0° 1' 3 3' 2" / Longitude 7 5° 3 6' 4 3" /

Date sample collected /1/1/0/8/8/4/ Time 1000

Spring flow cu. ft/sec. -

Depth to water level 10.6 feet

Sampling Depth 20 feet

Type of sample Check one: pump ✓ bailer ___

pH (00403) / / / / /5/3/

Alkalinity (mg/1) (00410) / / / / /1/8/

Total Iron (ug/1) (01045) / / /3/1/0/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1) (00945) / / / / /1/9/

Total Solids (mg/1) (00500) / / / /1/7/

Chlorides (mg/1) (00940) / / / / / /8/

BOD 5 day (mg/1) (00310) / / / / /5/ /

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / / /

Specific Conductance (Micromhos) (00095) / / / /1/4/1/

/ / / / / /

/ / / / / / /

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgrov

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-7 Check one: spring ____ well XX

Monitoring point location: Latitude 40°13'38" Longitude 75°36'58"

Date ~~sample collected~~ 11/10/8/4 Time 1035

Spring flow cu. ft/sec. ____

Depth to water level DRY feet

Sampling Depth ____ feet

Type of sample Check one: pump ___ bailer ___

pH (00403) / / / / / / /

Alkalinity (mg/1) (00410) / / / / / / /

Total Iron (ug/1) (01045) / / / / / / /

Sulfates (mg/1) (00945) / / / / / / /

Total Solids (mg/1) (00500) / / / / / /

Chlorides (mg/1) (00940) / / / / / / /

BOD 5 day (mg/1) (00310) / / / / / / /

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / / / /

Specific Conductance (Micromhos) (00095) / / / / / / /

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgrove

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-8 Check one: spring ____ well XX

Monitoring point location: Latitude 4/0/1/3/4/5/" Longitude 7/5°/3/6/2/4/"

Date sample collected 1/1/0/8/8/4/ Time 1045

Spring flow cu. ft/sec. —

Depth to water level 9.5 feet

Sampling Depth 11 feet

Type of sample Check one: pump ✓ bailer ____

pH (00403) / / / / /6/6/

Alkalinity (mg/1) (00410) / / / / /2/4/

Total Iron (ug/1) (01045) / / /3/7/0/0/

Sulfates (mg/1) (00945) / / / / /2/3/

Total Solids (mg/1) (00500) / / / /2/4/

Chlorides (mg/1) (00940) / / / / / /9/

BOD 5 day (mg/1) (00310) / / / / /4/ /

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / / /<

Specific Conductance (Micromhos) (00095) / / / /1/6/1/

For Metals check one: 1. Standard method ____ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgrov

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-5 Check one: spring ____ well XX

Monitoring point location: Latitude 4/0/1/3/3/5/ Longitude 7/5/3/6/5/6/

Date sample collected 10/4/1/6/8/5/ Time 0900

Spring flow cu. ft/sec. -

Depth to water level 15.2 feet

Sampling Depth 17 feet

Type of sample Check one: pump ___ bailer ✓

pH (00403) / / / / / 6/5/

Alkalinity (mg/1) (00410) / / / / / 7/2/

Total Iron (ug/1) (01045) / / / / 1/6/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1) (00945) / / / / / 8/0/

Total Solids (mg/1) (00500) / / / / 8/4/0

Chlorides (mg/1) (00940) / / / / / 2/1/

BOD 5 day (mg/1) (00310) / / / / 1/8/0/

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / / 5/2/

Specific Conductance (Micromhos) (00095) / / / / 2/4/1/

/ / / / / / /

/ / / / / / /

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgrov

Facility Number / / / / / / I D / 3 / 0 / 0 / 0 / 0 / 1 /

Monitoring point number M-6 Check one: spring ____ well XX

Monitoring point location: Latitude 4 0 1 3 3 2 / Longitude 7 5 3 6 4 3 /

Date sample collected 10/4/1/6/8/5/ Time 0930

Spring flow cu. ft/sec. -

Depth to water level 8.8 feet

Sampling Depth 10 feet

Type of sample Check one: pump ___ bailer ✓

pH (00403) / / / / 5 1 /

Alkalinity (mg/1) (00410) / / / / 1 4 /

Total Iron (ug/1) (01045) / / / / 4 0 /

Sulfates (mg/1) (00945) / / / / 5 3 /

Total Solids (mg/1) (00500) / / / / 4 4

Chlorides (mg/1) (00940) / / / / / 4 /

BOD 5 day (mg/1) (00310) / / / 3 3 0 /

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / 4 2 /

Specific Conductance (Micromhos) (00095) / / / / / 4 /

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgrove

Facility Number / / / / / / I/D/3/0/0/0/A/

Monitoring point number M-7 Check one: spring ____ well XX

Monitoring point Location: Latitude 40°13'38" Longitude 75°36'38"

Date sample collected 10/4/16/85 Time 1000

Spring flow cu. ft/sec. -

Depth to water level 12.6 feet

Sampling Depth 15 feet

Type of sample Check one: pump ___ bailer ✓

pH (00403) / / / / / 5/2/

Alkalinity (mg/l) (00410) / / / / / 11/2/

Total Iron (ug/l) (01045) / / / / / 5/0/

Sulfates (mg/l) (00945) / / / / / 8/2/

Total Solids (mg/l) (00500) / / / / 6/6/8

Chlorides (mg/l) (00940) / / / / / 11/0/

BOD 5 day (mg/l) (00310) / / / / 5/1/0/

COD .25h $K_2Cr_2O_7$ (mg/l) (00340) / / 1/2/

Specific Conductance (Micromhos) (00095) / / / / 1/7/0/

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.
28 S. HANOVER ST.
POTTSTOWN, PA. 19464

SANITARY LANDFILL
CHEMICAL ANALYSIS QUARTERLY REPORT

Facility Name OCCIDENTAL CHEMICAL CORPORATION County Montgomery Municipality Lower Pottsgrove

Facility Number / / / / / / I/D/3/0/0/0/0/1/

Monitoring point number M-8 Check one: spring ____ well XX

Monitoring point location: Latitude 4/0/1/3/4/5/" Longitude 7/5°/3/6'/2/4/"

Date sample collected 10/4/1/6/8/5/ Time 1030

Spring flow cu. ft/sec. –

Depth to water level 8.7 feet

Sampling Depth 10 feet

Type of sample Check one: pump ___ bailer ✓

pH (00403) / / / / /5/6/

Alkalinity (mg/1) (00410) / / / / / /6/

Total Iron (ug/1) (01045) / / / / /4/0/

/ / / / / / / /

/ / / / / / / /

Sulfates (mg/1) (00945) / / / / /6/2/

Total Solids (mg/1) (00500) / / / /3/3/0

Chlorides (mg/1) (00940) / / / / / /6/

BOD 5 day (mg/1) (00310) / / / /4/2/0/

COD .25h $K_2 Cr_2 O_7$ (mg/1) (00340) / /4/2/

Specific Conductance (Micromhos) (00095) / / / /2/0/5/

/ / / / / / /

/ / / / / / /

For Metals check one: 1. Standard method ___ or 2. Atomic absorption ✓

Name and address of laboratory performing chemical analyses:

WASTEX INDUSTRIES, INC.

28 S. HANOVER ST.

POTTSTOWN, PA. 19464

1/00

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

CHEMICAL ANALYSIS ANNUAL REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrove

Facility Number ID300001

Check one: Sanitary Landfill x Spray Irrigation ____ Other ____

Describe ____

Monitoring point number M-5 Check one: spring ____ well x

Monitoring point location: Latitude 40° 13' 35" Longitude 75° 36' 56"

Date sample collected 4/18/84 Time ____

Spring flow cu. ft/sec. ____

Depth to water level 11.3 feet

Sampling Depth 11.3 feet

Type of sample (CHECK ONE) pump ____ bailer x

Temperature (Degrees C) (00010) ____

pH (00403) 5.31

Alkalinity (mg/l) (00410) 16

Total Iron (ug/l) (01045) 1,310,000

Manganese (ug/l) (01054) 2,900

Aluminum (ug/l) (01105) 51,000

Chlorides (mg/l) (00940) 15.0

Fluorides (mg/l) (00950) .11

Sulfates (00945) 160

Other Analysis Required ____

Albuminoid Nitrogen (mg/l) (00639) 1.95

Ammonia Nitrogen (mg/l) (00610) <.1

Ortho Phosphates reported as P (mg/l) (70507) 2.9

Nitrite-Nitrogen (mg/l) (00615) < .002

Nitrate-Nitrogen (mg/l) (00620) .83

Total Solids (mg/l) (00500) 4,819

Suspended Solids (mg/l) (00530) 4,200

Settleable Solids (ml/100 ml) (00545) 28

TOC 2.22

BOD 5 day (mg/l) (00310) 52

COD .25n $K_2Cr_2O_7$ (mg/l) (00340) 163

Specific Conductance (micromhos) (00905) 255

For Fluorides check one: 1. Standard Method ____ or 2. Selective ion probe ____

For Metals check one: 1. Standard Method ____ or 2. Atomic absorption x

Name and address of laboratory performing chemical analyses:

Wastex Industries, Inc.
28 S. Hanover St.
Pottstown, Pa. 19464

AR100483

.1/00

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

CHEMICAL ANALYSIS ANNUAL REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrove

Facility Number ID300001

Check one: Sanitary Landfill x Spray Irrigation ____ Other ____

Describe ____

Monitoring point number M-6 Check one: spring ____ well X

Monitoring point location: Latitude 40° 13' 32" Longitude 75° 36' 43"

Date sample collected 4/18/84 Time ____

Spring flow cu. ft/sec. ____

Depth to water level 2.6 feet

Sampling Depth 2.6 feet

Type of sample (CHECK ONE) pump ____ bailer x

Temperature (Degrees C) (00010) ____

pH (00403) 5.11

Alkalinity (mg/l) (00410) 12

Total Iron (ug/l) (01045) 2,800

Manganese (ug/l) (01054) 200

Aluminum (ug/l) (01105) 1,700

Chlorides (mg/l) (00940) 14.0

Fluorides (mg/l) (00950) .07

Sulfates (00945) 85

Other Analysis Required ____

Albuminoid Nitrogen (mg/l) (00639) .5

Ammonia Nitrogen (mg/l) (00610) < .1

Ortho Phosphates reported as P(mg/l) (70507) 2.7

Nitrite-Nitrogen (mg/l) (00615) < .002

Nitrate-Nitrogen (mg/l) (00620) .67

Total Solids (mg/l) (00500) 319

Suspended Solids (mg/l) (00530) 182

Settleable Solids (ml/100 ml) (00545) 5

TOC .96

BOD 5 day (mg/l) (00310) 11

COD .25n $K_2Cr_2O_7$ (mg/l) (00340) 8

Specific Conductance (micromhos) (00905) 150

For Fluorides check one: 1. Standard Method ____ or 2. Selective ion probe ____

For Metals check one: 1. Standard Method ____ or 2. Atomic absorption x

Name and address of laboratory performing chemical analyses:

Wastex Industries, Inc.
28 S. Hanover St.
Pottstown, Pa. 19464

AR100484

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

CHEMICAL ANALYSIS ANNUAL REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrove

Facility Number PD300001

Check one: Sanitary Landfill x Spray Irrigation ____ Other ____

Describe ____

Monitoring point number M-7 Check one: spring ____ well X

Monitoring point location: Latitude 40° 13' 38" Longitude 75° 36' 38"

Date sample collected 4/18/84 Time ____

Spring flow cu. ft/sec. ____

Depth to water level 6.1 feet

Sampling Depth 6.1 feet

Type of sample (CHECK ONE) pump ____ bailer X

Temperature (Degrees C) (00010) ____

pH (00403) 4.98

Alkalinity (mg/l) (00410) 12

Total Iron (ug/l) (01045) 2,800

Manganese (ug/l) (01054) 1,100

Aluminum (ug/l) (01105) 2,100

Chlorides (mg/l) (00940) 14.0

Fluorides (mg/l) (00950) .15

Sulfates (00945) 140

Other Analysis Required ____

Albuminoid Nitrogen (mg/l) (00639) .19

Ammonia Nitrogen (mg/l) (00610) .1

Ortho Phosphates reported as P(mg/l) (70507) .40

Nitrite-Nitrogen (mg/l) (00615) .002

Nitrate-Nitrogen (mg/l) (00620) .49

Total Solids (mg/l) (00500) 317

Suspended Solids (mg/l) (00530) 162

Settleable Solids (ml/100 ml) (00545) 5

TOC 1.85

BOD 5 day (mg/l) (00310) 11

COD .25n $K_2Cr_2O_7$ (mg/l) (00340) 7

Specific Conductance (micromhos) (00905) 200

For Fluorides check one: 1. Standard Method ____ or 2. Selective ion probe ____

For Metals check one: 1. Standard Method ____ or 2. Atomic absorption X

Name and address of laboratory performing chemical analyses:

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28 S. Hanover St.
Pottstown, Pa. 19464

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

CHEMICAL ANALYSIS ANNUAL REPORT

Facility Name Occidental Chemical Corporation County Montgomery Municipality Lower Pottsgrove

Facility Number ID300001

Check one: Sanitary Landfill X Spray Irrigation ____ Other ____

Describe ____

Monitoring point number M-8 Check one: spring ____ well X

Monitoring point location: Latitude 40° 13' 45" Longitude 75° 36' 24"

Date sample collected 4/18/84 Time ____

Spring flow cu. ft/sec. ____

Depth to water level 3.2 feet

Sampling Depth 3.2 feet

Type of sample (CHECK ONE) pump ____ bailer X

Temperature (Degrees C) (00010) ____

pH (00403) 5.76

Alkalinity (mg/l) (00410) 10

Total Iron (ug/l) (01045) 280

Manganese (ug/l) (01054) 10

Aluminum (ug/l) (01105) 100

Chlorides (mg/l) (00940) 6.0

Fluorides (mg/l) (00950) .05

Sulfates (00945) 25

Other Analysis Required ____

Albuminoid Nitrogen (mg/l) (00639) .15

Ammonia Nitrogen (mg/l) (00610) 1

Ortho Phosphates reported as P(mg/l) (70507) 1.0

Nitrite-Nitrogen (mg/l) (00615) .002

Nitrate-Nitrogen (mg/l) (00620) 1.78

Total Solids (mg/l) (00500) 109

Suspended Solids (mg/l) (00530) 5

Settleable Solids (ml/100 ml) (00545) 5

TOC 1.36

BOD 5 day (mg/l) (00310) 2

COD .25n $K_2Cr_2O_7$ (mg/l) (00340) 2

Specific Conductance (micromhos) (00905) 157

For Fluorides check one: 1. Standard Method ____ or 2. Selective ion probe ____

For Metals check one: 1. Standard Method ____ or 2. Atomic absorption X

Name and address of laboratory performing chemical analyses:

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AR100486

LEVELS PRIOR TO PUMPING

OBSERV. WELL	FT ELEV. TO TOP PLASTIC	8/9/82 *	8/12/81	8/13/81	8/14/81	12/7/82	3/14-15/83	6/21-22/83 STATIC
1	135.23							
2	124.82							
3	123.97							
4	122.57							
5	127.00	111.54	110.18	110.07	110.16	111.85	114.31	114.35
6	124.69	115.56	114.70	114.66	114.62	113.61	120.15	117.27
7	126.50		<108.87	—	<109.12	—	—	—
8	122.36		113.10	—	113.06	—	—	—
9	126.16	119.62	110.86	110.71	110.46	111.97	119.12	116.51
10	126.29	115.13	—	111.45	116.40	112.36	118.60	116.98
11	126.96	109.23	<104.88	—	<104.82	109.34	112.56	111.61
12	136.29	115.21	114.79	114.92	114.62	115.15	116.86	115.93
13	126.98	115.13	113.92	113.69	114.81	115.31	116.30	115.94
14	145.61	DRY	134.26	134.06	133.54	—	135.37	—
15	124.96	113.73	<109.19	—	<109.19	109.17	118.19	116.23
16	122.13		<112.75	—	<112.75	—	—	—
17	121.97		—	—	<109.89	—	—	—
18	123.89		112.83	—	112.53	—	—	—
19	125.06	111.48	110.59	—	111.01	113.55	115.53	114.73
20	122.98		116.46	—	116.22	—	—	—
21	123.25		108.71	—	107.85	—	—	—
22	124.99		111.83	—	111.28	—	—	—
23	161.87		<125.17	<125.17	126.26	—	—	—
24	127.88	114.34	114.46	—	114.34	—	116.31	—
25	123.38	118.23	112.60	—	112.53	113.70	114.81	116.17
26	124.95		—	—	<113.29	—	—	—

* DISTANCE TO WATER PROBABLY FROM TOP CASING, NOT PLASTIC INSERT.