932054

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE II INVESTIGATION

VOLUME II - APPENDICES

Nash Road Landfill **Site No. 932054**

Town of Wheatfield **Niagara County**

Date: July 1985

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233

Henry G. Williams, *Commissioner*

Division of Solid and Hazardous Waste

Norman H. Nosenchuck, P.E., *Director*

By:

ENGINEERING-SCIENCE

In Association With

DAMES & MOORE

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE II INVESTIGATION

VOLUME II – APPENDICES

Nash Road Landfill Site No. 932054

Town of Wheatfield Niagara County

Date: July 1985

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233

Henry G. Williams, *Commissioner*

Division of Solid and Hazardous Waste

Norman H. Nosenchuck, P.E., *Director*

By:

ENGINEERING-SCIENCE

In Association With

DAMES & MOORE

APPENDICES

APPENDIX A - FIELD PROCEDURES

APPENDIX B - BORING LOGS AND WELL SCHEMATICS
PERMEABILITY TEST DATA

APPENDIX C - GEOPHYSICAL SURVEY DATA

APPENDIX D - CHEMICAL ANALYSES

APPENDIX A

FIELD PROCEDURES

APPENDIX A

FIELD PROCEDURES

Preliminary Emergency Surface Water Analysis

A preliminary round of surface water sampling was performed in June 1983 by Dames & Moore and Engineering Science. These sampling points are located on the eastern end of the site near the disposal trench and form a network surrounding the suspected "hot spots".

Engineering Science provided sample bottles and performed the chemical analyses. Samples were tested for the indicator parameters. No preservatives were used.

Sampling Procedures

1. Sample bottles were labelled with routine identification information.

2. The sample bottle was unwrapped, opened, and submerged below the surface of the water.

3. As the bottle filled, all air bubbles were allowed to escape from inside the bottle to prevent volatization of chemicals.

4. The bottle was repackaged, placed in the cooler, and refrigerated. Chain of custody documents accompanied the cooler during transportation.

Magnetic Survey

The magnetic surveys at Nash Road were conducted utilizing a Geometrics Model 816/826A Magnetometer. The magnetometer indicated the magnetic field intensity, in gammas, of the earth at a single ground-surface point. The successful application of the magnetometer is determined by the magnetic intensity of the target and by the distance the target is buried below ground surface. For example, a large number of steel drums buried 10 to 20 feet deep would cause a relatively high magnetic value over background and would be easily detected with a magnetometer. On the other hand, only one drum buried 50 feet deep would cause a relatively low magnetic value over background and would not be easily detected with a magnetometer. The magnetometer will also detect areas where soil has been disturbed such as in a pit or trench. Once the natural magnetic field of the undisturbed soil has been altered by the excavation and/or burial of foreign material, the change in the magnetic field over the area can be detected by a magnetometer.

Electrical Resistivity Survey

The electrical resistivity survey consisted of both vertical and horizontal resistivity earth measurements. These measurements,

obtained with a Bison Earth Resistivity Model 2350B Meter, indicated the relative electrical resistance in ohms of the earth to the conductance of an induced electrical current through metal probes or electrodes pushed into the ground. As an example of the resistivity nature of the subsurface, a fresh-water uncontaminated aquifer would exhibit a relatively high resistivity, whereas a contaminated (with metals) aquifer would exhibit a relatively low resistivity.

Vertical resistivity measurements, termed soundings, indicate the variation of resistivity at various depths at one ground-surface point. The resistivity sounding method applied at Nash Road was the "Modified Wenner Electrode Array". In this method the current electrodes (those furthest from the center of the array) are stationary while the potential electrodes (those closest to the center of the array) are moved away from the center at equally spaced distances. In the "Modified Wenner Electrode Array" the potential electrode distance closely approximates the depth of investigation into the subsurface. For example, a sounding with a total potential electrode distance of thirty feet would indicate resistivity values at approximately thirty feet below the ground surface.

Horizontal resistivity measurements, on the other hand, are termed profiles indicating the variation of resistivity at one approximmate depth at many ground-surface locations. The resistivity profile method applied at Nash Road was the standard Wenner Array (Bison, 1975). In this method the current and potential electrodes are pushed into the ground at equal distances from one another. The depth of investigation is a zone of the subsurface approximately three-fourths to one times the electrode spacing. For example, an electrode spacing of fifty feet in the Wenner Array would investigate a zone of the subsurface between approximately 38 to 50 feet deep. Five Wenner Arrays were utilized at the Nash Road site to distinguish shallow and deep subsurface variations in resistivity.

Air Quality Monitoring

Air quality monitoring for organic vapors with an HNU photoionization meter was implemented at each hole before, during, and after drilling. The purpose of air quality monitoring was three-fold: to determine whether the use of respirators was needed while on-site, to locate potential "hot-spots" from which vapors may emanate, and to support or disprove preliminary suspicions regarding the locations of the areas of high contamination. Additionally, an air quality survey was performed of the entire site. Several east-west traverses across the site were made while the meter was constantly operating. No contamination was detected.

Drilling

Drilling was performed by Parratt Wolff, Inc. with a CME-70 (truck-mounted) rig. A 3-1/2" I.D. hollow-stemmed continuous-

flight auger was used. All augers were steam-cleaned between borings to prevent cross-contamination during drilling. Two shallow borings were drilled to depths of 10 feet and 14 feet. Five borings were drilled to bedrock at depths of between 65 and 71 feet. Dense till was encountered at the deeper borings and, on occasion, a rotary bit and clean water were used to penetrate large cobbles.

Soil samples were taken by an open-drive split spoon sampler. Shallow borings were sampled continuously at 2-foot intervals. Deep borings were sampled continuously until the lacustrine clay was penetrated. Thereafter, the sampling method was standard sampling at 5-foot intervals. Glass sample jars were provided by the drilling subcontractor. Dames & Moore staff was responsible for drilling documentation at each boring.

Well Installation

Well installation took place immediately after drilling. Johnson stainless steel wire-wound continuous slot (10-slot size) screen was used for each well. The screen segments are 5-feet long and are flush-jointed; all joints are additionally secured with teflon tape. The two shallow wells have 5-foot long screens and the 5 deep wells have 10-foot long screens. All screens were cleaned by steaming or washing with hexane, methanol, and distilled water prior to installation.

Upon completing the screen and riser pipe emplacement, a No. 1 Q-rok sand filter was poured into the annulus to a height of two to four feet above the top of the screened interval. A 3-foot primary bentonite seal was set on top of the sand pack. When installing the shallow wells, a concrete backfill was poured on top of the bentonite seal to the the ground surface and a 6" O.D. steel protective casing with a locking cap was installed. After placing the primary bentonite seal in the deep wells, the auger was gradually withdrawn. The approximately 30-foot thick lacustrine clay was allowed to close-in and form a thick seal around the mid-section of the riser pipe. At the 4-foot depth, a supplementary bentonite seal was set to a depth of 2 feet. Concrete backfill was placed on top of the supplementary bentonite seal and a 6" O.D. steel protective casing with a locking cap was installed. Relative ground elevation was surveyed.

Well Development

Shallow wells were bailed until the discharge water was clear. Deep wells were developed by surging with clean water from the rig until the discharge water was clear. The deep wells were then bailed to remove excess water and to allow natural recovery of the well. The bailer was decontaminated between each well by washing with hexane and methanol, and rinsing with distilled water.

Groundwater Sampling

Groundwater samples were taken from each of the wells on-site and from one residential well off-site.

A MasterFlex pump and silicone hose were used to pump the two shallow wells. A Geofilter bladder pump with a teflon bladder and a silicone hose were used on the deep wells and on the residential well. The bladder pump was run by a 1 h.p. air compressor and a gasoline powered generator. All pumping and field testing equipment was decontaminated between wells with a wash of hexane and methanol and a rinse of distilled water. New silicone hose was used at each well and discarded after sampling.

Sample bottles and shipping coolers for samples from the on-site wells were provided by H2M Laboratories in Melville, N.Y. The sample bottles for the off-site, residential wells were provided by Compu-Chem Laboratories of Research Triangle Park, N.C.

On-Site Wells

Static water levels were measured prior to pumping in order to calculate the volume of water in each well. Two well volume exchanges were performed on each well before sampling. During sampling, care was taken to insure minimal aeration of the water occurred. Each bottle was tilted at approximately a 45 degree angle and the sample water was allowed to run slowly down the inside of the bottle to prevent the escape of volatile chemicals from the representative sample. Sample bottles for purgeable chemical analyses and those that contained preservatives were filled to the point where a meniscus would form, capped tightly, and inspected for air bubbles. Bottles in which air bubbles were found were reopened and water was added by droplets until this condition was corrected. Sample bottles for analyses of extractable chemicals were filled in the same manner, except that the fill line was at the bottom of the bottle neck.

After the sample bottles had been filled, they were wrapped in plastic protective sheets, placed in the shipping coolers, and refrigerated.The shipping packages provided by H2M were "Playmate" coolers by Igloo. Zip-loc bags filled with ice were used as the refrigerant and to provide extra cushioning protection during transportation. Chain of custody documents were included inside the shipping coolers, also sealed in separate plastic Zip-loc bags. Unique, tamper-proof "DAMES & MOORE" seals were placed on all of the coolers for quality assurance purposes. All packages were taken to an air courier for delivery to the laboratory with 24 hours of their sampling times.

Field tests performed during sampling were for specific conductance, temperature, and organic vapors. All field testing equipment was decontaminated between wells by washing with hexane and methanol and by rinsing with distilled water.

Off-Site Well Sampling

The off-site well that was sampled for chemical analysis is located at 7403 Nash Road, adjacent to the northwest corner of the landfill site. This property is owned by Mr. Osterman of North Tonawanda. The well on this property has a 6" casing diameter and is 75 feet deep. It is no longer in use.

Approximately one well volume exchanges was performed on Mr. Osterman's well. Precisely the same sampling methods were employed as those used at the on-site wells. However, a different laboratory was used for the chemical analysis of the off-site well, and the shipping procedure was slightly different. The Compu-Chem shipping package consisted of an insulated styrofoam container inside a corrugated paper box. "Blue-Ice" was used as the refrigerant in these packages, and the chain of custody document was taped to the top of the styrofoam container inside the box. A unique, tamper-proof "DAMES & MOORE" seal was placed on the package for quality assurance purposes. This package was taken to an air courier within two hours after the time of sampling.

In Situ Permeability Testing

After sampling each well, a recovery-type permeability test was performed. At the end of pumping, the water level in the well was low. A pressure transducer calibrated to record feet-of-head was lowered, linked to a microprocessing unit with printer, to the bottom of the well. Timed head readings were recorded for up to 30 minutes and permeabilities were calculated according to the formula (Lambe Whitman, 1969):

$$kh = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln\frac{H_1}{H_2}, \text{ when } \frac{2mL}{D} > 4$$

where: k_h = horizontal permeability
d = diameter of standpipe
m = transformationratio (assumed to be 1 for case where $k_h = k_v$)
L = intake length
D = diameter of intake (borehole)
t = time
H = Head

At the end of each test, the pressure transducer was removed from the well.

Surface Water and Sediment Sampling

Surface water and sediment sampling bottles were provided by Compu-Chem Laboratories at Research Triangle Park, N.C. Surface water and sediment samples for chemical analysis were intended to

landfill site. Unfortunately, no surface water samples were collected since there was no available standing water during this sampling effort. However, sediment samples were successfully taken. The sampling procedure was to manually press a stainless steel 2-inch diameter tube into the dried sediment to a depth of 4 inches. Sediment sample was then extracted and placed in the sample jars. Sampling tube was decontaminated between sampling points by washing with hexane and methanol and by rinsing with distilled water. Photographs were taken of the three sediment sampling locations.

The sediment samples were packed in insulated styrofoam shipping packages and and refrigerated with "Blue-Ice." A chain of custody document was taped to the top of the styrofoam package and the entire parcel was encased in the corrugated paper box. Unique, tamper-proof "DAMES & MOORE" seals were placed on the packages for quality assurance purposes. All packages were taken to an air courier within 6 hours after their sampling times.

Down-Hole Gamma Logging

Each well was logged with a portable Mt. Soprus gamma logging unit. The procedure was to lower the probe to the bottom of the well and record gamma counts per second as the probe was slowly raised up the well to the ground surface. Typically, two runs per well were performed to check the precision of the unit and to allow for corrections to any portion of a record during which the paper or pen may have skipped or slid. After logging each well, the probe and cable was rinsed with distilled water.

APPENDIX B

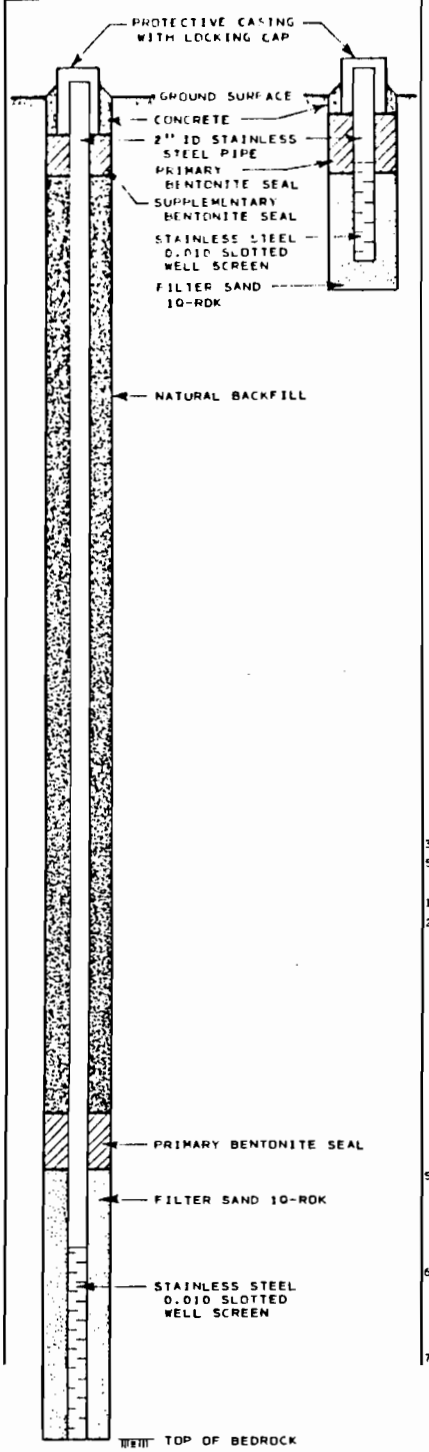
BORING LOGS AND WELL SCHEMATICS

PERMEABILITY TEST DATA

BORING OW-1
NASH ROAD SITE

WELL SCHEMATICS

OW-1B OW-1



SAMPLING					FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
BLOW COUNT	SAMPLE NO & TYPE	RUN NO	CORE REC	CORE HOD				
								SURFACE CONDITIONS: GRASSY, WET.
5	1 ▣					0	ML	LIGHT BROWN MOIST MEDIUM SILT AND CLAY, TRACE OF SAND, OCCASIONAL BLACK ORGANIC STAINS
15	2 ▣							
15	3 ▣					5	CL	GRAY MOIST STIFF LAYERED CLAY AND SILT WITH OCCASIONAL SEAMS OF FINE TO MEDIUM SAND, 1/8" IN THICKNESS
35	4 ▣							GRADES TO LESS STIFF
15	5 ▣							
9	6 ▣					10		GRAY MOIST MEDIUM LAYERED CLAY, RED CLAY LAYERS APPROXIMATELY 1/10" THICKNESS AT IRREGULAR INTERVALS
10	7 ▣							
2	8 ▣							GRADES TO VERY SOFT CLAY
2	9 ▣					15		
	10 ▣							
	11 ▣					20		
9	1B:1 ▣					25	CH	GRADES TO SOFT
4	1B:2 ▣					30		GRADES TO VERY SOFT
						35		
38/6"	1B:3 ▣							BROWN, MOIST SILT AND COARSE TO FINE GRAVEL, LITTLE CLAY, LITTLE FINE SAND (TILL)
55/6"	1B:4 ▣							
16/6"	1B:5 ▣					40		GRADES TO WET
20/6"	1B:6 ▣							
						45		
98	1B:7 ▣					50	GM	GRADES TO MOIST, DENSE SILT, SOME FINE TO COARSE SAND, LITTLE FINE GRAVEL
55/6"	1B:8 ▣					55		
65/6"	1B:9 ▣					60		GRADES TO WET
76/6"	1B:10 ▣					65		

SOIL SAMPLING INFORMATION

- ▣ STANDARD PENETRATION TEST
- ■ UNDISTURBED SAMPLE
- ⊠ DISTURBED SAMPLE
- □ NO SAMPLE RECOVERED

ROCK CORE INFORMATION

RD — CORE LOSS ZONE

PERCENT CORE RECOVERY

82 — CORE ROD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-I

NASH ROAD SITE

WELL SCHEMATICS	SAMPLING: BLOW COUNT	SAMPLING: SAMPLE NO & TYPE	SAMPLING: RUN NO	SAMPLING: CORE REC	SAMPLING: CORE ROD	FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
							65	GM	TOP OF BEDROCK AT 68.6'. BEDROCK IS DOLOSTONE.
		1B;11					70		BORING TERMINATED AT A DEPTH OF 68.6' ON JUNE 11, 1984.

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

ROCK CORE INFORMATION

- RQD — PERCENT CORE RECOVERY
- CORE LOSS ZONE
- 82 — CORE ROD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

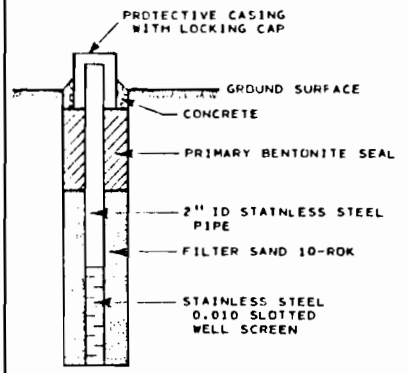
- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-2
NASH ROAD SITE

WELL SCHEMATICS

OW-2



SAMPLING					FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
BLOW COUNT	SAMPLE NO & TYPE	RUN NO.	CORE REC	CORE ROD				
								SURFACE CONDITIONS: GRASSY, MUDDY
10	1 ▣					0	ML	LIGHT BROWN MOIST STIFF SILT, LITTLE FINE SAND
11	2 ▣						SW	GRAY WET MEDIUM DENSE FINE SAND, TRACE SILT
13	3 ▣					5		GRAY AND BROWN MOIST STIFF LAYERED CLAY AND SILT; SILT LAYERS ABOUT 1/2" THICK
34	4 ▣						CL	GRADES TO MEDIUM
18	5 ▣							GRADES TO SOFT
5	6 ▣					10		
3	7 ▣						CH	GRAY MOIST, VERY SOFT LAYERED CLAY; RED CLAY LAYERS ARE APPROXIMATELY 1/5" THICK AT 3/4" INTERVALS
						15		BORING TERMINATED AT A DEPTH OF 14.0' ON JUNE 6, 1984.

SOIL SAMPLING INFORMATION

- ▣ STANDARD PENETRATION TEST
- ■ UNDISTURBED SAMPLE
- ▩ DISTURBED SAMPLE
- □ NO SAMPLE RECOVERED

ROCK CORE INFORMATION

- RQD — CORE LOSS ZONE
- PERCENT CORE RECOVERY
- 82 — CORE ROD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

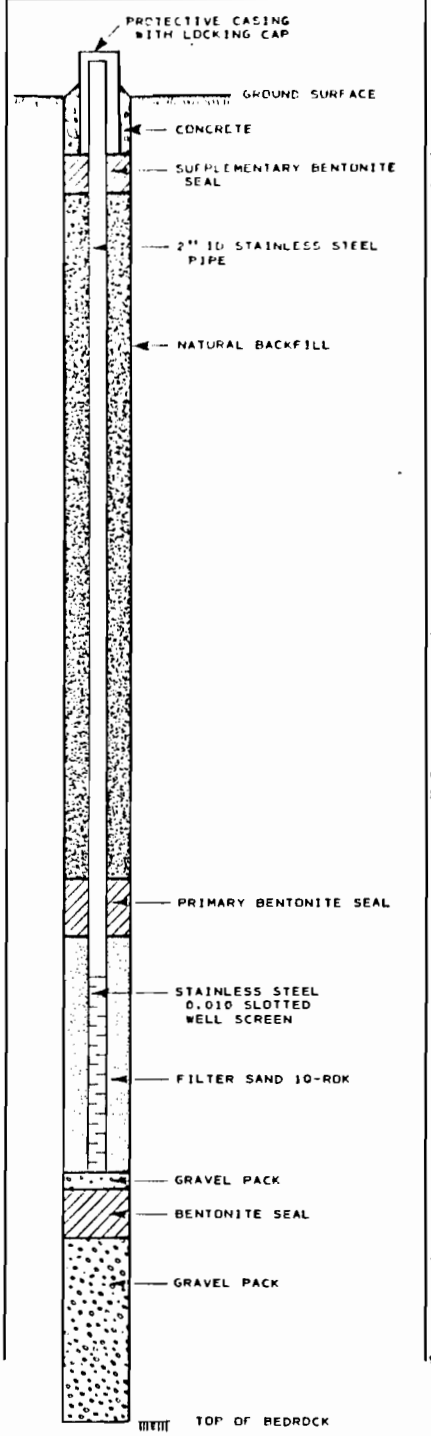
DAMES & MOORE

BORING OW-3

NASH ROAD SITE

WELL SCHEMATICS

OW-3



SAMPLING					FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
BLOW COUNT	SAMPLE NO. & TYPE	RUN NO.	CORE REC.	CORE POD				
								SURFACE CONDITIONS: GRASSY, TALL BRUSH
6	1 ▣					0		MIXED SAND/WASTE FILL
11	2 ▣							
7/.5'	3A ▣							
9/.5'	3B ▣					5	CL	GRAY AND BROWN MOIST MEDIUM LAYERED CLAY AND SILT, TRACE FINE SAND, BROWN SILT LAYERS APPROXIMATELY 1/2" -1" IN THICKNESS AT 1 1/2" INTERVALS
32	4 ▣							GRADES TO STIFF AT 6.0'
20	5 ▣							GRAY MOIST MEDIUM LAYERED CLAY
7	6 ▣					10		RED CLAY LAYERS APPROXIMATELY 1/10" THICK AT 1/2" INTERVALS
6	7 ▣							GRADES TO SOFT WITH OCCASIONAL SILT LAYERS APPROXIMATELY 1/2" THICK AT 10.0'
4	8 ▣							CLAY LAYERS BECOME LESS DISTINCT AT 12.0'
2	9 ▣					15	CH	GRADES TO VERY SOFT AT 16.0'
2	10 ▣							
2	11 ▣					20		
3	12A ▣					25	CL	GRAY AND BROWN/RED MOIST MEDIUM STIFF LAYERED CLAY AND SILT AT 26.0'
3	12B ▣							SEAM OF MOIST MEDIUM TO FINE SAND AT 26.3'
72/5'	13 ▣							BROWN MOIST MEDIUM SILT AND COARSE TO FINE GRAVEL, TRACE FINE SAND, TRACE CLAY (TILL)
	14 ▣					30		GRADES TO DRY AND VERY STIFF SILT AT 28.5'
65/5'	15 ▣					35		GRADES TO MOIST AND HARD SILT
100/4"	16 ▣							
29	17 ▣					40		GRADES TO MOIST AND MEDIUM
							GM	
21	18 ▣					45		GRADES TO WET
23	19 ▣					50		
17	20 ▣					55		
75/5'	21 ▣					60		GRADES TO COARSE TO FINE GRAVEL AND BROWN DRY HARD SILT, SOME WEATHERED ROCK FRAGMENTS, TRACE FINE SAND
96/5'	22 ▣					65		

SOIL SAMPLING INFORMATION

- ▣ STANDARD PENETRATION TEST
- ■ UNDISTURBED SAMPLE
- ▨ DISTURBED SAMPLE
- □ NO SAMPLE RECOVERED

ROCK CORE INFORMATION

- RQD / CORE LOSS ZONE
- PERCENT CORE RECOVERY
- R2 CORE POD

2-01-80 PIEZOMETRIC SURFACE & DATE TESTED

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-3

NASH ROAD SITE

WELL SCHEMATICS	SAMPLING: BLOW COUNT	SAMPLE NO. & TYPE	RUN NO	CORE REC	CORE RQD	FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
							65	GM	TOP OF BEDROCK 68.7' BEDROCK IS DOLOSTONE BORING TERMINATED AT A DEPTH OF 68.7' ON JUNE 7, 1984.
							70		

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

ROCK CORE INFORMATION

RQD — CORE LOSS ZONE; PERCENT CORE RECOVERY

82 — CORE POD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

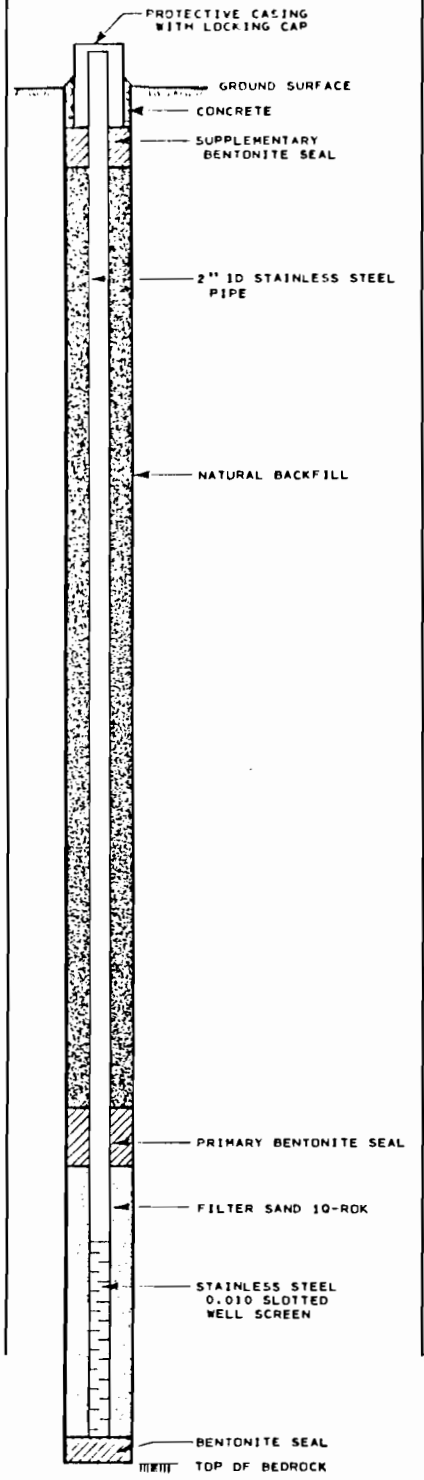
DAMES & MOORE

BORING OW-4

NASH ROAD SITE

WELL SCHEMATICS

OW-4



BLOW COUNT	SAMPLE NO & TYPE	RUN NO	CORE REC	CORE ROD
22	1 ■			
15	2 ■			
17	3 ■			
33	4 ■			
10	5 ■			
18	6 ■			
16				
8	7 ■			
6	8 ■			
5	9 ■			
2	10 ■			
3				
2	11 ■			
2				
2	12 ■			
2				
2	13 ■			
2				
2	14 ■			
2				
26	15 ■			
46	16			
50/.2'	17 ■			
	18			
80/.5'	19 ■			
50/.5'	20 ■			
50/.4'	21 ■			
50/.5'	22 ■			

SAMPLING | FRACTURES | DEPTH IN FEET | GRAPHIC LOG

DESCRIPTIVE GEOLOGIC NOTES

SURFACE CONDITIONS: GRASSY, SOME SURFACE TRASH

0 — MIXED SAND/WASTE FILL

GRAY MOIST SILT AND CLAY

5 — ML

GRAY WET MEDIUM TO FINE SAND, TRACE SILT, ORGANIC ODOR, SOME BLACK STAIN — SW

GRAY AND BROWN MOIST LAYERED SILT AND CLAY, TRACE FINE SAND

LAYERS APPROX. 1/2" THICK

10 — CL

GRADES TO WET BROWN SILT AND CLAY

15

GRADES TO CLAY, TRACE SILT

20

25 — CH

30

35

40 — BROWN WET SILT AND FINE TO COARSE SAND, LITTLE MEDIUM TO FINE GRAVEL — SW

BROWN WET MEDIUM TO FINE SAND — SP

45 — BROWN MOIST SILT, AND COARSE TO FINE SAND, LITTLE FINE TO COARSE SAND (TILL)

50 — GRADES TO WET — GM

55 — GRADES TO MOIST

60

65

SOIL SAMPLING INFORMATION

- ■ STANDARD PENETRATION TEST
- ■ UNDISTURBED SAMPLE
- ■ DISTURBED SAMPLE
- □ NO SAMPLE RECOVERED

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-4
NASH ROAD SITE

WELL SCHEMATICS	SAMPLING: B. ON COUNT	SAMPLE NO & TYPE	RUN NO	CORE REC	CORE ROD	FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
							65	GM	TOP OF BEDROCK 70.3' BEDROCK IS DOLOSTONE
							70		BORING TERMINATED AT A DEPTH OF 70.3' ON JUNE 13, 1984.

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

ROCK CORE INFORMATION

80 — CORE LOSS ZONE

PERCENT CORE RECOVERY

82 — CORE ROD

FRACTURES

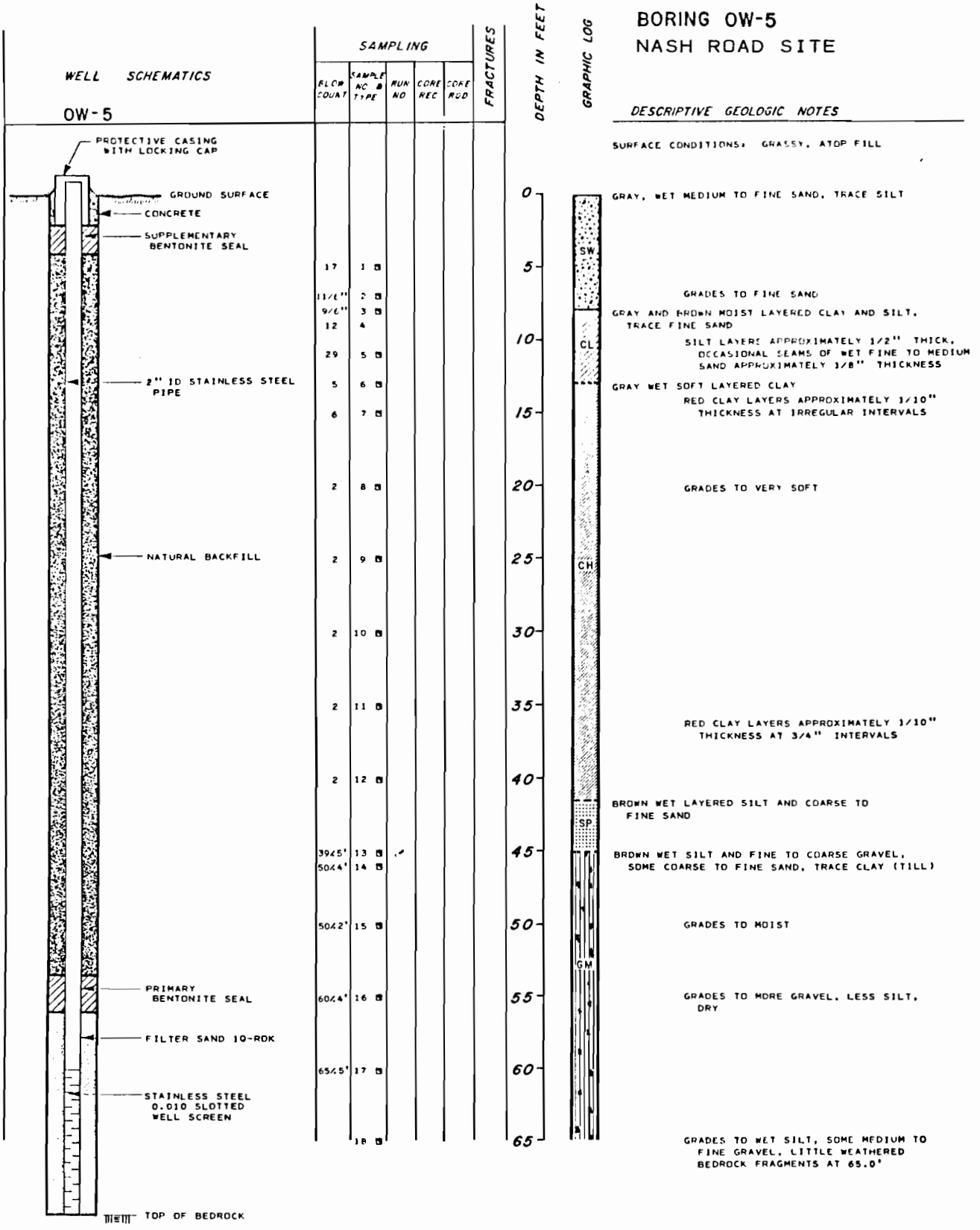
- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-5
NASH ROAD SITE



DESCRIPTIVE GEOLOGIC NOTES

SURFACE CONDITIONS: GRASSY, ATOP FILL

GRAY, WET MEDIUM TO FINE SAND, TRACE SILT

GRADES TO FINE SAND

GRAY AND BROWN MOIST LAYERED CLAY AND SILT, TRACE FINE SAND

SILT LAYERS APPROXIMATELY 1/2" THICK, OCCASIONAL SEAMS OF WET FINE TO MEDIUM SAND APPROXIMATELY 1/8" THICKNESS

GRAY WET SOFT LAYERED CLAY

RED CLAY LAYERS APPROXIMATELY 1/10" THICKNESS AT IRREGULAR INTERVALS

GRADES TO VERY SOFT

RED CLAY LAYERS APPROXIMATELY 1/10" THICKNESS AT 3/4" INTERVALS

BROWN WET LAYERED SILT AND COARSE TO FINE SAND

BROWN WET SILT AND FINE TO COARSE GRAVEL, SOME COARSE TO FINE SAND, TRACE CLAY (TILL)

GRADES TO MOIST

GRADES TO MORE GRAVEL, LESS SILT, DRY

GRADES TO WET SILT, SOME MEDIUM TO FINE GRAVEL, LITTLE WEATHERED BEDROCK FRAGMENTS AT 65.0'

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-5
NASH ROAD SITE

WELL SCHEMATICS	SAMPLING: BLOW COUNT	SAMPLE NO & TYPE	RUN NO	CORE REC	CORE ROD	FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
							65	GM	TOP OF DOLOSTONE BEDROCK AT 69.8'
							70		BORING TERMINATED AT A DEPTH OF 70.0' ON JUNE 14, 1984.

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

ROCK CORE INFORMATION

- 80 — PERCENT CORE RECOVERY
- CORE LOSS ZONE
- 82 — CORE ROD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone
- Void

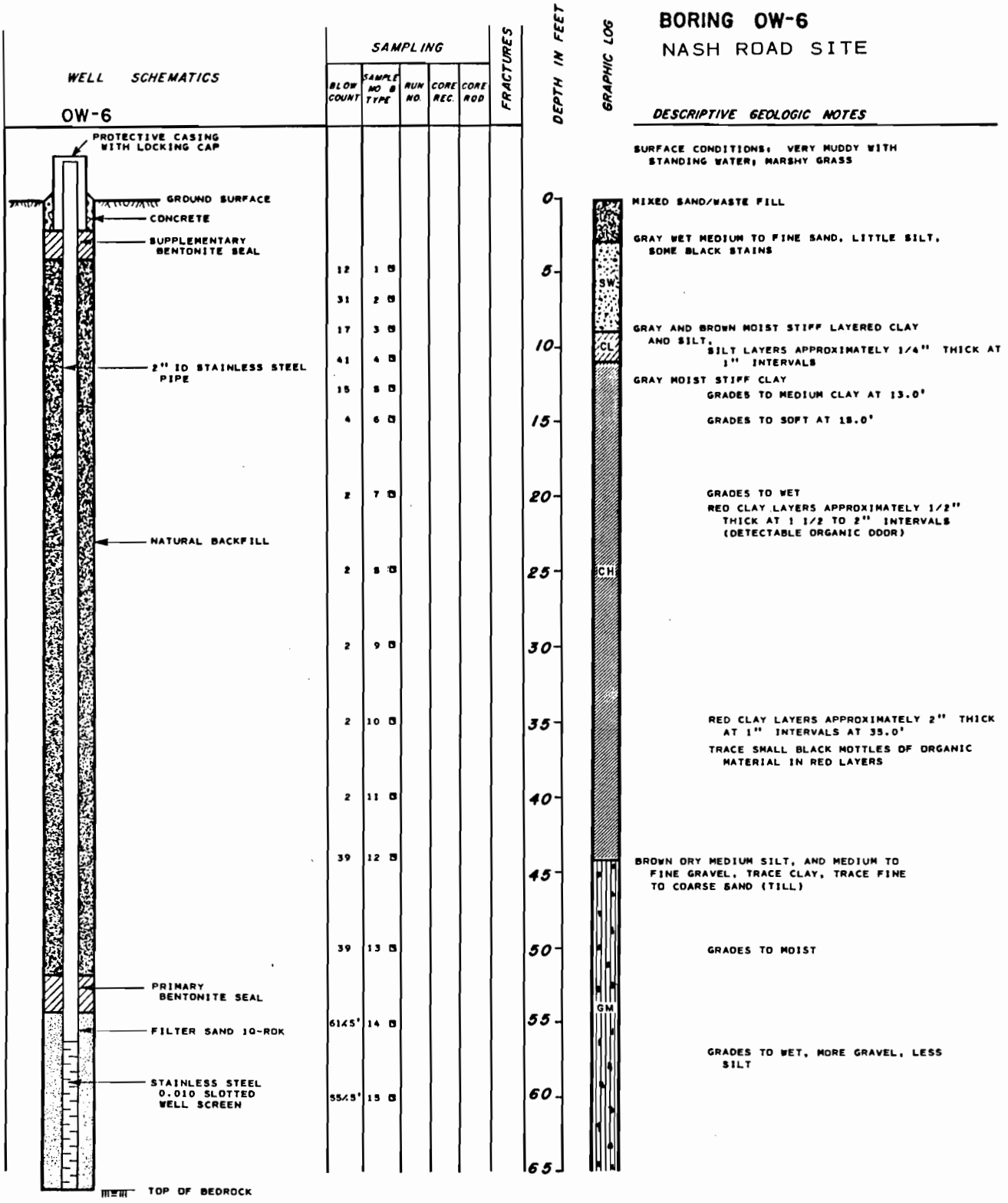
KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-6

NASH ROAD SITE



DESCRIPTIVE GEOLOGIC NOTES

SURFACE CONDITIONS: VERY MUDDY WITH STANDING WATER; MARSHY GRASS

MIXED SAND/WASTE FILL

GRAY WET MEDIUM TO FINE SAND, LITTLE SILT, SOME BLACK STAINS

GRAY AND BROWN MOIST STIFF LAYERED CLAY AND SILT, SILT LAYERS APPROXIMATELY 1/4" THICK AT 1" INTERVALS

GRAY MOIST STIFF CLAY

GRADES TO MEDIUM CLAY AT 13.0'

GRADES TO SOFT AT 18.0'

GRADES TO WET

RED CLAY LAYERS APPROXIMATELY 1/2" THICK AT 1 1/2 TO 2" INTERVALS (DETECTABLE ORGANIC ODOR)

RED CLAY LAYERS APPROXIMATELY 2" THICK AT 1" INTERVALS AT 35.0'

TRACE SMALL BLACK MOTTLES OF ORGANIC MATERIAL IN RED LAYERS

BROWN DRY MEDIUM SILT, AND MEDIUM TO FINE GRAVEL, TRACE CLAY, TRACE FINE TO COARSE SAND (TILL)

GRADES TO MOIST

GRADES TO WET, MORE GRAVEL, LESS SILT

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

ROCK CORE INFORMATION

B0 — CORE LOSS ZONE

PERCENT CORE RECOVERY

B2 — CORE ROD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures-shown at approximate angle to core axis
- Mineralized fracture c = calcite s = sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

DAMES & MOORE

BORING OW-6
NASH ROAD SITE

WELL SCHEMATICS	SAMPLING: BLOW COUNT	SAMPLE NO & TYPE	RUN NO	CORE REC	CORE ROD	FRACTURES	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTIVE GEOLOGIC NOTES
							65	SM	TOP OF BEDROCK 66.0' BEDROCK IS DOLOSTONE
							70		BORING TERMINATED AT A DEPTH OF 66.0' ON JUNE 19, 1984.

SOIL SAMPLING INFORMATION

- STANDARD PENETRATION TEST
- UNDISTURBED SAMPLE
- DISTURBED SAMPLE
- NO SAMPLE RECOVERED

ROCK CORE INFORMATION

- 80 — CORE LOSS ZONE
- PERCENT CORE RECOVERY
- 82 — CORE ROD

FRACTURES

- Zone of core loss
- Breccia zone
- Dip-slip slickensides
- Fractures shown at approximate angle to core axis
- Mineralized fracture c - calcite s - sulfide
- Fractured zone
- Void

KEY TO WELL SCHEMATIC

- Grout
- Bentonite Seal
- Sand Filter
- Well Screen

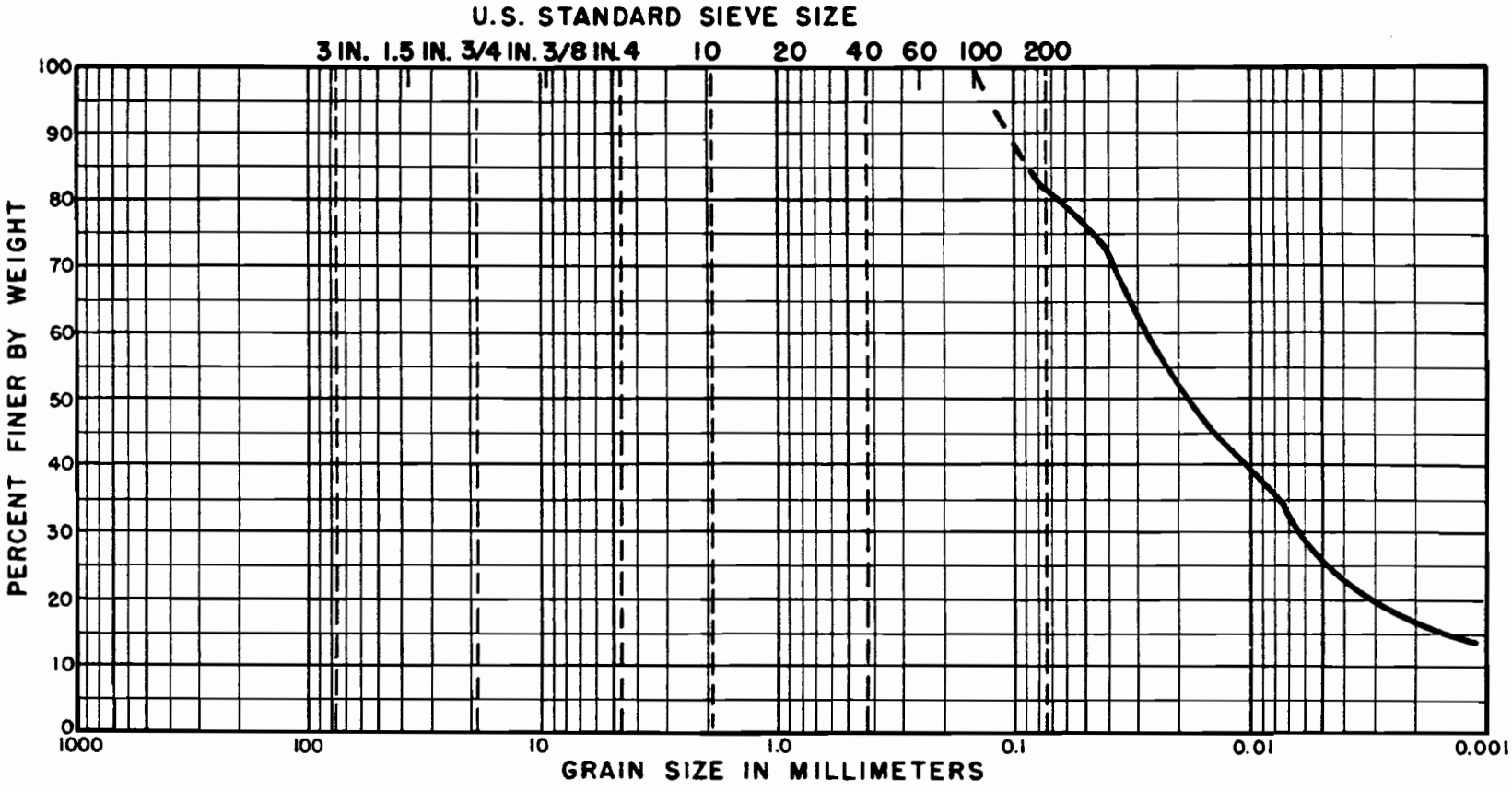
DAMES & MOORE

FIGURE B-6B

FILE
BY DATE
CHECKED BY DATE

REVISIONS
BY DATE
BY DATE
PLATE OF

757.2 (REV. 4-62)



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW-1	2.0' - 4.0'	ML	YELLOW SILT	15.2%				NASH ROAD SITE

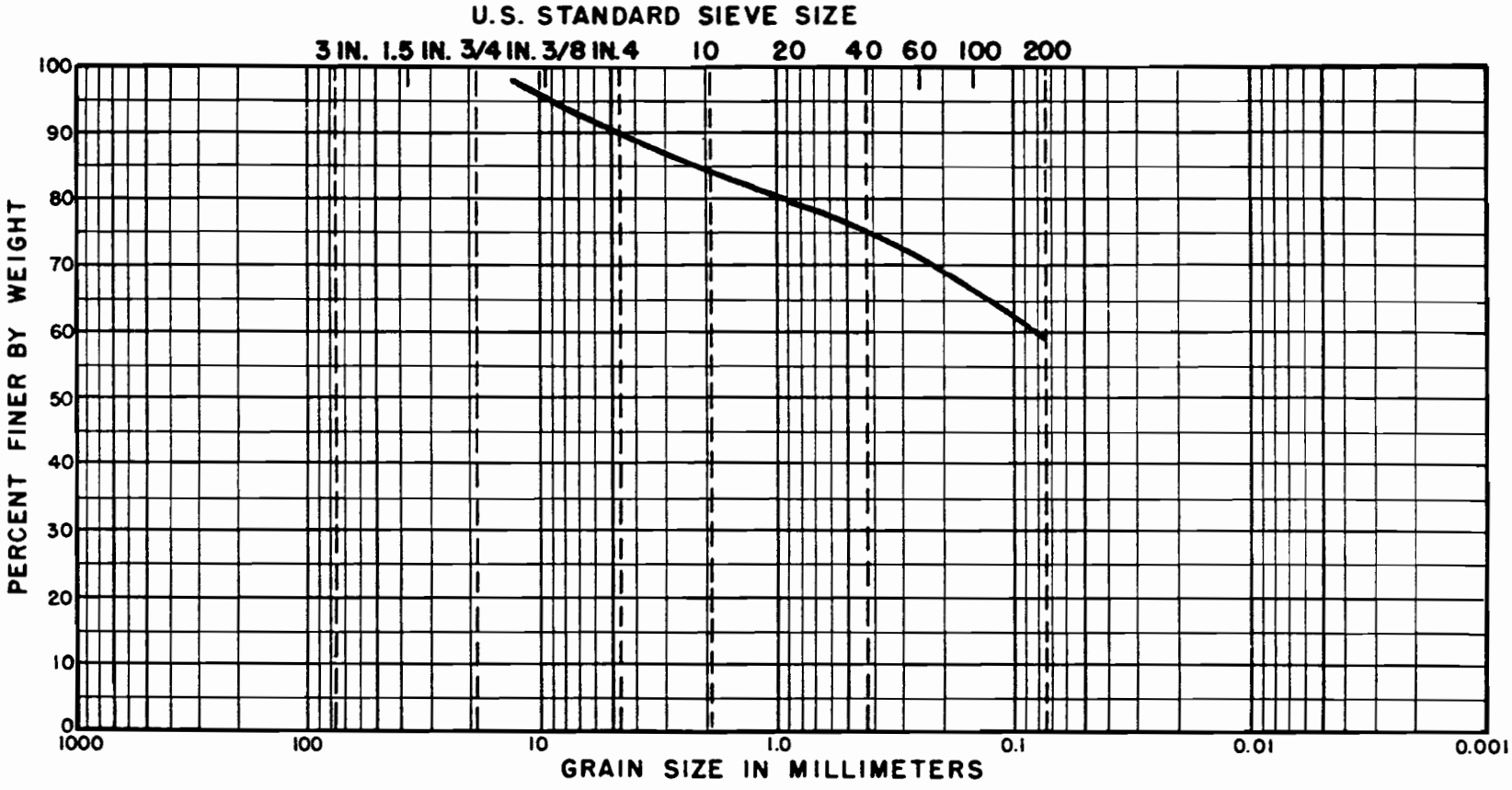
Note: Black sand sized particles and froth on top of solution in hydrometer; soapy odor

Color: Yellow

GRADATION CURVE

DAMES & MOORE

FIGURE B.7



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW1-B	50.0 - 51.5'	GM	PINKISH BROWN TILL					NASH ROAD SITE

DAMES & MOORE

FIGURE B.8

GRADATION CURVE

FILE

BY DATE

CHECKED BY DATE

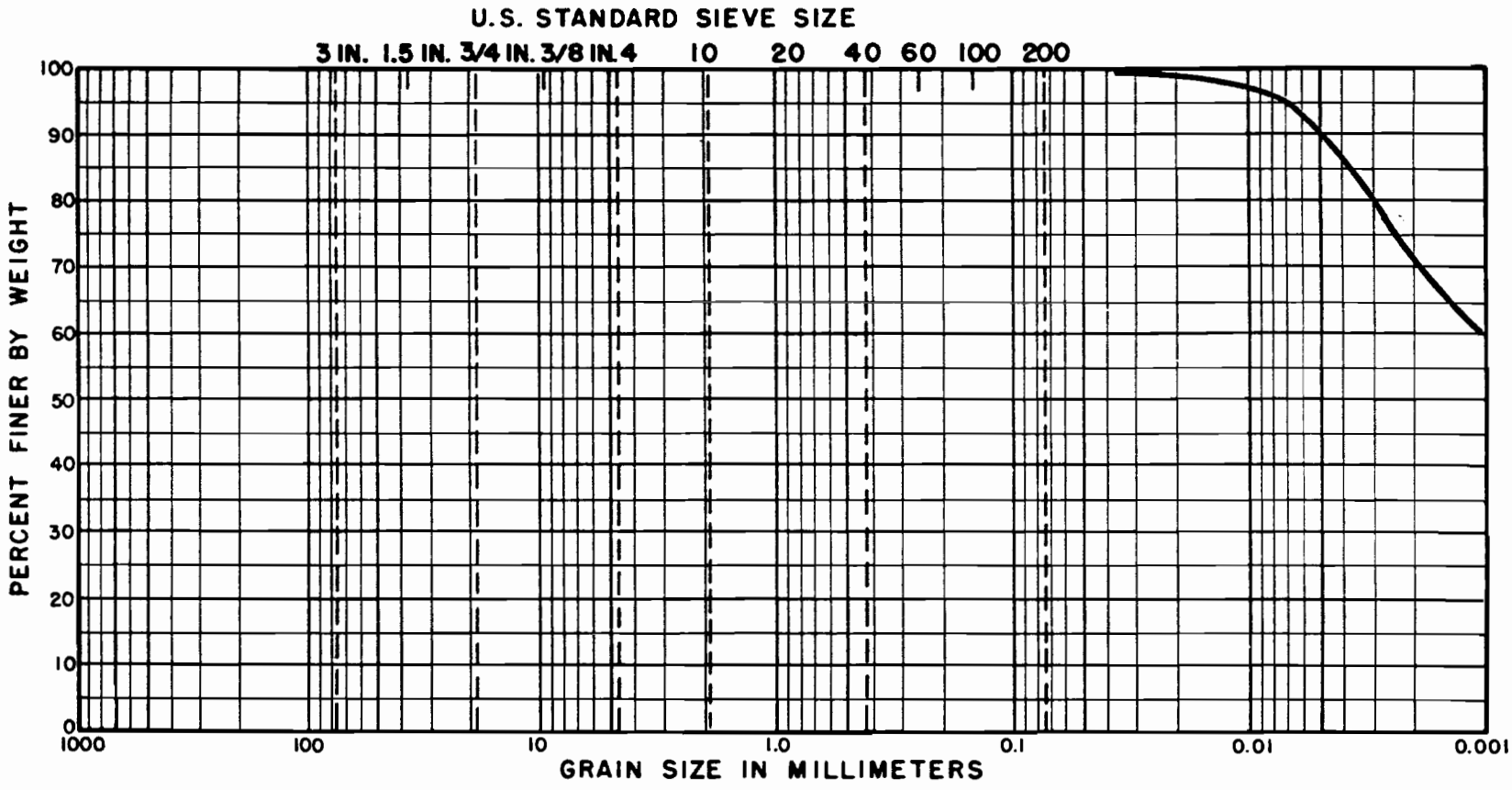
REVISIONS

BY DATE

BY DATE

PLATE OF

757.2 (REV. 4-62)



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

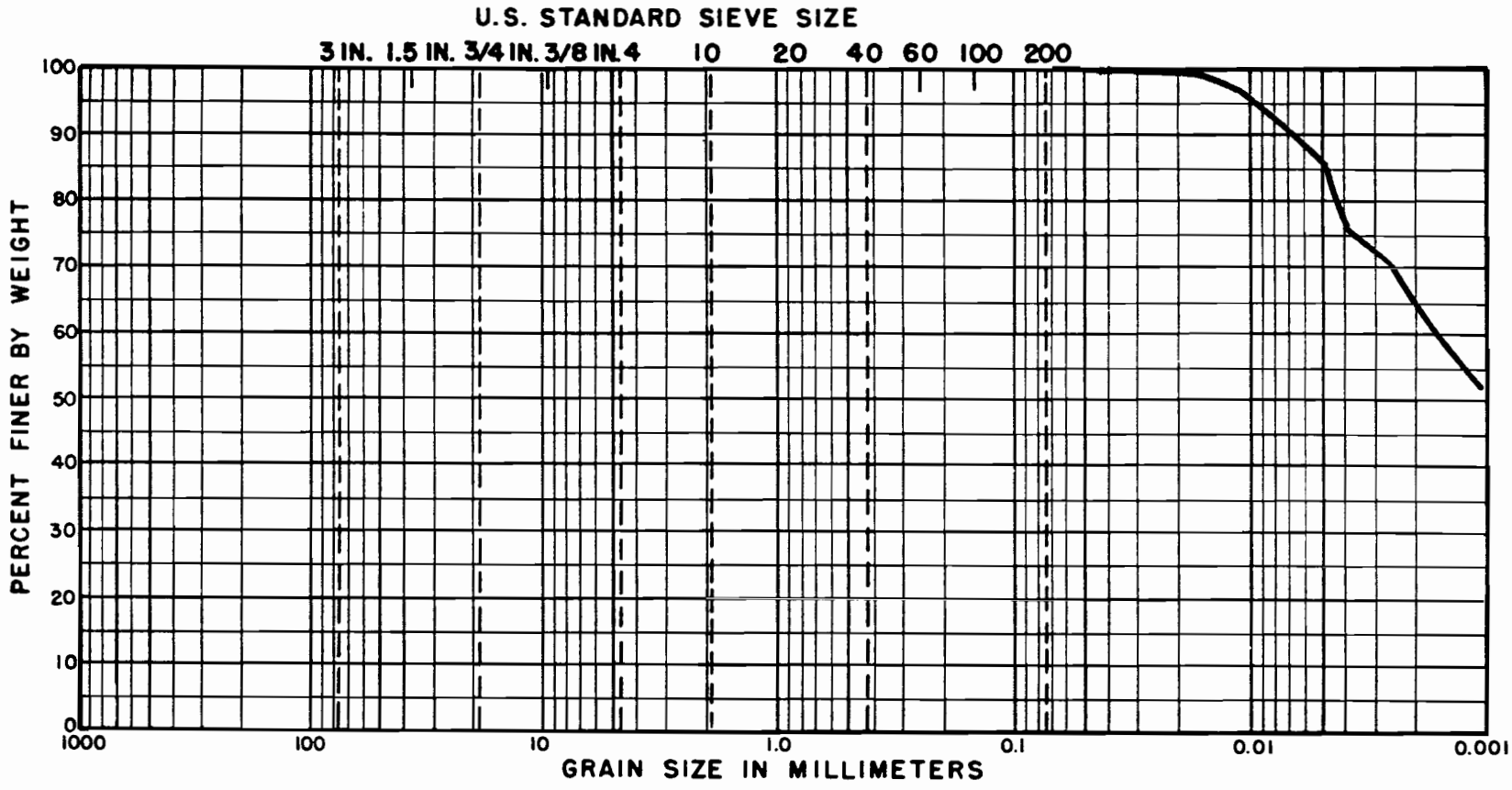
BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW-4	12.0' - 13.0'	CL	GRAY BROWN LACUSTRINE CLAY	33.2%				NASH ROAD SITE

COLOR: GRAY - BROWN

GRADATION CURVE

DAMES & MOORE

FIGURE B.9



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW-4	30.0' - 32.0'	CLT	BROWN LACUSTRINE CLAY	36.5%				NASH ROAD SITE

NOTE: Small bubbles throughout solution in hydrometer

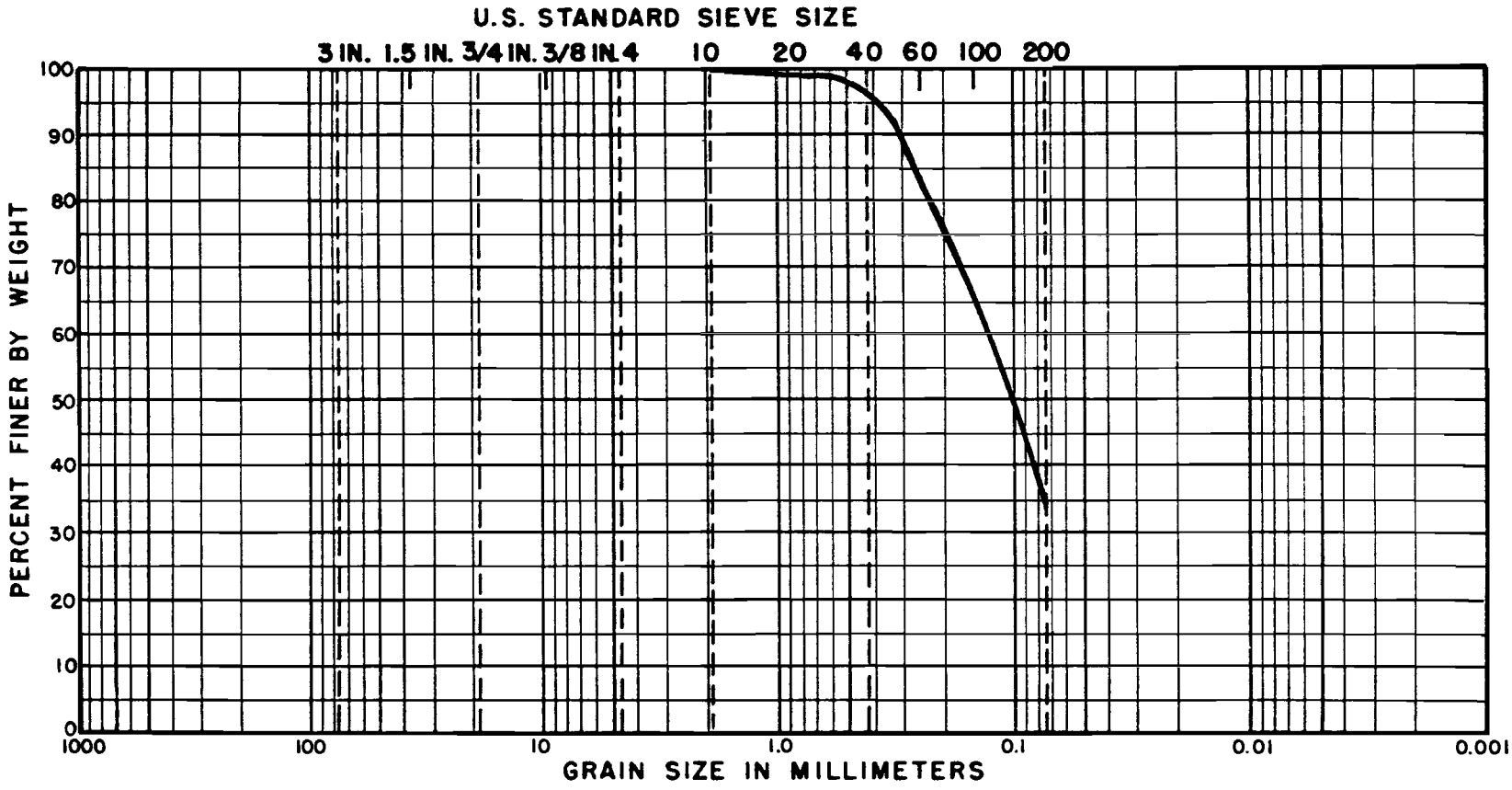
COLOR: Light brown

GRADATION CURVE

DAMES & MOORE

FIGURE B.10

757.2 (REV. 4-62)



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW-4	44.6 - 45.0'	SP	LOWER SAND UNIT					NASH ROAD SITE

DAMES & MOORE

GRADATION CURVE

FIGURE B.11

FILE 12505 DW3-19

BY D. Thomas DATE 8/14/84

CHECKED BY _____ DATE _____

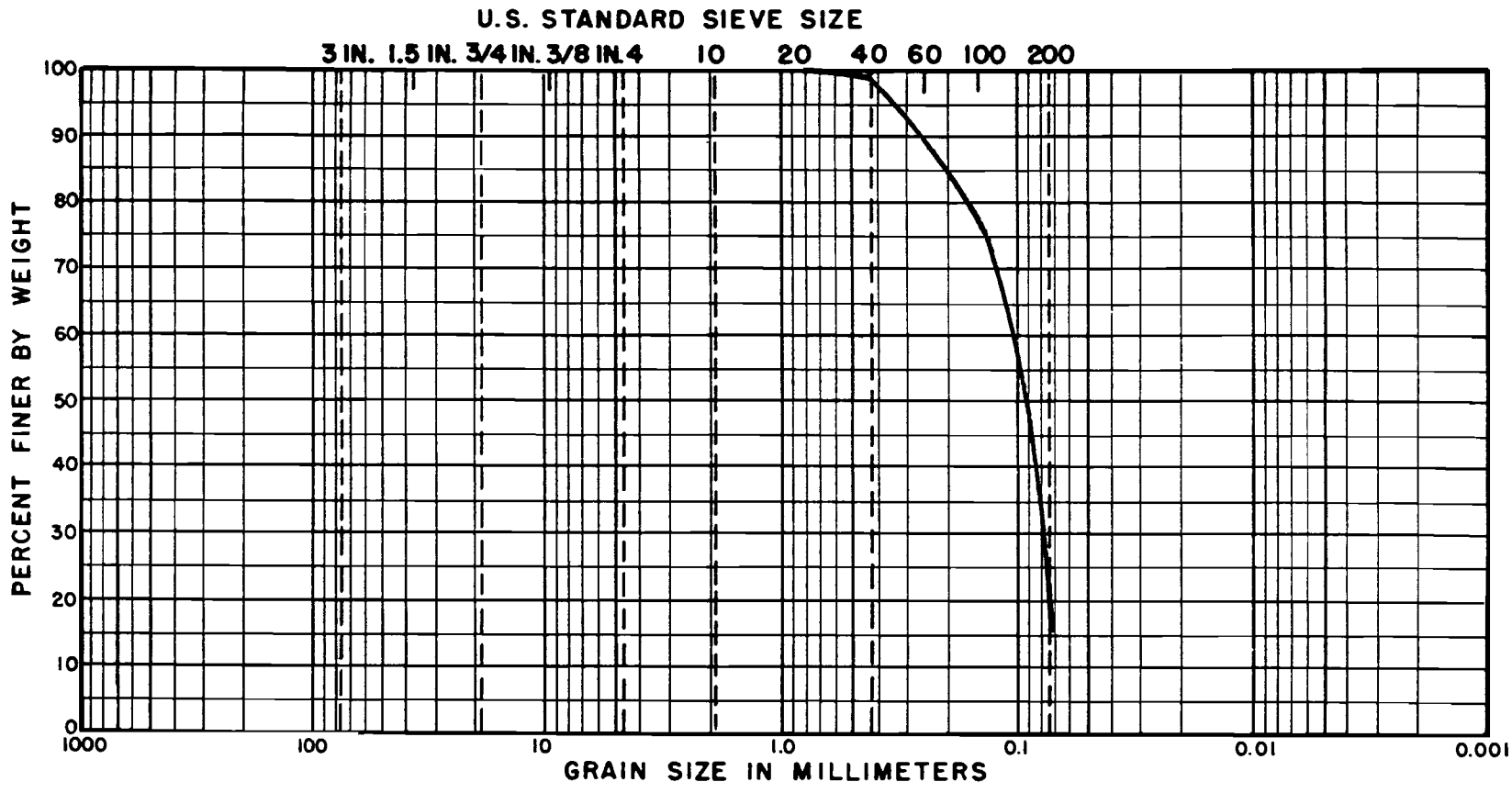
REVISIONS

BY _____ DATE _____

BY _____ DATE _____

PLATE _____ OF _____

757.2 (REV. 4-62)



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW-5	5.0 - 7.0'	SW	UPPER SAND UNIT					NASH ROAD SITE

DAMES & MOORE

FIGURE B.12

GRADATION CURVE

3303 B-19

BY D. Danca DATE 8/10/84

CHECKED BY _____ DATE _____

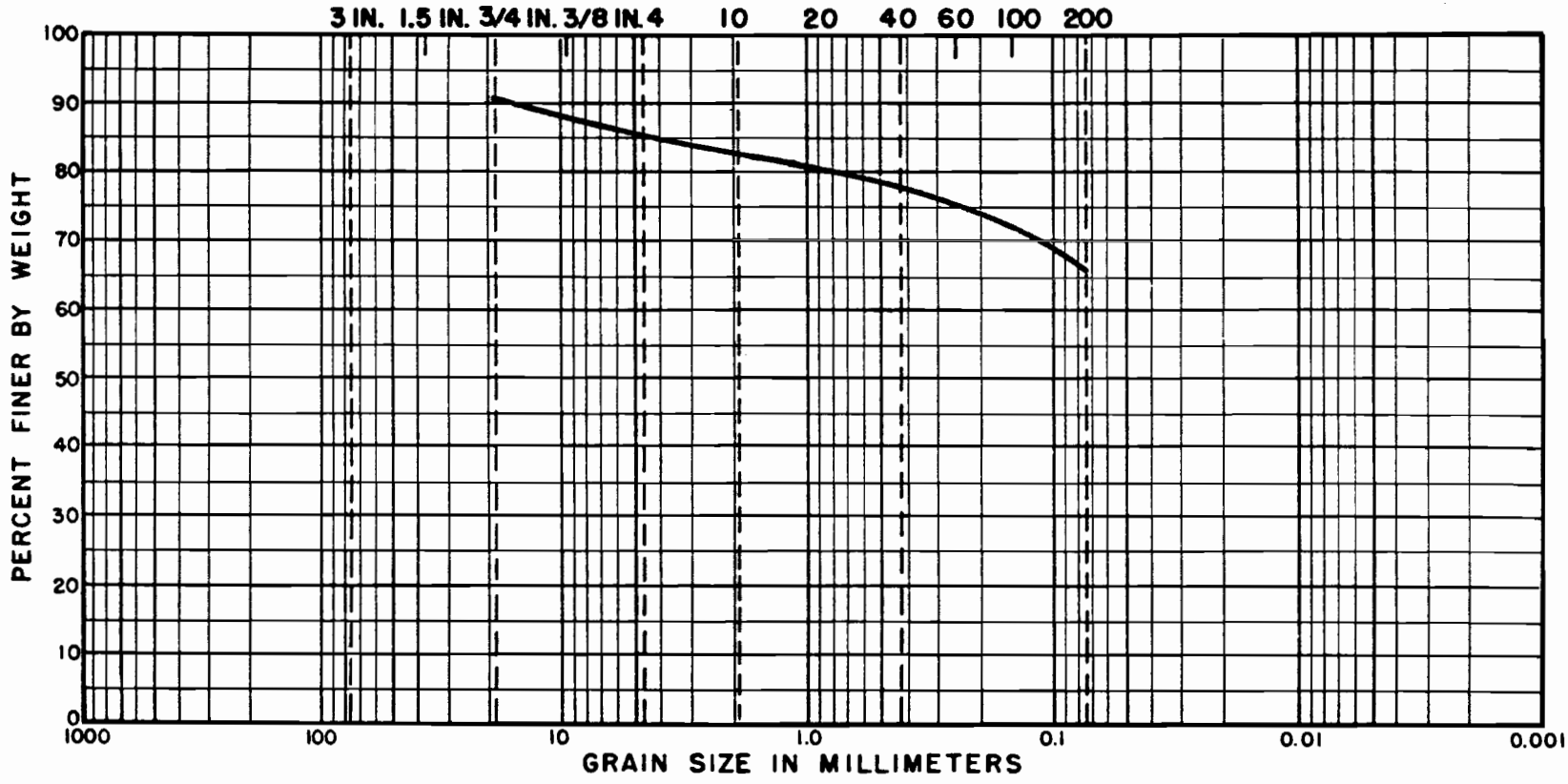
DIVISIONS

BY _____ DATE _____

BY _____ DATE _____

PLATE _____ OF _____

757.2 (REV. 4-62)



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

BORING	DEPTH	CLASSIFICATION		NAT. WC	LL	PL	PI	
OW-6	60.0 - 60.5'	GM	PINKISH BROWN TILL					NASH ROAD SITE

DAMES & MOORE

FIGURE B.13

GRADATION CURVE

Summary
In-Situ Permeability

Well	Permeability cm/sec	
OW-1	4.37×10^{-4}	silt
OW-2	6.75×10^{-4}	silt + sand
OW-1B	8.43×10^{-7}	till/bedrock
OW-3	1.43×10^{-6}	wet zone in till
OW-4	7.88×10^{-7}	till/bedrock
OW-5	7.5×10^{-4}	till/bedrock
OW-6	4.8×10^{-4}	till/bedrock

CALIBRATION DATA
Well 1 OW1
A=-5.6258E 01
B= 6.4516E-02
D= 0.0000E 00
J0= 272
T0= 81493

ET(sec)= 30
WELL DRAWDOWN
OW1 -2.96

ET(sec)= 61
WELL DRAWDOWN
OW1 -3.63

ET(sec)= 90
WELL DRAWDOWN
OW1 -4.27

ET(sec)= 121
WELL DRAWDOWN
OW1 -4.88

ET(sec)= 151
WELL DRAWDOWN
OW1 -5.22

ET(sec)= 180
WELL DRAWDOWN
OW1 -5.46

ET(sec)= 211
WELL DRAWDOWN
OW1 -5.61

ET(sec)= 241
WELL DRAWDOWN
OW1 -5.76

ET(sec)= 271
WELL DRAWDOWN
OW1 -5.87

ET(sec)= 301
WELL DRAWDOWN
OW1 -5.93

ET(sec)= 330
WELL DRAWDOWN
OW1 -6.00

ET(sec)= 361
WELL DRAWDOWN
OW1 -6.06

ET(sec)= 390
WELL DRAWDOWN
OW1 -6.12

ET(sec)= 421
WELL DRAWDOWN

ET(sec)= 421
WELL DRAWDOWN

OW1 -6.19

ET(sec)= 451
WELL DRAWDOWN

OW1 -6.19

ET(sec)= 481
WELL DRAWDOWN

OW1 -6.25

ET(sec)= 511
WELL DRAWDOWN

OW1 -6.32

ET(sec)= 540
WELL DRAWDOWN

OW1 -6.32

ET(sec)= 571
WELL DRAWDOWN

OW1 -6.32

ET(sec)= 600
WELL DRAWDOWN

OW1 -6.38

ET(sec)= 631
WELL DRAWDOWN

OW1 -6.38

ET(sec)= 661
WELL DRAWDOWN

OW1 -6.38

ET(sec)= 690
WELL DRAWDOWN

OW1 -6.38

ET(sec)= 721
WELL DRAWDOWN

OW1 -6.45

ET(sec)= 751
WELL DRAWDOWN

OW1 -6.45

ET(sec)= 781
WELL DRAWDOWN

OW1 -6.45

ET(sec)= 811
WELL DRAWDOWN

OW1 -6.45

ET(sec)= 841
WELL DRAWDOWN

OW1 -6.45

ET(sec)= 871
WELL DRAWDOWN

OW1 -6.45

ET(sec)= 901
WELL DRAWDOWN

OW1 -6.49

ET(sec)= 930
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 961
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 990
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 1021
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 1051
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 1080
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 1110
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 1141
WELL DRAWDOWN

OW1 -6.51

ET(sec)= 1171
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1200
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1231
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1261
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1291
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1320
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1350
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1380
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1410
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1380
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1410
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1441
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1471
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1500
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1530
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1561
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1591
WELL DRAWDOWN

OW1 -6.58

ET(sec)= 1621
WELL DRAWDOWN

OW1 -6.62

ET(sec)= 1651
WELL DRAWDOWN

OW1 -6.62

ET(sec)= 1681
WELL DRAWDOWN

OW1 -6.64

ET(sec)= 1711
WELL DRAWDOWN

OW1 -6.64

ET(sec)= 1741
WELL DRAWDOWN

OW1 -6.64

ET(sec)= 1771
WELL DRAWDOWN

OW1 -6.64

ET(sec)= 1800
WELL DRAWDOWN

OW1 -6.64

ET(sec)= 1830
WELL DRAWDOWN

CALIBRATION DATA
Well 1 OW1B
A=-5.6923E 01
B= 8.5279E-02
D= 0.0000E 00

J0= 273
T0= 62293

ET(sec)= 61
WELL DRAWDOWN

OW1B -1.58

ET(sec)= 121
WELL DRAWDOWN

OW1B -1.76

ET(sec)= 180
WELL DRAWDOWN

OW1B -1.89

ET(sec)= 241
WELL DRAWDOWN

OW1B -1.95

ET(sec)= 301
WELL DRAWDOWN

OW1B -2.08

ET(sec)= 361
WELL DRAWDOWN

OW1B -2.19

ET(sec)= 420
WELL DRAWDOWN

OW1B -2.28

ET(sec)= 481
WELL DRAWDOWN

OW1B -2.35

ET(sec)= 541
WELL DRAWDOWN

OW1B -2.48

ET(sec)= 601
WELL DRAWDOWN

OW1B -2.54

ET(sec)= 661
WELL DRAWDOWN

OW1B -2.61

ET(sec)= 721
WELL DRAWDOWN

OW1B -2.74

ET(sec)= 780
WELL DRAWDOWN

OW1B -2.80

ET(sec)= 840
WELL DRAWDOWN

OW1B -2.87

ET(sec)= 900
WELL DRAWDOWN

WELL DRAWDOWN

OW1B -2.87

ET(sec)= 900
WELL DRAWDOWN

OW1B -2.93

ET(sec)= 960
WELL DRAWDOWN

OW1B -3.00

ET(sec)= 1021
WELL DRAWDOWN

OW1B -3.06

ET(sec)= 1081
WELL DRAWDOWN

OW1B -3.17

ET(sec)= 1141
WELL DRAWDOWN

OW1B -3.26

ET(sec)= 1200
WELL DRAWDOWN

OW1B -3.32

ET(sec)= 1261
WELL DRAWDOWN

OW1B -3.39

ET(sec)= 1321
WELL DRAWDOWN

OW1B -3.45

ET(sec)= 1381
WELL DRAWDOWN

OW1B -3.52

ET(sec)= 1440
WELL DRAWDOWN

OW1B -3.59

ET(sec)= 1500
WELL DRAWDOWN

OW1B -3.65

ET(sec)= 1561
WELL DRAWDOWN

OW1B -3.22

ET(sec)= 1621
WELL DRAWDOWN

OW1B -3.78

ET(sec)= 1681
WELL DRAWDOWN

OW1B -3.85

ET(sec)= 1741
WELL DRAWDOWN

OW1B -3.91

ET(sec)= 1800
WELL DRAWDOWN

OW1B -3.98

ET(sec)= 1861
WELL DRAWDOWN

ET(sec)= 1981
WELL DRAWDOWN

OW1B -4.17

ET(sec)= 2041
WELL DRAWDOWN

OW1B -4.24

ET(sec)= 2101
WELL DRAWDOWN

OW1B -4.33

ET(sec)= 2161
WELL DRAWDOWN

OW1B -4.43

ET(sec)= 2220
WELL DRAWDOWN

OW1B -4.46

ET(sec)= 2280
WELL DRAWDOWN

OW1B -4.56

ET(sec)= 2340
WELL DRAWDOWN

OW1B -4.56

ET(sec)= 2400
WELL DRAWDOWN

OW1B -4.65

ET(sec)= 2461
WELL DRAWDOWN

OW1B -4.70

ET(sec)= 2520
WELL DRAWDOWN

OW1B -4.76

ET(sec)= 2580
WELL DRAWDOWN

OW1B -4.83

ET(sec)= 2640
WELL DRAWDOWN

OW1B -4.89

ET(sec)= 2701
WELL DRAWDOWN

OW1B -4.96

ET(sec)= 2761
WELL DRAWDOWN

OW1B -5.02

ET(sec)= 2821
WELL DRAWDOWN

OW1B -5.09

ET(sec)= 2880
WELL DRAWDOWN

ET(sec)=
WELL DRAWDOWN

OW1B -5.02

ET(sec)= 2821
WELL DRAWDOWN

OW1B -5.09

ET(sec)= 2880
WELL DRAWDOWN

OW1B -5.15

ET(sec)= 2941
WELL DRAWDOWN

OW1B -5.22

ET(sec)= 3001
WELL DRAWDOWN

OW1B -5.28

ET(sec)= 3061
WELL DRAWDOWN

OW1B -5.35

ET(sec)= 3121
WELL DRAWDOWN

OW1B -5.41

ET(sec)= 3181
WELL DRAWDOWN

OW1B -5.46

ET(sec)= 3240
WELL DRAWDOWN

OW1B -5.48

ET(sec)= 3300
WELL DRAWDOWN

OW1B -5.54

ET(sec)= 3361
WELL DRAWDOWN

OW1B -5.61

ET(sec)= 1370
WELL DRAWDOWN

OW2 -3.05

ET(sec)= 1396
WELL DRAWDOWN

OW2 -2.85

ET(sec)= 1422
WELL DRAWDOWN

OW2 -2.69

ET(sec)= 1449
WELL DRAWDOWN

OW2 -2.51

ET(sec)= 1475
WELL DRAWDOWN

OW2 -2.31

ET(sec)= 1501
WELL DRAWDOWN

OW2 -2.11

ET(sec)= 1527
WELL DRAWDOWN

OW2 -1.96

ET(sec)= 1554
WELL DRAWDOWN

OW2 -1.78

ET(sec)= 1580
WELL DRAWDOWN

OW2 -1.58

ET(sec)= 1606
WELL DRAWDOWN

OW2 -1.42

ET(sec)= 1633
WELL DRAWDOWN

OW2 -1.24
J0= 273
T0= 59355

ET(sec)= 16
WELL DRAWDOWN

OW2 -0.57

ET(sec)= 42
WELL DRAWDOWN

OW2 -0.57

ET(sec)= 68
WELL DRAWDOWN

OW2 -0.57

ET(sec)= 94
WELL DRAWDOWN

ET(sec)=
WELL DRAWDOWN

OW2 -1.15

ET(sec)= 119
WELL DRAWDOWN

OW2 -1.73

ET(sec)= 145
WELL DRAWDOWN

OW2 -2.33

ET(sec)= 171
WELL DRAWDOWN

OW2 -2.91

ET(sec)= 196
WELL DRAWDOWN

OW2 -3.51

ET(sec)= 222
WELL DRAWDOWN

OW2 -4.12

ET(sec)= 248
WELL DRAWDOWN

OW2 -4.72

ET(sec)= 273
WELL DRAWDOWN

OW2 -5.25

ET(sec)= 299
WELL DRAWDOWN

OW2 -5.65

ET(sec)= 325
WELL DRAWDOWN

OW2 -5.99

ET(sec)= 351
WELL DRAWDOWN

OW2 -6.28

ET(sec)= 377
WELL DRAWDOWN

OW2 -6.52

ET(sec)= 403
WELL DRAWDOWN

OW2 -6.72

ET(sec)= 429
WELL DRAWDOWN

OW2 -6.86

ET(sec)= 455
WELL DRAWDOWN

OW2 -7.01

ET(sec)= 481
WELL DRAWDOWN

OW2 -7.12

ET(sec)= 507
WELL DRAWDOWN

OW2 -7.26

ET(sec)= 533
WELL DRAWDOWN

WELL DRAWDOWN

OW2 -7.26

ET(sec)= 533
WELL DRAWDOWN

OW2 -7.32

ET(sec)= 560
WELL DRAWDOWN

OW2 -7.39

ET(sec)= 586
WELL DRAWDOWN

OW2 -7.46

ET(sec)= 612
WELL DRAWDOWN

OW2 -7.50

ET(sec)= 638
WELL DRAWDOWN

OW2 -7.52

ET(sec)= 665
WELL DRAWDOWN

OW2 -7.59

ET(sec)= 691
WELL DRAWDOWN

OW2 -7.59

ET(sec)= 717
WELL DRAWDOWN

OW2 -7.66

ET(sec)= 743
WELL DRAWDOWN

OW2 -7.66

ET(sec)= 769
WELL DRAWDOWN

OW2 -7.66

ET(sec)= 796
WELL DRAWDOWN

OW2 -7.70

ET(sec)= 822
WELL DRAWDOWN

OW2 -7.72

ET(sec)= 848
WELL DRAWDOWN

OW2 -7.72

ET(sec)= 874
WELL DRAWDOWN

OW2 -7.72

ET(sec)= 900
WELL DRAWDOWN

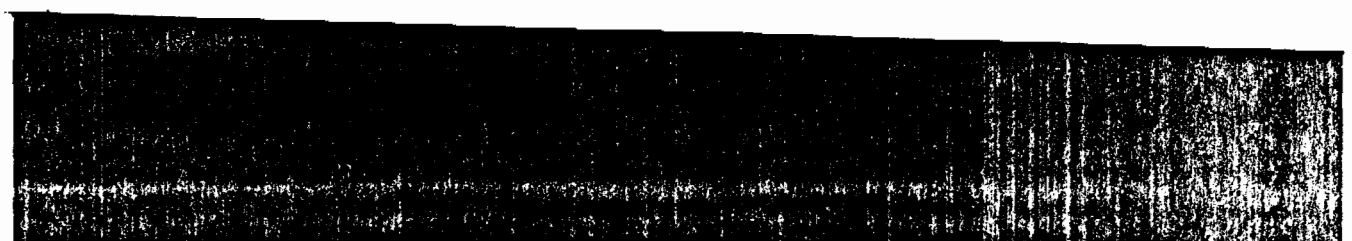
OW2 -7.72

ET(sec)= 926
WELL DRAWDOWN

OW2 -7.79

ET(sec)= 952
WELL DRAWDOWN

```
OW2              -7.70

ET(sec)=   822
WELL       DRAWDOWN

OW2              -7.72

ET(sec)=   848
WELL       DRAWDOWN

OW2              -7.72

ET(sec)=   874
WELL       DRAWDOWN

OW2              -7.72

ET(sec)=   900
WELL       DRAWDOWN

OW2              -7.72

ET(sec)=   926
WELL       DRAWDOWN

OW2              -7.79

ET(sec)=   952
WELL       DRAWDOWN

OW2              -7.79

ET(sec)=   979
WELL       DRAWDOWN

OW2              -7.79
```



CALIBRATION DATA
Well 1 OW3
A=-6.7066E 01
B= 8.2644E-02
D= 1.5000E 01
J0= 272
T0= 71820

ET(sec)= 60
WELL DRAWDOWN

OW3 8.09

ET(sec)= 121
WELL DRAWDOWN

OW3 7.93

ET(sec)= 180
WELL DRAWDOWN

OW3 7.85

ET(sec)= 241
WELL DRAWDOWN

OW3 7.76

ET(sec)= 301
WELL DRAWDOWN

OW3 7.60

ET(sec)= 360
WELL DRAWDOWN

OW3 7.52

ET(sec)= 421
WELL DRAWDOWN

OW3 7.43

ET(sec)= 481
WELL DRAWDOWN

OW3 7.30

ET(sec)= 541
WELL DRAWDOWN

OW3 7.19

ET(sec)= 600
WELL DRAWDOWN

OW3 7.10

ET(sec)= 661
WELL DRAWDOWN

OW3 7.02

ET(sec)= 721
WELL DRAWDOWN

OW3 6.94

ET(sec)= 781
WELL DRAWDOWN

OW3 6.77

ET(sec)= 841
WELL DRAWDOWN

OW3 6.69

ET(sec)= 900
WELL DRAWDOWN

OW3 6.61

ET(sec)= 961
WELL DRAWDOWN

OW3 6.44

ET(sec)= 1021
WELL DRAWDOWN

OW3 6.36

ET(sec)= 1081
WELL DRAWDOWN

OW3 6.28

ET(sec)= 1141
WELL DRAWDOWN

OW3 6.19

ET(sec)= 1200
WELL DRAWDOWN

OW3 6.11

ET(sec)= 1261
WELL DRAWDOWN

OW3 6.36

ET(sec)= 1321
WELL DRAWDOWN

OW3 6.28

ET(sec)= 1381
WELL DRAWDOWN

OW3 6.19

ET(sec)= 1441
WELL DRAWDOWN

OW3 6.11

ET(sec)= 1501
WELL DRAWDOWN

OW3 6.03

ET(sec)= 1561
WELL DRAWDOWN

OW3 5.95

ET(sec)= 1621
WELL DRAWDOWN

OW3 5.86

ET(sec)= 1681
WELL DRAWDOWN

OW3 5.78

ET(sec)= 1741
WELL DRAWDOWN

OW3 5.61

ET(sec)= 1800
WELL DRAWDOWN

OW3 5.61

ET(sec)= 1861
WELL DRAWDOWN

OW3 5.50

ET(sec)= 1921
WELL DRAWDOWN

OW3 5.37

ET(sec)= 1981
WELL DRAWDOWN

OW3 5.37

ET(sec)= 1941
WELL DRAWDOWN

OW3 5.37

ET(sec)= 1981
WELL DRAWDOWN

OW3 5.37

ET(sec)= 2041
WELL DRAWDOWN

OW3 5.28

ET(sec)= 2101
WELL DRAWDOWN

OW3 5.15

ET(sec)= 2160
WELL DRAWDOWN

OW3 5.04

ET(sec)= 2220
WELL DRAWDOWN

OW3 4.95

ET(sec)= 2280
WELL DRAWDOWN

OW3 4.87

ET(sec)= 2340
WELL DRAWDOWN

OW3 4.79

ET(sec)= 2400
WELL DRAWDOWN

OW3 4.71

ET(sec)= 2461
WELL DRAWDOWN

OW3 4.62

ET(sec)= 2521
WELL DRAWDOWN

OW3 4.54

ET(sec)= 2581
WELL DRAWDOWN

OW3 4.46

ET(sec)= 2641
WELL DRAWDOWN

OW3 4.38

ET(sec)= 2700
WELL DRAWDOWN

OW3 4.29

ET(sec)= 2760
WELL DRAWDOWN

OW3 4.21

ET(sec)= 2821
WELL DRAWDOWN

OW3 4.13

ET(sec)= 2881
WELL DRAWDOWN

OW3 4.04

ET(sec)= 2941
WELL DRAWDOWN

ET(sec)= 2700
WELL DRAWDOWN

OW3 4.29

ET(sec)= 2760
WELL DRAWDOWN

OW3 4.21

ET(sec)= 2821
WELL DRAWDOWN

OW3 4.13

ET(sec)= 2881
WELL DRAWDOWN

OW3 4.04

ET(sec)= 2941
WELL DRAWDOWN

OW3 3.96

ET(sec)= 3001
WELL DRAWDOWN

OW3 3.88

ET(sec)= 3061
WELL DRAWDOWN

OW3 3.80

ET(sec)= 3121
WELL DRAWDOWN

OW3 3.71

ET(sec)= 3181
WELL DRAWDOWN

OW3 3.63

ET(sec)= 3241
WELL DRAWDOWN

OW3 3.55

ET(sec)= 3301
WELL DRAWDOWN

OW3 3.47

ET(sec)= 3360
WELL DRAWDOWN

OW3 3.38

ET(sec)= 3421
WELL DRAWDOWN

OW3 3.30

ET(sec)= 3481
WELL DRAWDOWN

OW3 3.22

ET(sec)= 3541
WELL DRAWDOWN

OW3 3.14

ET(sec)= 3601
WELL DRAWDOWN

OW3 3.08

ET(sec)= 3660
WELL DRAWDOWN

CALIBRATION DATA
Well 1 OW4
A=-6.1285E 01
B= 7.1428E-02
D= 0.0000E 00
J0= 223
T0= 81079

ET(sec)= 60
WELL DRAWDOWN

OW4 -14.00

ET(sec)= 121
WELL DRAWDOWN

OW4 -14.21

ET(sec)= 180
WELL DRAWDOWN

OW4 -14.35

ET(sec)= 241
WELL DRAWDOWN

OW4 -14.50

ET(sec)= 300
WELL DRAWDOWN

OW4 -14.64

ET(sec)= 361
WELL DRAWDOWN

OW4 -14.78

ET(sec)= 420
WELL DRAWDOWN

OW4 -14.85

ET(sec)= 481
WELL DRAWDOWN

OW4 -15.00

ET(sec)= 541
WELL DRAWDOWN

OW4 -15.07

ET(sec)= 600
WELL DRAWDOWN

OW4 -15.14

ET(sec)= 661
WELL DRAWDOWN

OW4 -15.21

ET(sec)= 720
WELL DRAWDOWN

OW4 -15.28

ET(sec)= 781
WELL DRAWDOWN

OW4 -15.35

ET(sec)= 841
WELL DRAWDOWN

OW4 -15.42

ET(sec)= 900
WELL DRAWDOWN

OW4 -15.50

ET(sec)= 960
WELL DRAWDOWN

OW4	-15.50
ET(sec)=	960
WELL	DRAWDOWN
OW4	-15.57
ET(sec)=	1021
WELL	DRAWDOWN
OW4	-15.64
ET(sec)=	1081
WELL	DRAWDOWN
OW4	-15.64
ET(sec)=	1141
WELL	DRAWDOWN
OW4	-15.71
ET(sec)=	1201
WELL	DRAWDOWN
OW4	-15.78
ET(sec)=	1261
WELL	DRAWDOWN
OW4	-15.85
ET(sec)=	1321
WELL	DRAWDOWN
OW4	-15.85
ET(sec)=	1380
WELL	DRAWDOWN
OW4	-15.92
ET(sec)=	1440
WELL	DRAWDOWN
OW4	-16.00
ET(sec)=	1501
WELL	DRAWDOWN
OW4	-16.07
ET(sec)=	1561
WELL	DRAWDOWN
OW4	-16.07
ET(sec)=	1621
WELL	DRAWDOWN
OW4	-16.14
ET(sec)=	1680
WELL	DRAWDOWN
OW4	-16.21
ET(sec)=	1740
WELL	DRAWDOWN
OW4	-16.21
ET(sec)=	1801
WELL	DRAWDOWN
OW4	-16.28
ET(sec)=	1861
WELL	DRAWDOWN
OW4	-16.35
ET(sec)=	1920
WELL	DRAWDOWN
OW4	-16.42

ET(sec)= 1801
WELL DRAWDOWN

OW4 -16.28

ET(sec)= 1861
WELL DRAWDOWN

OW4 -16.35

ET(sec)= 1920
WELL DRAWDOWN

OW4 -16.42

ET(sec)= 1980
WELL DRAWDOWN

OW4 -16.50

ET(sec)= 2040
WELL DRAWDOWN

OW4 -16.50

ET(sec)= 2100
WELL DRAWDOWN

OW4 -16.57

ET(sec)= 2161
WELL DRAWDOWN

OW4 -16.57

ET(sec)= 2221
WELL DRAWDOWN

OW4 -1.49

ET(sec)= 2280
WELL DRAWDOWN

OW4 -1.35

ET(sec)= 2341
WELL DRAWDOWN

OW4 -1.21

ET(sec)= 2401
WELL DRAWDOWN

OW4 -0.99

OUT OF WATER
CONTACT [illegible]

ET(sec)= 2461
WELL DRAWDOWN

W4 -0.92

RECOVERY TEST
7/11/84

WATER LEVEL
IS WATER
ABOVE XDUCER
TRANSDUCER AT
DEPTH OF 30'

OW-5

TIME	WATER LEVEL
17.0556	16.7000
17.0611	16.7000
17.0625	16.7000
START	
17.0933	15.7967
17.0933	16.7645
17.0933	15.2161
17.0933	15.4096
17.0933	15.5387
17.0933	15.6032
17.0933	15.8612
1	15.5387
17.0933	15.6677
17.0933	15.2806
17.0933	14.9580
17.0933	15.1516
17.1122	15.3451
17.1122	15.4741
17.1122	15.6032
17.1122	15.7322
17.1122	15.7967
17.1122	15.9258
17.1247	16.3129
17.1318	16.5709
START	
17.1512	15.6032
17.1542	16.1838
17.1613	16.5064
17.1642	16.6354
17.1712	16.7645
17.1743	16.7645
17.1812	16.7645
17.1842	16.8290
17.1913	16.8290
17.1942	16.8290
17.2012	16.8290
17.2043	16.8290
17.2112	16.7645
17.2142	16.8290

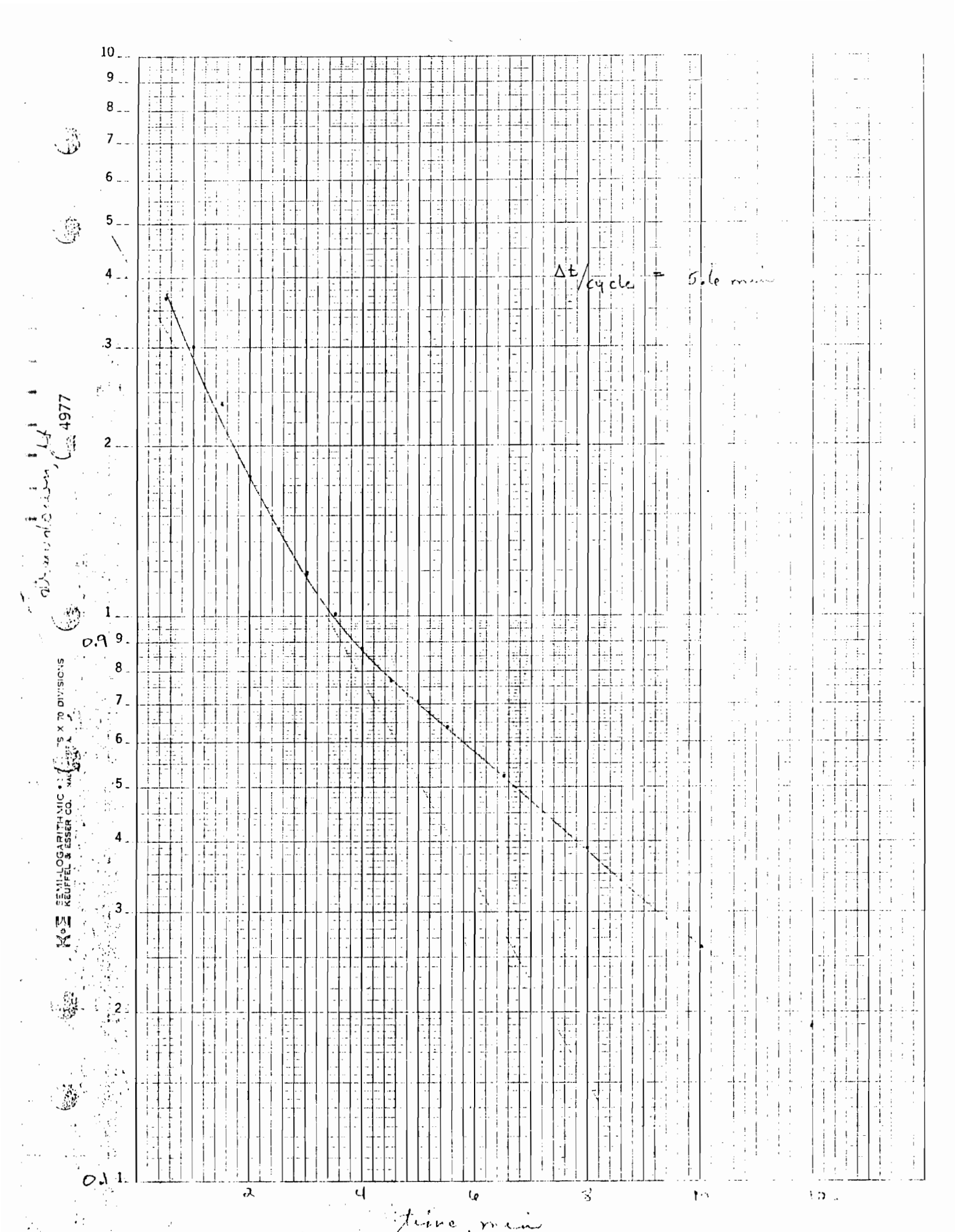
static 14.3' below
top of casing
S.U. 1.3'

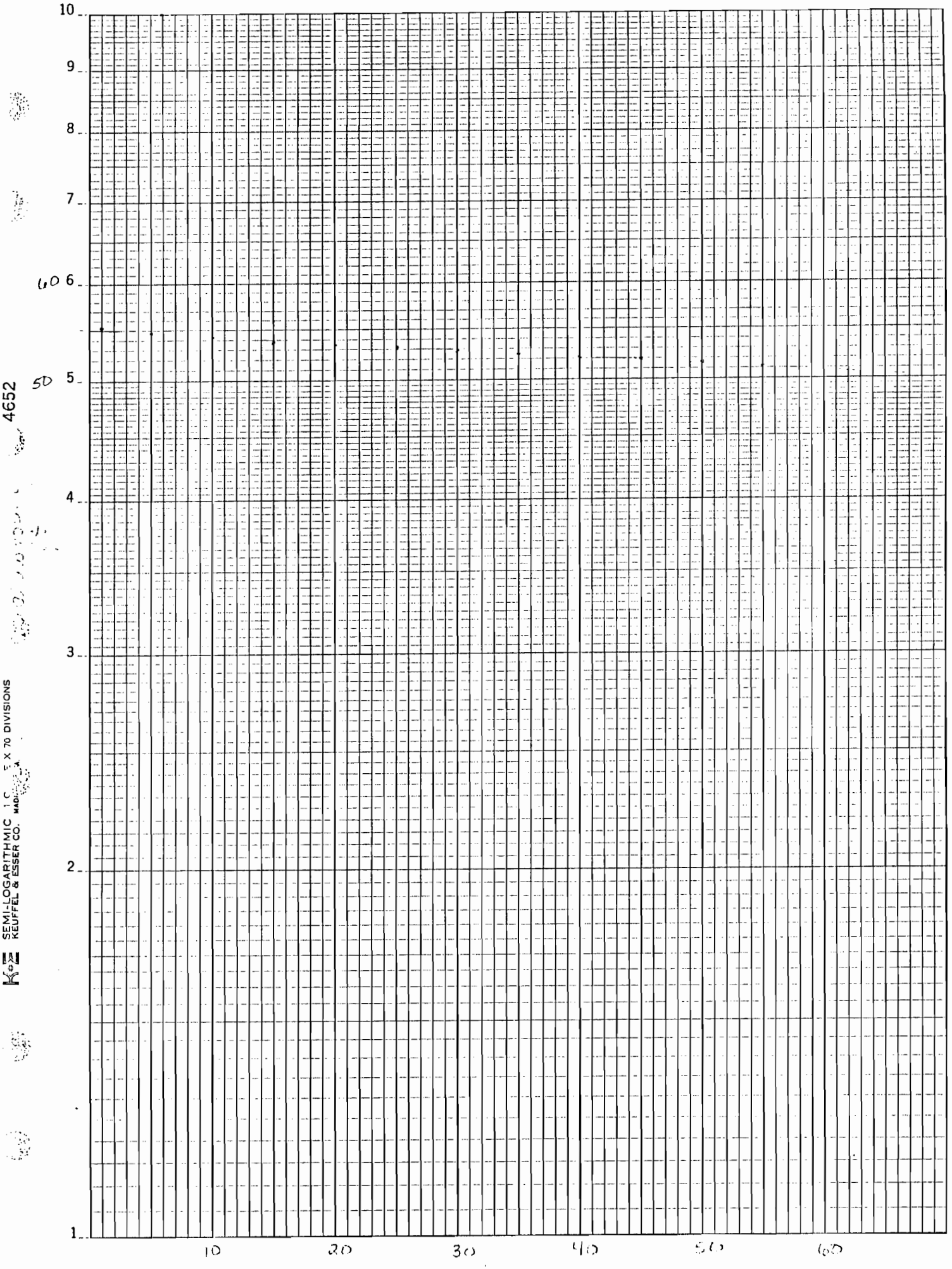
XDUCER AT
~35'0 Down
HOLE

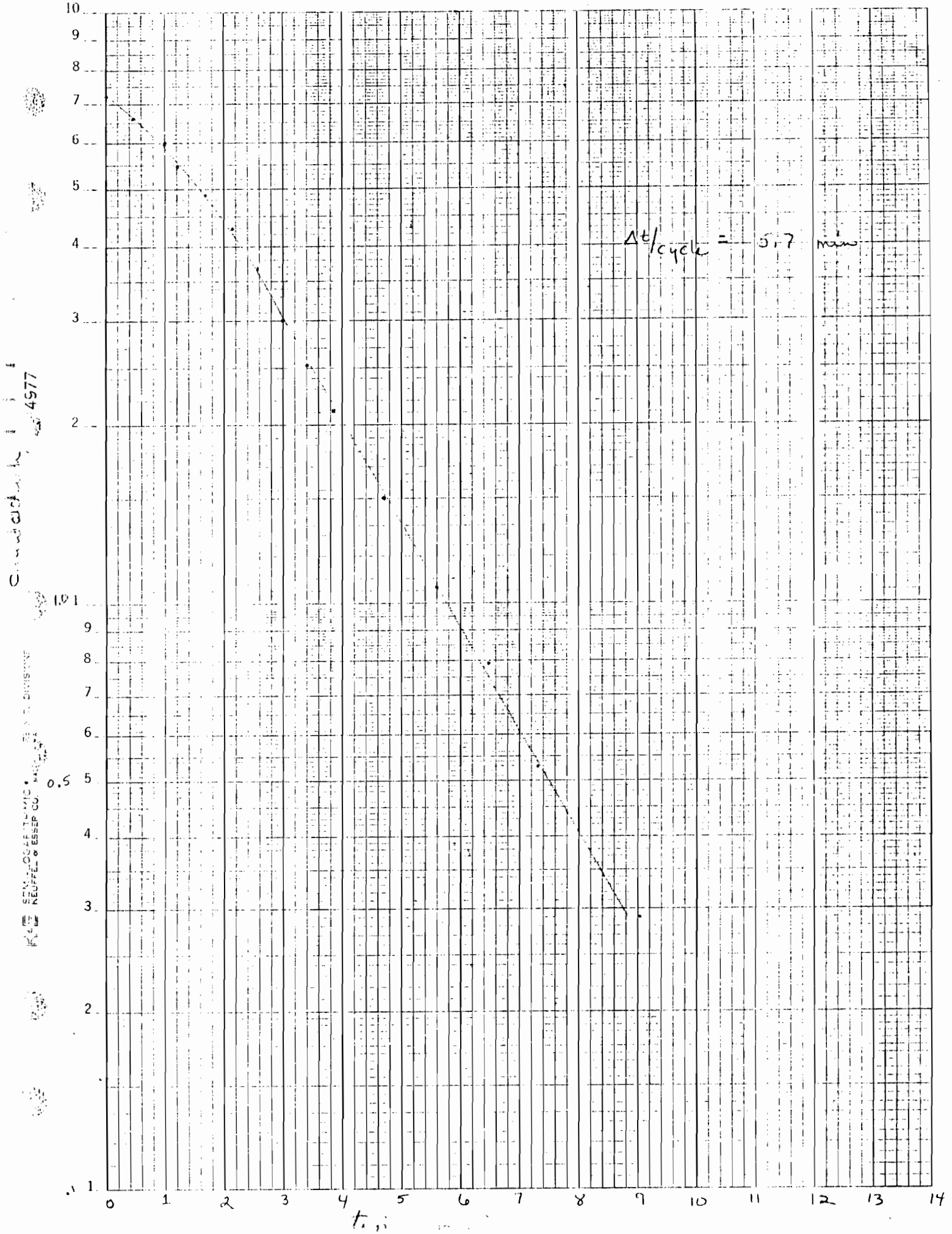
OW-6

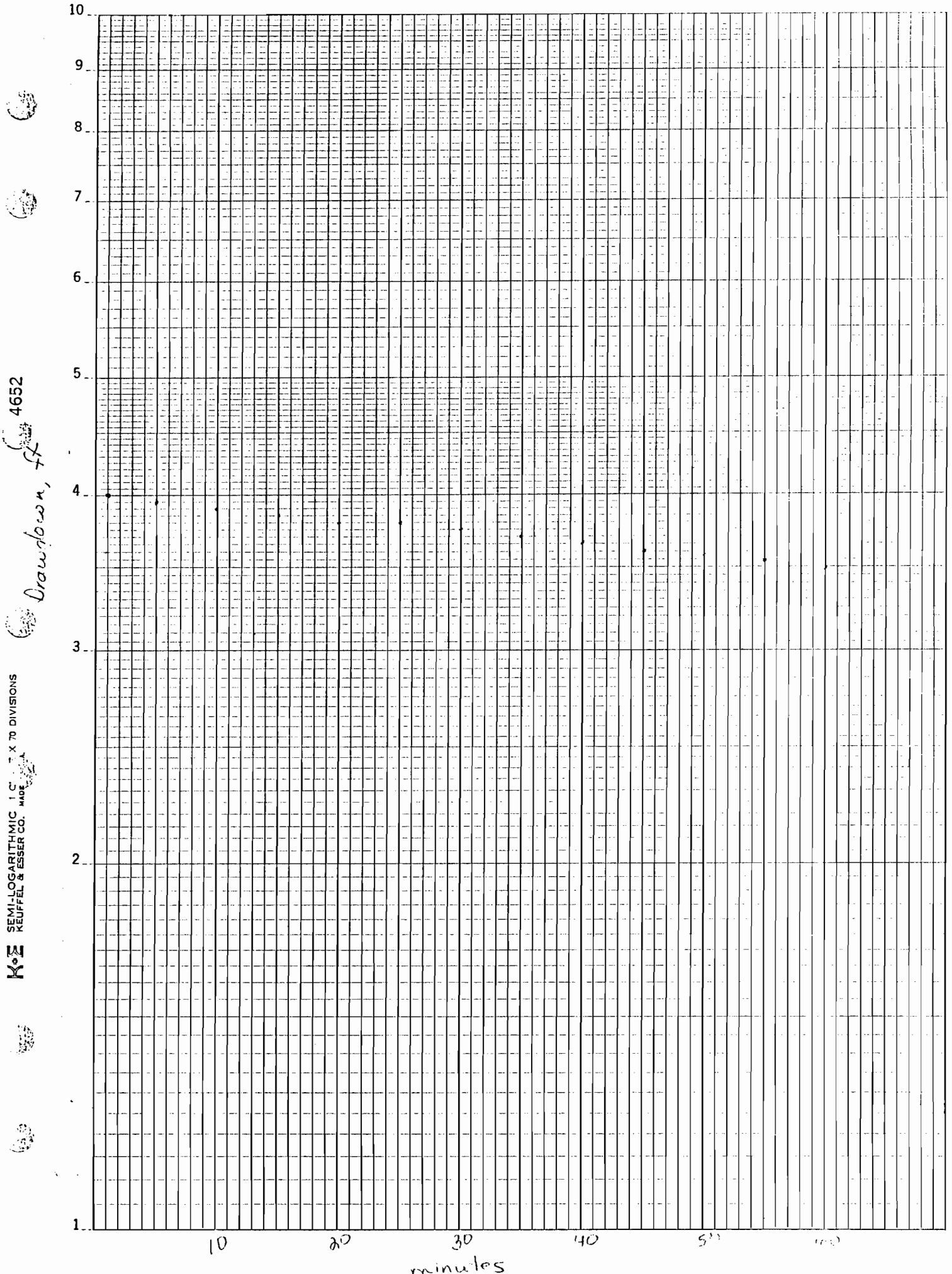
TIME	WATER LEVEL
17.4344	17.7653
17.4354	17.7653
17.4404	17.7653
17.4923	15.8202
17.4933	15.8045
17.4944	16.0006
17.5021	15.8045
17.5036	16.0006
17.5051	16.2620
17.5106	16.4581
17.5121	16.5888
17.5136	16.7196
17.5205	17.5432*

* SUSPECT DATA
static = 17.25' stick up 0.9'

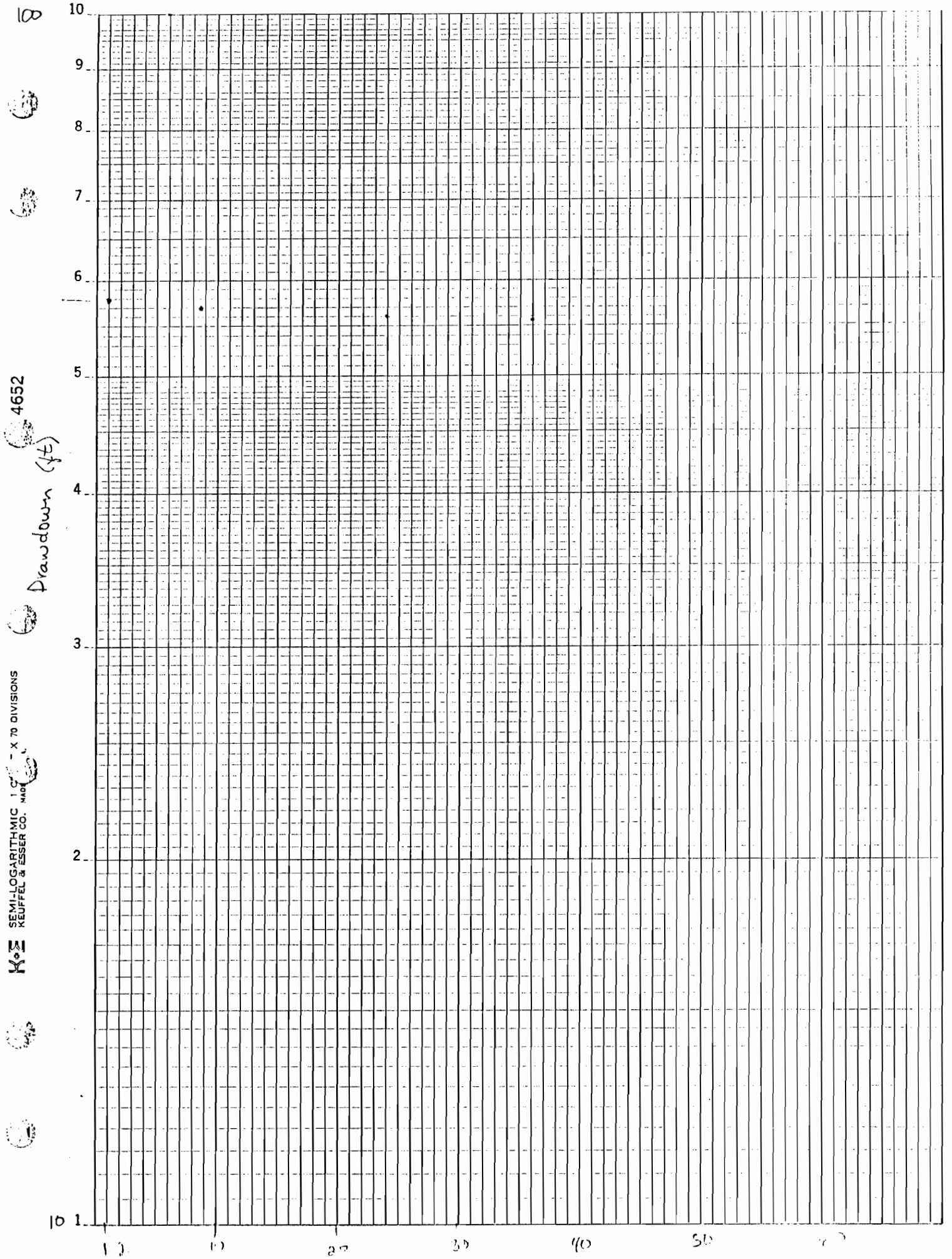

Δt/cycle = 5.16 min
time, min
SEMI-LOGARITHMIC
KEUFFEL & ESSER CO.

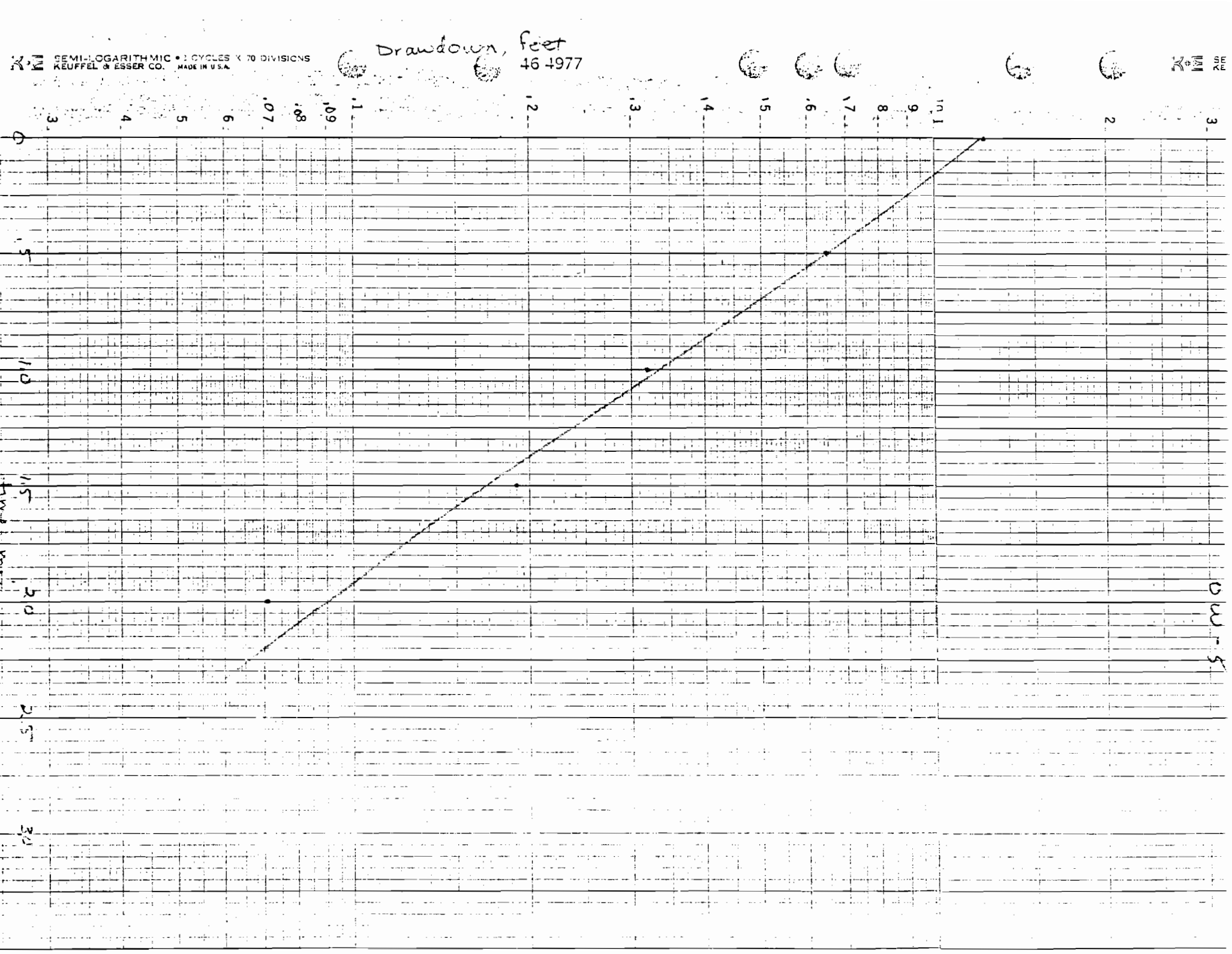

10
9
8
7
6
5
4
3
2
1
10
20
30
40
50
60
4652
SEMI-LOGARITHMIC 1 C 5 X 70 DIVISIONS
KEUFFEL & ESSER CO.

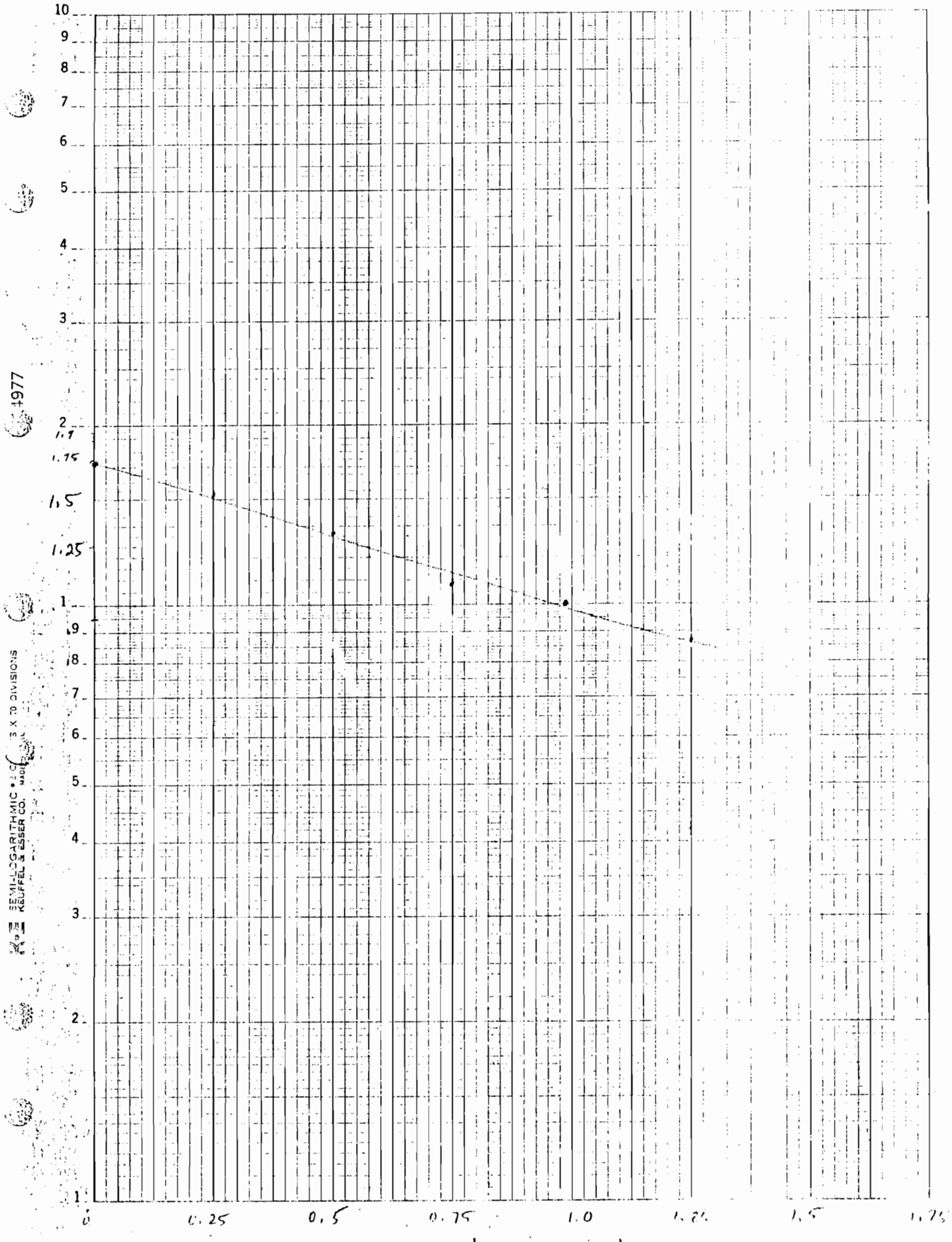

Δt/cycle = 5.7 min
4977
SEN-LOGARITHMIC
KEUFFEL & ESSER CO.
0.5
1.0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
t, ;


10
9
8
7
6
5
4
3
2
1
10
20
30
40
minutes
4652
Draw down, ft
SEMI-LOGARITHMIC 1 C
KEUFFEL & ESSER CO. MADE
X 70 DIVISIONS

OW-4


100
10
9
8
7
6
5
4
3
2
10 1
4652
Drawdown (ft)
SEMI-LOGARITHMIC 1 CY. X 70 DIVISIONS
KEUFFEL & ESSER CO.


SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.
Drawdown, feet
46 4977
Drawdown, feet


1977
SEMI-LOGARITHMIC
KEUFFEL & ESSER CO.
10
9
8
7
6
5
4
3
2
1
1.75
1.5
1.25
1
0
0.25
0.5
0.75
1.0
1.5

~~check~~ ~~OW-10~~

Case F OW-1

from straight line

assume $m = 1$ $H_1 = 2.63$ ft $= 80.2$ cm

$L = 6$ ft $= 183$ cm $t_1 = 60$ sec

$D = 17$ cm $H_2 = 0.34$ ft $= 10.4$ cm

$d = 5$ cm $t_2 = 360$ sec

$$\frac{2mL}{D} = \frac{2(182.9)}{17} > 4$$

$$k_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln\frac{H_1}{H_2}$$

$$k_h = \frac{5^2 \ln\left(\frac{4(1)(183)}{17}\right)}{8(183)(300)} \ln\left(\frac{80.2}{10.4}\right)$$

$$k_h = \frac{25(3.763)}{439200}(2.04)$$

$k_h = 4.37 \times 10^{-4}$ cm/sec

Layer 1

OW - 10

assume $m = 1$

$L = 14\ ft = 426.7\ cm$

$D = 17\ cm$

$d = 5\ cm$

$H_1 = 55.3\ ft = 1685.5\ cm$

$t_1 = 60\ sec$

$H_2 = 51.\ ft = 1554.5\ cm$

$t_2 = 3300\ sec$

$$k_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$k_h = \frac{(5^2) \ln\left(\frac{4(1)(426.7)}{17}\right)}{8(426.7)(3300-60)} \ln\left(\frac{1686}{1555}\right)$$

$$k_h = \frac{25\ (4.609)}{11060064} \quad 0.08088$$

$$k_h = 8.43 \times 10^{-7}\ cm/sec$$

Case F

OW-2

assume $m = 1$

$L = 9\,ft = 274.3\,cm$

$D = 17\,cm$

$d = 5\,cm$

$H_1 = 4.4' = 670.6\,cm$

$t_1 = 120\,sec$

$H_2 = 0.42' = 12.8\,cm$

$t_2 = 480\,sec$

$$k_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln\frac{H_1}{H_2}$$

(1)

$$k_h = \frac{5^2 \ln\left(\frac{4(1)(274.3)}{5}\right)}{8(274.3)(480-120)} \ln\left(\frac{670.6}{12.8}\right)$$

$$\frac{(25)\quad 5.3911}{789984} \quad 3.9587$$

(2) $k_h = 6.75 \times 10^{-4}\ cm/sec$

Case F

OW-3

assume $m = 1$

$L = 12\ ft = 366\ cm$

$D = 12\ cm$

$d = 5\ cm$

$H_1 = 4\ ft = 121.9\ cm$

$t_1 = 60\ sec$

$H_2 = 3.5\ ft = 106.7\ cm$

$t_2 = 3600\ sec$

$$k_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$k_h = \frac{(5^2) \ln\left(\frac{4(1)(366)}{17}\right)}{8(366)(3600-60)} \ln\left(\frac{121.9}{106.7}\right)$$

$$k_h = \frac{25\ (4.4557)}{10365120}\ (0.1332)$$

$$k_h = 1.43 \times 10^{-6}\ cm/sec$$

Case F

OW-4

assume $m = 1$

$\frac{2mL}{D} = \frac{2(1)(396)}{17} = 46 > 4$

$L = 13\ ft = 396\ cm$

$D = 6.75\ in = 17\ cm$

$d = 2\ in = 5\ cm$

pt 2 $H_1 = 5.8\ ft = 177$

$t_1 = 60\ sec$ 169

$H_2 = 5.56\ ft = 169$

$t_2 = 2160\ sec$

$$k_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

$$k_h = \frac{(5)^2 \ln\left(\frac{4(1)(396)}{17}\right)}{8(396)(2160-60)} \ln \frac{177}{169} \quad \frac{1770}{1690}$$

$$\frac{25(4.53)}{6652800.} \quad (.04625) \quad (.04625)$$

113.4

$q_h =$ ~~3.685 x 10 cm/sec~~ $= 7.88 \times 10^{-7}$ cm/sec

Case F OW-5

assume $m = 1$

$L = 14\ ft = 426.7\ cm$

$D = 17\ cm$

$d = 5\ cm$

$$k_h = \frac{d^2 \ln\left(\frac{4mL}{D}\right)}{8L(t_2 - t_1)} \ln\left(\frac{H_1}{H_2}\right)$$

$H_1 = 0.65' = 19.8$

$t_1 = 0.5\ min = 30$

$H_2 = 0.09' = 2.7$

$t_2 = 2\ min = 120$

$$k_h = \frac{115.0\,(5^2) \ln\left(\frac{4(1)(427)}{17}\right)}{8(427)(120-30)} \ln\left(\frac{19.8}{2.7}\right)$$

4.6

30744.0 (1.99)

7.5×10^{-4}

Case 1 OW-L6

M = 1

L = 12.1' = ~~37~~ 368.8 cm

D = 17 cm

d = 5 cm

H_1 - 1.5 = 45.75

b_1 - 0.25 = 45

H_2 - .87 = 26.5

t_2 - 1.25 = 75

$$k_h = \frac{(25)\ \ln\left(4 \cdot \frac{368.8}{17}\right)}{8\,(368.8)(30)} \left[\ln \frac{15.7}{26.5}\right]$$

$$\frac{(111.5)\,.\,(.54)}{88512}$$

5.
66.0
53.9
12.1

$$6.8 \times 10^{-4}$$

APPENDIX C

GEOPHYSICAL SURVEY DATA

SOUNDING 1 NASH ROAD LANDFILL

p-p1 spacing (feet)	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	8.50	0.10	0.85	2499.80	2124.83	2124.83
4.00	19.50	0.10	1.95	1249.50	2436.53	4561.36
6.00	250.50	0.01	2.51	832.60	2085.66	6647.02
8.00	30.50	0.01	0.31	624.00	190.32	6837.34
10.00	40.50	0.01	0.41	498.80	202.01	7039.35
12.00	484.00	0.01	4.84	415.20	2009.57	9048.92
14.00	30.00	0.10	3.00	355.40	1066.20	10115.12
16.00	661.00	0.10	66.10	310.50	20524.05	30639.17
18.00	752.00	0.10	75.20	275.50	20717.60	51356.77
20.00	820.50	0.10	82.05	247.50	20307.38	71664.15
22.00	888.00	0.10	88.80	224.50	19935.60	91599.75
24.00	90.50	0.10	9.05	205.30	1857.97	93457.71
26.00	102.00	0.10	10.20	189.10	1928.82	95386.53
28.00	118.00	0.10	11.80	175.10	2066.18	97452.71
30.00	106.50	0.10	10.65	162.90	1734.89	99187.60
32.00	131.00	0.10	13.10	152.30	1995.13	101182.73
34.00	142.50	0.10	14.25	142.80	2034.90	103217.63
36.00	155.00	0.10	15.50	134.40	2083.20	105300.83
38.00	163.50	0.10	16.35	126.80	2073.18	107374.01
40.00	170.00	0.10	17.00	120.00	2040.00	109414.01
42.00	179.00	0.10	17.90	113.80	2037.02	111451.03
44.00	194.00	0.10	19.40	108.10	2097.14	113548.17
46.00	198.00	0.10	19.80	102.90	2037.42	115585.59
48.00	209.50	0.10	20.95	98.20	2057.29	117642.88
50.00	197.50	0.10	19.75	93.80	1852.55	119495.43
52.00	224.00	0.10	22.40	89.70	2009.28	121504.71
54.00	233.50	0.10	23.35	85.80	2003.43	123508.14
56.00	246.00	0.10	24.60	82.30	2024.58	125532.72
58.00	255.50	0.10	25.55	79.00	2018.45	127551.17
60.00	268.00	0.10	26.80	75.80	2031.44	129582.61
62.00	274.00	0.10	27.40	72.90	1997.46	131580.07
64.00	286.00	0.10	28.60	70.10	2004.86	133584.93
66.00	296.50	0.10	29.65	67.50	2001.38	135586.30
68.00	309.00	0.10	30.90	65.00	2008.50	137594.80
70.00	320.00	0.10	32.00	62.70	2006.40	139601.20
72.00	330.00	0.10	33.00	60.40	1993.20	141594.40
74.00	339.00	0.10	33.90	58.30	1976.37	143570.77
76.00	348.50	0.10	34.85	56.30	1962.06	145532.83
78.00	361.00	0.10	36.10	54.40	1963.84	147496.66
80.00	373.00	0.10	37.30	52.50	1958.25	149454.91
82.00	385.00	0.10	38.50	50.70	1951.95	151406.87
84.00	395.00	0.10	39.50	49.00	1935.50	153342.37
86.00	401.00	0.10	40.10	47.40	1900.74	155243.11
88.00	408.00	0.10	40.80	45.80	1868.64	157111.75
90.00	419.00	0.10	41.90	44.30	1856.17	158967.92
92.00	435.00	0.10	43.50	42.80	1861.80	160829.72
94.00	452.00	0.10	45.20	41.40	1871.28	162701.00
96.00	471.50	0.10	47.15	40.10	1890.72	164591.71
98.00	480.00	0.10	48.00	38.80	1862.40	166454.11
100.00	490.00	0.10	49.00	37.50	1837.50	168291.61

SOUNDING 2 NASH ROAD LANDFILL

p-p1 spacing (feet)	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	2.50	0.10	0.25	2499.80	624.95	624.95
4.00	1.50	0.10	0.15	1249.50	187.43	812.38
6.00	2.00	0.10	0.20	832.60	166.52	978.90
8.00	4.00	0.10	0.40	624.00	249.60	1228.50
10.00	5.00	0.10	0.50	498.80	249.40	1477.90
12.00	6.00	0.10	0.60	415.20	249.12	1727.02
14.00	6.50	0.10	0.65	355.40	231.01	1958.03
16.00	8.00	0.10	0.80	310.50	248.40	2206.43
18.00	3.00	0.10	0.30	275.50	82.65	2289.08
20.00	5.00	0.10	0.50	247.50	123.75	2412.83
22.00	8.50	0.10	0.85	224.50	190.83	2603.65
24.00	10.50	0.10	1.05	205.30	215.57	2819.22
26.00	12.00	0.10	1.20	189.10	226.92	3046.14
28.00	12.00	0.10	1.20	175.10	210.12	3256.26
30.00	12.50	0.10	1.25	162.90	203.63	3459.88
32.00	13.50	0.10	1.35	152.30	205.61	3665.49
34.00	14.50	0.10	1.45	142.80	207.06	3872.55
36.00	16.50	0.10	1.65	134.40	221.76	4094.31
38.00	15.00	0.10	1.50	126.80	190.20	4284.51
40.00	16.50	0.10	1.65	120.00	198.00	4482.51
42.00	17.00	0.10	1.70	113.80	193.46	4675.97
44.00	17.50	0.10	1.75	108.10	189.18	4865.14
46.00	18.50	0.10	1.85	102.90	190.37	5055.51
48.00	20.00	0.10	2.00	98.20	196.40	5251.91
50.00	20.50	0.10	2.05	93.80	192.29	5444.20
52.00	20.50	0.10	2.05	89.70	183.89	5628.08
54.00	22.50	0.10	2.25	85.80	193.05	5821.13
56.00	23.50	0.10	2.35	82.30	193.41	6014.54
58.00	24.50	0.10	2.45	79.00	193.55	6208.09
60.00	25.50	0.10	2.55	75.80	193.29	6401.38
62.00	25.00	0.10	2.50	72.90	182.25	6583.63
64.00	25.50	0.10	2.55	70.10	178.76	6762.38
66.00	27.50	0.10	2.75	67.50	185.63	6948.01
68.00	28.50	0.10	2.85	65.00	185.25	7133.26
70.00	27.50	0.10	2.75	62.70	172.43	7305.68
72.00	30.50	0.10	3.05	60.40	184.22	7489.90
74.00	32.50	0.10	3.25	58.30	189.48	7679.38
76.00	33.00	0.10	3.30	56.30	185.79	7865.17
78.00	35.00	0.10	3.50	54.40	190.40	8055.57
80.00	35.50	0.10	3.55	52.50	186.38	8241.94
82.00	37.00	0.10	3.70	50.70	187.59	8429.53
84.00	37.50	0.10	3.75	49.00	183.75	8613.28
86.00	38.00	0.10	3.80	47.40	180.12	8793.40
88.00	39.00	0.10	3.90	45.80	178.62	8972.02
90.00	40.50	0.10	4.05	44.30	179.42	9151.44
92.00	41.50	0.10	4.15	42.80	177.62	9329.06
94.00	42.50	0.10	4.25	41.40	175.95	9505.01
96.00	43.50	0.10	4.35	40.10	174.44	9679.44
98.00	45.00	0.10	4.50	38.80	174.60	9854.04
100.00	46.50	0.10	4.65	37.50	174.38	10028.42

SOUNDING 3 NASH ROAD LANDFILL

p-p1 spacing (feet)	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	9.00	0.01	0.09	2499.80	224.98	224.98
4.00	16.50	0.01	0.17	1249.50	206.17	431.15
6.00	25.00	0.01	0.25	832.60	208.15	639.30
8.00	32.00	0.01	0.32	624.00	199.68	838.98
10.00	41.00	0.01	0.41	498.80	204.51	1043.49
12.00	51.00	0.01	0.51	415.20	211.75	1255.24
14.00	55.00	0.01	0.55	355.40	195.47	1450.71
16.00	65.00	0.01	0.65	310.50	201.83	1652.53
18.00	75.50	0.01	0.76	275.50	208.00	1860.54
20.00	82.00	0.01	0.82	247.50	202.95	2063.49
22.00	89.50	0.01	0.90	224.50	200.93	2264.41
24.00	83.50	0.01	0.84	205.30	171.43	2435.84
26.00	102.00	0.01	1.02	189.10	192.88	2628.72
28.00	112.00	0.01	1.12	175.10	196.11	2824.83
30.00	120.00	0.01	1.20	162.90	195.48	3020.31
32.00	128.00	0.01	1.28	152.30	194.94	3215.26
34.00	138.50	0.01	1.39	142.80	197.78	3413.04
36.00	147.00	0.01	1.47	134.40	197.57	3610.60
38.00	155.50	0.01	1.56	126.80	197.17	3807.78
40.00	166.00	0.01	1.66	120.00	199.20	4006.98
42.00	175.50	0.01	1.76	113.80	199.72	4206.70
44.00	184.00	0.01	1.84	108.10	198.90	4405.60
46.00	193.50	0.01	1.94	102.90	199.11	4604.71
48.00	201.00	0.01	2.01	98.20	197.38	4802.09
50.00	213.00	0.01	2.13	93.80	199.79	5001.89
52.00	221.50	0.01	2.22	89.70	198.69	5200.57
54.00	231.00	0.01	2.31	85.80	198.20	5398.77
56.00	239.50	0.01	2.40	82.30	197.11	5595.88
58.00	248.00	0.01	2.48	79.00	195.92	5791.80
60.00	258.00	0.01	2.58	75.80	195.56	5987.36
62.00	268.00	0.01	2.68	72.90	195.37	6182.74
64.00	276.50	0.01	2.77	70.10	193.83	6376.56
66.00	285.50	0.01	2.86	67.50	192.71	6569.28
68.00	297.00	0.01	2.97	65.00	193.05	6762.33
70.00	308.50	0.01	3.09	62.70	193.43	6955.76
72.00	317.00	0.01	3.17	60.40	191.47	7147.22
74.00	329.00	0.01	3.29	58.30	191.81	7339.03
76.00	340.00	0.01	3.40	56.30	191.42	7530.45
78.00	349.00	0.01	3.49	54.40	189.86	7720.31
80.00	359.00	0.01	3.59	52.50	188.48	7908.78
82.00	370.00	0.01	3.70	50.70	187.59	8096.37
84.00	382.00	0.01	3.82	49.00	187.18	8283.55
86.00	395.00	0.01	3.95	47.40	187.23	8470.78
88.00	408.00	0.01	4.08	45.80	186.86	8657.65
90.00	420.00	0.01	4.20	44.30	186.06	8843.71
92.00	431.50	0.01	4.32	42.80	184.68	9028.39
94.00	443.00	0.01	4.43	41.40	183.40	9211.79
96.00	456.50	0.01	4.57	40.10	183.06	9394.85
98.00	468.00	0.01	4.68	38.80	181.58	9576.43
100.00	484.00	0.01	4.84	37.50	181.50	9757.93

SOUNDING 4 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	5.50	0.10	0.55	224.80	123.64	123.64
4.00	10.50	0.10	1.05	112.00	117.60	241.24
6.00	12.50	0.10	1.25	74.30	92.88	334.12
8.00	183.00	0.01	1.83	55.30	101.20	435.31
10.00	248.50	0.01	2.49	43.80	108.84	544.16
12.00	227.00	0.01	2.27	36.00	81.72	625.88
14.00	342.00	0.01	3.42	30.40	103.97	729.85
16.00	16.50	0.10	1.65	26.10	43.07	772.91
18.00	39.00	0.10	3.90	22.80	88.92	861.83
20.00	52.00	0.10	5.20	20.00	104.00	965.83
22.00	58.00	0.10	5.80	17.70	102.66	1068.49
24.00	63.50	0.10	6.35	15.80	100.33	1168.82
26.00	79.00	0.10	7.90	14.10	111.39	1280.21
28.00	89.00	0.10	8.90	12.60	112.14	1392.35
30.00	97.00	0.10	9.70	11.30	109.61	1501.96

SOUNDING 5 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	45.00	0.01	0.45	224.80	101.16	101.16
4.00	85.50	0.01	0.86	112.00	95.76	196.92
6.00	159.50	0.01	1.60	74.30	118.51	315.43
8.00	224.50	0.01	2.25	55.30	124.15	439.58
10.00	23.00	0.10	2.30	43.80	100.74	540.32
12.00	309.00	0.01	3.09	36.00	111.24	651.56
14.00	401.00	0.01	4.01	30.40	121.90	773.46
16.00	490.00	0.01	4.90	26.10	127.89	901.35
18.00	573.00	0.01	5.73	22.80	130.64	1032.00
20.00	63.50	0.10	6.35	20.00	127.00	1159.00
22.00	70.50	0.10	7.05	17.70	124.79	1283.78
24.00	79.50	0.10	7.95	15.80	125.61	1409.39
26.00	92.00	0.10	9.20	14.10	129.72	1539.11
28.00	97.00	0.10	9.70	12.60	122.22	1661.33
30.00	86.50	0.10	8.65	11.30	97.75	1759.08

SOUNDING 6 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	2.00	0.10	0.20	224.80	44.96	44.96
4.00	88.00	0.01	0.88	112.00	98.56	143.52
6.00	140.50	0.01	1.41	74.30	104.39	247.91
8.00	195.50	0.01	1.96	55.30	108.11	356.02
10.00	20.00	0.10	2.00	43.80	87.60	443.62
12.00	29.50	0.10	2.95	36.00	106.20	549.82
14.00	36.50	0.10	3.65	30.40	110.96	660.78
16.00	43.50	0.10	4.35	26.10	113.54	774.32
18.00	51.00	0.10	5.10	22.80	116.28	890.60
20.00	48.50	0.10	4.85	20.00	97.00	987.60
22.00	61.00	0.10	6.10	17.70	107.97	1095.57
24.00	69.50	0.10	6.95	15.80	109.81	1205.38
26.00	79.00	0.10	7.90	14.10	111.39	1316.77
28.00	88.50	0.10	8.85	12.60	111.51	1428.28
30.00	98.50	0.10	9.85	11.30	111.31	1539.58

SOUNDING 7 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	0.00	0.00	0.00	224.80	0.00	0.00
4.00	0.00	0.00	0.00	112.00	0.00	0.00
6.00	0.00	0.00	0.00	74.30	0.00	0.00
8.00	0.00	0.00	0.00	55.30	0.00	0.00
10.00	0.00	0.00	0.00	43.80	0.00	0.00
12.00	0.00	0.00	0.00	36.00	0.00	0.00
14.00	40.50	0.10	4.05	30.40	123.12	123.12
16.00	44.00	0.10	4.40	26.10	114.84	237.96
18.00	53.00	0.10	5.30	22.80	120.84	358.80
20.00	59.00	0.10	5.90	20.00	118.00	476.80
22.00	667.00	0.01	6.67	17.70	118.06	594.86
24.00	0.00	0.00	0.00	15.80	0.00	594.86
26.00	0.00	0.00	0.00	14.10	0.00	594.86
28.00	0.00	0.00	0.00	12.60	0.00	594.86
30.00	0.00	0.00	0.00	11.30	0.00	594.86

SOUNDING 10 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	0.00	0.00	0.00	224.80	0.00	0.00
4.00	0.00	0.00	0.00	112.00	0.00	0.00
6.00	0.00	0.00	0.00	74.30	0.00	0.00
8.00	0.00	0.00	0.00	55.30	0.00	0.00
10.00	0.00	0.00	0.00	43.80	0.00	0.00
12.00	302.00	0.01	3.02	36.00	108.72	108.72
14.00	356.00	0.01	3.56	30.40	108.22	216.94
16.00	426.00	0.01	4.26	26.10	111.19	328.13
18.00	482.00	0.01	4.82	22.80	109.90	438.03
20.00	547.50	0.01	5.48	20.00	109.50	547.53
22.00	622.00	0.01	6.22	17.70	110.09	657.62
24.00	0.00	0.00	0.00	15.80	0.00	657.62
26.00	0.00	0.00	0.00	14.10	0.00	657.62
28.00	0.00	0.00	0.00	12.60	0.00	657.62
30.00	0.00	0.00	0.00	11.30	0.00	657.62

SOUNDING 11 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	0.00	0.00	0.00	224.80	0.00	0.00
4.00	0.00	0.00	0.00	112.00	0.00	0.00
6.00	0.00	0.00	0.00	74.30	0.00	0.00
8.00	0.00	0.00	0.00	55.30	0.00	0.00
10.00	0.00	0.00	0.00	43.80	0.00	0.00
12.00	310.50	0.01	3.11	36.00	111.78	111.78
14.00	366.00	0.01	3.66	30.40	111.26	223.04
16.00	414.00	0.01	4.14	26.10	108.05	331.10
18.00	481.50	0.01	4.82	22.80	109.78	440.88
20.00	551.00	0.01	5.51	20.00	110.20	551.08
22.00	618.50	0.01	6.19	17.70	109.47	660.55
24.00	0.00	0.00	0.00	15.80	0.00	660.55
26.00	0.00	0.00	0.00	14.10	0.00	660.55
28.00	0.00	0.00	0.00	12.60	0.00	660.55
30.00	0.00	0.00	0.00	11.30	0.00	660.55

SOUNDING 12 NASH ROAD LANDFILL

	dial reading (ohms)	scale multiplier	corrected reading (ohms)	*k (feet)	apparent resistivity (ohm-ft)	cumulative resistivity (ohm-ft)
2.00	0.00	0.00	0.00	224.80	0.00	0.00
4.00	0.00	0.00	0.00	112.00	0.00	0.00
6.00	0.00	0.00	0.00	74.30	0.00	0.00
8.00	0.00	0.00	0.00	55.30	0.00	0.00
10.00	0.00	0.00	0.00	43.80	0.00	0.00
12.00	22.00	0.10	2.20	36.00	79.20	79.20
14.00	26.00	0.10	2.60	30.40	79.04	158.24
16.00	30.00	0.10	3.00	26.10	78.30	236.54
18.00	34.00	0.10	3.40	22.80	77.52	314.06
20.00	42.00	0.10	4.20	20.00	84.00	398.06
22.00	50.50	0.10	5.05	17.70	89.39	487.45
24.00	0.00	0.00	0.00	15.80	0.00	487.45
26.00	0.00	0.00	0.00	14.10	0.00	487.45
28.00	0.00	0.00	0.00	12.60	0.00	487.45
30.00	0.00	0.00	0.00	11.30	0.00	487.45

ENGINEERING-SCIENCE, INC.
RESISTIVITY PROFILE DATA SHEET

Job No. _____ Date 6-1-84

Site Name Nash Rd Site Location Nash Rd.

Observer(s) Harman & Baker Comments (soil conditions, etc.) moist to wet

Equipment Used (name, serial #) Bison (Battery check = 318.5) Electrode Array Method Used Wenner - Profile (29 milliamps)

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-1	10	9.0	1.0	9.0	90
P-1	20	5.5	1.0	5.5	110
P-1	30	3.0	1.0	3.0	90
P-1	50	29.5	0.1	2.95	147.5
P-1	70	26.0	0.1	2.6	182
P-2	10	86.0	0.1	8.6	86
P-2	20	49.5	0.1	4.95	99

Bison Unit: Apparent Resistivity = Electrode Spacing x (2 π V/I x Scale Multiplier) where ( ) = Corrected Reading

6-1-84

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-2	30	37.5	0.1	3.75	112.5
P-2	50	30.5	0.1	3.05	152.5
P-2	70	25.0	0.1	2.5	175.0
P-3	10	86	0.1	8.6	86.0
P-3	20	50	0.1	5.0	100.0
P-3	30	38.5	0.1	3.85	115.5
P-3	50	29.5	0.1	2.95	147.5
P-3	70	27.5	0.1	2.75	192.5
P-4	10	75	0.1	7.5	75.0
P-4	20	44.5	0.1	4.45	89.0

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-4	30	32.5	0.1	3.25	97.5
P-4	50	27.5	0.1	2.75	137.5
P-4	70	25.0	0.1	2.5	175.0
P-5	10	98.5	0.1	9.85	98.5
P-5	20	51.5	0.1	5.15	103.0
P-5	30	36.5	0.1	3.65	109.5
P-5	50	30.0	0.1	3.0	150.0
P-5	70	25.5	0.1	2.55	178.5
P-6	10	116.0	0.1	11.6	116.0
P-6	20	56.5	0.1	5.65	113.0

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-6	30	41.5	0.1	4.15	124.5
P-6	50	30.0	0.1	3.0	150.0
P-6	70	26.0	0.1	2.6	182.0
P-7	10	110.0	0.1	11.0	110.0
P-7	20	54.0	0.1	5.4	108.0
P-7	30	40.5	0.1	4.05	121.5
P-7	50	26.0	0.1	2.6	130.0
P-7	70	24.5	0.1	2.45	171.5
P-8	10	114.0	0.1	11.4	114
P-8	20	53.5	0.1	5.35	107

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-8	30	40.0	0.1	4.0	120
P-8	50	30.0	0.1	3.0	150
P-8	70	28.0	0.1	2.8	196
P-9	10	146.0	0.1	14.6	146
P-9	20	48.5	0.1	4.85	97
P-9	30	41.0	0.1	4.10	123
P-9	50	31.0	0.1	3.1	155
P-9	70	27.5	0.1	2.75	192.5
P-10	10	146.0	0.1	14.6	146
P-10	20	62.5	0.1	6.25	125

6-1-84

Station Location	Electrode Spacing (feet)	2π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-10	30	44.0	0.1	4.4	132
P-10	50	32.0	0.1	3.2	160
P-10	70	28.5	0.1	2.85	199.5
P-11	10	183.5	0.1	18.35	183.5
P-11	20	70.5	0.1	7.05	141
P-11	30	46.0	0.1	4.6	138
P-11	50	294.0	0.01	2.94	147
P-11	70	294.0	0.01	2.94	205.8
P-12	10	187.5	0.1	18.75	187.5
P-12	20	66.5	0.1	6.65	133

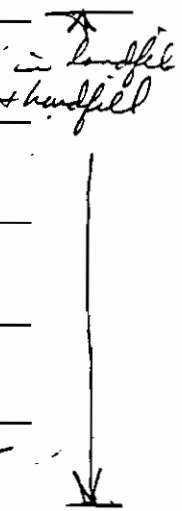
6-1-84

Station Location	Electrode Spacing (feet)	2π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-12	30	44	0.1	4.4	132
P-12	50	32.0	0.1	3.2	160
P-12	70	29.5	0.1	2.95	206.5
P-13	10	180.0	0.1	18	180
P-13	20	66.5	0.1	6.65	133
P-13	30	373.0	0.01	3.73	111.9
P-13	50	26.0	0.1	2.6	130
P-13	70	244	0.01	2.44	170.8
P-14	10	177.5	0.1	17.75	177.5
P-14	20	624.0	0.01	6.24	124.8

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-14	30	436.5	0.01	4.365	131.0
P-14	50	315.5	0.01	3.155	157.8
P-14	70	293.5	0.01	2.935	205.4
P-15	10	194.5	0.1	19.45	194.5
P-15	20	63.0	0.1	6.3	126
P-15	30	33.0	0.1	3.3	99
P-15	50	31.0	0.1	3.1	155
P-15	70	269.0	0.01	2.69	188.3
P-16	10	114.0	0.1	11.4	114
P-16	20	55.0	0.1	5.5	110

6-1-84

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-16	30	41	0.1	4.1	123
P-16	50	31.5	0.1	3.15	157.5
P-16	70	272.5	0.01	2.725	190.75
P-17	10	48	0.1	4.8	48
P-17	20	37	0.1	3.7	74
P-17	30	31.0	0.1	3.1	93
P-17	50	26	0.1	2.6	130
P-17	70	23.5	0.1	2.35	164.5
P-18	10	797.5	0.01	7.975	79.75
P-18	20	41.5	0.1	4.15	83



6-1-84

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-18	30	29.5	0.1	2.95	~~89.4~~ 88.5
P-18	50	27	0.1	2.7	135
P-18	70	24	0.1	2.4	168
P-19	10	5,5	1.0	5,5	55
P-19	20	23.5	0.1	2.35	47
P-19	30	26.0	0.1	2.6	78
P-19	50	23	0.1	2.3	115
P-19	70	24	0.1	2.4	168
P-20	10	124,5	0.1	12.45	124.5
P-20	20	56.5	0,1	5.65	113.0

6-1-84

Station Location	Electrode Spacing (feet)	2 π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-20	30	41.0	0.1	4.1	123
P-21	10	138.5	0.1	13.85	138.5
P-21	20	61.0	0.1	6.1	122
P-21	30	43.0	0.1	4.3	129
P-21	50	37.0	0.1	3.7	185
P-21	70	32.0	0.1	3.2	224
P-22	10	146.5	0.1	14.65	146.5
P-22	20	63	0.1	6.3	126
P-22	30	46	0.1	4.6	138
P-22	50	39.5	0.1	3.95	197.5

6-1-84

Station Location	Electrode Spacing (feet)	2π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-22	70	33	0.1	3.3	231
P-23	10	55	0.1	5.5	55
P-23	20	39	0.1	3.9	78
P-23	30	38	0.1	3.8	114
P-23	50	24	0.1	2.4	120
P-23	70	28	0.1	2.8	196
P-24	10	91.5	0.1	9.15	91.5
P-24	20	423	0.01	4.23	~~84.7~~ 84.6
P-24	30	388	0.01	3.88	116.4
P-24	50	321	0.01	3.21	160.5

Landfill area

6-1-84

Station Location	Electrode Spacing (feet)	2π V/I (ohms)	Scale Multiplier	Corrected Reading (ohms)	Apparent Resistivity (ohm - feet)
P-24	70	266	0.01	2.66	1862

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Harmon & Baker (ES)

Base Station Location In wooded area. / N.55°W & 178' from B2

Equipment Used (name, serial #) Geometrics # 816/826A #6673
(10 Battery checks)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
	N	Base Station	0850	57111
	S	"		57116
	E	"		57119
	W	"		57119
A	North	Mag. Start (P.L.) TL		58810
	40'	A1		58052
	"	A2		57293
	"	A3		57331
	"	A4 (Woods)(TL)		57059
	S 80°E from A (40')			
B	North	B (PL) TL		58396
	40'	B1		58002
	"	B2		57178
	"	B3		57169
	"	B4		57252
	"	B5		57169
	"	B6		57343
C	due East 40' from B	C TL		57426
	North 40'	C1		57348
	40'	C2		57574
	"	C3		58146
	"	C4		57384
	"	C5		57459
	"	C6		57529
	"	C7		57505
	"	C8		57233
	"	C9 (SWR) w\ Gas		57595
D	due East 40' from C	D (TL)		57662
	North 40'	D1		57646
	"	D2		58052
	"	D3		57152
	"	D4		57186
	"	D5		57244
	"	D6 (SW)		57162

P.L. : Power line near

TL Tree line

SWR : Standing water, reed (SWL)

G = 90.2

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Hamm + Baker (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
D	North 40'	D7 (sw)		56640
	"	D8 (sw)		56903
	"	D9		57431
	"	D10		57312
	"	D11 (sw)		57176
E	~~East~~ 40' of D11	E		57213
	South 40'	E1		57680
	40'	E2		56980
	"	E3 (sw) Pits		57679
	"	E4 (sw) "		57219
	"	E5 (sw) "		57729
	"	E6 (sw) Pits		57361
	"	E7 sw Pit		57134
	"	E8		57082
	"	E9		57705
	"	E10		57829
	"	E11 (TL)		57573
X		over pipe line		58623
		under power line		58295
F	40° due East of E11	F		57645
	North 40'	F1		57481
	"	F2		57085
	"	F3 (sw) Pit		57083
	"	F4 (sw) Pit		57480
	"	F5 (sw) Pit		57009
	"	F6 (sw) Pit		57451
	"	F7 "		56917
	"	F8 "		57119
	"	F9		57230
	"	F10		57322
	"	F11 (SW) Pit (L)		57298
G	due East 40' of F11	G		56375
	South 40'	G1		57387
	"	G2		57673
	"	G3 (sw) Pit		57834

p: pit

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Rd, N.Y.

Observer(s) Hausner & Baker (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
G	South 40'	G4	(SW) Pit	58507
	"	G5	"	57425
	"	G6	(SW) Pit	56910
	"	G7	(SW) Pit	58175
	"	G8	(SW) Pit	57100
	"	G9		57455
	"	G10	(SW) Pit	52359
	"	G11	(SW) Pit	57927
H	due East 40' of G11	H	(20' to TL)	57429
	North 40'	H1	(SW) Pit	58001
	"	H2	(SW)	56798
	"	H3		57550
	"	H4	(SW-R)(L)	56834
	"	H5	SW-R(L)	56616
	"	H6	SW	59107/59110
	"	H7	SW	57777
	"	H8		57095
	"	H9		57372
	"	H10		56773
	"	H-11		56562
I	East 40' of H-11	I		55975
	South 40'	I-1		57049
	"	I-2		57043
	"	I-3		57654
	"	I-4	(SW)	57214
	"	I-5	(SW)	57801
	"	I-6	"	57006
	"	I-7	"	56929
	"	I-8	"	56976
	"	I-9	"	57194
	"	I-10	" (Pit)	57014
	"	I-11	" " (20' to TL)	57873

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Road, N.Y.

Observer(s) Baker & Harman (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
J	East 40' of I-11	J		58193
	North 40'	J-1	(SW) Pit	56819
	"	J-2		57018
	"	J-3	SW Gas Bubbles	57351
	"	J-4	SW	56957
	"	J-5	SW	57231
	"	J-6	SW	57014
	"	J-7	SW	57311
	"	J-8		58252
	"	J-9		57327
	"	J-10		57696
	"	J-11	SW R Ditch (TL)	56125
K	East 40' of J-10	K	SW R Ditch (TL)	57057
	South 40'	K-1	(SW-R) L	57638
	"	K-2	(SW-R) L	57619
	"	K-3	(ET)	57321
	"	K-4	SW (White Pile)	57141
	"	K-5	SW	57482
	"	K-6		57230
	"	K-7		57114
	"	K-8		57232
	"	K-9		57177
	"	K-10	SW (Pit)	57502
	"	K-11		57167
	"	K-12	SW R L (PL) (TL)	58636
L	East 40' of K-12	L	SW R (TL)	57111
	North 40'	L-1		57538
	"	L-2	SW Pit	57145
	"	L-3		57424
	"	L-4		56976
	"	L-5		57126
	"	L-6	SW	57289
	"	L-7	SW	57050
	"	L-8		57079
	"	L-9		57088

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36.330 Date 5-30-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Harman & Baker (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
L	North 40'	L-10	(SW) RL	57454
	"	L-11	SW RL (smell of organics) (OS)	57574
	"	L-12	SW RL (TL)	56542
M	East 40' of L-11	M	SW RL (Gas Bubbles)	5717
	South 40'	M-1	SW RL	57434
	"	M-2	SW RL	57125
	"	M-3		56907
	"	M-4	SW RL	57320
	"	M-5	(ET)	57306
	"	M-6	SW	57576
	"	M-7		57844
	"	M-8	SW R (Gas Bubbles)	57367
	"	M-9		57776
	"	M-10	SW Pit	58062
	"	M-11	SW RL	58574
N	East 40' of M	N	SW	56834
	North 40'	N-1	SW Pit	58026
	"	N-2		57391
	"	N-3	SW R	57413
	"	N-4	SW	57425
	"	N-5	SW (ET)	57858
	"	N-6	SW	57411
	"	N-7	SW RL	57444
	"	N-8	ET	57224
	"	N-9	ET	57223
	"	N-10	SW RL	57538
	"	N-11	SW RL (TL)	57389
O	East 40' of N-10	O	SW RL	57019
	South 40'	O-1		57336
	"	O-2	ET	56964
	"	O-3		57197
	"	O-4		57006
	"	O-5		57163
	"	O-6		57253
	"	O-7		58054

ET : exposed trash

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Baker + Harman (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
O	South 40'	O-8		57444
	"	O-9	sub P,4 (Eastern limit of pits)	57208
	~~X~~	~~O-10~~		
P	East 40' of O-9	P		57774
	North 40'	P-1		57148
	"	P-2		57777
	"	P-3		58810
	"	P-4		57777
	"	P-5		56975
	"	P-6		57391
	"	P-7		57381
	"	P-8		57541
	"	P-9 (sub R)		57400
	"	P-10	(Ditch)	56623
Q	East 40' of P-9	Q		57057
	South 40'	Q-1		57216
	"	Q-2 ET		57525
	"	Q-3		56853
	"	Q-4		57341
	"	Q-5		57041
	"	Q-6		57930
	"	Q-7		57250
	"	Q-8		56738
	"	Q-9		57296
	"	Q-10	(Phone 6, stake ?)	57295
R	East 40' of Q-9	R		57118
		~~R (minus 1)~~		
	North 40'	R-1		57228
	"	R-2		57193
	"	R-3		57835
	"	R-4 (ED)		57923
	"	R-5		57363
	"	R-6		57335
	"	R-7		57390
	"	R-8		57138

ED : Earth Depression

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Baker & Harman (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
R	North 40'	R-9 (20'	to TL + SW R)	57016
S	East 40' of R-9	S	"	57628
	South 40'	S-1		57059
	"	S-2		57247
	"	S-3		57445
	"	S-4		57374
	"	S-5		57409
	"	S-6 (ED)		57321
	"	S-7		57225
	"	S-8		57199
	"	S-9	(West end of trench)	57448
	"	S-10	(SW)	57258
T	East 40' of S-10	T	(T	57328
	North 40'	T-1	(in pit - 25' wide) SW w/ Gas Bubbles	57496
	N-40'	T-2		57308
	"	T-3		57485
	"	T-4	(ET)	57416
	"	T-5	(ET)	57711
	"	T-6	(ET)	57267
	"	T-7	(ET)	56999
	"	T-8		57598
	"	T-9		57382
	"	T-10	SW R (20' to TL)	57621
U	East 40' of T-10	U	(SW R)	56852
	South 40'	U-1		57153
	"	U-2		57379
	"	U-3		57475
	"	U-4		57077
	"	U-5		57150
	"	U-6		57163
	"	U-7		57763
	"	U-8		57202
	"	U-9 SW	Pit (Battery Case) (BC)	57746
	"	U-10		57351

T = Trench

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Road, N.Y.

Observer(s) Baker & Harman (ES)

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
U	South 40'	U-11		57052
V	East 40' of U-11	V		57333
	North 40'	V-1 (Gas pipeline sign?)		58004
	"	V-2 SW (pit)		57331
	"	V-3		57575
	"	V-4		57554
	"	V-5		57515
	"	V-6 (ET)		57417
	"	V-7		57520
	"	V-8 (ET)		57490
	"	V-9		57690
	"	V-10 (SW-RD)		56989
W	East 40' of V-10	W (SW-RD)		56499
	South 40'	W-1		57824
	"	W-2 (ED)		57313
	"	W-3		57691
	"	W-4		57802
	"	W-5		57317
	"	W-6 (ET)		57689
	"	W-7		57441
	"	W-8		57390
	"	W-9		57293
	"	W-10		57029
X	East 40' of W-10	X		57072
	North 40'	X-1 SW-ED		57528
	"	X-2		57223
	"	X-3		57585
	"	X-4 (ED)	(RC)	57806
	"	X-5 (ED)	(Battery cores)	57628
	"	X-6 (ED)		57390
	"	X-7		57305
	"	X-8		57436
	"	X-9		57286
	"	X-10	West end of ED (ET)	56561

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-30-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Harman & Baker (ES)

Base Station Location N 55°W, 178 feet from B-2

Equipment Used (name, serial #) Geometrics 816/826A #6673

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
Y	East 40' of X-10	Y SW	R (ET) (x)	57093
	South 40'	Y-1	ET (Kathy cars)	56733
	"	Y-2	"	57117
	"	Y-3	(ET)	58031
	"	Y-4		57553
	"	Y-5		57022
	"	Y-6	(ED)	57343
	"	Y-7		57952
	"	Y-8	(ED)	57288
	"	Y-9	SW (pit)	57746
	"	Y-10		57143
	"	Y-11		57114
Z	East 40' of Y-11	Z		57597
	North 40'	Z-1		
	N	Base Station	1840	57066
	S			57067
	E			57067
	W			57064

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-31-84

Site Name and Location Nash Rd., N.Y.

Observer(s) Baker & Harman

Base Station Location

Equipment Used (name, serial #) Geometrics 816/826A # 6673
(Battery check 10)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
	N	MAG Base	0820	56 988
	S	"		56 989
	E	"		56 989
	W	"		56 990
	North	Z		57 554
	N 40'	Z-1		56 979
	"	Z-2	(ED)	57 901
	"	Z-3	(ED)	57 573
	"	Z-4		57 298
	"	Z-5		57 002
	"	Z-6		57 121
	"	Z-7		56 932
	"	Z-8	(Battery Cover)	57 471
	"	Z-9	(ET)	57 018
	"	Z-10	(EP)	56 900
	South (E-40')	AA	(Battery Cover) (N20E from EP)	57 431
	S 40'	AA-1	" "	57 546
	"	AA-2	" "	57 056
	"	AA-3		57 313
	"	AA-4		57 626
	"	AA-5		57 413
	"	AA-6		57 300
	"	AA-7		57 424
	"	AA-8		56 802
	"	AA-9		57 720
	"	AA-10	(TL)	57 422
	North (E-40')	BB	(TL) (SW)	56 984
	N 40'	BB-1		57 195
	"	BB-2		57 112
	"	BB-3		57 387
	"	BB-4		57 212
	"	BB-5		57 908
	"	BB-6		57 907
	"	BB-7		57 128

EP = EDGE OF POND

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. 36330 Date 5-31-84

Site Name and Location Nash Rd, N.Y.

Observer(s) Baker & Harman

Base Station Location

Equipment Used (name, serial #)

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
	N 40'	BB-8	(ET)	57307
	"	BB-9 (Battery Cases)		56959
	"	BB-10 (EP)(Battery Cases)		57113
	South (E-40')	CC Battery Cases	(N30'N-EP)	57192
	S 40'	CC-1	(ET)	57270
	"	CC-2		57591
	"	CC-3		57619
	"	CC-4	(ET)	57061
	"	CC-5		57452
	"	CC-6		57338
	"	CC-7		57043
	"	CC-8		57144
	"	CC-9	(SW)	57073
	"	CC-10	(SW)	57334
	North (E-40')	DD		57371
	N 40'	DD-1	(SW)	57211
	"	DD-2		57323
	"	DD-3		57158
	"	DD-4		57245
	"	DD-5		57369
	"	DD-6		57224
	"	DD-7		57267
	"	DD-8		57693
	"	DD-9	(ET)	57066
	"	DD-10	(ET)(EP)	56964
	South (E-40')	EE	(ET)(N30'N-EP)	57394
	S 40'	EE-1	(ET)	57329
	"	EE-2	(ET)	57126
	"	EE-3	(ET)(ED)	57271
	"	EE-4		57169
	"	EE-5	(ED)	57589
	"	EE-6	(SW RA)	56935
	"	EE-7	(SW)	57569
	"	EE-8	(SW)(TL)	57304
	North (E-40')	FF	(ET)	57169

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. _____ Date 5-31-84

Site Name and Location Nash Rd, N.Y.

Observer(s) Baker & Harman

Base Station Location _____

Equipment Used (name, serial #) _____

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
	N 40'	FF-1		57162
	"	FF-2		57435
	"	FF-3	(ED) (SW)	57305
	"	FF-4	(SW)	57147
	"	FF-5	(ED)	57414
	"	FF-6	(ED) (ET)	57520
	"	FF-7	(ET)	57150
	N 30'	FF-8	(EP) (ET)	57407 (Drum
	South (E-40')	GG	(EP) (ET) (Drum)	57214
	S 40'	GG-1	(EP) (Pit Area?)	57043
	"	GG-2	(SW) Pit Area	56989 ~30' wid
	"	GG-3		57446
	"	GG-4	(SW) (Pit Area?)	57675 ~20' wi
	"	GG-5		57520
	"	GG-6		57549
	North (E-40')	HH	~~(SW)~~ TL	~~57354~~ 57292
	N 40'	HH-1	(SW)	57354
	"	HH-2		57533
	"	HH-3	(SW)	57293
	"	HH-4		57659
	"	HH-5	(SW) Pit Area	56889
	"	HH-6	(EP)	57114
	South (E-40')	II-	Pit Area (EP)	57245
	S 40'	II-1		57406
	"	II-2		57295
	"	II-3		57560
	"	II-4		57257
	"	II-5	~~(EP)~~ (TL)	57184
	North (E-40')	JJ		57299
	N 40'	JJ-1		57265
	"	JJ-2		57411
	"	JJ-3	(ED)	56903
	"	JJ-4		57178
	"	JJ-5		57603
	"	JJ-6		57694

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. _____ Date 5-31-84

Site Name and Location Nash Rd.

Observer(s) Balzer & Harman

Base Station Location _____

Equipment Used (name, serial #) _____

Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
	N40'	JJ-7	(SW ~~EP~~) Battery Cable	58178 / 58168
	"	JJ-8	(EP) EAST	57220
	"	JJ-9	~30'E of EP	57250
	"	JJ-10		57198
	W 40'	II-6	Drainage Ditch (EP)	57104
	"	HH-7	(NEP)	57241
	"	GG-7	EP	57250
	South (E-40')	KK		57262
	S40'	KK-1		57158
	"	KK-2	(ED)	57004
	"	KK-3	(SW)	56865
	"	KK-4	(ED) (SW)	57567
	"	KK-5		57853
	"	KK-6		57523
	"	KK-7	(ED?)	57710
	"	KK-8		58165 / 58129
	"	KK-9		57828
	"	KK-10	(TL)	57410
	North (E-40')	LL	(TL)	~~57800~~
	N40'	LL-1	(TL)	57308
	"	LL-2	(TL) (SW)	57313
	"	LL-3	(TL)	57634
	"	LL-4	(TL) (ED) (SW)	58521 / 5849
	"	LL-5		57990
	"	LL-6	(SW) (ED)	57325
	"	LL-7	(SW) 5 Bubbles	57608
	"	LL-8	(ED) (SW)	56810
	"	LL-9		57171
	South (E-40')	MM	(TL)	57142
	S-40'	MM-1	(SW) (ED) (TL)	56818
	"	MM-2	(SW) (ED) (TL)	57956
	"	MM-3	(TL)	57109
	"	MM-4	(TL)	57089
	"	MM-5	(TL)	57164

ENGINEERING-SCIENCE
MAGNETOMETER DATA SHEET

Job No. _____ Date 5-31-84

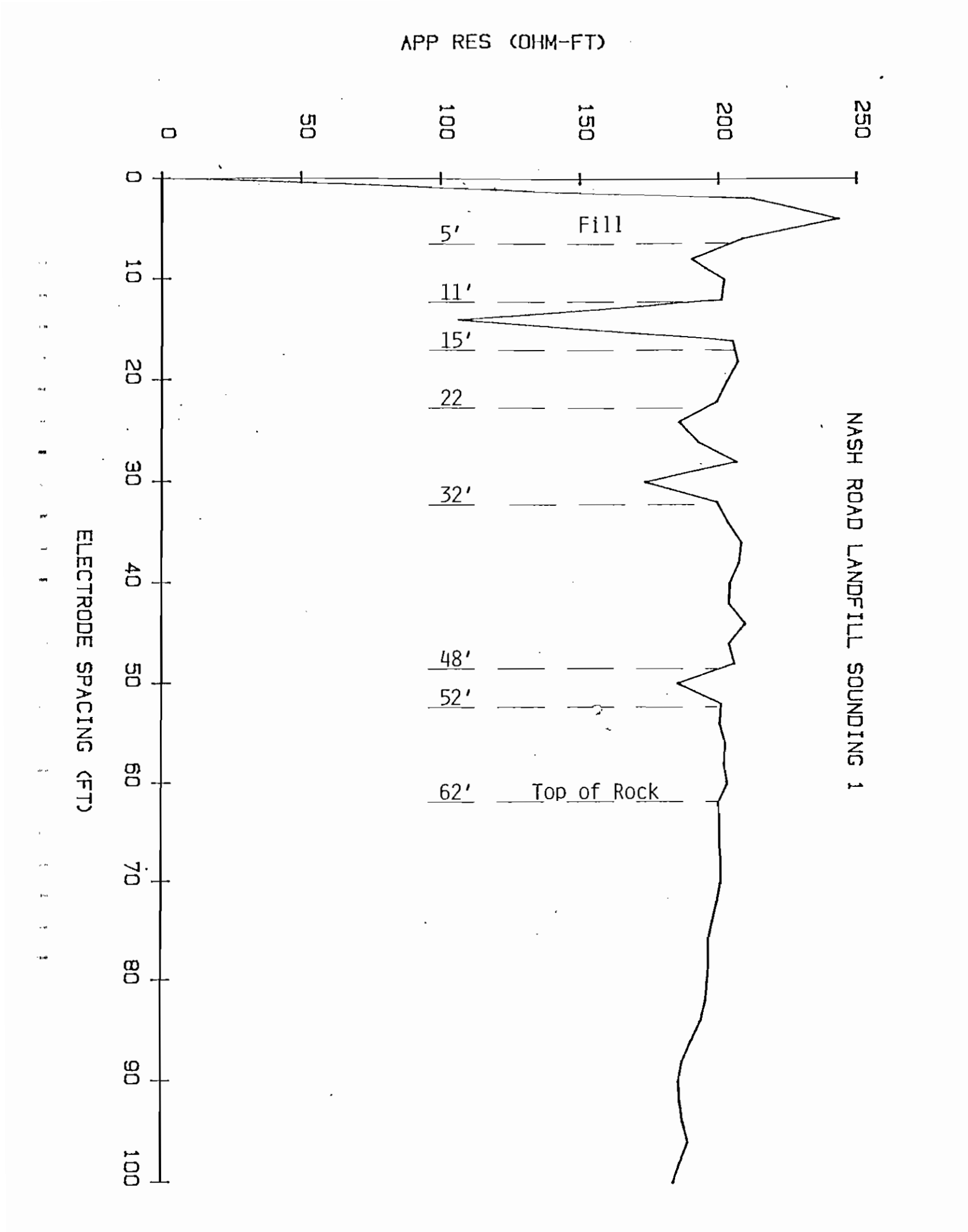
Site Name and Location Nash Rd.

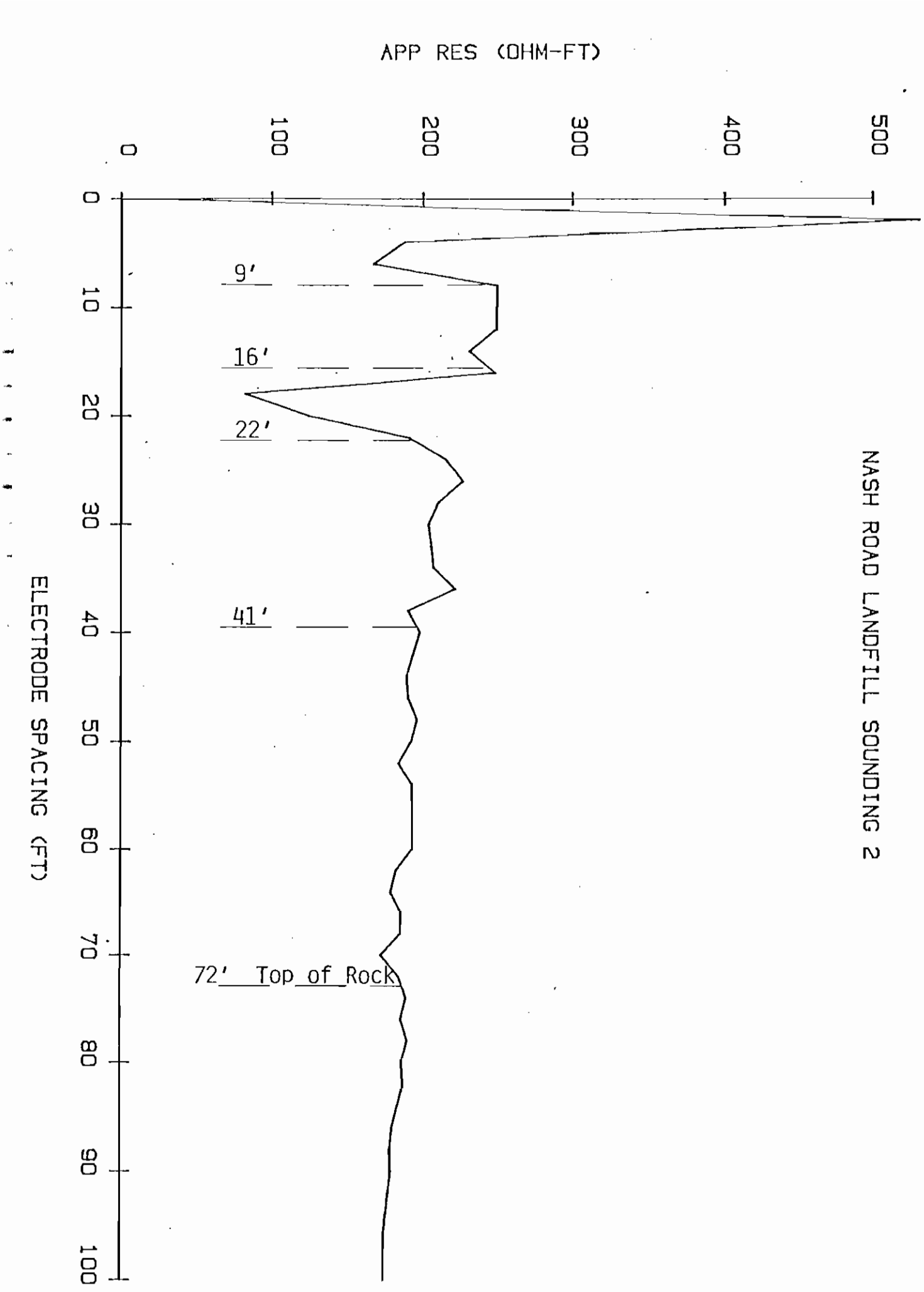
Observer(s) Harman & Baker

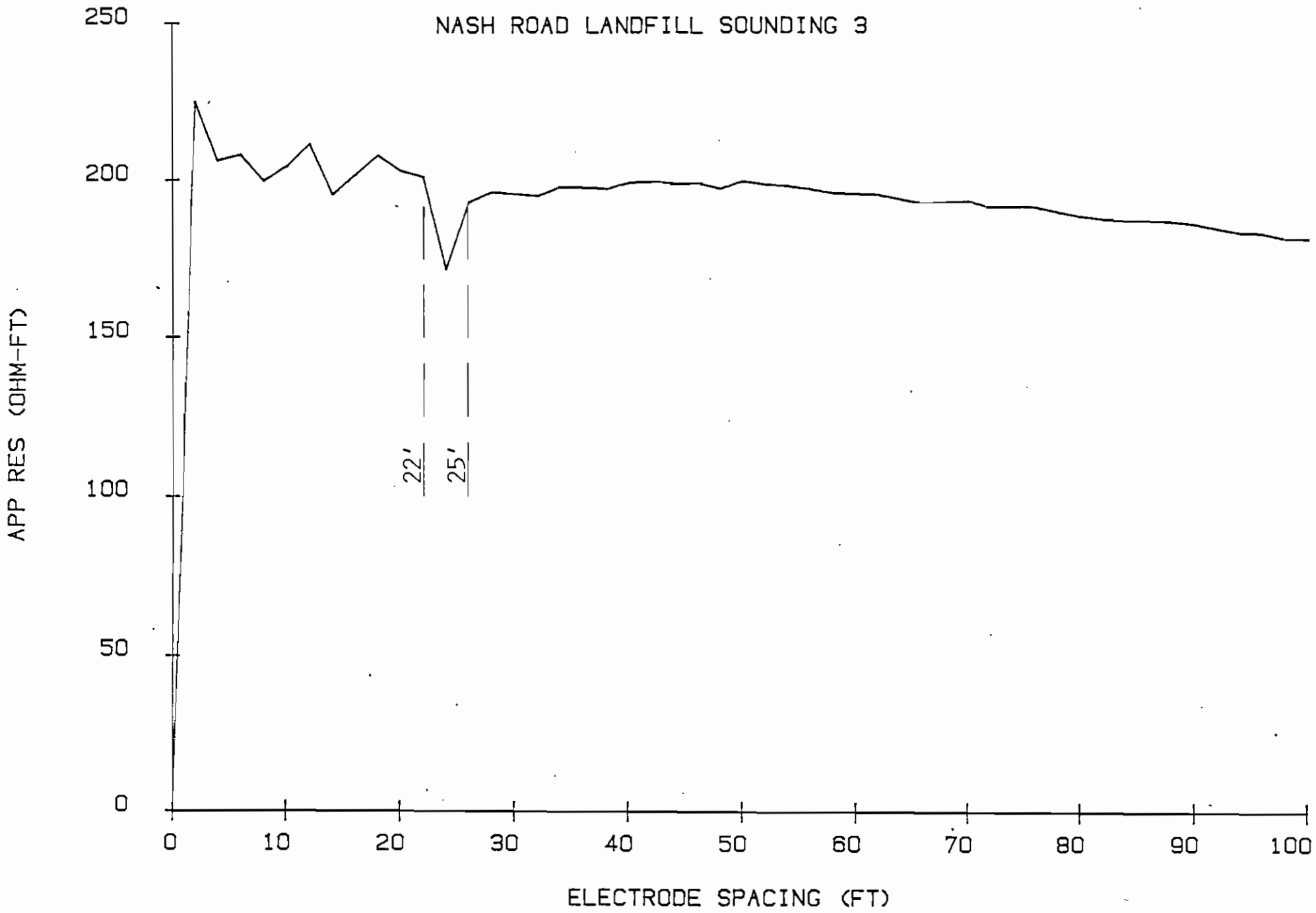
Base Station Location _____

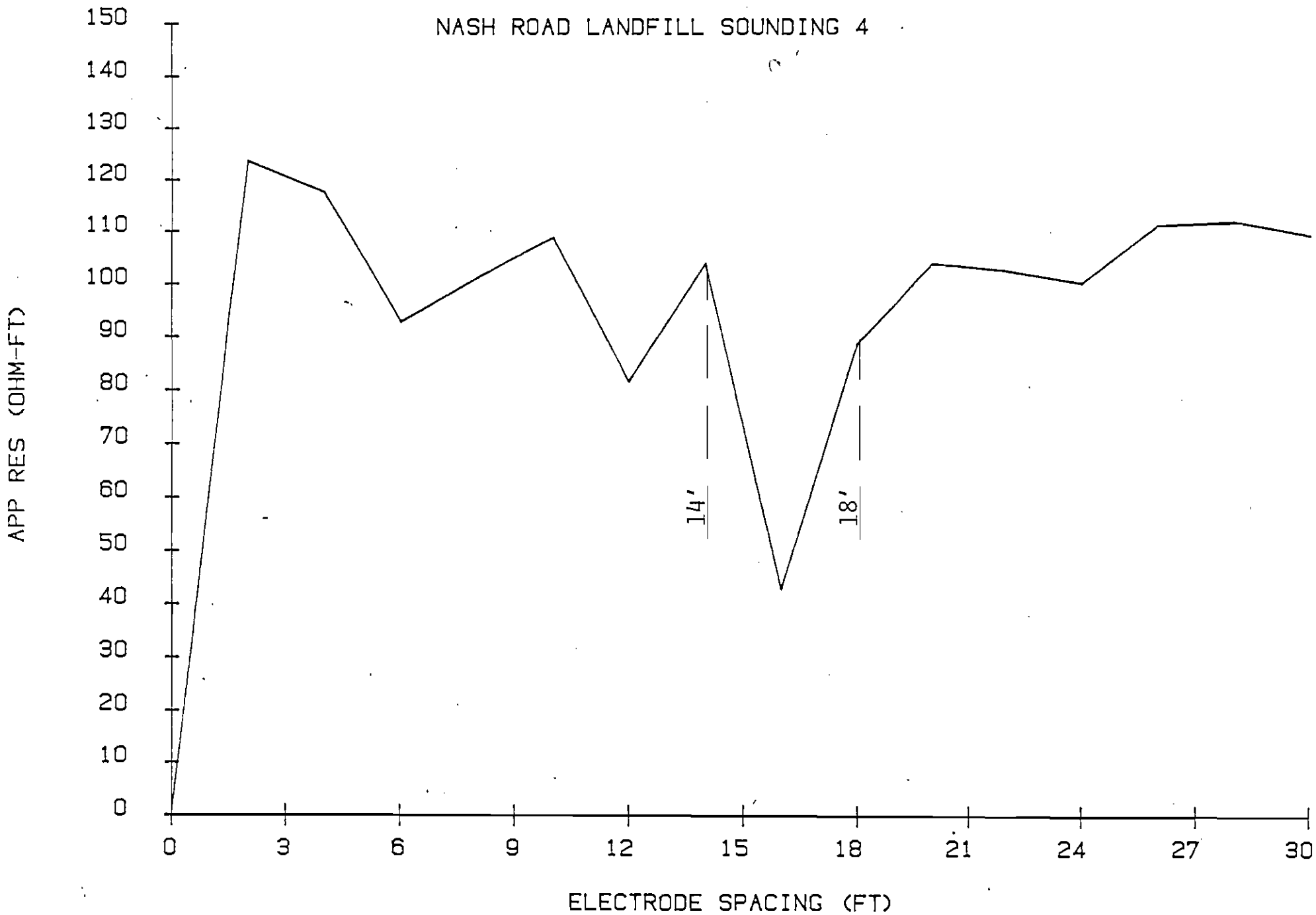
Equipment Used (name, serial #) _____

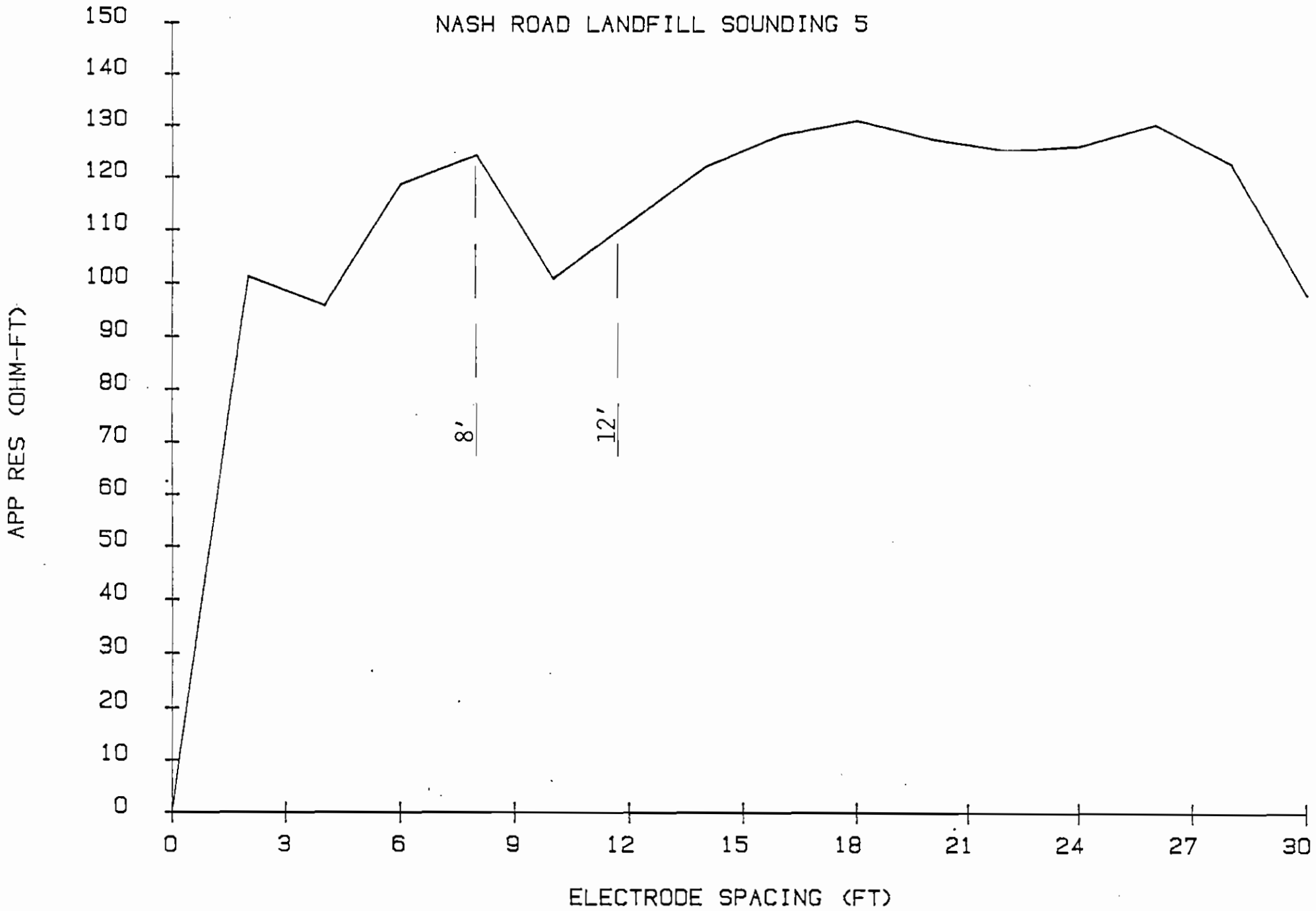
Traverse Identification	Orientation (Compass Heading)	Station Identification	Time (24-hr Clock)	Reading (Gamma)
	N	MAG Base		57021
	S			57020
	E			57019
	W			57018

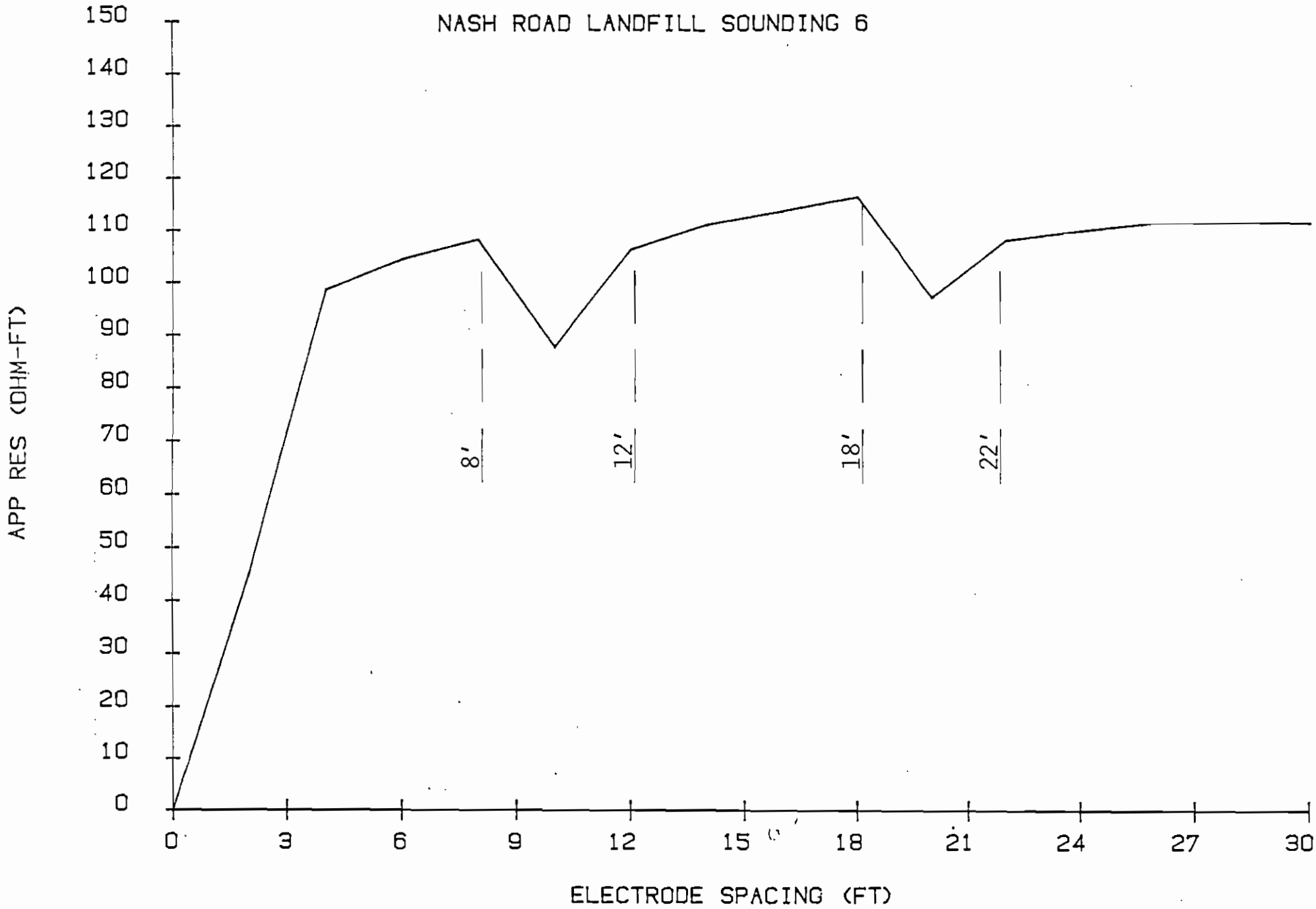

APP RES (OHM-FT)
0
50
100
150
200
250
0
10
20
30
40
50
60
70
80
90
100
ELECTRODE SPACING (FT)
5'
Fill
11'
15'
22
32'
48'
52'
62'
Top of Rock
NASH ROAD LANDFILL SOUNDING 1

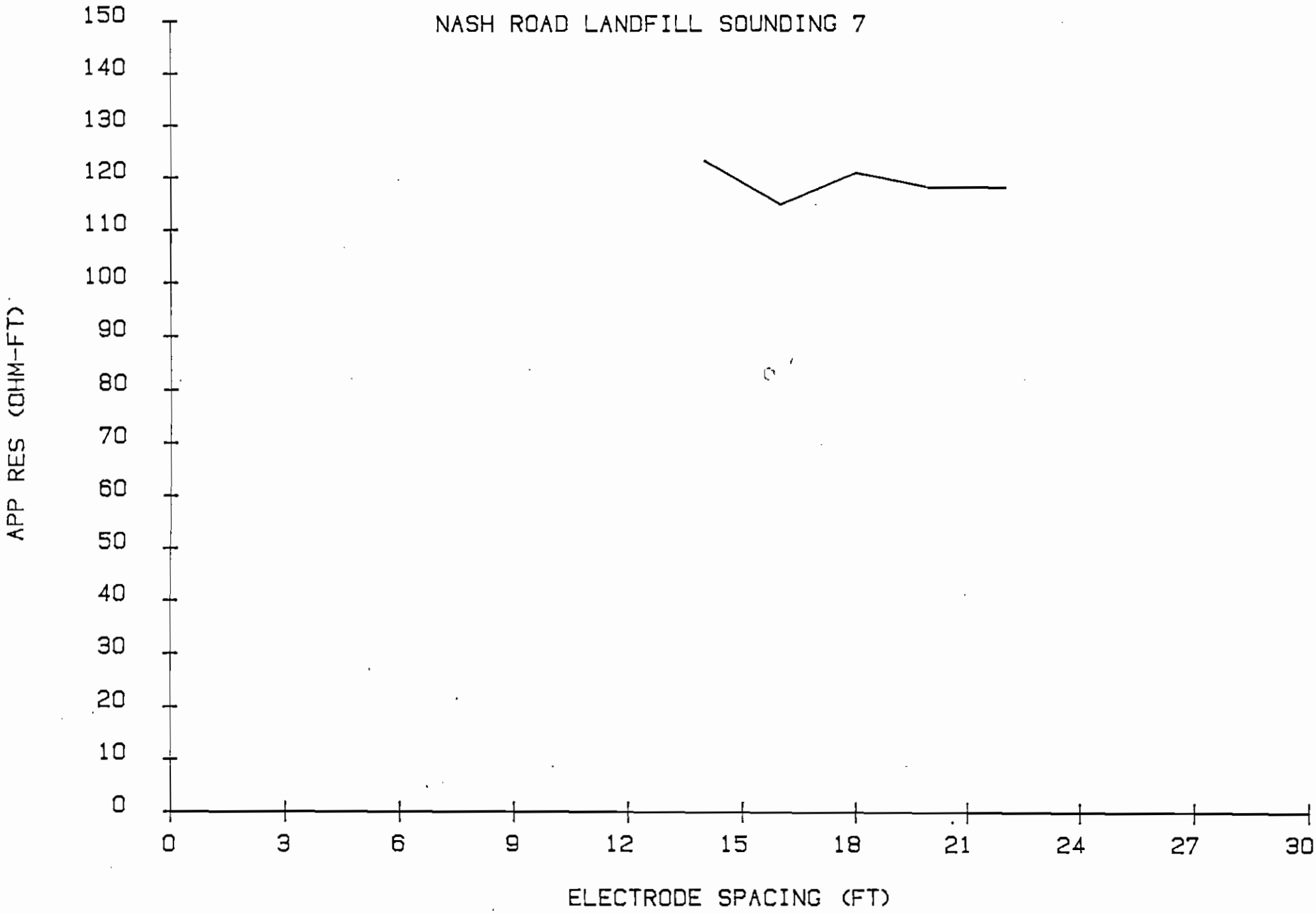

APP RES (OHM-FT)
0
100
200
300
400
500
0
10
20
30
40
50
60
70
80
90
100
9'
16'
22'
41'
72' Top of Rock
ELECTRODE SPACING (FT)
NASH ROAD LANDFILL SOUNDING 2

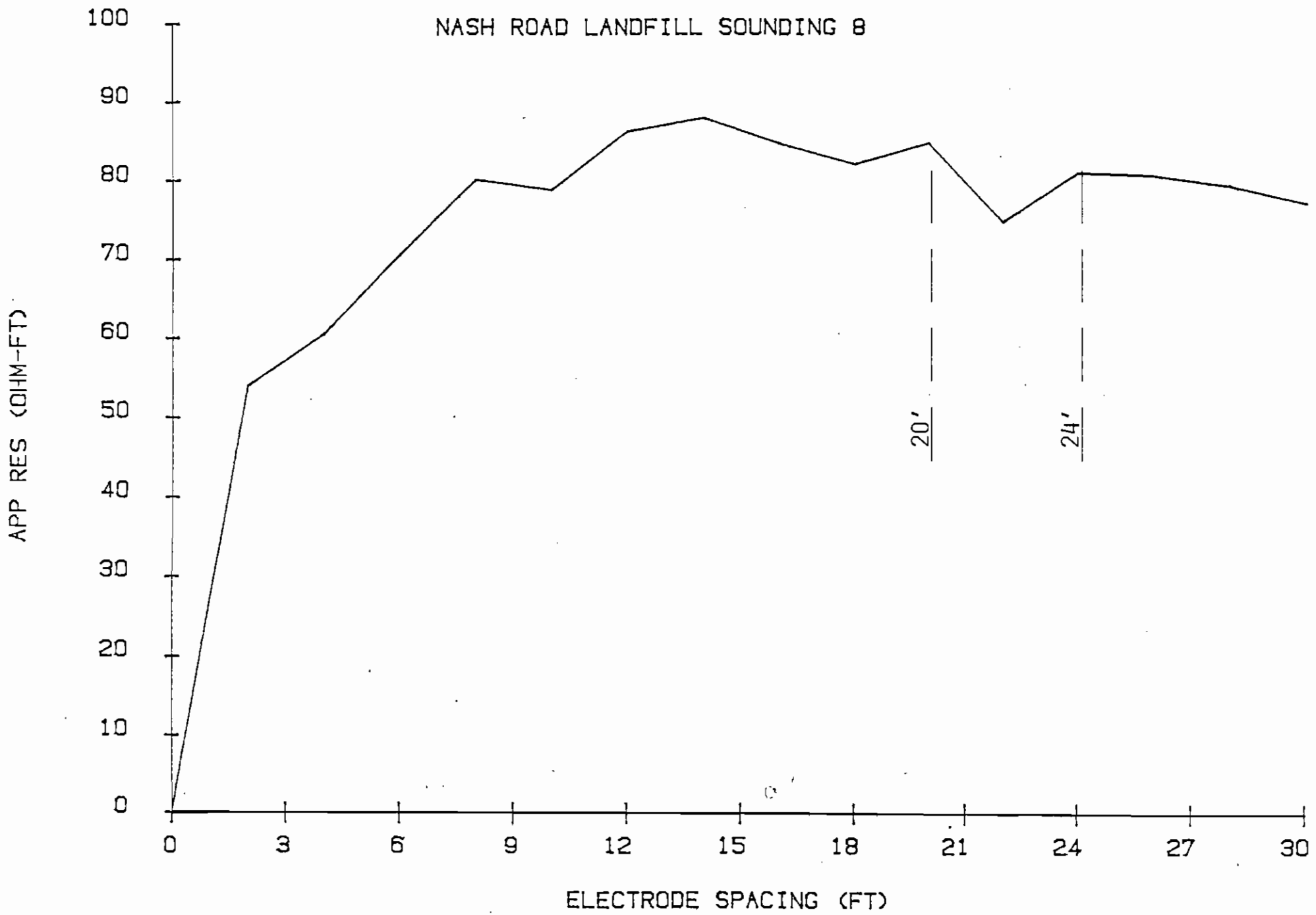

NASH ROAD LANDFILL SOUNDING 3
APP RES (OHM-FT)
250
200
150
100
50
0
22'
25'
0
10
20
30
40
50
60
70
80
90
100
ELECTRODE SPACING (FT)

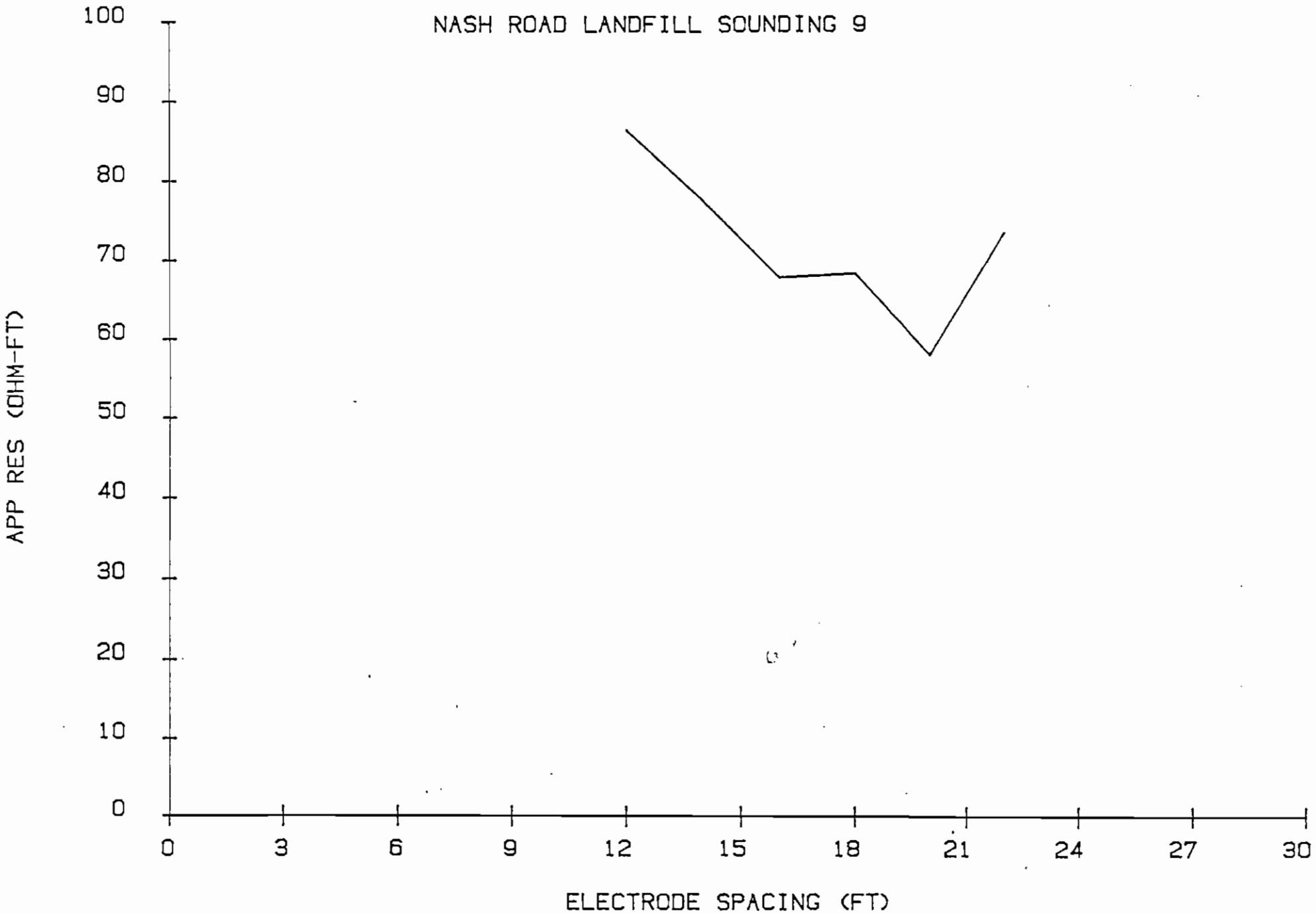

NASH ROAD LANDFILL SOUNDING 4
APP RES (OHM-FT)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
14'
18'
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)

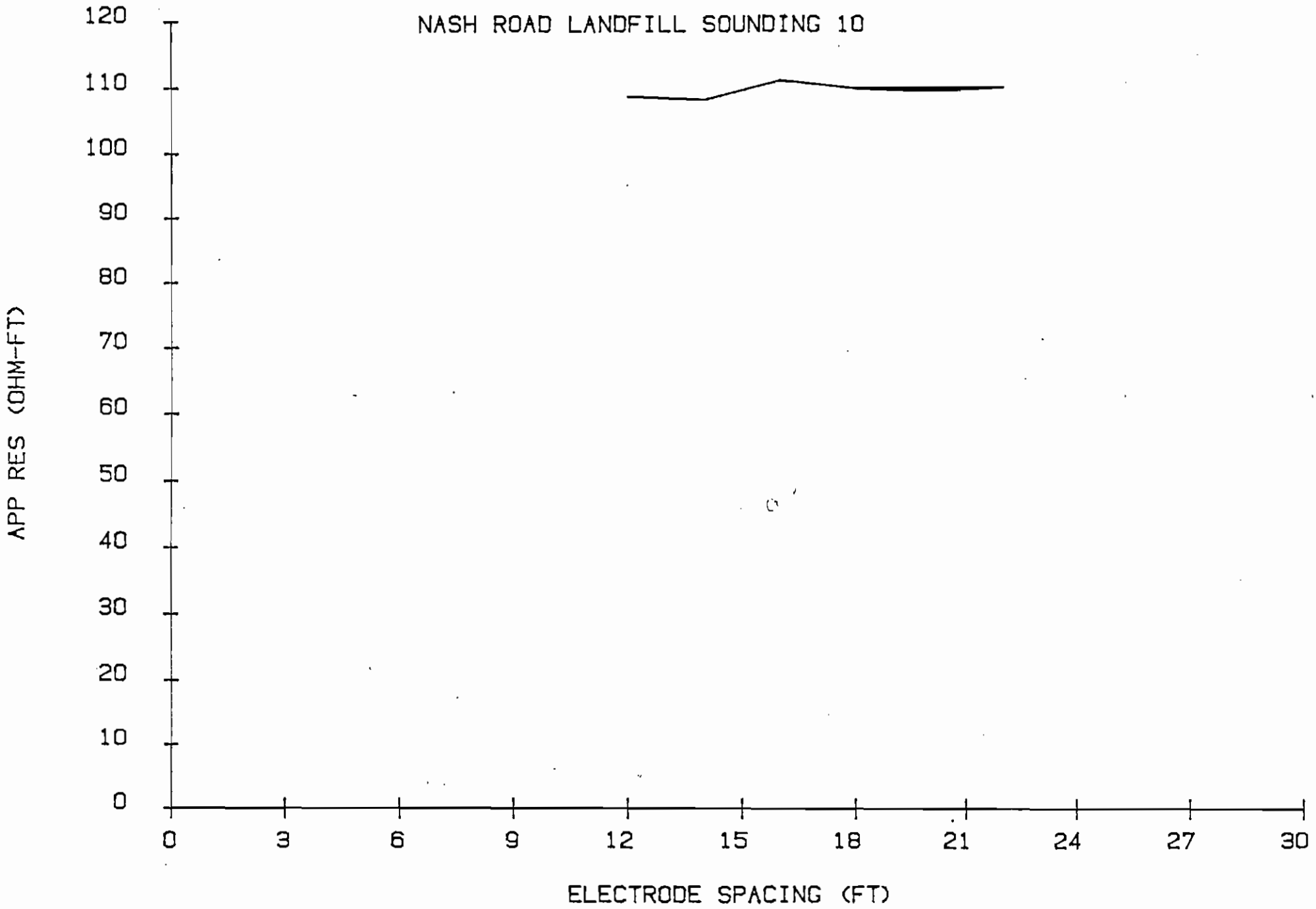

NASH ROAD LANDFILL SOUNDING 5
APP RES (OHM-FT)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
8'
12'
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)

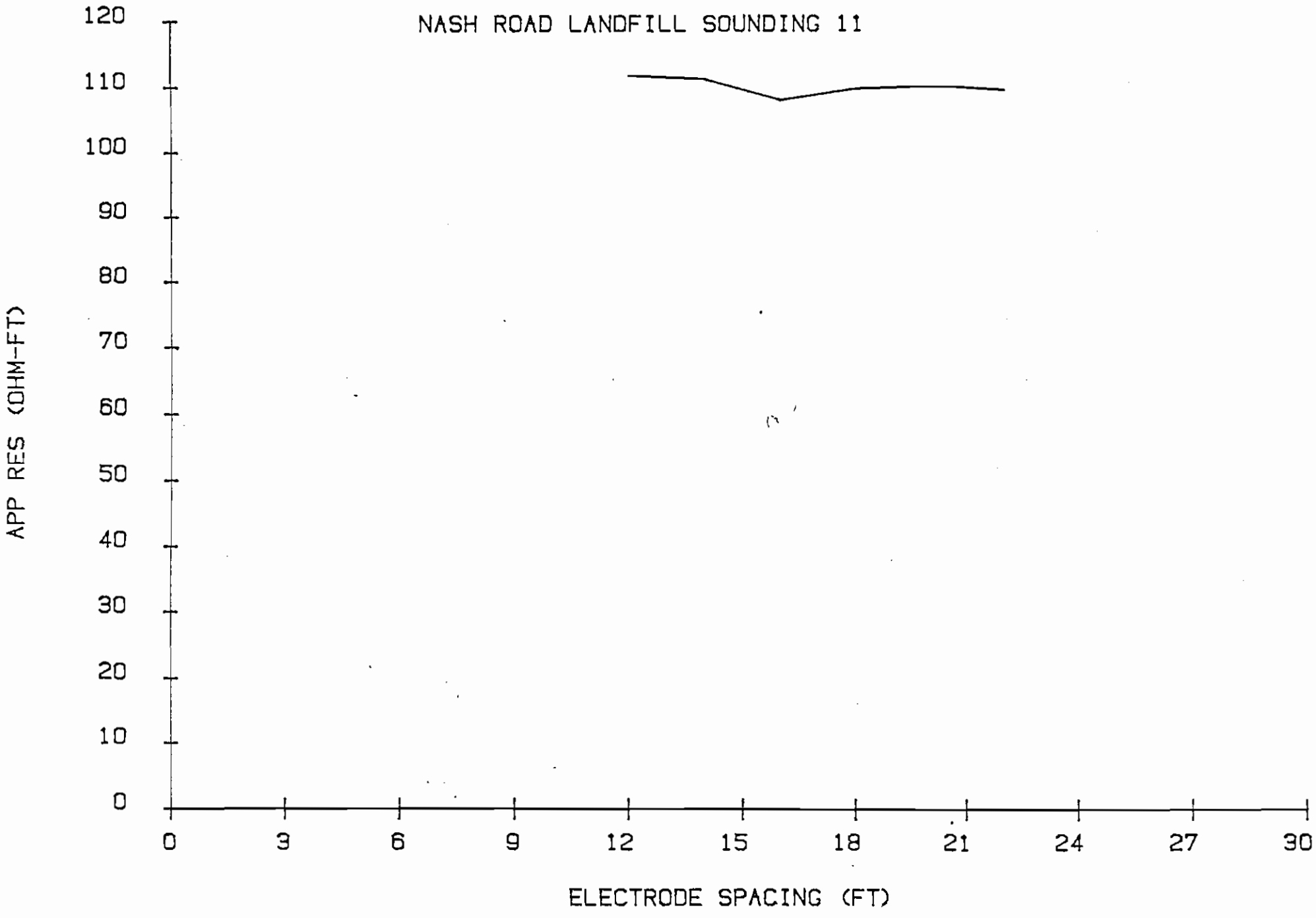

NASH ROAD LANDFILL SOUNDING 6
APP RES (OHM-FT)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)
8'
12'
18'
22'

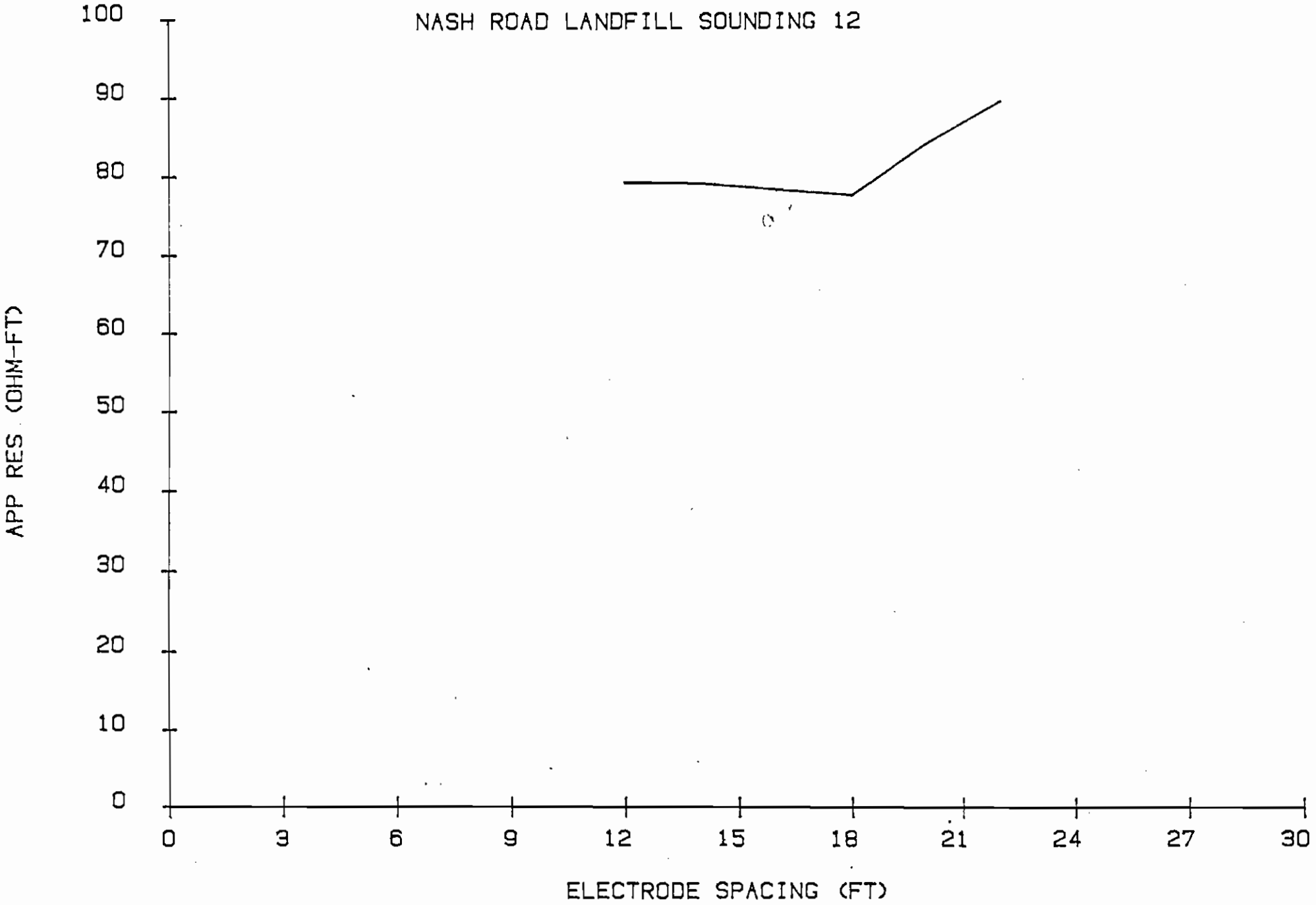

NASH ROAD LANDFILL SOUNDING 7
APP RES (OHM-FT)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)


NASH ROAD LANDFILL SOUNDING 8
APP RES (OHM-FT)
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)
20'
24'


NASH ROAD LANDFILL SOUNDING 9
APP RES (OHM-FT)
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)


NASH ROAD LANDFILL SOUNDING 10
APP RES (OHM-FT)
120
110
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)


NASH ROAD LANDFILL SOUNDING 11
APP RES (OHM-FT)
120
110
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)


NASH ROAD LANDFILL SOUNDING 12
APP RES (OHM-FT)
100
90
80
70
60
50
40
30
20
10
0
0
3
6
9
12
15
18
21
24
27
30
ELECTRODE SPACING (FT)

APPENDIX D

CHEMICAL ANALYSES

1) HNU Meter Air Survey
2) Surface Water
3) Sediment
4) Groundwater
   Monitoring Wells
   Osterman Residential Well
5) Trip Blanks

1) HNU METER AIR SURVEY

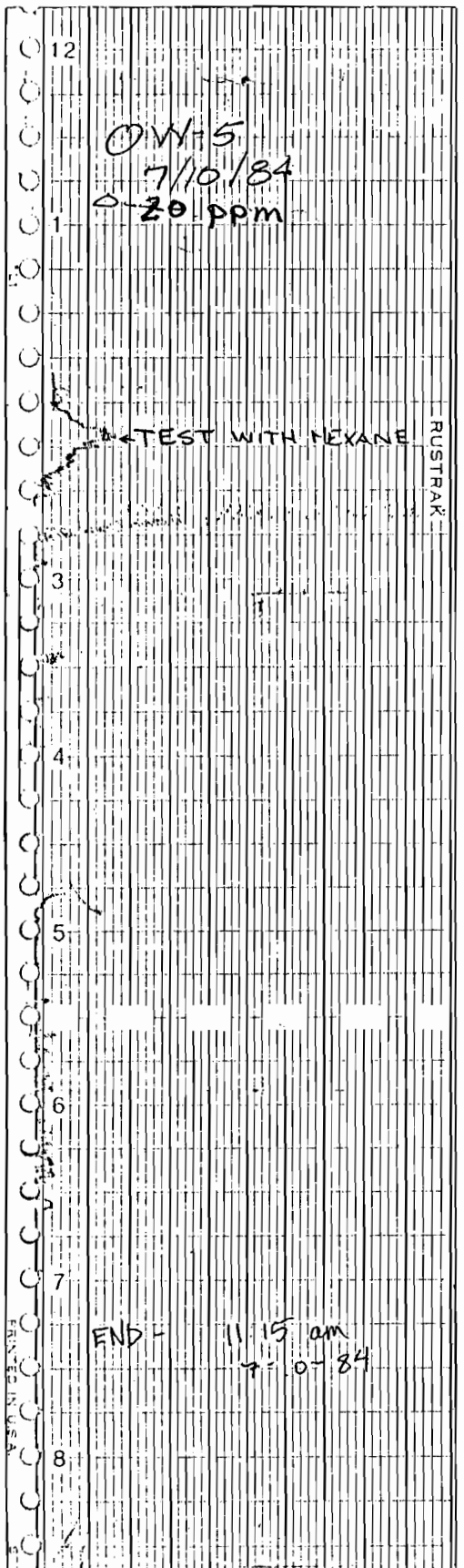
FILE 13305-003-19

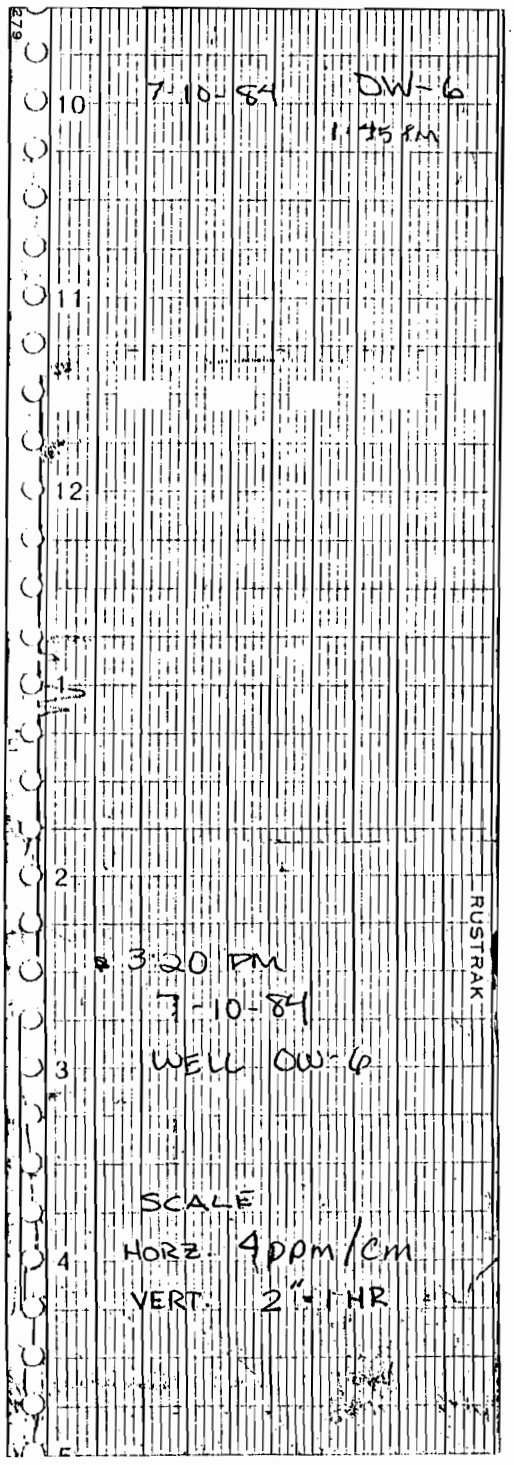
SUBJECT

HNU PHOTO-IONIZER READINGS SHEET 1 OF 1

7/10/84

SCALE HORZ 4 ppm/cm
VERT 2" = 1 HR





DAMES & MOORE

REVISIONS
BY DATE TO EO
BY DATE TO EO

BY DATE
CHECKED BY
COPY TO EO

2) SURFACE WATER

ENGINEERING-SCIENCE LABORATORY ANALYSIS REPORT

DATE: 7/15/83
JOB: NASH ROAD - PHASE I
JOB NUMBER: 36330

SAMPLE ID: Five samples received 7/1/83 for volatile organics, base-neutral organics, total organic halogens and pH analyses

Parameter / Sample ID	SW-1	SW-2	SW-3	SW-4	SW-5
Methylene Chloride (ug/L)	11	<10	10	<10	<10
Chloroform (ug/L)	<10	<10	<10	<10	<10
Carbon tetrachloride (ug/L)	<10	<10	<10	<10	<10
Benzene (ug/L)	<10	<10	<10	<10	<10
Toluene (ug/L)	<10	<10	<10	<10	<10
Chlorobenzene (ug/L)	<10	<10	<10	<10	<10
1,1,2-Trichloroethane (ug/L)	<10	<10	<10	<10	<10
Tetrachloroethene (ug/L)	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane (ug/L)	<10	<10	<10	<10	<10
Trichloroethene (ug/L)	<10	<10	<10	<10	<10
Trichlorobenzene Isomers (ug/L)	<10	<10	<10	<10	<10
Dichlorobenzene Isomers (ug/L)	<10	<10	<10	<10	<10
Hexachlorobutadiene (ug/L)	<10	<10	<10	<10	<10
pH (S.U.)	6.9	8.1	7.1	7.4	7.4
Total Organic Halogens (ppm)	0.010	0.005	0.007	0.007	0.008

B.L. Thorpe
Laboratory Supervisor

W. Andrews, Ph.D.
nette M. Davis
Chemist, VP

SAVANNAH LABORATORIES AND ENVIRONMENTAL SERVICES, INC.

P.O. Box 13842 • Savannah, Ga. 31406
912/354-7858

REPORT OF ANALYSIS

B. L. Thorpe
Engineering-Science
57 Executive Park South, NE
Suite 590
Atlanta,GA. 30329

REPORT NO. 5239

DATE RECEIVED 7/7/83

SAMPLED BY Client

IDENTIFICATION: Samples submitted to laboratory

METHODS: EPA Methods of Analysis (Model 610/O.I. Corp.)

SAMPLE ID.#	TOX CONTENT (ppm)
07-1000-01	0.010
07-1001-01	0.005
07-1002-01	0.007
07-1003-01	0.007
07-1004-01	0.008

Janette M. Davis

Janette M. Davis

3) SEDIMENT

COMPUCHEM LABORATORIES

August 29, 1984

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

SEP 04 1984

Dear Mr. Schroder:

Thank you for selecting CompuChem® Laboratories for your recent sample analysis. We have completed the analysis that you requested and have enclosed a summary of the CompuChem® data for your review. Additional data details are available for purchase if you require them.

As you know, EPA has proposed detection limits for the priority pollutants in the December 3, 1979, Federal Register, and we have reported all priority pollutant concentrations which have exceeded these limits (or their equivalent for solid matrices). In addition, we have permanently stored a complete record of your data on magnetic tape. This includes chromatograms, mass spectra, calibration and quality control data for the organics. Therefore, your original data is readily available for future reference. Should you require additional information from your data base, please contact us at 1/800-334-8525.

In order to expedite data to you, we have forwarded the results for all completed analyses. If you submitted more samples than are included in the enclosed results, the data will be forthcoming upon completion of our final review.

Your confidence in our CompuChem® service is appreciated. We look forward to a continuing association.

Sincerely,

Customer Service Dept.
CompuChem®

Enclosure:

Report:	SD-3	-	32411
	SD-2	-	32412
	SD-1	-	32413

DATA REPORT NOTICE

CompuChem employs Methods 624 and 625 for GC/MS analysis of organics in liquid matrices. These methods were proposed on December 3, 1979 by the U.S.E.P.A. in Volume 44 of the Federal Register. These methods were subsequently revised and reissued in July, 1982 as publication EPA-600/4-82-057. The EPA Environmental Monitoring and Support Laboratory (EMSL-Cincinnati) has subsequently issued method modifications which provide for the analysis of solid matrices. These modifications specify changes in the sample preparation procedures.

Additionally, for solid samples detection limits and any analytical results reported are based on processing the method specified sample size of as-received material.

The referenced methods are no longer appropriate for several of the original priority pollutant compounds. This is due to either the deletion from the toxic pollutant list (40 CFR Part 401) by EPA or the determination by EPA that the referenced methods may not be optimized for certain compounds (EPA-600/4-82-057) originally incorporated by the methods.

CompuChem® presents these compounds in its sample data report for completeness as many of the government compound list forms continue to display the affected compounds. For consistency, these compounds are reported as "BDL" or "Below Detection Limit" as they are either not likely to exist in the sample or are not likely to be detected by the method. Those compounds which have actually been deleted are listed below with the Federal Register deletion reference.

Compound Name	GC/MS Fraction	Federal Register	Date
Dichlorodifluoromethane	Volatile	46FR2264	1/8/81
*Trichlorofluoromethane	Volatile	46FR2264	1/8/81
Bis(Chloromethyl)Ether	Volatile	46FR10723	2/4/81

*While this compound has been deleted, CompuChem® continues to identify and quantitate for it.

COMPUCHEM LABORATORIES

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32411

Samples:
Received - 7-26-84
Analyzed - 8-02-84

SAMPLE IDENTIFIER:	COMPUCHEM SAMPLE NUMBER:
SD-3	32411
SD-2	32412
SD-1	32413

SUBMITTED TO:

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Diana A. Scammell

DIANA A. SCAMMELL
TECHNICAL SPECIALIST, OPERATIONS

R. L. MYERS, PH.D., PRESIDENT

ROBERT E. MEIERER
DIRECTOR OF QUALITY ASSURANCE

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32411

	INORGANICS PRIORITY POLLUTANTS	CONCENTRATION (MG/KG)	DETECTION LIMIT (MG/KG)
14M.	CYANIDE, TOTAL	BDL	1.0

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32412

	INORGANICS PRIORITY POLLUTANTS	CONCENTRATION (MG/KG)	DETECTION LIMIT (MG/KG)
14M.	CYANIDE, TOTAL	BDL	1.0

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32413

	INORGANICS PRIORITY POLLUTANTS	CONCENTRATION (MG/KG)	DETECTION LIMIT (MG/KG)
14M.	CYANIDE, TOTAL	BDL	1.0

SEP 10 1984

COMPUCHEM
LABORATORIES

SEP 06 1984

August 31, 1984

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Dear Mr. Schroder:

Thank you for selecting CompuChem® Laboratories for your recent sample analysis. We have completed the analysis that you requested and have enclosed a summary of the CompuChem® data for your review. Additional data details are available for purchase if you require them.

As you know, EPA has proposed detection limits for the priority pollutants in the December 3, 1979, Federal Register, and we have reported all priority pollutant concentrations which have exceeded these limits (or their equivalent for solid matrices). In addition, we have permanently stored a complete record of your data on magnetic tape. This includes chromatograms, mass spectra, calibration and quality control data for the organics. Therefore, your original data is readily available for future reference. Should you require additional information from your data base, please contact us at 1/800-334-8525.

In order to expedite data to you, we have forwarded the results for all completed analyses. If you submitted more samples than are included in the enclosed results, the data will be forthcoming upon completion of our final review.

Your confidence in our CompuChem® service is appreciated. We look forward to a continuing association.

Sincerely,

Customer Service Dept.
CompuChem®

Enclosure:

Report: SD-2 - 32299

DATA REPORT NOTICE

CompuChem employs Methods 624 and 625 for GC/MS analysis of organics in liquid matrices. These methods were proposed on December 3, 1979 by the U.S.E.P.A. in Volume 44 of the Federal Register. These methods were subsequently revised and reissued in July, 1982 as publication EPA-600/4-82-057. The EPA Environmental Monitoring and Support Laboratory (EMSL-Cincinnati) has subsequently issued method modifications which provide for the analysis of solid matrices. These modifications specify changes in the sample preparation procedures.

Additionally, for solid samples detection limits and any analytical results reported are based on processing the method specified sample size of as-received material.

The referenced methods are no longer appropriate for several of the original priority pollutant compounds. This is due to either the deletion from the toxic pollutant list (40 CFR Part 401) by EPA or the determination by EPA that the referenced methods may not be optimized for certain compounds (EPA-600/4-82-057) originally incorporated by the methods.

CompuChem® presents these compounds in its sample data report for completeness as many of the government compound list forms continue to display the affected compounds. For consistency, these compounds are reported as "BDL" or "Below Detection Limit" as they are either not likely to exist in the sample or are not likely to be detected by the method. Those compounds which have actually been deleted are listed below with the Federal Register deletion reference.

Compound Name	GC/MS Fraction	Federal Register	Date
Dichlorodifluoromethane	Volatile	46FR2264	1/8/81
*Trichlorofluoromethane	Volatile	46FR2264	1/8/81
Bis(Chloromethyl)Ether	Volatile	46FR10723	2/4/81

*While this compound has been deleted, CompuChem® continues to identify and quantitate for it.

COMPUCHEM
LABORATORIES

REPORT OF DATA

SAMPLE IDENTIFIER: SD-2

COMPUCHEM SAMPLE NUMBER: 32299

SUBMITTED TO:

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Diana A. Scammell

DIANA A. SCAMMELL
TECHNICAL SPECIALIST, OPERATIONS

R. L. MYERS, PH.D., PRESIDENT

ROBERT E. MEIERER
DIRECTOR OF QUALITY ASSURANCE

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

	Date
Received/Refrigerated	07/27/84
Organics	
Extracted	08/01/84
Analyzed	
1. Volatiles	07/03/84
2. Acid	08/08/84
3. Base/Neutrals	08/06/84
4. Pesticides/PCBS	08/06/84
Inorganics	
1. Metals	08/14/84
2. Cyanide	Not Requested
3. Phenols	Not Requested

COMPOUND LIST - VOLATILES ORGANICS

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

		CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1V.	CHLOROMETHANE	BDL	10
2V.	VINYL CHLORIDE	BDL	10
3V.	CHLOROETHANE	BDL	10
4V.	BROMOMETHANE	BDL	10
5V.	ACROLEIN	BDL	100
6V.	ACRYLONITRILE	BDL	100
7V.	METHYLENE CHLORIDE	NDB*	10
8V.	TRICHLOROFLUOROMETHANE	BDL	10
9V.	1,1-DICHLOROETHYLENE	BDL	10
10V.	1,1-DICHLOROETHANE	BDL	10
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10
12V.	CHLOROFORM	BDL	10
13V.	1,2-DICHLOROETHANE	BDL	10
14V.	1,1,1-TRICHLOROETHANE	BDL	10
15V.	CARBON TETRACHLORIDE	BDL	10
16V.	BROMODICHLOROMETHANE	BDL	10
17V.	1,2-DICHLOROPROPANE	BDL	10
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10
19V.	TRICHLOROETHYLENE	BDL	10
20V.	BENZENE	BDL	10
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10
22V.	1,1,2-TRICHLOROETHANE	BDL	10
23V.	DIBROMOCHLOROMETHANE	BDL	10
24V.	BROMOFORM	BDL	10
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10
27V.	TOLUENE	BDL	10
28V.	CHLOROBENZENE	BDL	10
29V.	ETHYLBENZENE	BDL	10
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10
31V.	DICHLORODIFLUOROMETHANE†	BDL	
32V.	BIS(CHLOROMETHYL)ETHER†	BDL	

BDL=BELOW DETECTION LIMIT
*See Quality Assurance Notice

†See Data Report Notice

QUALITY ASSURANCE NOTICE

CompuChem Sample No. 32299

Although not required by the Federal Register, December 3, 1979 (modified July, 1982) Volatile Method 624 procedure, the laboratory prepares VOA blanks when compositing water samples and preparing low and medium level hazardous waste VOA samples. This is to insure that the glassware used is free from contamination, and to monitor the possibility of cross-contamination from high levels of volatile organic compounds in some samples and the laboratory atmosphere.

The compositing or method blank (# 32330) prepared with this sample contained the compound(s) listed below. Sample data associated with this blank have been adjusted and/or flagged according to the EPA-recommended methods.

Compound(s)	Concentration Found In Sample (ug/kg)	Applicable Qualifier*
Methylene Chloride	44	NDB

The following data qualifiers are used by EPA and adopted by CompuChem® for reporting purposes:

NDB = The concentration of a priority pollutant in the blank is greater than 1/2 the detection limit and is greater than 1/2 the concentration in the sample.

*No adjusted sample concentration is reported.

COMPOUND LIST -- ACID EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

		CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1A.	PHENOL	BDL	500
2A.	2-CHLOROPHENOL	BDL	500
3A.	2-NITROPHENOL	BDL	500
4A.	2,4-DIMETHYLPHENOL	BDL	500
5A.	2,4-DICHLOROPHENOL	BDL	500
6A.	P-CHLORO-M-CRESOL	BDL	500
7A.	2,4,6-TRICHLOROPHENOL	BDL	500
8A.	2,4-DINITROPHENOL	BDL	5000
9A.	4-NITROPHENOL	BDL	500
10A.	4,6-DINITRO-O-CRESOL	BDL	5000
11A.	PENTACHLOROPHENOL	BDL	500

BDL=BELOW DETECTION LIMIT
†See Data Report Notice

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

		CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1B.	N-NITROSODIMETHYLAMINE	BDL	200
2B.	BIS (2-CHLOROETHYL) ETHER	BDL	200
3B.	1,3-DICHLOROBENZENE	BDL	200
4B.	1,4-DICHLOROBENZENE	BDL	200
5B.	1,2-DICHLOROBENZENE	BDL	200
6B.	BIS (2-CHLOROISOPROPYL) ETHER	BDL	200
7B.	HEXACHLOROETHANE	BDL	200
8B.	N-NITROSODI-N-PROPYLAMINE	BDL	200
9B.	NITROBENZENE	BDL	200
10B.	ISOPHORONE	BDL	200
11B.	BIS(2-CHLOROETHOXY) METHANE	BDL	200
12B.	1,2,4-TRICHLOROBENZENE	BDL	200
13B.	NAPHTHALENE	BDL	200
14B.	HEXACHLOROBUTADIENE	BDL	200
15B.	HEXACHLOROCYCLOPENTADIENE	BDL	200
16B.	2-CHLORONAPHTHALENE	BDL	200
17B.	DIMETHYLPHTHALATE	BDL	200
18B.	ACENAPHTHYLENE	BDL	200
19B.	2,6-DINITROTOLUENE	BDL	200
20B.	ACENAPHTHENE	BDL	200
21B.	2,4-DINITROTOLUENE	BDL	200
22B.	DIETHYLPHTHALATE	BDL	200
23B.	FLUORENE	BDL	200
24B.	4-CHLOROPHENYL PHENYL ETHER	BDL	200
25B.	DIPHENYLAMINE (N-NITROSO)	BDL	200
26B.	1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	200
27B.	4-BROMOPHENYL PHENYL ETHER	BDL	200
28B.	HEXACHLOROBENZENE	BDL	200

BDL=BELOW DETECTION LIMIT
†See Data Report Notice

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS (Page Two)

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

		CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
29B.	PHENANTHRENE	BDL	200
30B.	ANTHRACENE	BDL	200
31B.	DI-N-BUTYLPHTHALATE	BDL	200
32B.	FLUORANTHENE	BDL	200
33B.	BENZIDINE	BDL	200
34B.	PYRENE	BDL	200
35B.	BUTYLBENZYLPHTHALATE	BDL	200
36B.	BENZO(A)ANTHRACENE	BDL	200
37B.	3,3'-DICHLOROBENZIDINE	BDL	200
38B.	CHRYSENE	BDL	200
39B.	BIS(2-ETHYLHEXYL)PHTHALATE	BDL	200
40B.	DI-N-OCTYLPHTHALATE	BDL	200
41B.	BENZO(B)FLUORANTHENE	BDL	200
42B.	BENZO(K)FLUORANTHENE	BDL	200
43B.	BENZO(A)PYRENE	BDL	200
44B.	INDENO(1,2,3-C,D)PYRENE	BDL	500
45B.	DIBENZO(A,H)ANTHRACENE	BDL	500
46B.	BENZO(G,H,I)PERYLENE	BDL	500

BDL=BELOW DETECTION LIMIT
†See Date Report Notice

COMPOUND LIST -- PESTICIDES/PCB'S

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

		CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P.	ALDRIN	BDL	200
2P.	ALPHA-BHC	BDL	200
3P.	BETA-BHC	BDL	200
4P.	GAMMA-BHC	BDL	200
5P.	DELTA-BHC	BDL	200
6P.	CHLORDANE	BDL	200
7P.	4,4'-DDT	BDL	200
8P.	4,4'-DDE	BDL	200
9P.	4,4'-DDD	BDL	200
10P.	DIELDRIN	BDL	200
11P.	ALPHA-ENDOSULFAN	BDL	200
12P.	BETA-ENDOSULFAN	BDL	200
13P.	ENDOSULFAN SULFATE	BDL	200
14P.	ENDRIN	BDL	200
15P.	ENDRIN ALDEHYDE	BDL	200
16P.	HEPTACHLOR	BDL	200
17P.	HEPTACHLOR EPOXIDE	BDL	200
18P.	PCB-1242	BDL	200
19P.	PCB-1254	BDL	200
20P.	PCB-1221	BDL	200
21P.	PCB-1232	BDL	200
22P.	PCB-1248	BDL	200
23P.	PCB-1260	BDL	200
24P.	PCB-1016	BDL	200
25P.	TOXAPHENE	BDL	200

BDL=BELOW DETECTION LIMIT
†See Data Report Notice

COMPOUND LIST - INORGANICS (METALS)

SAMPLE IDENTIFIER: SD-2
COMPUCHEM SAMPLE NUMBER: 32299

INORGANICS PRIORITY POLLUTANTS	CONCENTRATION (UG/G)	DETECTION LIMIT† (UG/G)
1. CADMIUM, TOTAL	BDL	0.20
2. CHROMIUM, TOTAL	6.3	0.50
3. COPPER, TOTAL	8.2	1.0
4. LEAD, TOTAL*	7.0	0.50
5. MERCURY, TOTAL	0.064	0.0020
6. NICKEL, TOTAL	8.5	1.0
7. ZINC, TOTAL	34	0.20

BDL=BELOW DETECTION LIMIT
†See Data Report Notice

*Lead analyzed by Flame AAS because of concentration level found.

3308 East Chapel Hill/Nelson Highway
P.O. Box 12652
Research Triangle Park, NC 27709

Telephone: 919-549-8263
800-334-8525

CompuChem LABORATORIES

August 27, 1984

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

SEP 04 1984

Dear Mr. Schroder:

Thank you for selecting CompuChem® Laboratories for your recent sample analysis. We have completed the analysis that you requested and have enclosed a summary of the CompuChem® data for your review. Additional data details are available for purchase if you require them.

As you know, EPA has proposed detection limits for the priority pollutants in the December 3, 1979, Federal Register, and we have reported all priority pollutant concentrations which have exceeded these limits (or their equivalent for solid matrices). In addition, we have permanently stored a complete record of your data on magnetic tape. This includes chromatograms, mass spectra, calibration and quality control data for the organics. Therefore, your original data is readily available for future reference. Should you require additional information from your data base, please contact us at 1/800-334-8525.

In order to expedite data to you, we have forwarded the results for all completed analyses. If you submitted more samples than are included in the enclosed results, the data will be forthcoming upon completion of our final review.

Your confidence in our CompuChem® service is appreciated. We look forward to a continuing association.

Sincerely,

Customer Service Dept.
CompuChem®

Enclosure:

Report: SD-3 - 32297
SD-1 - 32301

DATA REPORT NOTICE

CompuChem employs Methods 624 and 625 for GC/MS analysis of organics in liquid matrices. These methods were proposed on December 3, 1979 by the U.S.E.P.A. in Volume 44 of the Federal Register. These methods were subsequently revised and reissued in July, 1982 as publication EPA-600/4-82-057. The EPA Environmental Monitoring and Support Laboratory (EMSL-Cincinnati) has subsequently issued method modifications which provide for the analysis of solid matrices. These modifications specify changes in the sample preparation procedures.

Additionally, for solid samples detection limits and any analytical results reported are based on processing the method specified sample size of as-received material.

The referenced methods are no longer appropriate for several of the original priority pollutant compounds. This is due to either the deletion from the toxic pollutant list (40 CFR Part 401) by EPA or the determination by EPA that the referenced methods may not be optimized for certain compounds (EPA-600/4-82-057) originally incorporated by the methods.

CompuChem® presents these compounds in its sample data report for completeness as many of the government compound list forms continue to display the affected compounds. For consistency, these compounds are reported as "BDL" or "Below Detection Limit" as they are either not likely to exist in the sample or are not likely to be detected by the method. Those compounds which have actually been deleted are listed below with the Federal Register deletion reference.

Compound Name	GC/MS Fraction	Federal Register	Date
Dichlorodifluoromethane	Volatile	46FR2264	1/8/81
*Trichlorofluoromethane	Volatile	46FR2264	1/8/81
Bis(Chloromethyl)Ether	Volatile	46FR10723	2/4/81

*While this compound has been deleted, CompuChem® continues to identify and quantitate for it.

CompuChem LABORATORIES

REPORT OF DATA

SAMPLE IDENTIFIER	COMPUCHEM SAMPLE NUMEBER
SD-3	32297
SD-1	32301

SUBMITTED TO:

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Diana A. Scammell

DIANA A. SCAMMELL
TECHNICAL SPECIALIST, OPERATIONS

R. L. MYERS, PH.D., PRESIDENT

ROBERT E. MEIERER
DIRECTOR OF QUALITY ASSURANCE

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

	Date
Received/Refrigerated	7-27-84
Organics	
Extracted	8-1-84
Analyzed	
1. Volatiles	7-30-84
2. Acid	8-8-84
3. Base/Neutrals	8-4-84
4. Pesticides/PCBS	8-4-84
Inorganics	
1. Metals	8-14-84
2. Cyanide	Not Requested
3. Phenols	Not Requested

COMPOUND LIST - VOLATILES ORGANICS

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

		CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1V.	CHLOROMETHANE	BDL	10
2V.	VINYL CHLORIDE	BDL	10
3V.	CHLOROETHANE	BDL	10
4V.	BROMOMETHANE	BDL	10
5V.	ACROLEIN	BDL	100
6V.	ACRYLONITRILE	BDL	100
7V.	METHYLENE CHLORIDE	BDL	10
8V.	TRICHLOROFLUOROMETHANE	BDL	10
9V.	1,1-DICHLOROETHYLENE	BDL	10
10V.	1,1-DICHLOROETHANE	BDL	10
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10
12V.	CHLOROFORM	BDL	10
13V.	1,2-DICHLOROETHANE	BDL	10
14V.	1,1,1-TRICHLOROETHANE	BDL	10
15V.	CARBON TETRACHLORIDE	BDL	10
16V.	BROMODICHLOROMETHANE	BDL	10
17V.	1,2-DICHLOROPROPANE	BDL	10
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10
19V.	TRICHLOROETHYLENE	BDL	10
20V.	BENZENE	BDL	10
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10
22V.	1,1,2-TRICHLOROETHANE	BDL	10
23V.	DIBROMOCHLOROMETHANE	BDL	10
24V.	BROMOFORM	BDL	10
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10
27V.	TOLUENE	BDL	10
28V.	CHLOROBENZENE	BDL	10
29V.	ETHYLBENZENE	BDL	10
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10
31V.	DICHLORODIFLUOROMETHANE†	BDL	
32V.	BIS(CHLOROMETHYL)ETHER†	BDL	

BDL=BELOW DETECTION LIMIT

†See Data Report Notice

COMPOUND LIST -- ACID EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
1A.	PHENOL	BDL	500
2A.	2-CHLOROPHENOL	BDL	500
3A.	2-NITROPHENOL	BDL	500
4A.	2,4-DIMETHYLPHENOL	BDL	500
5A.	2,4-DICHLOROPHENOL	BDL	500
6A.	P-CHLORO-M-CRESOL	BDL	500
7A.	2,4,6-TRICHLOROPHENOL	BDL	500
8A.	2,4-DINITROPHENOL	BDL	5000
9A.	4-NITROPHENOL	BDL	500
10A.	4,6-DINITRO-O-CRESOL	BDL	5000
11A.	PENTACHLOROPHENOL	BDL	500

BDL=BELOW DETECTION LIMIT
*Detection limits based on processing 50g of as-received sample.

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
1B.	N-NITROSODIMETHYLAMINE	BDL	200
2B.	BIS (2-CHLOROETHYL) ETHER	BDL	200
3B.	1,3-DICHLOROBENZENE	BDL	200
4B.	1,4-DICHLOROBENZENE	BDL	200
5B.	1,2-DICHLOROBENZENE	BDL	200
6B.	BIS (2-CHLOROISOPROPYL) ETHER	BDL	200
7B.	HEXACHLOROETHANE	BDL	200
8B.	N-NITROSODI-N-PROPYLAMINE	BDL	200
9B.	NITROBENZENE	BDL	200
10B.	ISOPHORONE	BDL	200
11B.	BIS(2-CHLOROETHOXY) METHANE	BDL	200
12B.	1,2,4-TRICHLOROBENZENE	BDL	200
13B.	NAPHTHALENE	BDL	200
14B.	HEXACHLOROBUTADIENE	BDL	200
15B.	HEXACHLOROCYCLOPENTADIENE	BDL	200
16B.	2-CHLORONAPHTHALENE	BDL	200
17B.	DIMETHYLPHTHALATE	BDL	200
18B.	ACENAPHTHYLENE	BDL	200
19B.	2,6-DINITROTOLUENE	BDL	200
20B.	ACENAPHTHENE	BDL	200
21B.	2,4-DINITROTOLUENE	BDL	200
22B.	DIETHYLPHTHALATE	BDL	200
23B.	FLUORENE	BDL	200
24B.	4-CHLOROPHENYL PHENYL ETHER	BDL	200
25B.	DIPHENYLAMINE (N-NITROSO)	BDL	200
26B.	1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	200
27B.	4-BROMOPHENYL PHENYL ETHER	BDL	200
28B.	HEXACHLOROBENZENE	BDL	200

BDL=BELOW DETECTION LIMIT
*Detection limits based on processing 50g of as-received sample.

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS (Page Two)

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
29B.	PHENANTHRENE	BDL	200
30B.	ANTHRACENE	BDL	200
31B.	DI-N-BUTYLPHTHALATE	BDL	200
32B.	FLUORANTHENE	BDL	200
33B.	BENZIDINE	BDL	200
34B.	PYRENE	BDL	200
35B.	BUTYLBENZYLPHTHALATE	BDL	200
36B.	BENZO(A)ANTHRACENE	BDL	200
37B.	3,3'-DICHLOROBENZIDINE	BDL	200
38B.	CHRYSENE	BDL	200
39B.	BIS(2-ETHYLHEXYL)PHTHALATE	BDL	200
40B.	DI-N-OCTYLPHTHALATE	BDL	200
41B.	BENZO(B)FLUORANTHENE	BDL	200
42B.	BENZO(K)FLUORANTHENE	BDL	200
43B.	BENZO(A)PYRENE	BDL	200
44B.	INDENO(1,2,3-C,D)PYRENE	BDL	500
45B.	DIBENZO(A,H)ANTHRACENE	BDL	500
46B.	BENZO(G,H,I)PERYLENE	BDL	500

BDL=BELOW DETECTION LIMIT
*Detection limits based on processing 50g of as-received sample.

COMPOUND LIST -- PESTICIDES/PCB'S

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
1P.	ALDRIN	BDL	200
2P.	ALPHA-BHC	BDL	200
3P.	BETA-BHC	BDL	200
4P.	GAMMA-BHC	BDL	200
5P.	DELTA-BHC	BDL	200
6P.	CHLORDANE	BDL	200
7P.	4,4'-DDT	BDL	200
8P.	4,4'-DDE	BDL	200
9P.	4,4'-DDD	BDL	200
10P.	DIELDRIN	BDL	200
11P.	ALPHA-ENDOSULFAN	BDL	200
12P.	BETA-ENDOSULFAN	BDL	200
13P.	ENDOSULFAN SULFATE	BDL	200
14P.	ENDRIN	BDL	200
15P.	ENDRIN ALDEHYDE	BDL	200
16P.	HEPTACHLOR	BDL	200
17P.	HEPTACHLOR EPOXIDE	BDL	200
18P.	PCB-1242	BDL	200
19P.	PCB-1254	BDL	200
20P.	PCB-1221	BDL	200
21P.	PCB-1232	BDL	200
22P.	PCB-1248	BDL	200
23P.	PCB-1260	BDL	200
24P.	PCB-1016	BDL	200
25P.	TOXAPHENE	BDL	200

BDL=BELOW DETECTION LIMIT
*Detection limit based on processing 50g of as-received sample.

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: SD-3
COMPUCHEM SAMPLE NUMBER: 32297

	CONCENTRATION (UG/G)	DETECTION LIMIT (UG/G)
1. CADMIUM	BDL	0.20
2. CHROMIUM	5.6	0.50
3. COPPER	10.0	1.0
4. LEAD *	14	0.50
5. MERCURY	0.010	0.0020
6. NICKEL	9.4	1.0
7. ZINC	48	0.20

BDL=BELOW DETECTION LIMIT

*Lead analyzed by Flame AAS because of concentration level found.

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

	Date
Received/Refrigerated	7-27-84
Organics	
Extracted	8-1-84
Analyzed	
1. Volatiles	7-31-84
2. Acid	8-8-84
3. Base/Neutrals	8-6-84
4. Pesticides/PCBS	8-6-84
Inorganics	
1. Metals	8-14-84
2. Cyanide	Not Requested
3. Phenols	Not Requested

COMPOUND LIST - VOLATILES ORGANICS

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

		CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1V.	CHLOROMETHANE	BDL	10
2V.	VINYL CHLORIDE	BDL	10
3V.	CHLOROETHANE	BDL	10
4V.	BROMOMETHANE	BDL	10
5V.	ACROLEIN	BDL	100
6V.	ACRYLONITRILE	BDL	100
7V.	METHYLENE CHLORIDE	BDL	10
8V.	TRICHLOROFLUOROMETHANE	BDL	10
9V.	1,1-DICHLOROETHYLENE	BDL	10
10V.	1,1-DICHLOROETHANE	BDL	10
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10
12V.	CHLOROFORM	BDL	10
13V.	1,2-DICHLOROETHANE	BDL	10
14V.	1,1,1-TRICHLOROETHANE	BDL	10
15V.	CARBON TETRACHLORIDE	BDL	10
16V.	BROMODICHLOROMETHANE	BDL	10
17V.	1,2-DICHLOROPROPANE	BDL	10
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10
19V.	TRICHLOROETHYLENE	BDL	10
20V.	BENZENE	BDL	10
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10
22V.	1,1,2-TRICHLOROETHANE	BDL	10
23V.	DIBROMOCHLOROMETHANE	BDL	10
24V.	BROMOFORM	BDL	10
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10
27V.	TOLUENE	BDL	10
28V.	CHLOROBENZENE	BDL	10
29V.	ETHYLBENZENE	BDL	10
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10
31V.	DICHLORODIFLUOROMETHANE†	BDL	
32V.	BIS(CHLOROMETHYL)ETHER†	BDL	

BDL=BELOW DETECTION LIMIT

†See Data Report Notice

COMPOUND LIST -- ACID EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
1A.	PHENOL	BDL	500
2A.	2-CHLOROPHENOL	BDL	500
3A.	2-NITROPHENOL	BDL	500
4A.	2,4-DIMETHYLPHENOL	BDL	500
5A.	2,4-DICHLOROPHENOL	BDL	500
6A.	P-CHLORO-M-CRESOL	BDL	500
7A.	2,4,6-TRICHLOROPHENOL	BDL	500
8A.	2,4-DINITROPHENOL	BDL	5000
9A.	4-NITROPHENOL	BDL	500
10A.	4,6-DINITRO-O-CRESOL	BDL	5000
11A.	PENTACHLOROPHENOL	BDL	500

BDL=BELOW DETECTION LIMIT
*Detection limits based on processing 50g of as-received sample.

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
1B.	N-NITROSODIMETHYLAMINE	BDL	200
2B.	BIS (2-CHLOROETHYL) ETHER	BDL	200
3B.	1,3-DICHLOROBENZENE	BDL	200
4B.	1,4-DICHLOROBENZENE	BDL	200
5B.	1,2-DICHLOROBENZENE	BDL	200
6B.	BIS (2-CHLOROISOPROPYL) ETHER	BDL	200
7B.	HEXACHLOROETHANE	BDL	200
8B.	N-NITROSODI-N-PROPYLAMINE	BDL	200
9B.	NITROBENZENE	BDL	200
10B.	ISOPHORONE	BDL	200
11B.	BIS(2-CHLOROETHOXY) METHANE	BDL	200
12B.	1,2,4-TRICHLOROBENZENE	BDL	200
13B.	NAPHTHALENE	BDL	200
14B.	HEXACHLOROBUTADIENE	BDL	200
15B.	HEXACHLOROCYCLOPENTADIENE	BDL	200
16B.	2-CHLORONAPHTHALENE	BDL	200
17B.	DIMETHYLPHTHALATE	BDL	200
18B.	ACENAPHTHYLENE	BDL	200
19B.	2,6-DINITROTOLUENE	BDL	200
20B.	ACENAPHTHENE	BDL	200
21B.	2,4-DINITROTOLUENE	BDL	200
22B.	DIETHYLPHTHALATE	BDL	200
23B.	FLUORENE	BDL	200
24B.	4-CHLOROPHENYL PHENYL ETHER	BDL	200
25B.	DIPHENYLAMINE (N-NITROSO)	BDL	200
26B.	1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	200
27B.	4-BROMOPHENYL PHENYL ETHER	BDL	200
28B.	HEXACHLOROBENZENE	BDL	200

BDL=BELOW DETECTION LIMIT
*Detection limit based on processing 50g of as-received sample.

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS (Page Two)

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
29B.	PHENANTHRENE	BDL	200
30B.	ANTHRACENE	BDL	200
31B.	DI-N-BUTYLPHTHALATE	BDL	200
32B.	FLUORANTHENE	BDL	200
33B.	BENZIDINE	BDL	200
34B.	PYRENE	BDL	200
35B.	BUTYLBENZYLPHTHALATE	BDL	200
36B.	BENZO(A)ANTHRACENE	BDL	200
37B.	3,3'-DICHLOROBENZIDINE	BDL	200
38B.	CHRYSENE	BDL	200
39B.	BIS(2-ETHYLHEXYL)PHTHALATE	BDL	200
40B.	DI-N-OCTYLPHTHALATE	BDL	200
41B.	BENZO(B)FLUORANTHENE	BDL	200
42B.	BENZO(K)FLUORANTHENE	BDL	200
43B.	BENZO(A)PYRENE	BDL	200
44B.	INDENO(1,2,3-C,D)PYRENE	BDL	500
45B.	DIBENZO(A,H)ANTHRACENE	BDL	500
46B.	BENZO(G,H,I)PERYLENE	BDL	500

BDL=BELOW DETECTION LIMIT
*Detection limit based on processing 50g of as-received sample.

COMPOUND LIST -- PESTICIDES/PCB'S

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

		CONCENTRATION (UG/KG)	DETECTION* LIMIT (UG/KG)
1P.	ALDRIN	BDL	200
2P.	ALPHA-BHC	BDL	200
3P.	BETA-BHC	BDL	200
4P.	GAMMA-BHC	BDL	200
5P.	DELTA-BHC	BDL	200
6P.	CHLORDANE	BDL	200
7P.	4,4'-DDT	BDL	200
8P.	4,4'-DDE	BDL	200
9P.	4,4'-DDD	BDL	200
10P.	DIELDRIN	BDL	200
11P.	ALPHA-ENDOSULFAN	BDL	200
12P.	BETA-ENDOSULFAN	BDL	200
13P.	ENDOSULFAN SULFATE	BDL	200
14P.	ENDRIN	BDL	200
15P.	ENDRIN ALDEHYDE	BDL	200
16P.	HEPTACHLOR	BDL	200
17P.	HEPTACHLOR EPOXIDE	BDL	200
18P.	PCB-1242	BDL	200
19P.	PCB-1254	BDL	200
20P.	PCB-1221	BDL	200
21P.	PCB-1232	BDL	200
22P.	PCB-1248	BDL	200
23P.	PCB-1260	BDL	200
24P.	PCB-1016	BDL	200
25P.	TOXAPHENE	BDL	200

BDL=BELOW DETECTION LIMIT
*Detection limit based on processing 50g of as-received sample.

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: SD-1
COMPUCHEM SAMPLE NUMBER: 32301

	CONCENTRATION (UG/G)	DETECTION LIMIT (UG/G)
1. CADMIUM, TOTAL	0.30	0.020
2. CHROMIUM, TOTAL	6.8	0.50
3. COPPER, TOTAL	5.7	1.0
4. LEAD, TOTAL *	18	0.50
5. MERCURY, TOTAL	0.0084	0.0020
6. NICKEL, TOTAL	6.5	1.0
7. ZINC, TOTAL	40	0.20

BDL=BELOW DETECTION LIMIT

*Lead analyzed by flame AAS because of concentration level found.

4) GROUNDWATER

MONITORING WELLS
OSETERMAN RESIDENTIAL WELL

Nash Rd

H2M LABORATORY

ENVIRONMENTAL and INDUSTRIAL ANALYTICAL SERVICES

November 1, 1984

Mr. Rocco Palazolo
Engineering Sciences
57 Executive Park S.
Atlanta, Georgia 30329

Re: Sample results for OW-1A, OW-1B, OW-2, OW-3, OW-4, OW-5, & OW-6.

Dear Rocco:

Enclosed please find additional copies of the reports for the above referenced samples. As we discussed, they were shipped to RECRA Environmental Laboratories for analysis, since we were unable to meet your turnaround time needs at the time.

Should you have any questions or comments, please do not hesitate to contact me at anytime.

Very truly yours,

H2M CORPORATION

Stanley C. Lewis
Operations Manager - Laboratory

SCL/jes
Enclosure

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

RECRA ENVIRONMENTAL LABORATORIES

Division of Recra Research, Inc.

August 24, 1984

Mr. Stan Lewis
H2M
575 Broadhallow Road
Melville, NY 11747

Re: Analytical Results

Dear Mr. Lewis:

Please find enclosed results of the analyses of the samples received at our laboratories on July 30 and August 1, 1984.

If you have any questions concerning these data, do not hesitate to contact our Customer Service Representative at (716) 692-7620.

Sincerely,

RECRA ENVIRONMENTAL LABORATORIES

James A. Ploscyca
Laboratory Manager

BJK/JAP/mdc/jhs
Enclosure

I.D. #84-746
84-746 A
84-746 B

4248 Ridge Lea Road, Amherst, New York 14226

Telephone Sales (716) 838-6200
Laboratory (716) 692-7620

RECRA ENVIRONMENTAL LABORATORIES

Division of Recra Research, Inc.

ANALYTICAL

REPORT

4248 Ridge Lea Road, Amherst, New York 14226

Telephone Sales (716) 838-6200
Laboratory (716) 692-7620

RECRA ENVIRONMENTAL LABORATORIES

Division of Recra Research, Inc.

ANALYTICAL RESULTS

H2M
PRIORITY POLLUTANT ANALYSES

Prepared For:

H2M
575 Broadhallow Road
Melville, NY 11747

Prepared By:

Recra Environmental Laboratories
4248 Ridge Lea Road
Amherst, NY 14226

Report Date:

August 24, 1984

ANALYTICAL RESULTS

H2M
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

INTRODUCTION:

On July 30, and August 1, 1984 samples were received at Recra Environmental Laboratories. A request was made by H2M to have the samples analyzed for selected fractions of the Environmental Protection Agency decreed priority pollutants, total organic halide, and to determine the pH.

This report will address the results of those analyses.

METHODS:

Priority pollutant analyses were conducted according to Environmental Protection Agency (EPA) methodologies.

Organic priority pollutants were analyzed by Gas Chromatography/Mass Spectrometry (GC/MS).

RESULTS AND DISCUSSION:

Analysis for total organic halide was subcontracted. Sample FT-1 for total organic halide was not received.

Total organic halide values reported as "less than" (<) indicate the working detection limit for the given sample and/or parameter.

Sample OW-2 was analyzed in duplicate for the base neutral compounds but no positive values resulted.

Compounds reported as ND are "not detected". Compounds reported as BDL are confirmed as being present in the sample at a level "below detection limit", and are not subject to reliable quantitation.

Respectfully Submitted,

RECRA ENVIRONMENTAL LABORATORIES

Barbara J Krajewski

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-1	OW-1B	OW-2
acenaphthene	1.9	ND	ND	ND
acenaphthylene	3.5	ND	ND	ND
anthracene	1.9	ND	ND	ND
benzidine	44	ND	ND	ND
benzo(a)anthracene	7.8	ND	ND	ND
benzo(a)pyrene	2.5	ND	ND	ND
benzo(b)fluoranthene	4.8	ND	ND	ND
benzo(g,h,i)perylene	4.1	ND	ND	ND
benzo(k)fluoranthene	2.5	ND	ND	ND
bis(2-chloroethoxy)methane	5.3	ND	ND	ND
bis(2-chloroethyl)ether	5.7	ND	ND	ND
bis(2-chloroisopropyl)ether	5.7	ND	ND	ND
bis(2-ethylhexyl)phthalate	2.5	ND	ND	ND
4-bromophenylphenylether	1.9	ND	ND	ND
butylbenzylphthalate	2.5	ND	ND	ND
2-chloronaphthalene	1.9	ND	ND	ND
4-chlorophenylphenylether	4.2	ND	ND	ND
chrysene	2.5	ND	ND	ND
dibenzo(a,h)anthracene	2.5	ND	ND	ND
1,2-dichlorobenzene	1.9	ND	ND	ND
1,3-dichlorobenzene	1.9	ND	ND	ND
1,4-dichlorobenzene	4.4	ND	ND	ND
3,3'-dichlorobenzidine	16.5	ND	ND	ND
diethylphthalate	22	ND	ND	ND
dimethylphthalate	1.6	ND	ND	ND
di-n-butylphthalate	2.5	ND	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-1	OW-1B	OW-2
2,6-dinitrotoluene	1.9	ND	ND	ND
2,4-dinitrotoluene	5.7	ND	ND	ND
di-n-octylphthalate	2.5	ND	ND	ND
1,2-diphenylhydrazine	25	ND	ND	ND
fluoranthene	2.2	ND	ND	ND
fluorene	1.9	ND	ND	ND
hexachlorobenzene	1.9	ND	ND	ND
hexachlorobutadiene	0.9	ND	ND	ND
hexachlorocyclopentadiene	25	ND	ND	ND
hexachloroethane	1.6	ND	ND	ND
indeno(1,2,3-cd)pyrene	3.7	ND	ND	ND
isophorone	2.2	ND	ND	ND
naphthalene	1.6	ND	ND	ND
nitrobenzene	1.9	ND	ND	ND
N-nitrosodimethylamine	25	ND	ND	ND
N-nitrosodi-n-propylamine	25	ND	ND	ND
N-nitrosodiphenylamine	1.9	ND	ND	ND
phenanthrene	5.4	ND	ND	ND
pyrene	1.9	ND	ND	ND
1,2,4-trichlorobenzene	1.9	ND	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/2/84	7/3/84	7/3/84
Extraction Date	7/31/84	8/22/84	7/31/84
Analysis Date	8/14/84	8/23/84	8/15/84
Internal Standard - Level	20 µg/l	20 µg/l	20 µg/l
deuterated phenanthrene - Recovery	102%	82%	130%
Surrogate Standard (SS3) - Level	120 µg/l	120 µg/l	120 µg/l
decafluorobiphenyl - Recovery	54%	62%	65%
Surrogate Standard (SS4) - Level	100 µg/l	100 µg/l	100 µg/l
2-fluorobiphenyl - Recovery	61%	70%	63%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 8/24/84

RECRA ENVIRONMENTAL LABORATORIES

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-3	OW-4	OW-5
cenaphthene	1.9	ND	ND	ND
cenaphthylene	3.5	ND	ND	ND
nthracene	1.9	ND	ND	ND
benzidine	44	ND	ND	ND
enzo(a)anthracene	7.8	ND	ND	ND
benzo(a)pyrene	2.5	ND	ND	ND
enzo(b)fluoranthene	4.8	ND	ND	ND
benzo(g,h,i)perylene	4.1	ND	ND	ND
enzo(k)fluoranthene	2.5	ND	ND	ND
bis(2-chloroethoxy)methane	5.3	ND	ND	ND
is(2-chloroethyl)ether	5.7	ND	ND	ND
is(2-chloroisopropyl)ether	5.7	ND	ND	ND
bis(2-ethylhexyl)phthalate	2.5	ND	ND	ND
-bromophenylphenylether	1.9	ND	ND	ND
butylbenzylphthalate	2.5	ND	ND	ND
-chloronaphthalene	1.9	ND	ND	ND
4-chlorophenylphenylether	4.2	ND	ND	ND
rysene	2.5	ND	ND	ND
dibenzo(a,h)anthracene	2.5	ND	ND	ND
,2-dichlorobenzene	1.9	ND	ND	ND
,3-dichlorobenzene	1.9	ND	ND	ND
,4-dichlorobenzene	4.4	ND	ND	ND
3'-dichlorobenzidine	16.5	ND	ND	ND
diethylphthalate	22	ND	ND	ND
imethylphthalate	1.6	ND	ND	ND
di-n-butylphthalate	2.5	ND	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-3	OW-4	OW-5
2,6-dinitrotoluene	1.9	ND	ND	ND
2,4-dinitrotoluene	5.7	ND	ND	ND
di-n-octylphthalate	2.5	ND	ND	ND
1,2-diphenylhydrazine	25	ND	ND	ND
fluoranthene	2.2	ND	ND	ND
fluorene	1.9	ND	ND	ND
hexachlorobenzene	1.9	ND	ND	ND
hexachlorobutadiene	0.9	ND	ND	ND
hexachlorocyclopentadiene	25	ND	ND	ND
hexachloroethane	1.6	ND	ND	ND
indeno(1,2,3-cd)pyrene	3.7	ND	ND	ND
isophorone	2.2	ND	ND	ND
naphthalene	1.6	ND	ND	ND
nitrobenzene	1.9	ND	ND	ND
N-nitrosodimethylamine	25	ND	ND	ND
N-nitrosodi-n-propylamine	25	ND	ND	ND
N-nitrosodiphenylamine	1.9	ND	ND	ND
phenanthrene	5.4	ND	ND	ND
pyrene	1.9	ND	ND	ND
1,2,4-trichlorobenzene	1.9	ND	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/2/84	7/3/84	7/10/84
Extraction Date	7/31/84	7/31/84	7/31/84
Analysis Date	8/15/84	8/15/84	8/15/84
Internal Standard - Level	20 µg/l	20 µg/l	20 µg/l
deuterated phenanthrene - Recovery	110%	130%	135%
Surrogate Standard (SS3) - Level	120 µg/l	120 µg/l	120 µg/l
decafluorobiphenyl - Recovery	65%	58%	59%
Surrogate Standard (SS4) - Level	100 µg/l	100 µg/l	100 µg/l
2-fluorobiphenyl - Recovery	56%	47%	45%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara Hagenlocker

DATE 8/24/84

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-6	OSTERMAN WELL	FT-1
acenaphthene	1.9	ND	ND	ND
acenaphthylene	3.5	ND	ND	ND
anthracene	1.9	ND	ND	ND
benzidine	44	ND	ND	ND
benzo(a)anthracene	7.8	ND	ND	ND
benzo(a)pyrene	2.5	ND	ND	ND
benzo(b)fluoranthene	4.8	ND	ND	ND
benzo(g,h,i)perylene	4.1	ND	ND	ND
benzo(k)fluoranthene	2.5	ND	ND	ND
bis(2-chloroethoxy)methane	5.3	ND	ND	ND
bis(2-chloroethyl)ether	5.7	ND	ND	ND
bis(2-chloroisopropyl)ether	5.7	ND	ND	ND
bis(2-ethylhexyl)phthalate	2.5	ND	ND	ND
4-bromophenylphenylether	1.9	ND	ND	ND
butylbenzylphthalate	2.5	ND	ND	ND
2-chloronaphthalene	1.9	ND	ND	ND
4-chlorophenylphenylether	4.2	ND	ND	ND
chrysene	2.5	ND	ND	ND
dibenzo(a,h)anthracene	2.5	ND	ND	ND
1,2-dichlorobenzene	1.9	ND	ND	ND
1,3-dichlorobenzene	1.9	ND	ND	ND
1,4-dichlorobenzene	4.4	ND	ND	ND
3,3'-dichlorobenzidine	16.5	ND	ND	ND
diethylphthalate	22	ND	ND	ND
dimethylphthalate	1.6	ND	ND	ND
di-n-butylphthalate	2.5	ND	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-6	OSTERMAN WELL	FT-1
2,6-dinitrotoluene	1.9	ND	ND	ND
2,4-dinitrotoluene	5.7	ND	ND	ND
di-n-octylphthalate	2.5	ND	ND	ND
1,2-diphenylhydrazine	25	ND	ND	ND
fluoranthene	2.2	ND	ND	ND
fluorene	1.9	ND	ND	ND
hexachlorobenzene	1.9	ND	ND	ND
hexachlorobutadiene	0.9	ND	ND	ND
hexachlorocyclopentadiene	25	ND	ND	ND
hexachloroethane	1.6	ND	ND	ND
indeno(1,2,3-cd)pyrene	3.7	ND	ND	ND
isophorone	2.2	ND	ND	ND
naphthalene	1.6	ND	ND	ND
nitrobenzene	1.9	ND	ND	ND
N-nitrosodimethylamine	25	ND	ND	ND
N-nitrosodi-n-propylamine	25	ND	ND	ND
N-nitrosodiphenylamine	1.9	ND	ND	ND
phenanthrene	5.4	ND	ND	ND
pyrene	1.9	ND	ND	ND
1,2,4-trichlorobenzene	1.9	ND	ND	ND

ADDITIONAL SAMPLE INFORMATION			
Sample Date	7/10/84	7/11/84	7/3/84
Extraction Date	7/31/84	7/31/84	7/31/84
Analysis Date	8/15/84	8/15/84	8/15/84
Internal Standard - Level	20 µg/l	20 µg/l	20 µg/l
deuterated phenanthrene - Recovery	130%	78%	135%
Surrogate Standard (SS3) - Level	120 µg/l	120 µg/l	120 µg/l
decafluorobiphenyl - Recovery	71%	50%	64%
Surrogate Standard (SS4) - Level	100 µg/l	100 µg/l	100 µg/l
2-fluorobiphenyl - Recovery	63%	52%	55%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 8/24/84

RECRA ENVIRONMENTAL LABORATORIES

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-1	OW-1B	OW-2
acrolein	400	ND	ND	ND
acrylonitrile	400	ND	ND	ND
benzene	4.4	ND	ND	ND
bromodichloromethane	2.2	ND	ND	ND
bromoform	4.7	ND	ND	ND
bromomethane	10	ND	ND	ND
carbon tetrachloride	2.8	ND	ND	ND
chlorobenzene	6.0	ND	ND	ND
chloroethane	10	ND	ND	ND
2-chloroethylvinyl ether	10	ND	ND	ND
chloroform	1.6	ND	ND	ND
chloromethane	10	ND	ND	ND
dibromochloromethane	3.1	ND	ND	ND
1,1-dichloroethane	4.7	ND	ND	ND
1,2-dichloroethane	2.8	ND	ND	ND
1,1-dichloroethylene	2.8	ND	ND	ND
trans-1,2-dichloroethylene	1.6	ND	ND	ND
1,2-dichloropropane	6.0	ND	ND	ND
1,3-dichloropropene	5.0	ND	ND	ND
ethylbenzene	7.2	ND	ND	ND
methylene chloride	2.8	ND	ND	ND
1,1,2,2-tetrachloroethane	6.9	ND	ND	ND
tetrachloroethylene	4.1	ND	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/1)	SAMPLE IDENTIFICATION		
		OW-1	OW-1B	OW-2
toluene	6.0	ND	ND	ND
1,1,1-trichloroethane	3.8	ND	BDL	ND
1,1,2-trichloroethane	5.0	ND	ND	ND
trichloroethylene	1.9	ND	ND	ND
vinyl chloride	10	ND	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/2/84	7/3/84	7/3/84
Analysis Date	8/13/84	8/13/84	8/13/84
Internal Standard - Level	40 µg/1	40 µg/1	40 µg/1
bromochloromethane - Recovery	99%	120%	96%
Internal Standard - Level	40 µg/1	40 µg/1	40 µg/1
2-bromo-1-chloropropane - Recovery	99%	110%	96%
Internal Standard - Level	40 µg/1	40 µg/1	40 µg/1
1,4-dichlorobutane - Recovery	99%	120%	100%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Kazenski

DATE 8/24/84

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-3	OW-4	OW-5
acrolein	400	ND	ND	ND
acrylonitrile	400	ND	ND	ND
benzene	4.4	ND	ND	ND
bromodichloromethane	2.2	ND	ND	ND
bromoform	4.7	ND	ND	ND
bromomethane	10	ND	ND	ND
carbon tetrachloride	2.8	ND	ND	ND
chlorobenzene	6.0	ND	ND	ND
chloroethane	10	ND	ND	ND
2-chloroethylvinyl ether	10	ND	ND	ND
chloroform	1.6	ND	ND	ND
chloromethane	10	ND	ND	ND
dibromochloromethane	3.1	ND	ND	ND
1,1-dichloroethane	4.7	ND	ND	ND
1,2-dichloroethane	2.8	ND	ND	ND
1,1-dichloroethylene	2.8	ND	ND	ND
trans-1,2-dichloroethylene	1.6	ND	ND	ND
1,2-dichloropropane	6.0	ND	ND	ND
1,3-dichloropropene	5.0	ND	ND	ND
ethylbenzene	7.2	ND	ND	ND
methylene chloride	2.8	ND	ND	ND
1,1,2,2-tetrachloroethane	6.9	ND	ND	ND
tetrachloroethylene	4.1	ND	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION OW-3	OW-4	OW-5
toluene	6.0	ND	ND	ND
1,1,1-trichloroethane	3.8	ND	ND	ND
1,1,2-trichloroethane	5.0	ND	ND	ND
trichloroethylene	1.9	ND	ND	ND
vinyl chloride	10	ND	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/2/84	7/3/84	7/10/84
Analysis Date	8/13/84	8/13/84	8/10/84
Internal Standard - Level	40 µg/l	40 µg/l	40 µg/l
bromochloromethane - Recovery	120%	97%	99%
Internal Standard - Level	40 µg/l	40 µg/l	40 µg/l
2-bromo-1-chloropropane - Recovery	130%	97%	90%
Internal Standard - Level	40 µg/l	40 µg/l	40 µg/l
1,4-dichlorobutane - Recovery	130%	100%	85%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Kuyenski

DATE 8/24/84

RECRA ENVIRONMENTAL LABORATORIES

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-6	OSTERMAN WELL	FT-1
acrolein	400	ND	ND	ND
acrylonitrile	400	ND	ND	ND
benzene	4.4	ND	ND	ND
bromodichloromethane	2.2	ND	ND	ND
bromoform	4.7	ND	ND	ND
bromomethane	10	ND	ND	ND
carbon tetrachloride	2.8	ND	ND	ND
chlorobenzene	6.0	ND	ND	ND
chloroethane	10	ND	ND	ND
2-chloroethylvinyl ether	10	ND	ND	ND
chloroform	1.6	ND	ND	ND
chloromethane	10	ND	ND	ND
dibromochloromethane	3.1	ND	ND	ND
1,1-dichloroethane	4.7	ND	ND	ND
1,2-dichloroethane	2.8	ND	ND	ND
1,1-dichloroethylene	2.8	ND	ND	ND
trans-1,2-dichloroethylene	1.6	ND	ND	ND
1,2-dichloropropane	6.0	ND	ND	ND
1,3-dichloropropene	5.0	ND	ND	ND
ethylbenzene	7.2	ND	ND	ND
methylene chloride	2.8	15 µg/l	ND	ND
1,1,2,2-tetrachloroethane	6.9	ND	ND	ND
tetrachloroethylene	4.1	ND	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 8/24/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION		
		OW-6	OSTERMAN WELL	FT-1
toluene	6.0	ND	BDL	ND
1,1,1-trichloroethane	3.8	ND	ND	ND
1,1,2-trichloroethane	5.0	ND	ND	ND
trichloroethylene	1.9	ND	ND	ND
vinyl chloride	10	ND	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/10/84	7/11/84	7/3/84
Analysis Date	8/10/84	8/10/84	8/10/84
Internal Standard - Level	40 µg/l	40 µg/l	40 µg/l
bromochloromethane - Recovery	94%	98%	89%
Internal Standard - Level	40 µg/l	40 µg/l	40 µg/l
2-bromo-1-chloropropane - Recovery	99%	95%	77%
Internal Standard - Level	40 µg/l	40 µg/l	40 µg/l
1,4-dichlorobutane - Recovery	97%	96%	84%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 8/24/84

RECRA ENVIRONMENTAL LABORATORIES
T.D. #84-746

ANALYTICAL RESULTS

H2M

Report Date: 8/24/84

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE) TOTAL ORGANIC HALIDE (mg/l)
OW-1	7/2/84	<0.02
OW-1B	7/3/84	<0.02
OW-2	7/3/84	0.04
OW-3	7/2/84	0.04
OW-4	7/3/84	0.09
OW-5	7/10/84	<0.02
OW-6	7/10/84	0.12
Osterman Well	7/11/84	0.04

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 8/24/84

ANALYTICAL RESULTS

H2M

Report Date: 8/24/84

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE) pH (STANDARD UNITS)
OW-1	7/2/84	8.05
OW-1B	7/3/84	8.14
OW-2	7/3/84	8.12
OW-3	7/2/84	8.11
OW-4	7/3/84	8.14
OW-5	7/10/84	8.16
OW-6	7/10/84	8.07
FT-1	7/3/84	6.45
Osterman Well	7/11/84	8.20

FOR RECRA ENVIRONMENTAL LABORATORIES RAS for Richard V Finn

DATE 8/24/84

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES
QUALITY CONTROL

Report Date: 8/24/84

BASE NEUTRAL RECOVERY ANALYSIS OF METHOD BLANK

COMPOUND IDENTIFICATION	ng OF SPIKE	ng RECOVERED	% RECOVERY
1,3-dichlorobenzene	50	25	50
di-n-octylphthalate	50	36	72
fluoranthene	50	20	40
naphthalene	50	31	62
nitrobenzene	50	31	62

ADDITIONAL SAMPLE INFORMATION	
Extraction Date	7/31/84
Analysis Date	8/14/84
Internal Standard (IS) - Level	20 µg/l
deuterated phenanthrene - Recovery	140%
Surrogate Standard (SS3) - Level	120 µg/l
Decafluorobiphenyl - Recovery	61%
Surrogate Standard (SS4) - Level	100 µg/l
2-fluorobiphenyl - Recovery	50%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 8/24/84

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES
QUALITY CONTROL

Report Date: 8/24/84

VOLATILE RECOVERY ANALYSIS OF
SAMPLE OW-3

COMPOUND IDENTIFICATION	ng OF SPIKE	ng RECOVERED	% RECOVERY
carbon tetrachloride	200	120	60
chlorobenzene	200	160	80
chloroethyl vinyl ether	200	180	90
chloroform	200	160	80
dibromochloromethane	200	110	55
1,1-dichloroethane	200	180	90
1,1-dichloroethylene	200	170	85
1,2-dichloropropane	200	170	85
methylene chloride	200	140	70
tetrachloroethylene	200	180	80
1,1,2-trichloroethane	200	170	85
trichloroethylene	200	160	80

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/2/84
Analysis Date	8/13/84
Internal Standard - Level	40 µg/l
Bromochloromethane - Recovery	120%
Internal Standard - Level	40 µg/l
2-bromo-1-chloropropane - Recovery	130%
Internal Standard - Level	40 µg/l
1,4-dichlrobutane - Recovery	130%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 8/24/84

RECRA ENVIRONMENTAL LABORATORIES

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
13305-003	Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynne M. Baumgras

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1-liter glass: EXTRACTABLES	1-liter glass: TOX	40 ml vials: VOLATILES	plastic bottle: pH		REMARKS
OW-1	7/~~6~~/84	~~6~~ pm		X	Nash Rd, Wheatfield, NY	8	3	1	3	1		In cooler ~~I~~ Do not test if Dames & Moore label seal is not intact (label is broken) ~~notes~~ before opening.
	7/7/84	1600 pm										

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynne M. Baumgras	7/7/84 17pm	7-5	Steve Mirell	7-27-87 2:00 PM	John Wilson
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
13305-003	Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynne M. Baumgaas

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1-liter glass BNA/acidics	1-liter glass TOX	40-ml vials VOLATILES	plastic bottle pH			REMARKS
GW-2	7/26/84	10:00 am		X	Nash Rd, Wheatfield, NY	8	3	1	3	1			In cooler

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynne M. Baumgaas	7/26/84 4 PM		Stan Murrell	7-27-84 2:00 PM	John A. Kilpatrick
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
13305-003	Nash Rd Site, Wheatfield, NY

SAMPLERS: (Signature) Lynne M. Baumgaccio

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 liter glass EXTRACTABLES	1-120 ml glass: TOX	4 40ml vials: VOLATILES	1 plastic bottle: pH		REMARKS
OW-3	1/2/84	5pm		X	Nash Rd, Wheatfield, NY	8	3	1	3	1		In cooler IV Do not test unless Dames & Moore Stickers are intact (not broken.)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynne M. Baumgaccio	1/3/84 12pm		Stan Mirrell	7-27-84 2:00 pm	John A. Wright
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
13305-003	Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynne M. Baumgras

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1-liter glass: EXTRACTABLES	1-liter glass: TOX	40 ml vials: VOLATILES	plastic bottle: pH			REMARKS
ON-4	7/3/84	5:00 pm		X	Nash Rd., Wheatfield, NY	8	3	1	3	1			In cooler V
													Do not test if Dames & Moore seal is broken upon arrival (~~seal~~ label is broken)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
L Baumgras	6pm 7/3/84		Stu Murrell	7-27-84 2:00	John A. Myhre
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO. 13305-003

PROJECT NAME: Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynne M. Baumgarten

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Liter glass: EXTRACTABLES	1-liter glass: TOX	40 ml vials: VOLATILES	Plastic bottle: pH			REMARKS
OW-5	7/10/84	11:00 am		X	Nash Rd., Wheatfield, NY	8	3	1	3	1			In cooler II DO NOT TEST UNLESS DAMES & MOORE SEAL IS INTACT (LABEL NOT BROKEN)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynne M. Baumgarten	9:00 am 7/11/84	Stuart Murrell 7/16/84	Stu Murrell	7-27-84 2:00 pm	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO. 13305-003

PROJECT NAME: Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynnell Baumgras

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1-liter glass EXTRACTABLES	Liter glass: TOX	40-ml vials: VOLATILES	plastic bottle: PH		REMARKS
OW-6	7/10/84	4:00 pm		X	Nash Rd., Wheatfield, NY	8	3	1	3	1		In cooler VII
												DO NOT TEST UNLESS DAMES & MOORE SEAL IS INTACT (LABEL NOT BROKEN)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynnell Baumgras	7/11/84 9:00 am	Stu Munell 7/16/84	Stu Munell	7-27-84 2:00 PM	John A. Wright
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO. 13305-003

PROJECT NAME: Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynne M. Baumgras

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 liter glass EXTRACTABLES	1 liter glass TOX	40 ml vials VOLATILES	plastic bottle: PH		REMARKS
OSTERMAN WELL	7/11/84	2:00 PM		X	Osterman property Nash Rd, Wheatfield, NY	8	3	1	3	1		OSTERMAN WELL (AFTER 1 EXCHANGE)
												In cooler VIII
												DO NOT TEST IF UNIQUE SEAL IS NOT INTACT (DAMES + MOORE LABEL BROKEN)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynne M. Baumgras	7/12/84 5:00 PM	Stuart Murrell 7/16/84	Stu Murrell	7-27-84 2:00 PM	John A. Nyhart
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO. 13305-003

PROJECT NAME: Nash Road Site (Niagara Sanitation)

SAMPLERS: (Signature) Lynne M. Baumgras

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 liter glass EXTRACTABLE	1 liter glass - TOX	40 ml - vials VOLATILES	plastic bottle pH	REMARKS
OW-1B	7/[illegible]	[illegible] am		X	Nash Rd, Wheatfield, NY	8	3	1	3	1	In cooler II
OW-1B	7/3/81	10:00 am		X	Nash Rd, Wheatfield, NY	8	3	1	3	1	"
OW-1B	7/[illegible]	8:00 am		X	Nash Rd, Wheatfield, NY	5	1	1	2	1	In cooler II
FT-1	7/[illegible]	9:00 am		X	Nash Rd, Wheatfield, NY	3	2		1		
											Do not test unless Dames & Moore stickers are intact — seal not broken

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynne M. Baumgras	7/3/81 12pm	[signature] 7-5	Stan Mirell	7-27-81 2:00 PM	[signature]
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

SEP 07 1984

COMPUCHEM LABORATORIES

August 30, 1984

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Dear Mr. Schroder:

Thank you for selecting CompuChem® Laboratories for your recent sample analysis. We have completed the analysis that you requested and have enclosed a summary of the CompuChem® data for your review. Additional data details are available for purchase if you require them.

As you know, EPA has proposed detection limits for the priority pollutants in the December 3, 1979, Federal Register, and we have reported all priority pollutant concentrations which have exceeded these limits (or their equivalent for solid matrices). In addition, we have permanently stored a complete record of your data on magnetic tape. This includes chromatograms, mass spectra, calibration and quality control data for the organics. Therefore, your original data is readily available for future reference. Should you require additional information from your data base, please contact us at 1/800-334-8525.

In order to expedite data to you, we have forwarded the results for all completed analyses. If you submitted more samples than are included in the enclosed results, the data will be forthcoming upon completion of our final review.

Your confidence in our CompuChem® service is appreciated. We look forward to a continuing association.

Sincerely,

Customer Service Dept.
CompuChem®

Enclosure:

Report: OST-1 - 32303

DATA REPORT NOTICE

CompuChem employs Methods 624 and 625 for GC/MS analysis of organics in liquid matrices. These methods were proposed on December 3, 1979 by the U.S.E.P.A. in Volume 44 of the Federal Register. These methods were subsequently revised and reissued in July, 1982 as publication EPA-600/4-82-057. The EPA Environmental Monitoring and Support Laboratory (EMSL-Cincinnati) has subsequently issued method modifications which provide for the analysis of solid matrices. These modifications specify changes in the sample preparation procedures.

Additionally, for solid samples detection limits and any analytical results reported are based on processing the method specified sample size of as-received material.

The referenced methods are no longer appropriate for several of the original priority pollutant compounds. This is due to either the deletion from the toxic pollutant list (40 CFR Part 401) by EPA or the determination by EPA that the referenced methods may not be optimized for certain compounds (EPA-600/4-82-057) originally incorporated by the methods.

CompuChem® presents these compounds in its sample data report for completeness as many of the government compound list forms continue to display the affected compounds. For consistency, these compounds are reported as "BDL" or "Below Detection Limit" as they are either not likely to exist in the sample or are not likely to be detected by the method. Those compounds which have actually been deleted are listed below with the Federal Register deletion reference.

Compound Name	GC/MS Fraction	Federal Register	Date
Dichlorodifluoromethane	Volatile	46FR2264	1/8/81
*Trichlorofluoromethane	Volatile	46FR2264	1/8/81
Bis(Chloromethyl)Ether	Volatile	46FR10723	2/4/81

*While this compound has been deleted, CompuChem® continues to identify and quantitate for it.

COMPUCHEM
LABORATORIES

REPORT OF DATA

SAMPLE IDENTIFIER: OST-1

COMPUCHEM SAMPLE NUMBER: 32303

SUBMITTED TO:

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Diana A. Scammell

DIANA A. SCAMMELL
TECHNICAL SPECIALIST, OPERATIONS

R. L. MYERS, PH.D., PRESIDENT

ROBERT E. MEIERER
DIRECTOR OF QUALITY ASSURANCE

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

	Date
Received/Refrigerated	7-27-84
Organics	
Extracted	7-30-84
Analyzed	
1. Volatiles	7-31-84
2. Acid	8-8-84
3. Base/Neutrals	8-7-84
4. Pesticides/PCBS	8-7-84
Inorganics	
1. Metals	8-14-84
2. Cyanide	8-9-84
3. Phenols	Not Requested

COMPOUND LIST - VOLATILES ORGANICS

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

		CONCENTRATION (UG/L)	DETECTION† LIMIT (UG/L)
1V.	CHLOROMETHANE	BDL	10
2V.	VINYL CHLORIDE	BDL	10
3V.	CHLOROETHANE	BDL	10
4V.	BROMOMETHANE	BDL	10
5V.	ACROLEIN	BDL	100
6V.	ACRYLONITRILE	BDL	100
7V.	METHYLENE CHLORIDE	14(BG)*	10
8V.	TRICHLOROFLUOROMETHANE	BDL	10
9V.	1,1-DICHLOROETHYLENE	BDL	10
10V.	1,1-DICHLOROETHANE	BDL	10
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10
12V.	CHLOROFORM	BDL	10
13V.	1,2-DICHLOROETHANE	BDL	10
14V.	1,1,1-TRICHLOROETHANE	BDL	10
15V.	CARBON TETRACHLORIDE	BDL	10
16V.	BROMODICHLOROMETHANE	BDL	10
17V.	1,2-DICHLOROPROPANE	BDL	10
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10
19V.	TRICHLOROETHYLENE	BDL	10
20V.	BENZENE	BDL	10
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10
22V.	1,1,2-TRICHLOROETHANE	BDL	10
23V.	DIBROMOCHLOROMETHANE	BDL	10
24V.	BROMOFORM	BDL	10
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10
27V.	TOLUENE	BDL	10
28V.	CHLOROBENZENE	BDL	10
29V.	ETHYLBENZENE	BDL	10
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10
31V.	DICHLORODIFLUOROMETHANE†	BDL	
32V.	BIS(CHLOROMETHYL)ETHER†	BDL	

BDL=BELOW DETECTION LIMIT

†See Data Report Notice

*See Quality Control Notice

QUALITY ASSURANCE NOTICE

CompuChem Sample No. 32303

Although not required by the Federal Register, December 3, 1979 (modified July, 1982) Volatile Method 624 procedure, the laboratory prepares VOA blanks when compositing water samples and preparing low and medium level hazardous waste VOA samples. This is to insure that the glassware used is free from contamination, and to monitor the possibility of cross-contamination from high levels of volatile organic compounds in some samples and the laboratory atmosphere.

The compositing or method blank (# 32333) prepared with this sample contained the compound(s) listed below. The concentration in the associated sample has been adjusted and the data flagged with a qualifier.

Compound(s)	Adjusted Sample Concentration (ug/l)	Applicable Qualifier
Methylene Chloride	14	BG

The following data qualifiers are used by EPA and adopted by CompuChem® for reporting purposes:

BG = The concentration in the blank is greater than 1/2 of the method detection limit and is less than or equal to 1/2 the concentration detected in a sample; the concentration in the blank is subtracted from the sample.

COMPOUND LIST -- ACID EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

		CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1A.	PHENOL	BDL	25
2A.	2-CHLOROPHENOL	BDL	25
3A.	2-NITROPHENOL	BDL	25
4A.	2,4-DIMETHYLPHENOL	BDL	25
5A.	2,4-DICHLOROPHENOL	BDL	25
6A.	P-CHLORO-M-CRESOL	BDL	25
7A.	2,4,6-TRICHLOROPHENOL	BDL	25
8A.	2,4-DINITROPHENOL	BDL	250
9A.	4-NITROPHENOL	BDL	25
10A.	4,6-DINITRO-O-CRESOL	BDL	250
11A.	PENTACHLOROPHENOL	BDL	25

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

		CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B.	N-NITROSODIMETHYLAMINE	BDL	10
2B.	BIS (2-CHLOROETHYL) ETHER	BDL	10
3B.	1,3-DICHLOROBENZENE	BDL	10
4B.	1,4-DICHLOROBENZENE	BDL	10
5B.	1,2-DICHLOROBENZENE	BDL	10
6B.	BIS (2-CHLOROISOPROPYL) ETHER	BDL	10
7B.	HEXACHLOROETHANE	BDL	10
8B.	N-NITROSODI-N-PROPYLAMINE	BDL	10
9B.	NITROBENZENE	BDL	10
10B.	ISOPHORONE	BDL	10
11B.	BIS(2-CHLOROETHOXY) METHANE	BDL	10
12B.	1,2,4-TRICHLOROBENZENE	BDL	10
13B.	NAPHTHALENE	BDL	10
14B.	HEXACHLOROBUTADIENE	BDL	10
15B.	HEXACHLOROCYCLOPENTADIENE	BDL	10
16B.	2-CHLORONAPHTHALENE	BDL	10
17B.	DIMETHYLPHTHALATE	BDL	10
18B.	ACENAPHTHYLENE	BDL	10
19B.	2,6-DINITROTOLUENE	BDL	10
20B.	ACENAPHTHENE	BDL	10
21B.	2,4-DINITROTOLUENE	BDL	10
22B.	DIETHYLPHTHALATE	BDL	10
23B.	FLUORENE	BDL	10
24B.	4-CHLOROPHENYL PHENYL ETHER	BDL	10
25B.	DIPHENYLAMINE (N-NITROSO)	BDL	10
26B.	1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
27B.	4-BROMOPHENYL PHENYL ETHER	BDL	10
28B.	HEXACHLOROBENZENE	BDL	10

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLE ORGANICS (Page Two)

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

		CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B.	PHENANTHRENE	BDL	10
30B.	ANTHRACENE	BDL	10
31B.	DI-N-BUTYLPHTHALATE	BDL	10
32B.	FLUORANTHENE	BDL	10
33B.	BENZIDINE	BDL	10
34B.	PYRENE	BDL	10
35B.	BUTYLBENZYLPHTHALATE	33	10
36B.	BENZO(A)ANTHRACENE	BDL	10
37B.	3,3'-DICHLOROBENZIDINE	BDL	10
38B.	CHRYSENE	BDL	10
39B.	BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10
40B.	DI-N-OCTYLPHTHALATE	BDL	10
41B.	BENZO(B)FLUORANTHENE	BDL	10
42B.	BENZO(K)FLUORANTHENE	BDL	10
43B.	BENZO(A)PYRENE	BDL	10
44B.	INDENO(1,2,3-C,D)PYRENE	BDL	25
45B.	DIBENZO(A,H)ANTHRACENE	BDL	25
46B.	BENZO(G,H,I)PERYLENE	BDL	25

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCB'S

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

		CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P.	ALDRIN	BDL	10
2P.	ALPHA-BHC	BDL	10
3P.	BETA-BHC	BDL	10
4P.	GAMMA-BHC	BDL	10
5P.	DELTA-BHC	BDL	10
6P.	CHLORDANE	BDL	10
7P.	4,4'-DDT	BDL	10
8P.	4,4'-DDE	BDL	10
9P.	4,4'-DDD	BDL	10
10P.	DIELDRIN	BDL	10
11P.	ALPHA-ENDOSULFAN	BDL	10
12P.	BETA-ENDOSULFAN	BDL	10
13P.	ENDOSULFAN SULFATE	BDL	10
14P.	ENDRIN	BDL	10
15P.	ENDRIN ALDEHYDE	BDL	10
16P.	HEPTACHLOR	BDL	10
17P.	HEPTACHLOR EPOXIDE	BDL	10
18P.	PCB-1242	BDL	10
19P.	PCB-1254	BDL	10
20P.	PCB-1221	BDL	10
21P.	PCB-1232	BDL	10
22P.	PCB-1248	BDL	10
23P.	PCB-1260	BDL	10
24P.	PCB-1016	BDL	10
25P.	TOXAPHENE	BDL	10

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

	CONCENTRATION (MG/L)	DETECTION LIMIT (MG/L)
1. CADMIUM, TOTAL	BDL	0.010
2. CHROMIUM, TOTAL	BDL	0.050
3. COPPER, TOTAL	BDL	0.10
4. LEAD, TOTAL *	0.14	0.50
5. MERCURY, TOTAL	0.0008	0.0002
6. ZINC, TOTAL	0.05	0.020
7. NICKEL, TOTAL	BDL	0.10
8. CYANIDE	BDL	0.01

? RMP ?

BDL=BELOW DETECTION LIMIT

*Lead analyzed by flame AAS because of concentration level found.

Send copy to
Gilligan, DEM
File
Rocco

COMPUCHEM LABORATORIES

NOV 19 1984

November 8, 1984

Mr. Rocco Palazzolo
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

RE: Data Inquiry for sample OST-1/32303

Dear Mr. Palazzolo:

Enclosed is an amended compound list for sample number 32303 that reflects the correct detection limit for lead.

We apologize for any inconvenience you may have experienced. If you have further questions please feel free to call me at 1/800-334-8525.

Sincerely,

Diana A. Scammell

Diana A. Scammell
Technical Specialist, Operations

cc: Robert Meierer
Mickey Cartagena
File #32303

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: OST-1
COMPUCHEM SAMPLE NUMBER: 32303

	CONCENTRATION (MG/L)	DETECTION LIMIT (MG/L)
1. CADMIUM, TOTAL	BDL	0.010
2. CHROMIUM, TOTAL	BDL	0.050
3. COPPER, TOTAL	BDL	0.10
4. LEAD, TOTAL*	0.14	0.050
5. MERCURY, TOTAL	0.0008	0.00020
6. ZINC,TOTAL	0.05	0.020
7. NICKEL, TOTAL	BDL	0.10
8. CYANIDE	BDL	0.010

BDL=BELOW DETECTION LIMIT
*Lead analyzed by flame AAS because of concentration level found.

RECRA ENVIRONMENTAL LABORATORIES
Division of Recra Research, Inc.

1st sample of Gill Creek - Solv. Chem
1st sample of Osterman Well - Nuclear Rad

ANALYTICAL RESULTS

H2M
PRIORITY POLLUTANT ANALYSES

Prepared For:

H2M
575 Broadhallow Road
Melville, NY 11747

Prepared By:

Recra Environmental Laboratories
4248 Ridge Lea Road
Amherst, NY 14226

Report Date: October 3, 1984

ANALYTICAL RESULTS

H2M
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

INTRODUCTION:

On September 5, 1984 samples were received at Recra Environmental Laboratories. A request was made by H2M to have the samples analyzed for selected fractions of the Environmental Protection Agency decreed priority pollutants.

This report will address the results of those analyses.

METHODS:

Priority pollutant analyses were conducted according to Environmental Protection Agency (EPA) methodologies.

Organic priority pollutants were analyzed by Gas Chromatography/Mass Spectrometry (GC/MS). Pesticide priority pollutants were analyzed by Gas Chromatography.

RESULTS AND DISCUSSION:

No Volatile field blank was received.

Analyses for specific Pesticides/PCB's are based upon the matching of retention times between samples and standards on a single gas chromatographic column. Gas chromatographic values reported as "less than" (<) indicate the working detection limit for the given sample and/or parameter.

Pesticides identified by Gas Chromatography are at concentrations too low for confirmation via Gas Chromatography/Mass Spectrometry.

Compounds reported as ND are "not detected".

Respectfully Submitted,

RECRA ENVIRONMENTAL LABORATORIES

Barbara J Krajewski

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

ACID/PHENOLICS

COMPOUND	DETECTION LIMIT (ug/l)	SAMPLE IDENTIFICATION	
		GILL CREEK	OSTERMAN PROPERTY
2-chlorophenol	3.3	ND	ND
2,4-dichlorophenol	2.7	ND	ND
2,4-dimethylphenol	2.7	ND	ND
4,6-dinitro-o-cresol	24	ND	ND
2,4-dinitrophenol	42	ND	ND
2-nitrophenol	3.6	ND	ND
4-nitrophenol	2.4	ND	ND
p-chloro-m-cresol	3.0	ND	ND
pentachlorophenol	3.6	ND	ND
phenol	1.5	ND	ND
2,4,6-trichlorophenol	2.7	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/11/84	7/11/84
Extraction Date	9/7/84	9/7/84
Analysis Date	9/19/84	9/19/84
Internal Standard (IS) - Level	20 µg/l	20 µg/l
deuterated phenanthrene - Recovery	100%	110%
Surrogate Standard (SS1) - Level	120 µg/l	120 µg/l
2-fluorophenol - Recovery	55%	30%
Surrogate Standard (SS2) - Level	120 µg/l	120 µg/l
pentafluorophenol - Recovery	43%	27%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 10/3/84

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (ug/l)	SAMPLE IDENTIFICATION	
		GILL CREEK	OSTERMAN PROPERTY
acenaphthene	1.9	ND	ND
acenaphthylene	3.5	ND	ND
anthracene	1.9	ND	ND
benzidine	44	ND	ND
benzo(a)anthracene	7.8	ND	ND
benzo(a)pyrene	2.5	ND	ND
benzo(b)fluoranthene	4.8	ND	ND
benzo(g,h,i)perylene	4.1	ND	ND
benzo(k)fluoranthene	2.5	ND	ND
bis(2-chloroethoxy)methane	5.3	ND	ND
bis(2-chloroethyl)ether	5.7	ND	ND
bis(2-chloroisopropyl)ether	5.7	ND	ND
bis(2-ethylhexyl)phthalate	2.5	ND	ND
4-bromophenylphenylether	1.9	ND	ND
butylbenzylphthalate	2.5	ND	ND
2-chloronaphthalene	1.9	ND	ND
4-chlorophenylphenylether	4.2	ND	ND
chrysene	2.5	ND	ND
dibenzo(a,h)anthracene	2.5	ND	ND
1,2-dichlorobenzene	1.9	ND	ND
1,3-dichlorobenzene	1.9	ND	ND
1,4-dichlorobenzene	4.4	ND	ND
3,3'-dichlorobenzidine	16.5	ND	ND
diethylphthalate	22	ND	ND
dimethylphthalate	1.6	ND	ND
di-n-butylphthalate	2.5	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

BASE/NEUTRALS

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION	
		GILL CREEK	OSTERMAN PROPERTY
2,6-dinitrotoluene	1.9	ND	ND
2,4-dinitrotoluene	5.7	ND	ND
di-n-octylphthalate	2.5	ND	ND
1,2-diphenylhydrazine	25	ND	ND
fluoranthene	2.2	ND	ND
fluorene	1.9	ND	ND
hexachlorobenzene	1.9	ND	ND
hexachlorobutadiene	0.9	ND	ND
hexachlorocyclopentadiene	25	ND	ND
hexachloroethane	1.6	ND	ND
indeno(1,2,3-cd)pyrene	3.7	ND	ND
isophorone	2.2	ND	ND
naphthalene	1.6	ND	ND
nitrobenzene	1.9	ND	ND
N-nitrosodimethylamine	25	ND	ND
N-nitrosodi-n-propylamine	25	ND	ND
N-nitrosodiphenylamine	1.9	ND	ND
phenanthrene	5.4	ND	ND
pyrene	1.9	ND	ND
1,2,4-trichlorobenzene	1.9	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/11/84	7/11/84
Extraction Date	9/7/84	9/7/84
Analysis Date	9/19/84	9/19/84
Internal Standard - Level	20 µg/l	20 µg/l
deuterated phenanthrene - Recovery	100%	110%
Surrogate Standard (SS3) - Level	120 µg/l	120 µg/l
decafluorobiphenyl - Recovery	55%	45%
Surrogate Standard (SS4) - Level	100 µg/l	100 µg/l
2-fluorobiphenyl - Recovery	60%	47%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 10/3/84

RECRA ENVIRONMENTAL LABORATORIES

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION	
		GILL CREEK	OSTERMAN PROPERTY
acrolein	400	ND	ND
acrylonitrile	400	ND	ND
benzene	4.4	ND	ND
bromodichloromethane	2.2	ND	ND
bromoform	4.7	ND	ND
bromomethane	10	ND	ND
carbon tetrachloride	2.8	ND	ND
chlorobenzene	6.0	ND	ND
chloroethane	10	ND	ND
2-chloroethylvinyl ether	10	ND	ND
chloroform	1.6	ND	ND
chloromethane	10	ND	ND
dibromochloromethane	3.1	ND	ND
1,1-dichloroethane	4.7	ND	ND
1,2-dichloroethane	2.8	ND	ND
1,1-dichloroethylene	2.8	ND	ND
trans-1,2-dichloroethylene	1.6	ND	ND
1,2-dichloropropane	6.0	ND	ND
1,3-dichloropropene	5.0	ND	ND
ethylbenzene	7.2	ND	ND
methylene chloride	2.8	ND	ND
1,1,2,2-tetrachloroethane	6.9	ND	ND
tetrachloroethylene	4.1	ND	ND

(Continued)

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

VOLATILES

COMPOUND	DETECTION LIMIT (µg/l)	SAMPLE IDENTIFICATION	
		GILL CREEK	OSTERMAN PROPERTY
toluene	6.0	ND	ND
1,1,1-trichloroethane	3.8	ND	ND
1,1,2-trichloroethane	5.0	ND	ND
trichloroethylene	1.9	ND	ND
vinyl chloride	10	ND	ND

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/11/84	7/11/84
Analysis Date	9/17/84	9/17/84
Internal Standard - Level	40 µg/l	40 µg/l
bromochloromethane - Recovery	73%	80%
Internal Standard - Level	40 µg/l	40 µg/l
2-bromo-1-chloropropane - Recovery	70%	73%
Internal Standard - Level	40 µg/l	40 µg/l
1,4-dichlorobutane - Recovery	76%	76%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 10/3/84

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

PESTICIDES/PCB'S

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE) GILL CREEK (7/11/84)	OSTERMAN PROPERTY (7/11/84)
aldrin	µg/l	0.10	<0.01
α-BHC	µg/l	0.36	<0.01
β-BHC	µg/l	0.26	<0.01
δ-BHC	µg/l	0.05	<0.01
γ-BHC	µg/l	0.04	<0.01
chlordane	µg/l	<0.2	<0.1
4,4'-DDD	µg/l	<0.02	<0.01
4,4'-DDE	µg/l	<0.02	<0.01
4,4'-DDT	µg/l	<0.02	<0.01
dieldrin	µg/l	<0.02	<0.01
α-endosulfan	µg/l	<0.02	<0.01
β-endosulfan	µg/l	<0.02	<0.01
endosulfan sulfate	µg/l	<0.02	<0.01
endrin	µg/l	<0.02	<0.01
endrin aldehyde	µg/l	<0.02	<0.01
heptachlor	µg/l	<0.02	<0.01
heptachlor epoxide	µg/l	<0.02	<0.01
PCB-1016	µg/l	<0.2	<0.1
PCB-1221	µg/l	<0.4	<0.2
PCB-1232	µg/l	<0.4	<0.2
PCB-1242	µg/l	<0.2	<0.1
PCB-1248	µg/l	<0.2	<0.1
PCB-1254	µg/l	<0.2	<0.1
PCB-1260	µg/l	<0.2	<0.1
toxaphene	µg/l	<0.2	<0.1

FOR RECRA ENVIRONMENTAL LABORATORIES T. Boyle

DATE 10/3/84

RECRA ENVIRONMENTAL LABORATORIES

T.D. #84-898

ANALYTICAL RESULTS

H2M
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

METALS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE) GILLCREEK (7/11/84)	OSTERMAN PROPERTY (7/11/84)
Total antimony	mg/l	<0.005	<0.005
Total arsenic	mg/l	<0.005	<0.005
Total beryllium	mg/l	<0.005	<0.005
Total cadmium	mg/l	0.007	0.006
Total chromium	mg/l	<0.005	<0.005
Total copper	mg/l	0.010	0.013
Total lead	mg/l	<0.005	<0.005
Total mercury	mg/l	0.003	<0.0005
Total nickel	mg/l	<0.005	<0.005
Total selenium	mg/l	<0.005	<0.005
Total silver	mg/l	<0.02	<0.02
Total thallium	mg/l	<0.005	<0.005
Total zinc	mg/l	0.061	0.258

FOR RECRA ENVIRONMENTAL LABORATORIES D. V. Zinn

DATE 10/3/84

RECRA ENVIRONMENTAL LABORATORIES

ANALYTICAL RESULTS

H2M
PRIORITY POLLUTANT ANALYSES

Report Date: 10/3/84

MISCELLANEOUS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE) GILL CREEK (7/11/84)	OSTERMAN PROPERTY (7/11/84)
Total cyanide	mg/l	<0.010	<0.01
Total recoverable phenolics	mg/l	<0.01	<0.01

FOR RECRA ENVIRONMENTAL LABORATORIES D. V. Zinn

DATE 10/3/84

RECRA ENVIRONMENTAL LABORATORIES
T.D. #84-898

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY/MASS SPECTROMETRY
PRIORITY POLLUTANT ANALYSES
QUALITY CONTROL

Report Date: 10/3/84

EXTRACTABLE RECOVERY ANALYSIS OF
SAMPLE GILL CREEK

COMPOUND IDENTIFICATION	ng OF SPIKE	ng RECOVERED	% RECOVERY
2-chlorophenol	50	43	86
1,3-dichlorobenzene	50	29	58
2,4-dichlorophenol	50	46	92
di-n-octylphthalate	50	29	58
fluoranthene	50	50	100
naphthalene	50	34	68
nitrobenzene	50	36	72
2,4,6-trichlorophenol	50	29	58

ADDITIONAL SAMPLE INFORMATION

Sample Date	7/11/84
Extraction Date	9/7/84
Analysis Date	9/19/84
Internal Standard (IS) - Level	20 µg/l
deuterated phenanthrene - Recovery	120%
Surrogate Standard (SS1) - Level	120 µg/l
2-fluorophenol - Recovery	36%
Surrogate Standard (SS2) - Level	120 µg/l
pentafluorophenol - Recovery	27%
Surrogate Standard (SS3) - Level	120 µg/l
decafluorobiphenyl - Recovery	46%
Surrogate Standard (SS4) - Level	100 µg/l
2-fluorobiphenyl - Recovery	52%

FOR RECRA ENVIRONMENTAL LABORATORIES Barbara J Krajewski

DATE 10/3/84

RECRA ENVIRONMENTAL LABORATORIES
I.D. #84-898

ANALYTICAL RESULTS

H2M
GAS CHROMATOGRAPHY
PRIORITY POLLUTANT ANALYSES
QUALITY CONTROL

Report Date: 10/3/84

PESTICIDE RECOVERY ANALYSIS OF
SAMPLE GILL CREEK

COMPOUND IDENTIFICATION	ng OF SPIKE	ng RECOVERED	% RECOVERY
aldrin	0.26	0.20	77
γ-BHC	0.24	0.19	79
4,4'-DDE	0.25	0.20	80
β-endosulfan	0.66	0.61	92
endrin	0.23	0.29	126
heptachlor	0.24	0.18	75

FOR RECRA ENVIRONMENTAL LABORATORIES F. Boyle

DATE 10/3/84

5) TRIP BLANKS

analyses of trip blanks + rinse
Washes for Redmond & GW

3308 East Chapel Hill/Nelson Highway
P.O. Box 12652
Research Triangle Park, NC 27709

Telephone: 919-549-8263
800-334-8525

CompuChem LABORATORIES

August 7, 1984

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Dear Mr. Schroder:

Thank you for selecting CompuChem® Laboratories for your recent sample analysis. We have completed the analysis that you requested and have enclosed a summary of the CompuChem® data for your review. Additional data details are available for purchase if you require them.

As you know, EPA has proposed detection limits for the priority pollutants in the December 3, 1979, Federal Register, and we have reported all priority pollutant concentrations which have exceeded these limits (or their equivalent for solid matrices). In addition, we have permanently stored a complete record of your data on magnetic tape. This includes chromatograms, mass spectra, calibration and quality control data for the organics. Therefore, your original data is readily available for future reference. Should you require additional information from your data base, please contact us at 1/800-334-8525.

In order to expedite data to you, we have forwarded the results for all completed analyses. If you submitted more samples than are included in the enclosed results, the data will be forthcoming upon completion of our final review.

Your confidence in our CompuChem® service is appreciated. We look forward to a continuing association.

Sincerely,

Customer Service Dept.
CompuChem®

Enclosure:

Report: SD-3 Trip Blank - 32298
SD-2 Trip Blank - 32300
SD-1 Trip Blank - 32302

COMPUCHEM LABORATORIES IS NO LONGER
AFFILIATED WITH MEAD CORPORATION.

DATA REPORT NOTICE

CompuChem employs Methods 624 and 625 for GC/MS analysis of organics in liquid matrices. These methods were proposed on December 3, 1979 by the U.S.E.P.A. in Volume 44 of the Federal Register. These methods were subsequently revised and reissued in July, 1982 as publication EPA-600/4-82-057. The EPA Environmental Monitoring and Support Laboratory (EMSL-Cincinnati) has subsequently issued method modifications which provide for the analysis of solid matrices. These modifications specify changes in the sample preparation procedures.

Additionally, for solid samples detection limits and any analytical results reported are based on processing the method specified sample size of as-received material.

The referenced methods are no longer appropriate for several of the original priority pollutant compounds. This is due to either the deletion from the toxic polluant list (40 CFR Part 401) by EPA or the determination by EPA that the referenced methods may not be optimized for certain compounds (EPA-600/4-82-057) originally incorporated by the methods.

CompuChem® presents these compounds in its sample data report for completeness as many of the government compound list forms continue to display the affected compounds. For consistency, these compounds are reported as "BDL" or "Below Detection Limit" as they are either not likely to exist in the sample or are not likely to be detected by the method. Those compounds which have actually been deleted are listed below with the Federal Register deletion reference.

Compound Name	GC/MS Fraction	Federal Register	Date
Dichlorodifluoromethane	Volatile	46FR2264	1/8/81
*Trichlorofluoromethane	Volatile	46FR2264	1/8/81
Bis(Chloromethyl)Ether	Volatile	46FR10723	2/4/81

*While this compound has been deleted, CompuChem® continues to identify and quantitate for it.

CompuChem LABORATORIES

REPORT OF DATA

SAMPLE IDENTIFIER:		COMPUCHEM SAMPLE NUMBER:
SD-3	Trip Blank	32298
SD-2	Trip Blank	32300
SD-1	Trip Blank	32302

SUBMITTED TO:

Mr. Ernie Schroder
Engineering Science, Inc.
57 Executive Park South
Suite 590
Atlanta, GA 30329

Diana A. Scammell
DIANA A. SCAMMELL
TECHNICAL SPECIALIST, OPERATIONS

R. L. MYERS, PH.D., PRESIDENT

ROBERT E. MEIERER
DIRECTOR OF QUALITY ASSURANCE

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-3 Trip Blank
COMPUCHEM SAMPLE NUMBER: 32298

	Date
Received/Refrigerated	07/27/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	07/30/84
2. Acid	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenols	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: SD-3 Trip Blank
COMPUCHEM SAMPLE NUMBER: 32298

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	
31V.	DICHLORODIFLUOROMETHANE†	BDL		
32V.	BIS(CHLOROMETHYL)ETHER†	BDL		

BDL=BELOW DETECTION LIMIT

†See Data Report Notice

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-2 Trip Blank
COMPUCHEM SAMPLE NUMBER: 32300

	Date
Received/Refrigerated	07/27/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	07/30/84
2. Acid	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenols	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: SD-2 Trip Blank
COMPUCHEM SAMPLE NUMBER: 32300

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	
31V.	DICHLORODIFLUOROMETHANE†	BDL		
32V.	BIS(CHLOROMETHYL)ETHER†	BDL		

BDL=BELOW DETECTION LIMIT

†See Data Report Notice

LABORATORY CHRONICLE

SAMPLE IDENTIFIER: SD-1 Trip Blank
COMPUCHEM SAMPLE NUMBER: 32302

	Date
Received/Refrigerated	07/27/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	07/30/84
2. Acid	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenols	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: SD-1 Trip Blank
COMPUCHEM SAMPLE NUMBER: 32302

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	
31V.	DICHLORODIFLUOROMETHANE†	BDL		
32V.	BIS(CHLOROMETHYL)ETHER†	BDL		

BDL=BELOW DETECTION LIMIT

†See Data Report Notice

Peter Buechi, Senior Sanitary Engineer, Region 9
Martin S. Ferguson, Environmental Chemist, Hazardous Site Control
Sample Testing from the Nash Road Site

August 29, 1983

Enclosed is a Laboratory Test Report for the sampling of ponded water taken July 11, 1983 at the Nash Road Site. Diethyl phthalate, Terbutol and Toluene were identified in the extracted sample. The former and latter are hazardous wastes (priority pollutants).

MSF:cl
Enclosure

cc: J. Rankin
C. Goddard

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Solid Waste

Mobile Laboratory

Facility: Nash Rd.

Sample Type: Ponded H_2O.

Date Sampled: 7/11/83

Sampling Site		Ponded H_2O.					
Lab. Number		83-191-01					
Parameter	Units						
pH	SU						
Conductivity	ohms						
Cd	mg/l						
Fe	mg/l						
Zn	mg/l						
Cr	mg/l						
Pb	mg/l						
Ni	mg/l						
Cu	mg/l						
GC/MS	indent	Terbutol					
	ident	diethyl phthalate					
Toluene	ug/l.	42.7					