

INITIAL SUBMITTAL

**NORTH ALBANY (BROADWAY AVE.) MGP SITE
ALBANY, NEW YORK**

JANUARY 15, 1994

Prepared by:

**NIAGARA MOHAWK POWER CORPORATION
300 ERIE BOULEVARD WEST
SYRACUSE, NY 13202**

**NYSDEC Order on Consent
Index #DO-0001-9210**

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This report has been prepared, in accordance with NYSDEC Order on Consent (Index D0-0001-9210 November 16, 1992) with Niagara Mohawk Power Corporation, to satisfy the Initial Submittal requirement for the North Albany (Broadway) MGP site as presented in Section I Items A,B, C and D of that Order.

I. NYSDEC Order on Consent - ITEM A

"A brief history and description of the site, including the types, quantities, physical state, location, and, if applicable, dates of disposal of MGP wastes, including methods of disposal and spillage of such wastes;"

A. Site Description

The North Albany (Broadway) Manufactured Gas Plant (MGP) site is located on 1125 Broadway Street in Albany, Albany County, New York. The North Albany site occupies about 25 acres and is covered by numerous buildings, parking lots, and storage areas. The site is bordered by Broadway Street to the west, Interstate I-90 to the north, Conrail to the east, and Bridge Street to the south. The site is currently owned by Niagara Mohawk Power Corporation (NMPC) and utilized as a regional service center.

The land use nearby the site is urban/industrial. There are several small factories and businesses around the site and a small railyard to the east. Interstate I-787 and the Hudson River exist beyond the railyard to the east. To the northeast of I-90 is the closed North Albany County landfill.

Several of the storage areas in the southern part of the site are covered with gravel and crushed stone. The site also contains the NMPC eastern region Treatment, Storage, or Disposal (TSD) Facility near the center of the site. The current TSD facility covers less than one-half acre. Building Nos. 3 and 4 on the site were part of the former gas plant structures.

B. Site History

Prior to the construction of the coal gas plant in 1872, the site was part of the Stephen Van Rensselaer estate and was primarily farmland and residential. Throughout the life of the gas plant, the site was bordered on the west by Broadway. Expansion occurred primarily on the east and south sides of the site.

In 1872, the People's Gas Light Company constructed the first plant at the site. This facility consisted of a coal shed, horizontal purifier house, a gasometer, and an office. The plant was bordered to the north by a depot and stables owned by the Troy and Albany Passenger Railway. An ice house and an unidentified building labeled "Colby and Kelly" were east of and adjacent to the railway.

Original installations were designed to produce quantities estimated to be adequate for anticipated requirements. However, by the 1880's demand exceeded expectations and, it was necessary to consolidate separately-owned operations to develop larger, more efficient production units. Between 1885 and 1888, the Municipal Gas Company of Albany purchased properties of the three gas light companies in the area and integrated their manufacturing plants and distribution systems. In 1892, the Municipal Gas Company added three small gas holders, a lime/oxide house, and a machine shop/storage building on the eastern portion of the property.

In 1907, the Municipal Gas Company had expanded on the south side of the property. A 2,000,000 cubic foot (cu. ft.) gas holder was added to increase storage capacity. Also, a multi-purpose building (carriage house/meter storage, repair shop) was also constructed on the south side. In 1892, the retort house had been converted to water gas with the replacement of Williamson gas sets. To the north was United Traction, a company specializing in production of electricity for the trolley service, was located where the Troy and Albany Passenger Railway once operated. To the south adjacent to Bridge Street was Hart and Fleet Planning Mill and the Hudson Valley Ice Company

In 1924, a new 3,000,000 cu. ft. gas holder was installed at the Municipal Gas Plant, which further increased the total storage capacity to 5,000,000 cu. ft. In 1925, gas was supplied from the Water Street gas plant in Troy, New York.

In 1927, the Municipal Gas Company was acquired by New York Power and Light (NYP&L) and, additional expansions and renovations were conducted at the site. By 1931, the property had expanded to the south through various deed acquisitions. Also, between 1930 to 1940, the 250,000 cu. ft. gas holder and retort house were torn down. An educational building was constructed, and two additional purifying tanks were added on the south end of the purifying house. In 1931, a service building was also erected on-site. This building housed the maintenance operations and had the storage capacity for eighty cars.

In the 1930's, the NYP&L purchased several properties from Albany Lumber and Planning Co., Hudson Valley Ice Co., D&H Railroad, Paradise Oil Co., and Beacon Oil Company. These acquisitions extended the southern boundary of the property to Bridge Street. One property on Broadway was used by Standard Oil as a gas station.

In the 1950's, NYP&L became part of NMPC which continued to operate the site as a regional service center for gas and electric operations. Several new buildings were added to the northeast and southwest parts of the site. A PCB storage facility was located at Building No. 1.

In the 1980's, the regional NMPC hazardous waste treatment, storage and disposal (TSD) facility was added to the North Albany site.

C. By-Products

A number of by-products typically resulted from the production of coal gas and carburetted water gas. Site-specific production records are not presently available; however, the following is a description of by-products commonly associated with manufactured gas production:

1. Coal (Retort) Gas Production

Clinker and Ash - These by-products may include oxides of silica, calcium, aluminum, and trace metals. Trace metals typically associated with gas production are as follows: antimony, boron, cadmium, chromium, cobalt, copper, lead, manganese, and nickel.

Coal Tar - Coal tar contains primarily polynuclear aromatic hydrocarbons (PAHs), including heterocyclic compounds (organic compounds which contain other elements in addition to carbon and hydrogen).

Oil Sludge, Ammonia Liquors and Gas Condensates - Oil sludges and gas condensates consisted of aromatic-rich oils.

Tar Decanter Sludges - Tar sludge contains high concentrations of PAHs, heterocyclic PAHs.

Ammonia, Cyanide and Sulfur Salts

2. Water (Carburetted) Gas Production

Tar - The tar produced during carburetted gas production is similar to that produced by the coal gas process; however, it did not contain significant amounts of tar acids.

Tar Sludges - Tar sludges from the carburetted water gas process contained primarily polynuclear aromatic hydrocarbons.

Ash, Clinkers and Coke Breeze - The characteristics associated with ash, clinker, and coke breeze (coke dust) by-products were similar to coal gas production.

Emulsions and Liquors - Emulsions and liquors (liquids) were formed during condensation when the blue gas was cooled.

4. Gas Purification

Lime Sludge - Lime sludge was utilized for the recovery of hydrogen sulfide. The gas was passed through the lime sludge and the sulfur was precipitated as calcium sulfate.

Oxide Box By-Products - Oxide boxes replaced the lime sludge purification process. Wood chips impregnated with iron oxide were placed in purifier boxes to remove sulfur from the gas. The iron oxide reacted with the hydrogen sulfide to produce ferric sulfide. Eventually, the oxide chips were fouled by an accumulation of sulfur, tar, and the reaction of iron and cyanide which produce ferrocyanides. Typical oxide box by-products contained sulfur, ferrocyanide, thiocyanate, and naphthalene. Bog ore was commonly used as a source of iron oxide for oxide chip production. Bog ore contains the following trace metals: chromium, copper, lead, manganese, nickel and zinc.

D. By-Product Quantities

No reliable or complete records of the quantity of MGP by-products are known to exist for the period of operation.

E. Location of By-Products

There is limited information available at this time regarding the location of by-products at this site. The following is a summary of MGP material found at the site to date:

1. During the removal of underground storage tanks (USTs) in the 1990-1991, coal tar deposits were observed near the eastern end of the site.
2. Tar was encountered in test borings near and below the former gas plant buildings.

II. NYSDEC Order on Consent - Item B

"A concise summary of information held by Respondent and Respondent's attorneys and consultants with respect to all persons responsible for such disposal of MGP wastes, including but not limited to names, addresses, dates of disposal and any proof linking each such person responsible for MGP wastes identified pursuant to Subparagraph I.A of this Order."

The following is a chronological listing of companies that operated the North Albany (Broadway Ave.) MGP facility.

<u>Dates of Operation</u>	<u>Company</u>
1872-1880	Formation of People's Gas Light Company on February 5, 1872. The first gas plant located at the North Broadway site. Officially filed certificate of incorporation with the Secretary of State in 1873.
1880-1885	Incorporation of People's Gas Co. on January 31, 1880, which 1880 - 1885 was a reorganization of People's Gas Light Co.
1885-1925	Formation of Municipal Gas Company on July 13, 1885 through the 1885 - 1925 consolidation of three smaller utility companies. (Albany Gas Light Co. in 1885, People's Gas Company and People's Gas Light Co. in 1886, West Troy Gas Light Company in 1888).
1925-1927	Mohawk Hudson Power Corporation acquires control of Municipal 1925 - 1927 Gas Company in 1925.
1927-1929	Organization of New York Power and Light Corporation (NYP&L) from 1927 - 1929 the consolidation of Municipal Gas Company and five other companies in 1927. NYP&L was controlled by Mohawk Hudson Power Corporation.
1929-1950	Mohawk Hudson Power Corporation consolidated with Northeastern Power 1929 - 1950 Corporation and Buffalo Niagara and Eastern Power Corporation to form Niagara Hudson Power Corporation in 1929.

III. NYSDEC Order on Consent - Item C

"A comprehensive list and copies of all existing relevant reports with titles, authors, and subject matter, as well as a description of the results of all previous investigations of each site and areas in the vicinity of each site, including copies of all available topographic and property surveys, engineering studies, and aerial photographs."

A description of all previous site investigations, topographic maps and property surveys, engineering studies and aerial photographs are presented in the following appendices included with this submittal:

Appendix A - Property Surveys, Maps and Drawings

1. North Albany Service Station Site Plan - 1993
2. Map of Gas Plant Property - 1928
3. North Albany Service Station Site Plan - with historic structures 1993
4. NYP&L No. Albany St. Ltg. Cir. - 3/28/31
5. NYP&L Albany, NY - August 10, 1937
6. Finished grades elevation - 1962
7. North Albany Service Bldg. - 11-1-35
8. Utilities Plan - 1954
9. North Albany Service Building - 1983
10. North Albany Service Building, Heating Plant - 1954
11. Albany Service Building - 1955 to 1958
12. Soil Test Borings - 5/28/86
13. Site Plan - North Albany - 8/19/84
14. NYP&L North Albany - 3/27/36
15. Works of the Municipal Gas Co. - 7/7/41
16. North Parking Lot Paving - 4/30/57

Appendix B - Engineering Studies and Site Investigations

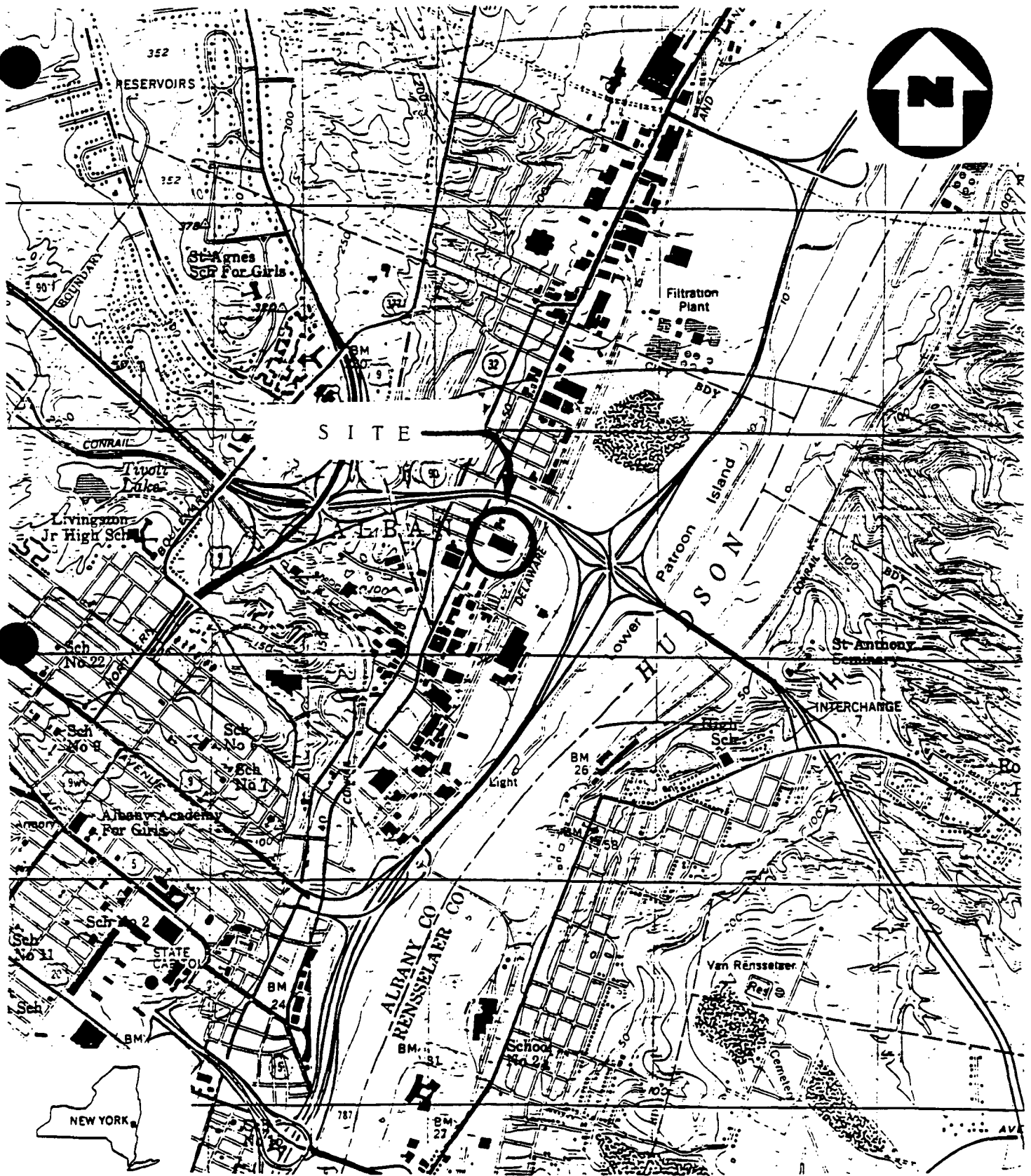
1. Pittsburgh Testing Laboratory Test Borings for North Albany Service Center, September, 1986.
2. NUS Corporation, Potential Hazardous Waste Site, Preliminary Assessment for USEPA - 3/17/87
3. Empire Soils Investigations, Inc., Bldg. 4 - North Albany Sta. 7/20/92
4. Robert J. Carlin and Associates, Report on Subsurface Soil and Foundation Investigation, 28 December, 1992.

Appendix C - Aerial Photographs

1. Circa 1950
2. 4/21/1986

IV. NYSDEC Order on Consent - Item D

"An 8.5 inch by 11 inch portion of a U.S. Geological Survey topographic map of the site which contains the name of the quadrangle and an arrow indicating the orientation of a northern compass point."



(QUAD) TROY SOUTH, N.Y.

North Albany (Broadway) MGP Site

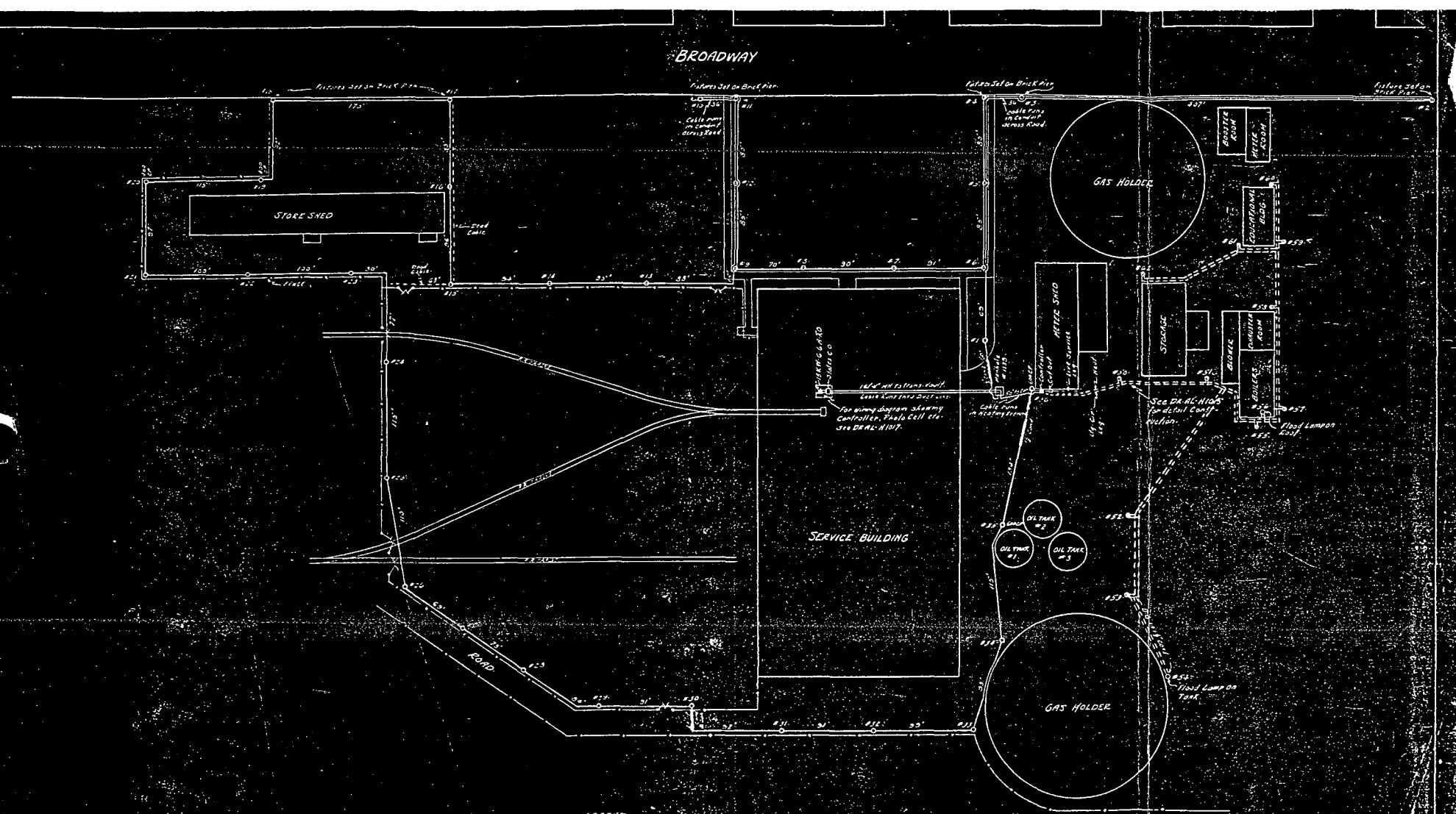
SITE LOCATION MAP

NIAGARA MOHAWK OPERATIONS HQ, ALBANY, N.Y.

SCALE: 1" = 2000'

Appendix A - Property Surveys, Maps and Drawings

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2. Map of Gas Plant Property - 1928
3. North Albany Service Station Site Plan - with historic structures 1993
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5. NYP&L Albany, NY - August 10, 1937
6. Finished grades elevation - 1962
7. North Albany Service Bldg. - 11-1-35
8. Utilities Plan - 1954
9. North Albany Service Building - 1983
10. North Albany Service Building, Heating Plant - 1954
11. Albany Service Building - 1955 to 1958
12. Soil Test Borings - 5/28/86
13. Site Plan - North Albany - 8/19/84
14. NYP&L North Albany - 3/27/36
15. Works of the Municipal Gas Co. - 7/7/41
16. North Parking Lot Paving - 4/30/57

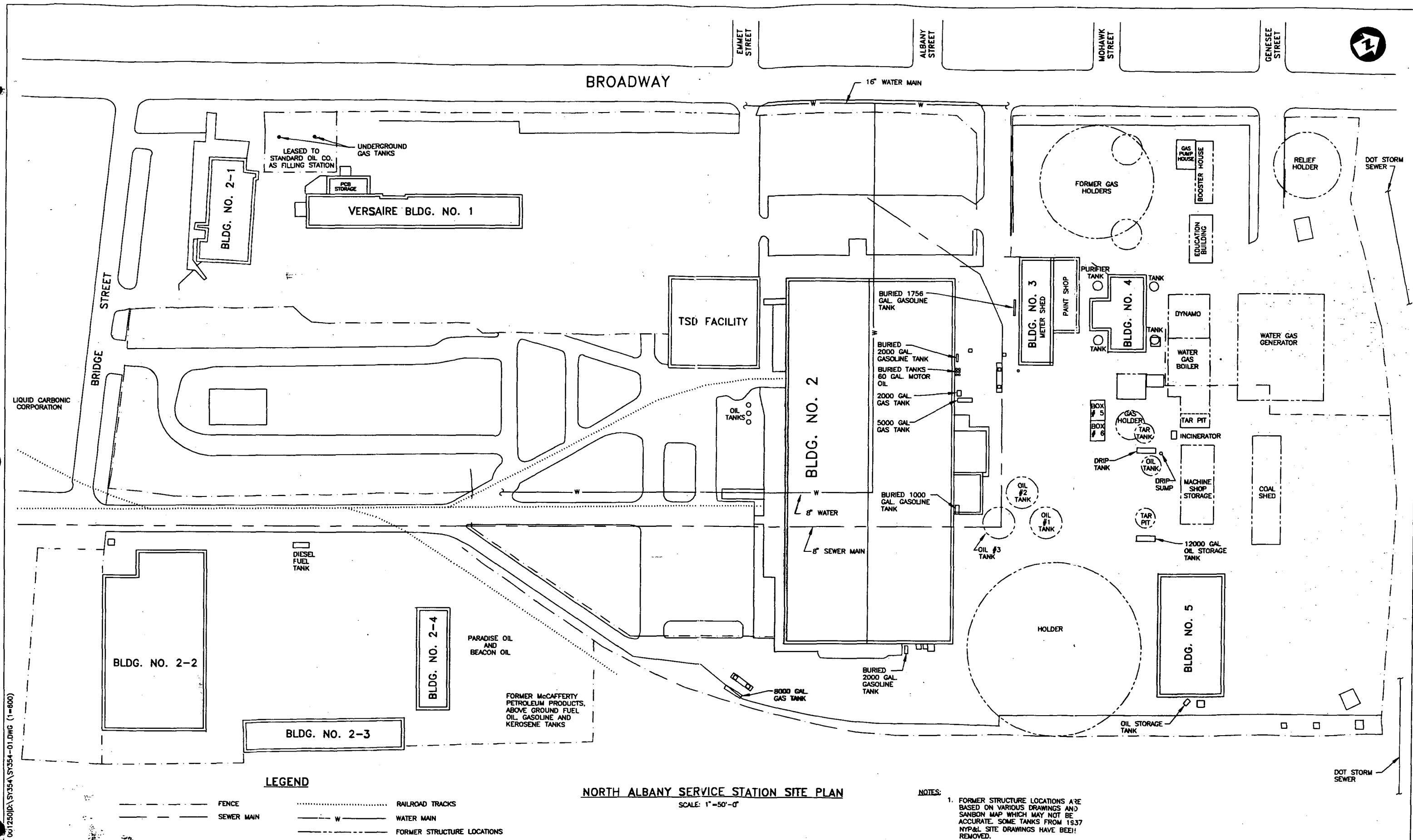


- ~LEGEND~
- Union Metal Post #3001-25000 except as noted.
 - Lamp lantern globe fixture mounted on brick pier 6000.
 - Galvanic bracket 300 Watt Lamp.
 - Red #8 L.C. G.W. Cable
 - Black #10 Feeder Cable
 - Blue #12 W.P. Wire (Overhead)
 - Yellow #12 W.P. Wire (Overhead)
 - Union Metal Post #3001 with small lantern globe 4500.
 - Flood Lamp 3000.

NEW YORK POWER & LIGHT CORP.
NO. ALBANY ST. LTG. CIR.

Scale 50 feet to inch

Drawn 1/10/11



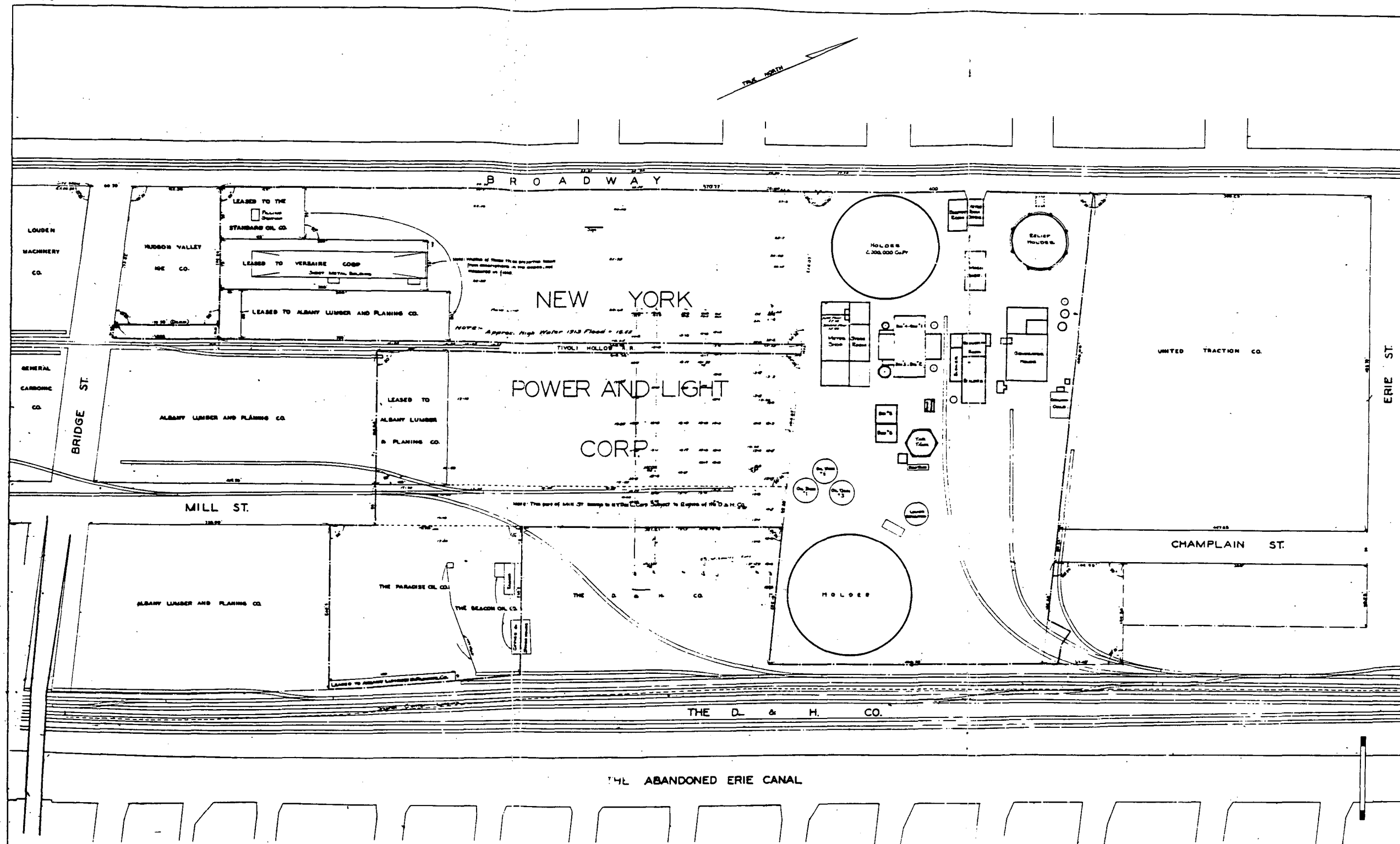
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4			DESIGNED BY -	
3			DRAWN BY JTS	5/28/03
2			CHECKED BY -	
1			ENGINEER -	
NO.	DATE	REVISIONS	BY	REGISTRATION NO. DATE

ENGINEERING-SCIENCE
DESIGN * RESEARCH * PLANNING
 290 ELWOOD DAVIS ROAD * SUITE 312 * LIVERPOOL, NEW YORK 13088 * 315/451-9560
 OFFICES IN PRINCIPAL CITIES



NIAGARA MOHAWK POWER CORPORATION
 ALBANY, NEW YORK

NORTH ALBANY BUILDING SERVICE CENTER	SCALE AS SHOWN
MGP SITE PLAN	FIGURE NO. 3.2
	FILE NO. SY354-01



N. Y. P. & L. CORP.
 MAP OF GAS PLANT PROPERTY
 ALBANY — N.Y.
 SCALE — 1" = 50'

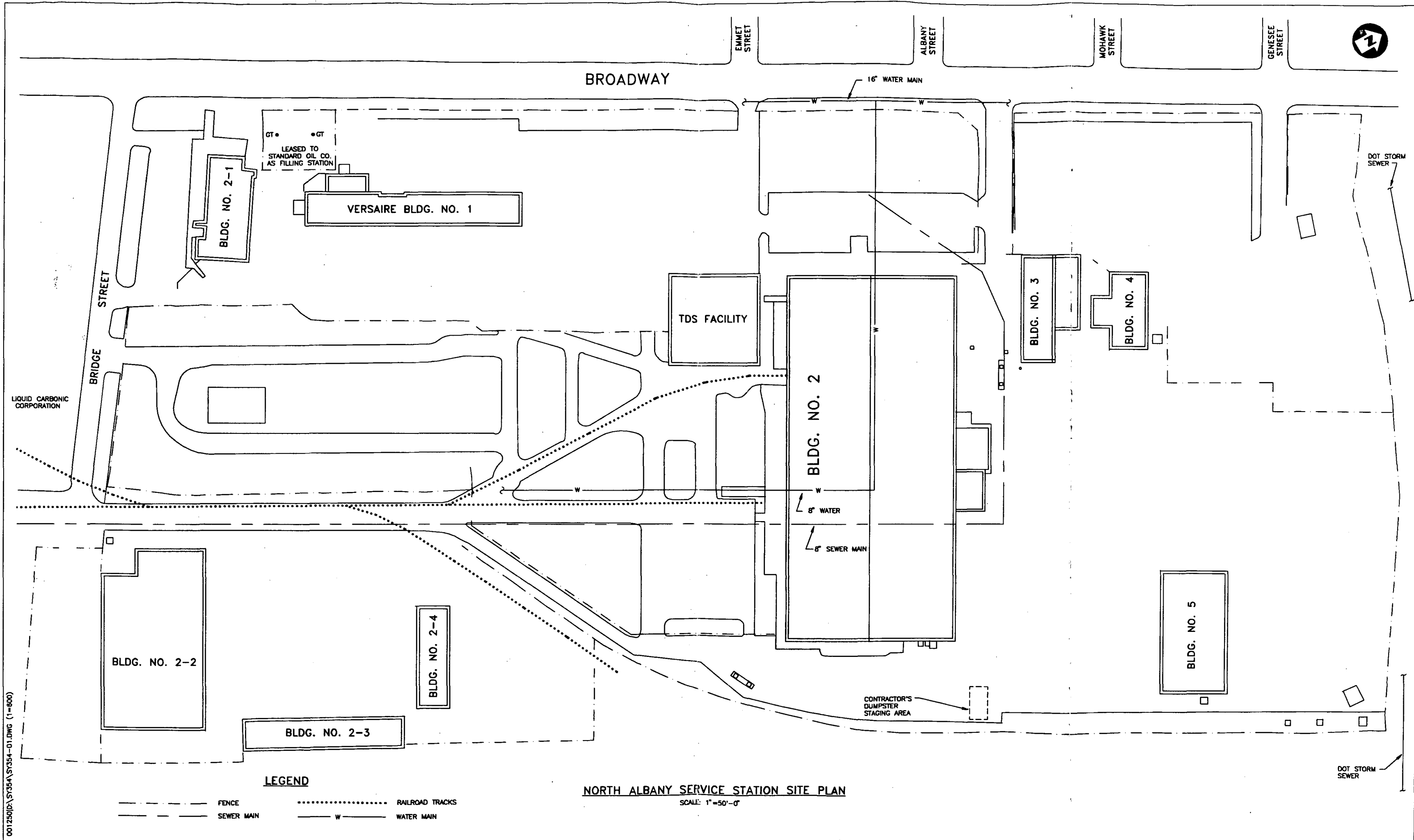
1928

Figure 3.1

Copyright Notice: This map is the property of the N. Y. P. & L. Corp. and is loaned to you for your use only. It is not to be reproduced or used in any way without the written consent of the N. Y. P. & L. Corp.

NO.	REVISION	DATE	BY	CHKD.
1	Original	1/15/28	J. H. S.	J. H. S.
2	Revised	1/15/28	J. H. S.	J. H. S.
3	Revised	1/15/28	J. H. S.	J. H. S.

NO.	REVISION	DATE	BY	CHKD.
1	Original	1/15/28	J. H. S.	J. H. S.
2	Revised	1/15/28	J. H. S.	J. H. S.
3	Revised	1/15/28	J. H. S.	J. H. S.



LEGEND

---	FENCE		RAILROAD TRACKS
---	SEWER MAIN	---	W
---		---	WATER MAIN

NORTH ALBANY SERVICE STATION SITE PLAN

SCALE: 1"=50'-0"

ENGINEERING-SCIENCE

DESIGN * RESEARCH * PLANNING

290 ELWOOD DAVIS ROAD * SUITE 312 * LIVERPOOL, NEW YORK 13088 * 315/451-9560
OFFICES IN PRINCIPAL CITIES

ES

NIAGARA MOHAWK POWER CORPORATION
ALBANY, NEW YORK

NORTH ALBANY BUILDING
SERVICE CENTER

1984 Modified 1993- Figure 2.2

SITE PLAN

SCALE
AS SHOWN

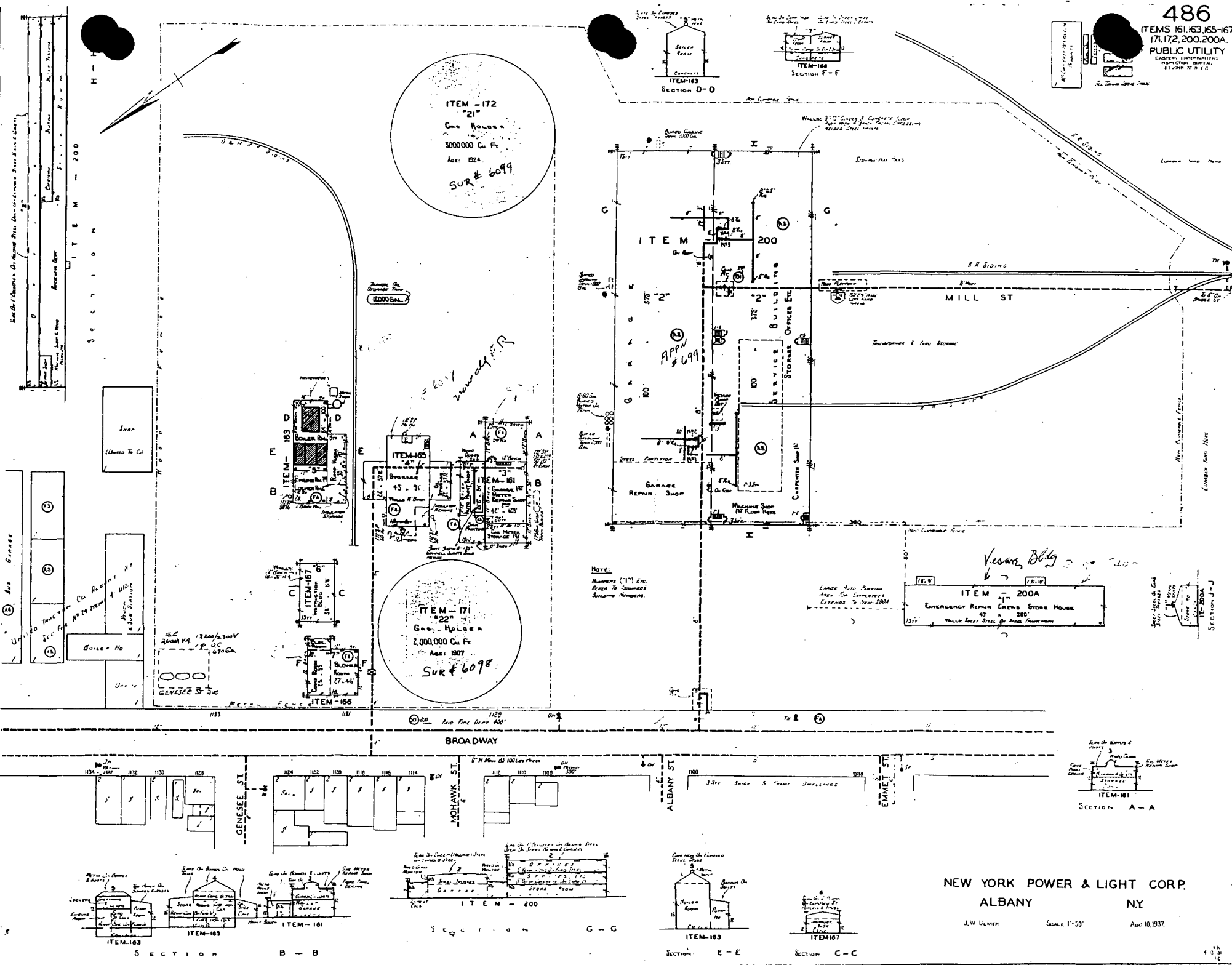
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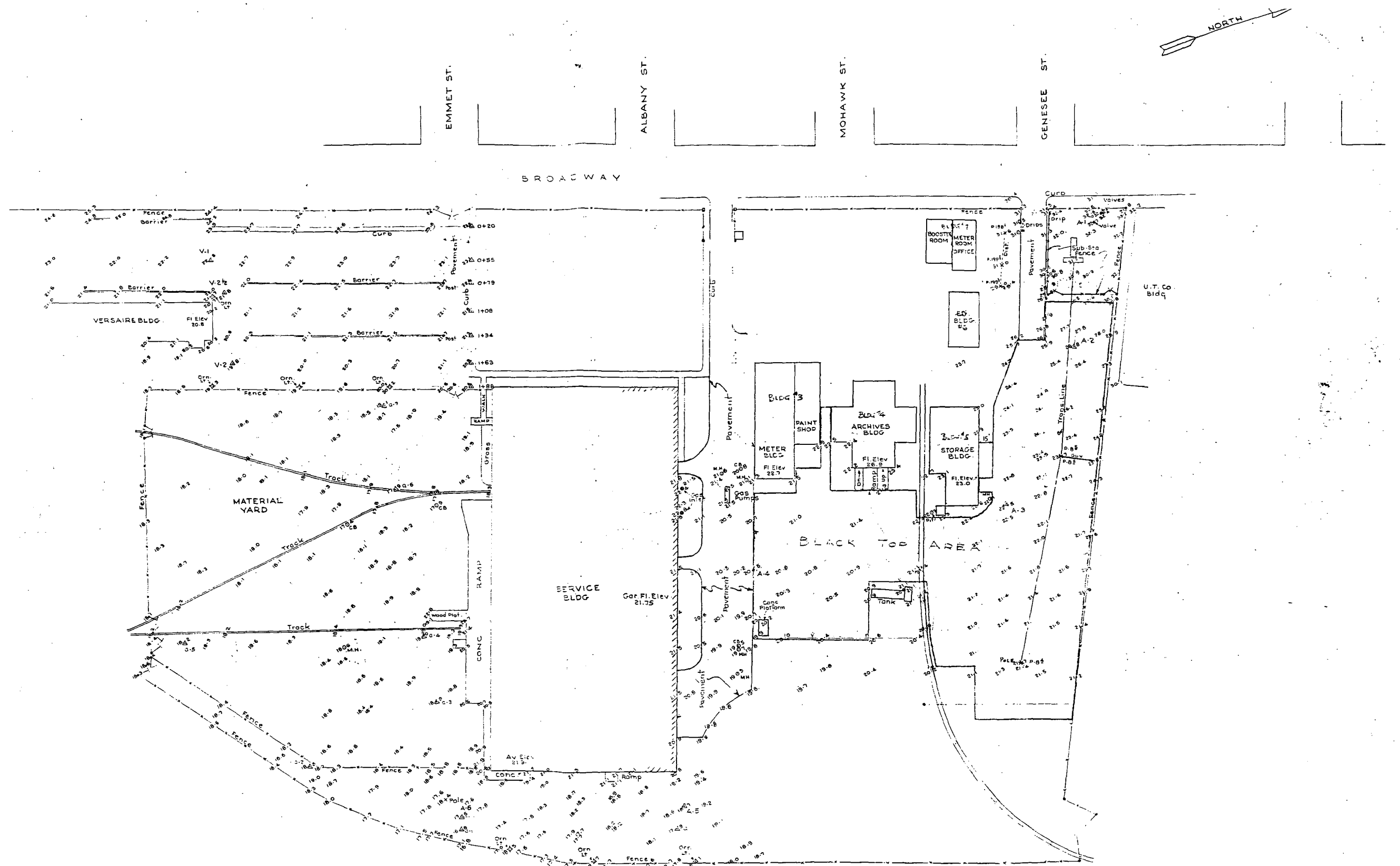
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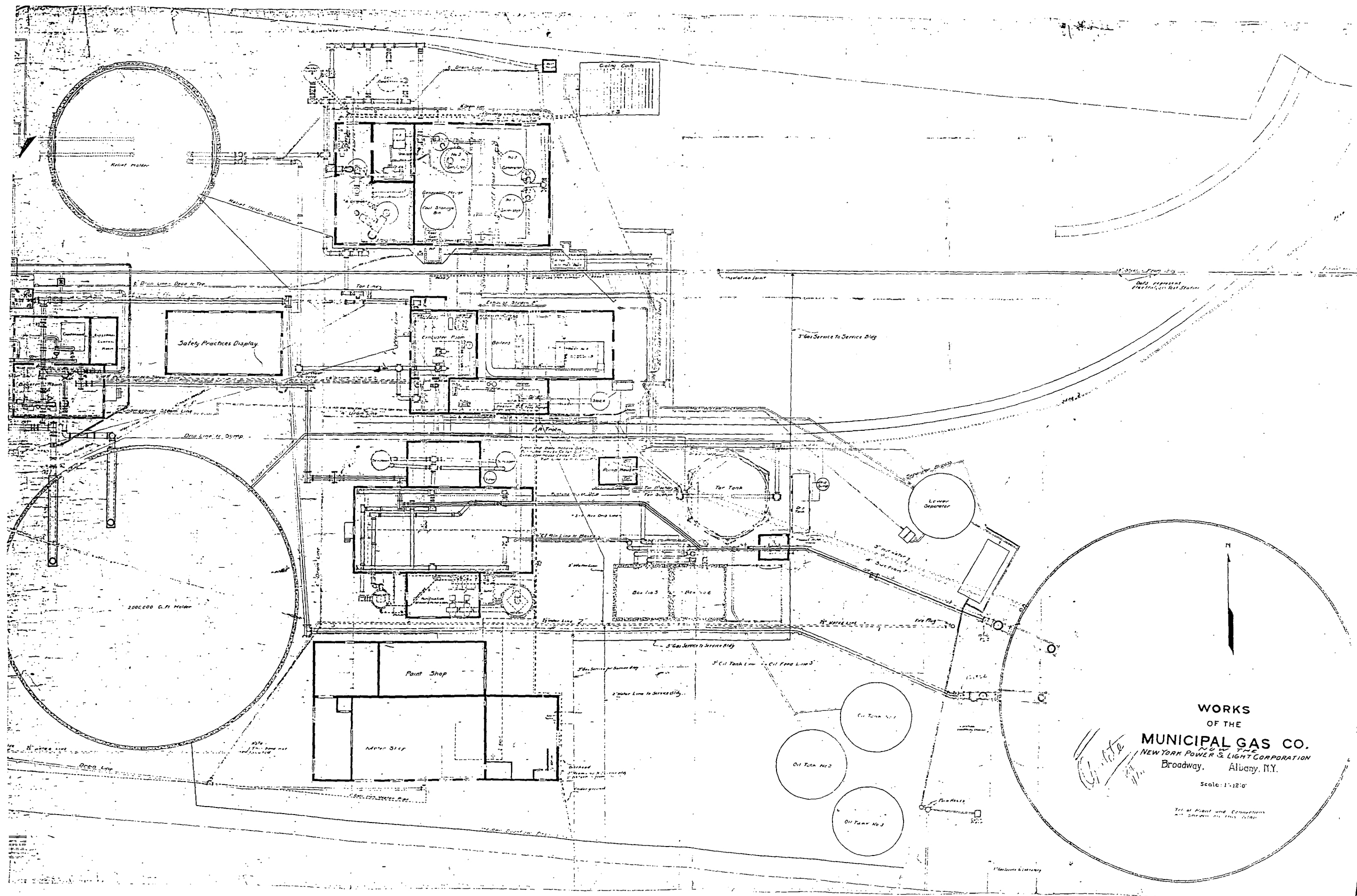
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4				DRAWN BY	JTS	4/28/93
3				CHECKED BY	-	-
2				ENGINEER	-	-
1				REGISTRATION NO.	-	-





REFERENCE DRAWINGS
 I-998 MAP OF GAS PLANT PROPERTY
 I-1210 ALBANY SERVICE BUILDING
 LOCATION PLAN



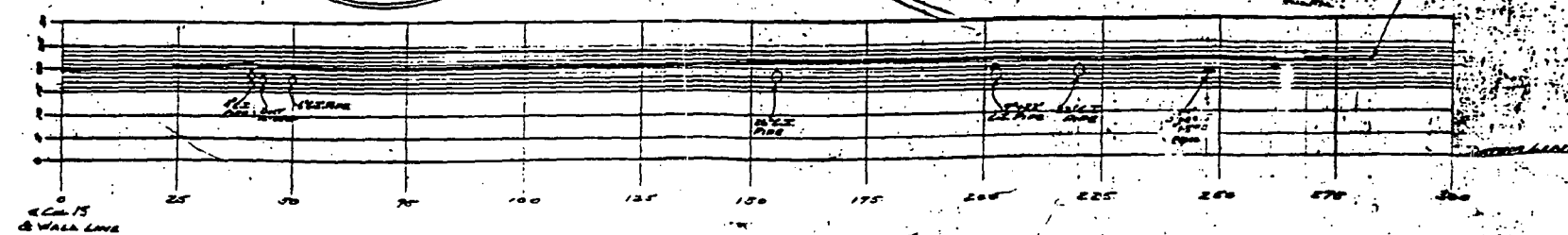
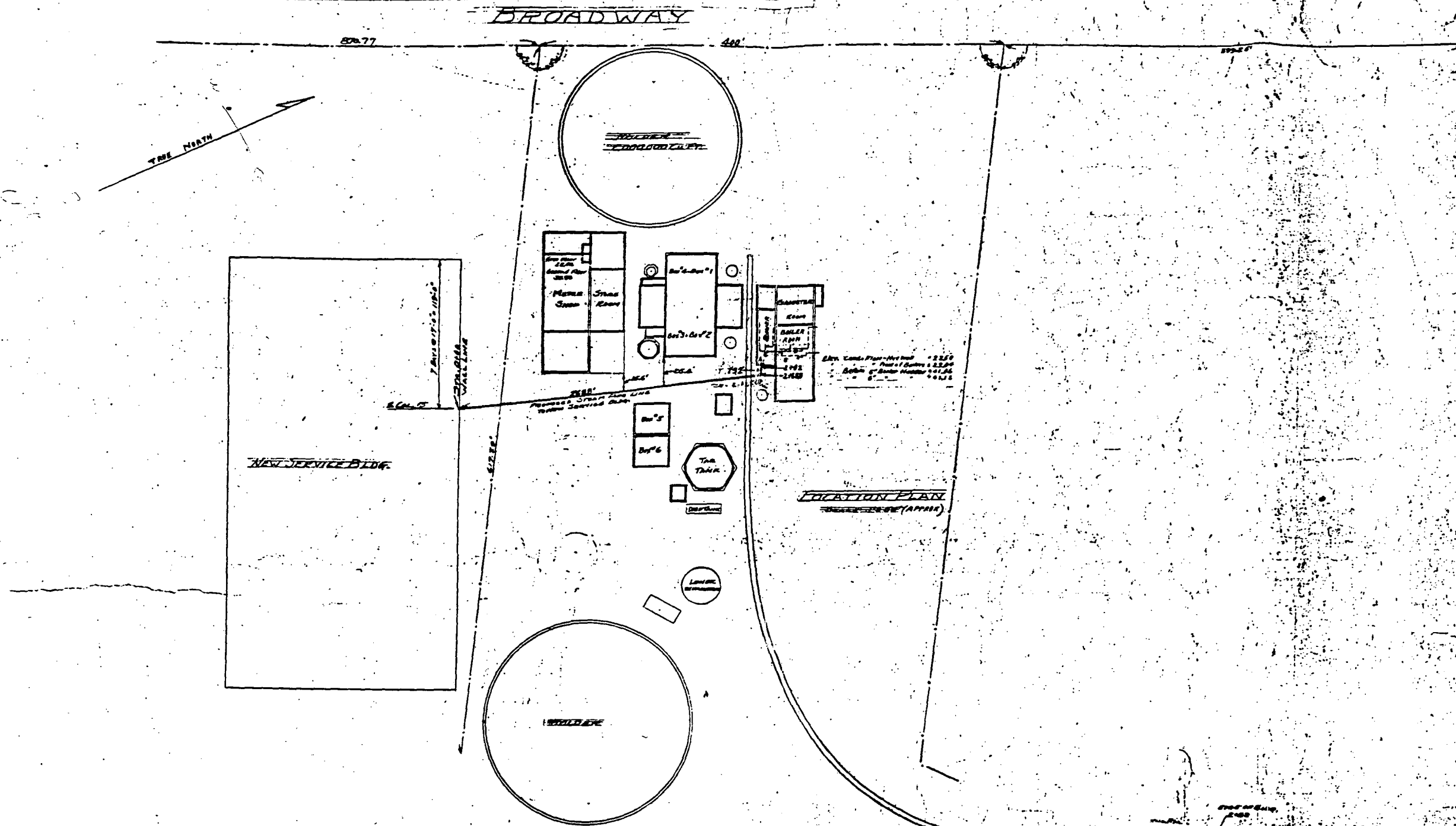
WORKS
OF THE
MUNICIPAL GAS CO.
NEW YORK POWER & LIGHT CORPORATION
Broadway, Albany, N.Y.

Scale: 1"=12'0"

Tot. of Plant and Connections
Not Shown on this Drawing

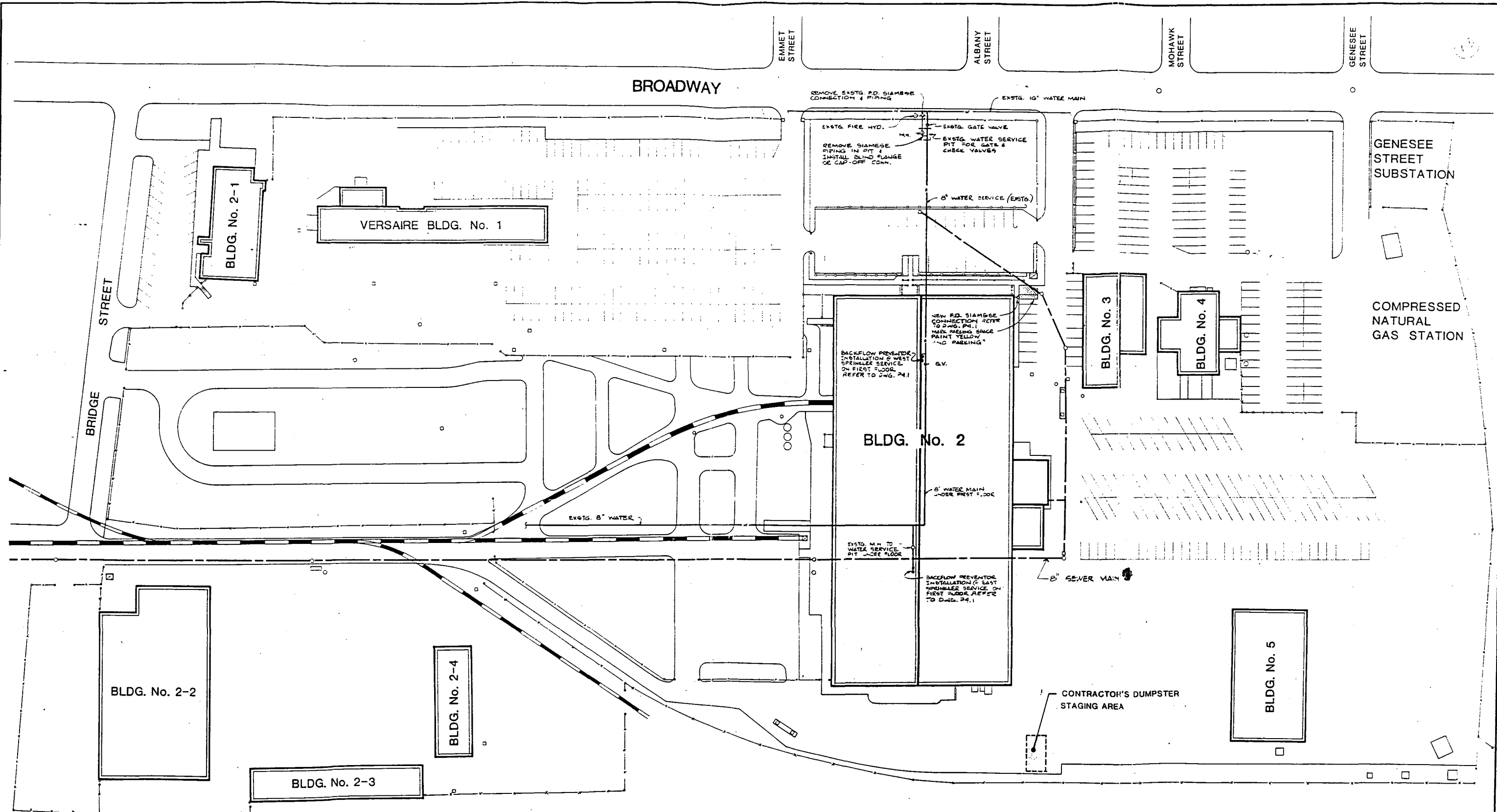
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14



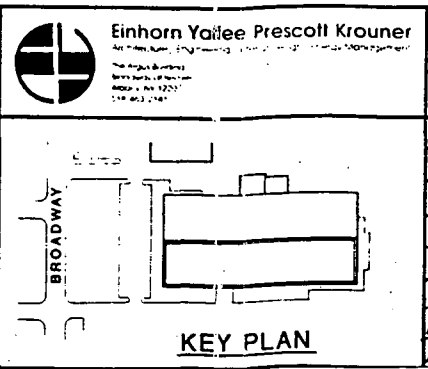
Data from NB 1551-1552
 Dwg. 898

N.Y.P.D. CORP.
 NORTH BATTERY SERVICE BUILDING
 LOCATION PLAN AND PROFILE OF
 PROPOSED HEATING LINE



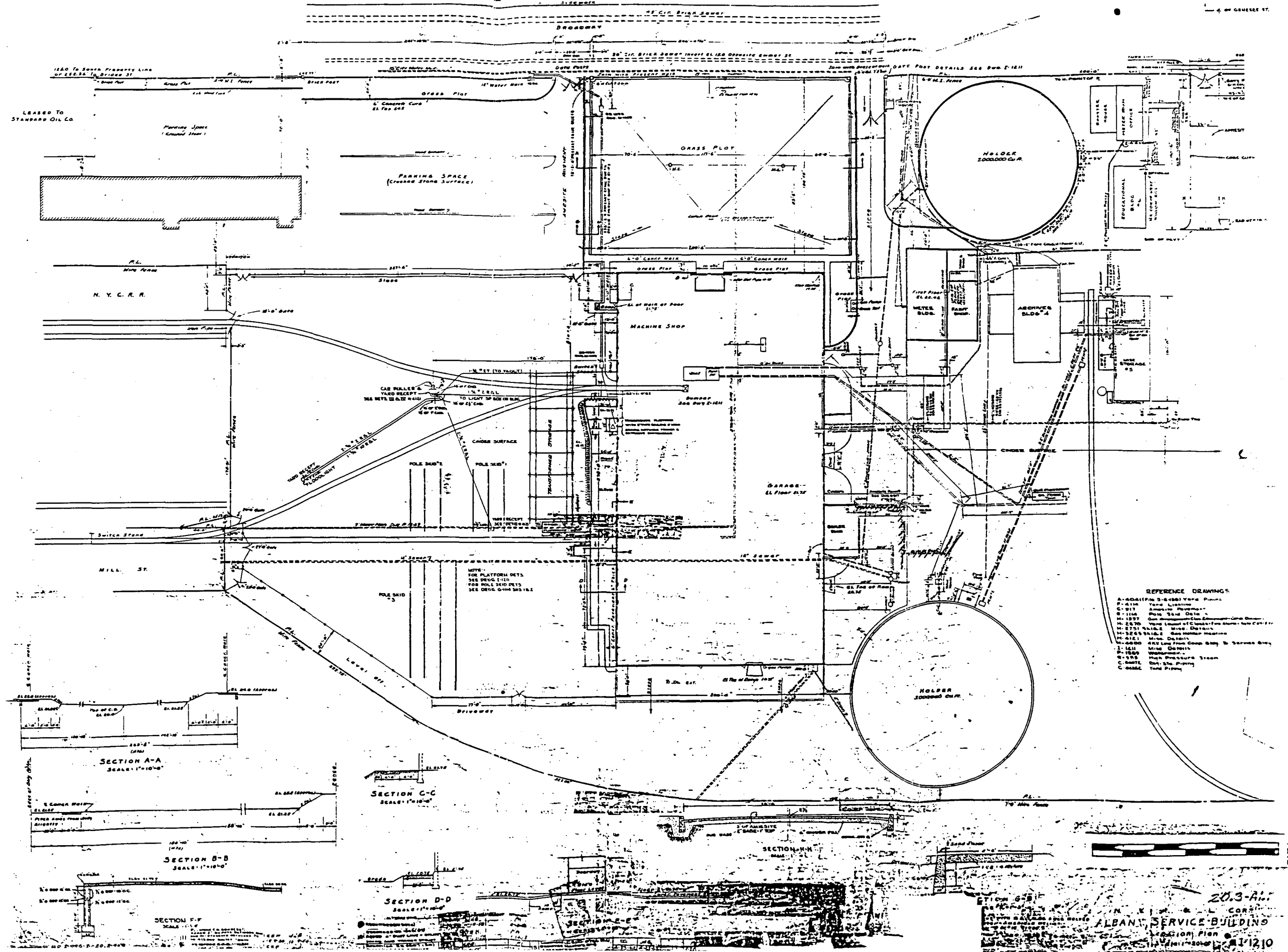
NORTH ALBANY SERVICE CENTER SITE PLAN

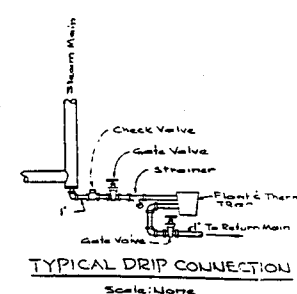
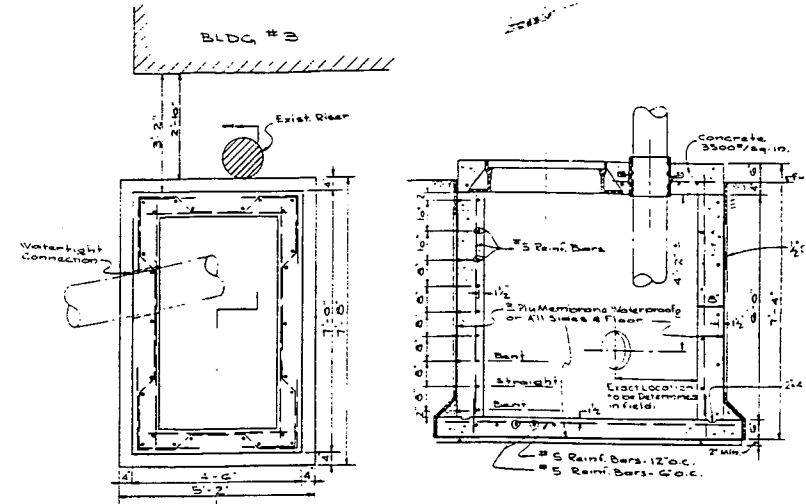
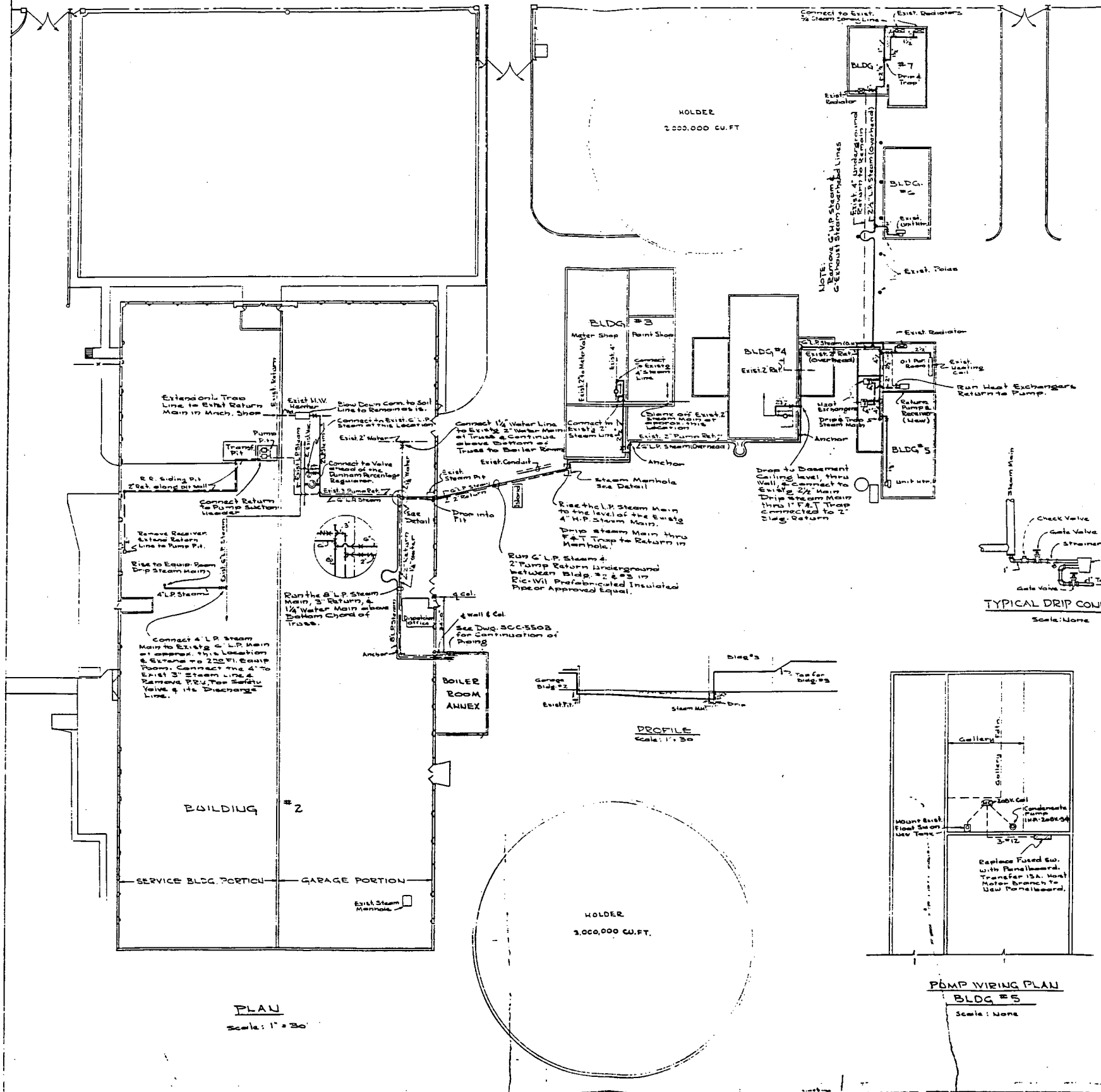
NO.	DATE	REVISIONS	
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NIAGARA MOHAWK POWER CORPORATION ALBANY, N.Y.			
NORTH ALBANY BUILDING 2 RENOVATION			
SPEC. No. E84-15			
SITE PLAN-NORTH ALBANY			
SERVICE CENTER			
BACKFLOW PREVENTERS P-L1			
DES. EC	DEC	TR.	CK.
APP.	APP.	APP.	APP.
DATE 8/19/84		SCALE 1" = 50'-0"	
INDEX 20.3 - A1.1		NO. C - 24122 - F	

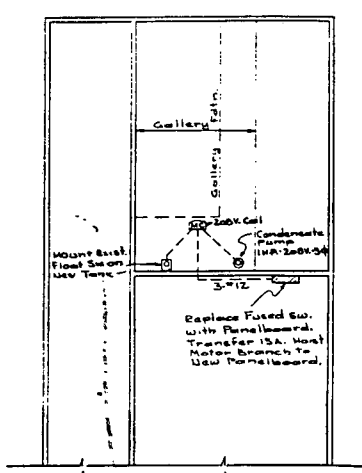
22
154154





STEAM MANHOLE DETAIL
Scale: 1/2" = 1'-0"

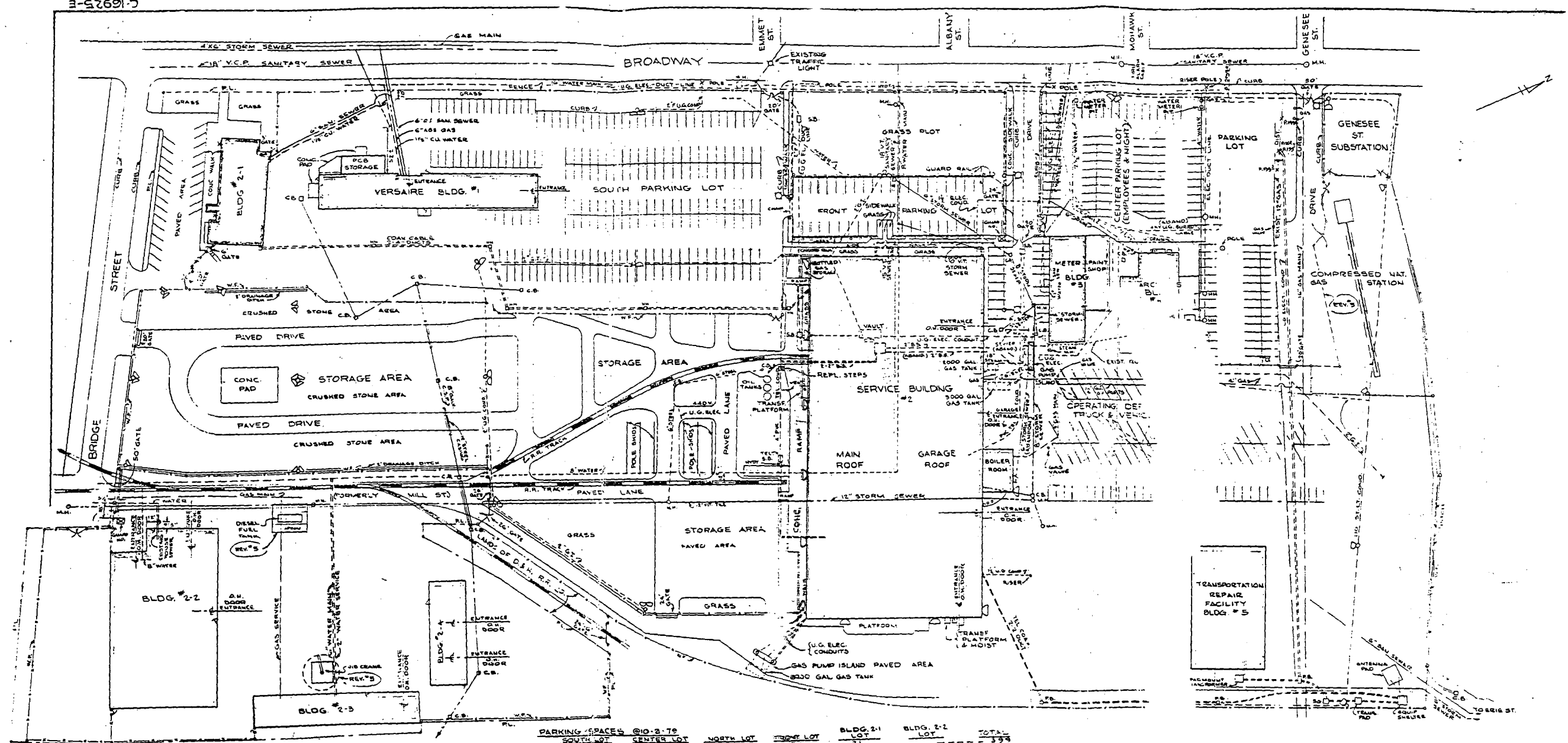
PROFILE
Scale: 1" = 30'



REFERENCE DWGS.
SC-C-5502 - BLDG. PLAN, ELEVATION & DETAILS
SC-C-5503 - BOILER RM. LAYOUT & SCHEMATIC DIAG.

C.O. C130
NIAGARA MOHAWK POWER CORPORATION
ALBANY, N.Y.
NO. ALBANY SERVICE BLDG.
HEATING PLANT
GENERAL PLAN & YARD PIPING
DATE: 11/1/71
BY: J.E. HART
CHECKED: J.E. HART
APPROVED: J.E. HART
SCALE: 1" = 30'

C-16925-E



PRESENT USE OF NORTH ALBANY PROPERTY @ 10-2-79

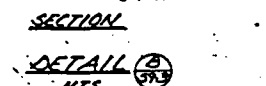
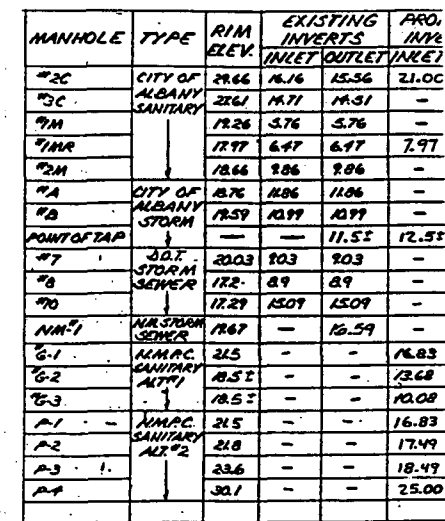
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BUILDING NO. 2-2	0.12
BUILDING NO. 2-3	0.15
BUILDING NO. 2-4	0.11
BUILDING NO. 3	0.11
BUILDING NO. 4	0.12
NO. 5 (DEVELOPED)	0.04
NO. 6	0.26
NO. 7	0.25
TRANSP. FACILITY	3.54
STORAGE	0.01
PARKING (VISITORS/SUPERVISORY)	3.20
" (EMPLOYEES)	2.81
" (OPERATING)	1.08
GRASS PLOT & SIDEWALK	0.00+
GAS PUMPS	0.02
PLATFORMS	0.02
SUBSTATION	0.11
BOILER ROOM	0.04
CONCRETE RAMPS	0.15
OTHER	1.50
TOTAL AREA	25.00±

PARKING SPACES @ 10-2-79	
LOT	SPACES
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OPERATING DEPT. PARKING (TRUCK AVENUE) - 250± (ESTIMATED)

REFERENCE DRAWINGS

SC-1-808 NORTH PARKING LOT BRIDGE
 7-6-288 PLOT PLAN
 SC-1-1210 HEATING PLANT GENERAL PLAN & YARD PIPING
 SC-1-1210 GAS HOLDER SITE GRADING PLAN
 C-1855-8 YARD LIGHTING
 C-10337-8 NEW GASOLINE TANK & PUMPS
 C-9-317 AMESITE PAVEMENT PLAN & SECTIONS
 C-1114 STORAGE YARD POLE SHEDS
 C-10402-8 CHAIN LINK FENCE ELECTRICAL GATE OPERATOR
 C-11258-8 PAVING AREA OF YARD
 C-1

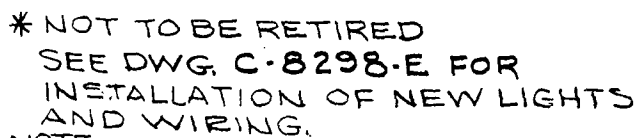


NOTES:

- 1) ALL U.S. FACILITIES ON THIS DRAWING ARE SHOWN AS BEING IN APPROX LOCATIONS.
- 2) FOR DETAILS OF NEW ELECTRIC SERVICE TELEPHONE AND ALARM CIRCUITS, ETC. SEE DWG. "C-17883-E".

STR #6038

7



- Union metal post #9001.250ap except as noted.
- ⊙ Union metal post #9001-with lantern globe. 400cp.
- ⊙ Large lantern globe mounted on brick pier 600cp.
- ⊗ Deluxe bracket 300 watt lamp
- Flood lamp 500cp.
- — — — — Underground cable
- - - - - Lighting cable in power conduit
- - - - - Exposed lighting cable
- ⊕ Sangamo time switch.
- Ⓟ street lighting Controller

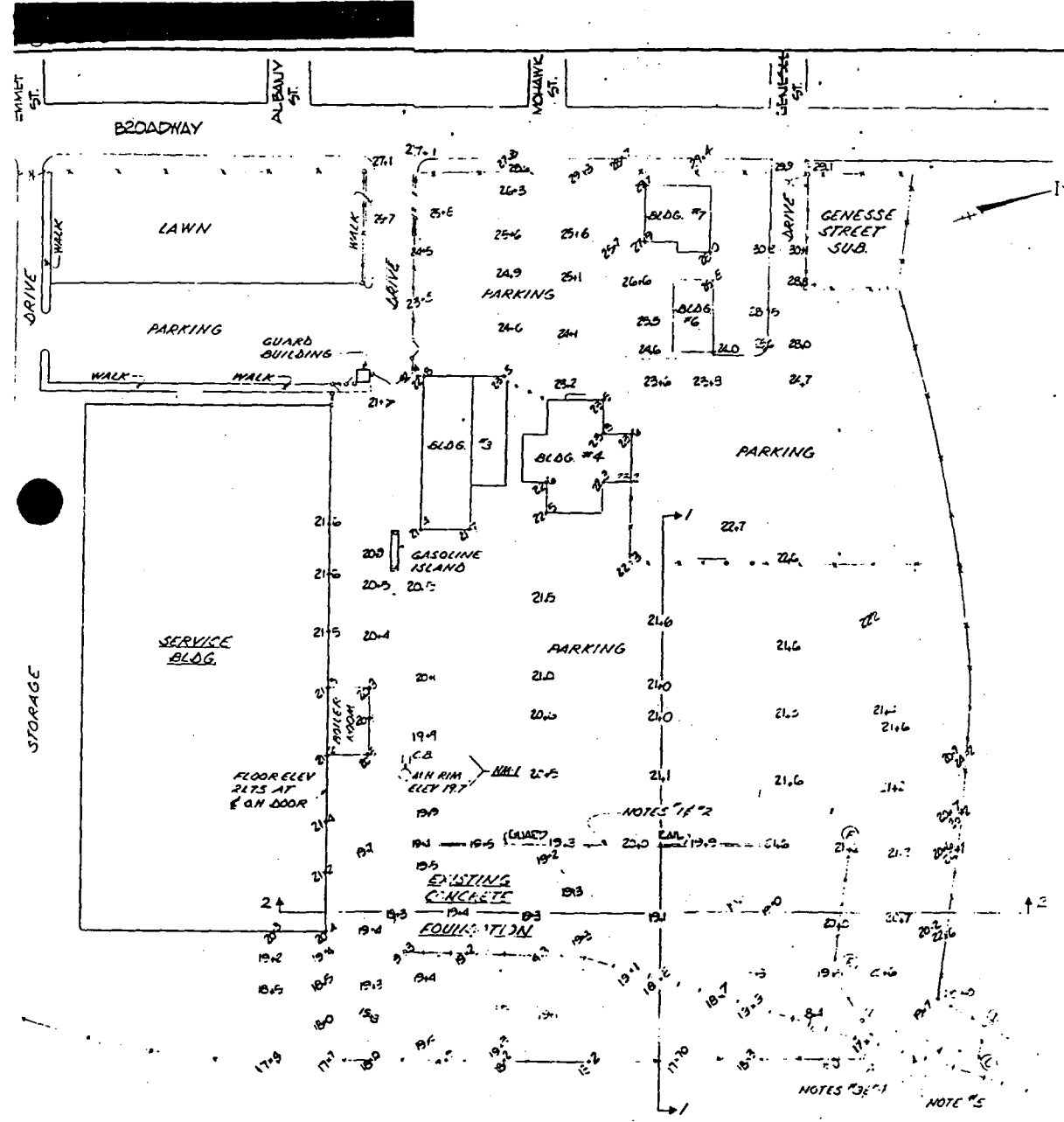
NEW YORK POWER & LIGHT CORP
NORTH ALBANY SERVICE BLDG
YARD LIGHTING

SCALE: 1"=100'

NO.	ALTERATIONS	CHECKED	INSPECTED	CORRECT	APPROVED	NO.	ALTERATIONS	CHECKED	INSPECTED	CORRECT	APPROVED	CHECKED	INSPECTED	CORRECT	APPROVED
1	Retraced	J.M.S.	L.B.W.	SA	FJC	4	REMOVED CABLE FROM VAULT 87 TO MH. 1139. ADDED CABLE & RO. AT POLE 1993					S.S	REB	EE	CAB
		10-7-48	10-8-48	10-12-48	10-12-48							10-25-35	10-25-35	10-31-35	11-1-35
2	Recorded CO 5301 (53) Replaced cable, added Cond. MH1139 to L36	J.M.S.	J.J.G.		FA	5	Remove all exist. fixtures, standard sa bases. Ret. all exist. wire & conduit except where * appears as per CO. 0803-61	GRG 8/25/61	GDT/FA 8-28-61	EHL 8-30-61	NEP 8-30-61	DRAWN TRACED EMG 10-6-48			
3	ADDED TIME SWITCH & CONTROLLER FROM PILOT WIRE SYSTEM PER L.T.O. 7558-49 (56)	MEM	JAB		FA						F-4114				
		9-14-56	9-14-56		9-17-56										

DRAWN
TRACED EMcG 10-6-48

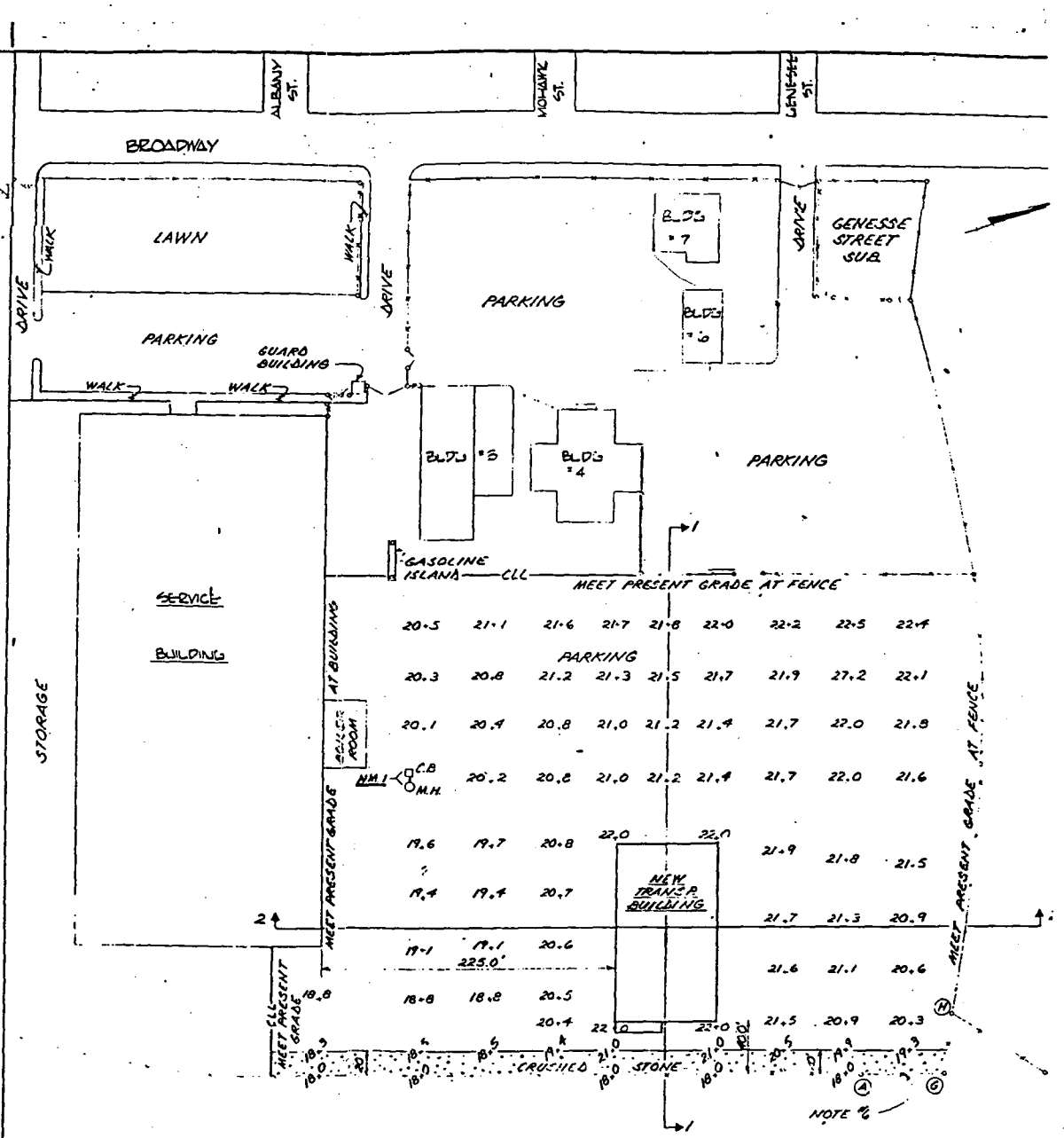
F-4114



PRESENT GRADE ELEVATIONS
SCALE: 1"=30' (ORIGINAL)

NOTES:

- 1) N.M.P.C. IS TO DISCONNECT CIRCUITS FOR CAR HEATERS AT PANCE BOARD.
- 2) CONTRACTOR IS TO REMOVE GUARD RAIL AND POSTS, ELECTRIC OUTLETS, CONDUITS, ETC. TO 10" BELOW PRESENT GRADE SEE ALSO NOTE #2 ON DND. "C-11983-C."
- 3) CONTRACTOR IS TO REMOVE R.R. SIDING FROM SOUTH END IN WARD TO JOINT NEAREST WEST END OF MAIN SPUR. RAILS ARE TO BE NEATLY STACKED NEXT TO CHAIN LINK ON R.R. R.O.W. FOR FUTURE USE BY RAILROAD. TIES, SHORES ETC. ARE TO BE TAKEN FROM SIGHT BY THE CONTRACTOR



FINISHED GRADE ELEVATIONS
SCALE: 1"=30' (ORIGINAL)

NOTES:

- 1) CONTRACTOR IS TO INSTALL ALL NEW CHAIN LINK FENCE (A) (B) (C) FENCE IS TO MATCH ADJACENT FENCE FOR HEIGHT AND STYLE. MATERIALS AND INSTALLATION METHODS ARE TO BE AS PER N.M.P.C. SPECIFICATION SECTION 0211.

END
- CHAIN LINK FENCE
- RAILROAD TRACK
- CONTRACT LIMIT LINE

Appendix B - Engineering Studies and Site Investigations

1. Pittsburgh Testing Laboratory Test Borings for North Albany Service Center, September, 1986.
 2. NUS Corporation, Potential Hazardous Waste Site, Preliminary Assessment for USEPA - 3/17/87
 3. Empire Soils Investigations, Inc., Bldg. 4 - North Albany Sta. 7/20/92
 4. Robert J. Carlin and Associates, Report on Subsurface Soil and Foundation Investigation, 28 December, 1992.
-

Pittsburgh
Testing
Laboratory



P.O. LS11512ZJB

BUF-702

TEST BORINGS FOR

North Albany Service Center

Albany, New York

Niagara Mohawk Power Corp.

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYLocation of Boring: Martin Albany Service Center, Albany, NYLocation of Boring: As Noted on Print

Layed Out By Others

Water Level -5.0'Time Completion of CoringDate 7-30-86Boring No. 1 Date 9-19-86 Sheet 1 of 2Type of Boring HS Auger Rig B40L IICasing used Yes Size 4"OD Drilling mud used -Boring begun 7-30-86 Boring completed 7-30-86Ground Elevation Grade referred to -Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
PENETRATION TESTS									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
							0		-0.3' Asphalt
							1		
							2		
	1	1.0		2	1	1	3		Mixed Fill Cinder Ash
		2.5	2	6	6	6	4		
	2	2.5		2	2	1	5		
		4.0	3	6	6	6	6		
							7		
	3	4.0		1	1	1	8		Slag, Bits of
		5.5	2	6	6	6	9		
		5.5		1	1	1	10		
		7.0	2	6	6	6	11		-7.8' Brick Stone
							12		
							13		Loose Black Fine to Medium
							14		Silty Sand, Traces of Fine Gravel
							15		(Wet)
	5	9.5		3	4	10	16		-10.5' (Wet)
		11.0	14	6	6	6	17		Medium Brown Fine to Coarse
							18		Silt Sand, Some Gravel
							19		Little Black Shale Fragments
							20		-13.5' (Wet)
							21		
							22		
							23		
	6	14.5		10	20	23	24		Dense Black Coarse Sand
		16.0	43	6	6	6	25		
							26		
							27		with Grey Silty Clay Seams
							28		
							29		-19.0' (Wet)
							30		
							31		Very Dense Black
							32		
							33		
							34		
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Engineer

Job No. BUF-702

Boring No. 1 Date 9-19-85 Sheet 2 of 2

Type of Boring _____ Rig _____

Casing used _____ Size _____ Drilling mud used _____

Boring begun _____ Boring completed _____

Ground Elevation _____ referred to _____

Field Party: _____

Case:

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
		19.5		18	22	35	20		Fine to Coarse Sand with
7		21.0	57	6	6	6	21		Grey Clay Black Shale
									-21.4' Seams and Layers
							22		Refusal with HS Augers
									First Run of Rock
							23		Black Shale 21.4 to 26.4
									No Voids
							24		Small Loss of Drilling Water
									Shale is Thinly Semibedded
							25		with Vertical Seams
									Recovery 92%
							26		-26.4'
							27		Rock Coreing Terminated
							28		
							29		
							30		
							31		
							32		
							33		
							34		
							35		
							36		
							37		
							38		
							39		
							40		
							1		

Engineer _____

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NY
North Albany Service Center, Albany, NYLocation of Boring: As Noted on Print
Layed Out By Others

Water Level	-5.8'
Time	Completion of Coring
Date	7-29-86

Boring No. 2 Date 9-19-86 Sheet 1 of 2Type of Boring HS Auger Rig B40L IICasing used Yes Size 4"OD Drilling mud used ---Boring begun 7-29-86 Boring completed 7-29-86Ground Elevation Grade referred to --- Date ---Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									PENETRATION TESTS
							0	-0.3'	Asphalt
							1		
							2		Mixed Fill
	1	1.0		2	4	3			
		2.5	7	6	6	6	3		
		2.5		2	2	1			
	2	4.0	3	6	6	6	4		Pieces of Coal, Sand
							5		Stone, Wood
		4.0		2	3	3		-5.6'	(Dry)
	3	5.5	6	6	6	6	6		Loose Grey Clayey Silt
		5.5		1	2	3			Little Fine Gravel
	4	7.0	5	6	6	6	7		Black Shale Fragments
							8		
							9	-8.7'	(Moist)
							10		Medium Grey & Brown
		9.5		3	6	8			Clayey Silt, Little Broken
	5	11.0	14	6	6	6	11		Gravel, Black Shale Fragments
							12		
							13		(Moist)
							14	-13.5'	
							15		Medium Brown Clayey Silt
		14.5		3	4	7			Little Gravel, Black
	6	16.0	11	6	6	6	16		Shale Fragments
							17		(Moist to Wet)
							18	-17.6'	
		18.6		55	50				Very Hard Brown Clay
		18.8		0.2	00			-18.8'	and Black Shale Seams
	7						19		1st Run of Rock
							0		Soft to Medium Hard Black Shale
							1		

Engineer _____

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYLocation North Albany Service Center, Albany, NY

Location of Boring:

Water Level

Time

Date

Boring No. 2 Date 9-19-86 Sheet 2 of 2

Type of Boring _____ Rig _____

Casing used _____ Size _____ Drilling mud used _____

Boring begun _____ Boring completed _____

Ground Elevation _____ referred to _____

Field Party: _____ Datum _____

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
							20		Started Coring at -18.8' - 23.8'
							21		Rock (Black Shale)
							22		No Voids
							23		Small Loss of Drill Water
							24		Little Soft Rock Seams
							25		Recovery 50%
							26		-23.8'
							27		2nd Run of Rock
							28		23.8 to 28.8
							29		Cored 5'
							30		Black Shale
							31		No Voids
							32		Small Loss of Drill Water
							33		Recovery 55%
							34		-28.8'
							35		Rock Coring Terminated
							36		
							37		
							38		
							39		
							40		
							1		

Engineer _____

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NY
Project North Albany Service Center, Albany, NYLocation of Boring: As Noted on Print
Layed Out By Others

Water Level	1st Water Noted -4.3'
Time	-7.1' Completion of Coring
Date	8-1-86

 Boring No. 3 Date 9-19-86 Sheet 1 of 2
 Type of Boring HS Augers Rig B40L II
 Casing used Yes Size 4"OD Drilling mud used -
 Boring begun 7-31-86 Boring completed 8-1-86
 Ground Elevation Grade referred to -
Field Party: Doak, Misener & Blackwell

Datum:

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
PENETRATION TESTS									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
							0	-0.3'	Asphalt
							1		
							2		Mixed Fill
	1	1.0		2	3	3			Sand, Silt
		2.5	6	6	6	6			Bits of Cinders
		2.5		1	1	2			Coal, Slag
	2	4.0	3	6	6	6			
							4	-4.3'	
							5		
	3	4.0		3	2	1			
		5.5	3	6	6	6			Some Black
		5.5		1	1	1			
	4	7.0	2	6	6	6			Sludge
							8		
								-8.5'	(Wet)
							9		
									Soft Grey & Brown Silty Clay
							10		Little Fine Gravel
	5	9.5		1	3	6			-10.7'
		11.0	9	6	6	6			(Moist)
							11		Medium Brown Clayey Silt
							12		Little Gravel, Traces of
								-12.6'	Black Shale Fragments
							13		(Damp to Moist)
							14		
							15		Dense Brown Clayey Silt
	6	14.5		18	20	22			
		16.0	42	6	6	6			
							16		
							17		with Black Shale Seams
							18		
								-18.8'	(Dry)
							19		Refusal at -18.8 with
									HS Augers
							0		1st Run of Rock 18.8 to 23.8
							1		

Engineer

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYFt. North Albany Service Center, Albany, NY

Location of Boring:

Water Level

Time

Date

Boring No. 3 Date 9-19-86 Sheet 2 of 2

Type of Boring _____ Rig _____

Casing used _____ Size _____ Drilling mud used _____

Boring begun _____ Boring completed _____

Ground Elevation _____ referred to _____

Field Party: _____

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
							20		
							21		Cored 5' of Rock
							22		(Black Shale)
							23		No Voids
							24		Small Loss of Drill Water
							25		Recovery 94%
							26		
							27		
							28		
							29		
							30		
							31		
							32		
							33		
							34		
							35		
							36		
							37		
							38		
							39		
							40		
							1		

Engineer _____

LOG OF BORING

Job No. BUF-702

Client Niagara Mohawk Power Corp., Albany, NY
 Location North Albany Service Center, Albany, NY

Location of Boring: As Noted on PrintLayed Out By Others

Water Level 1st Water Noted -4.6'
 Time -4.2' Completion of Boring
 Date -5.5' Completion of Coring 7-31-86

Boring No. 4 Date 9-19-86 Sheet 1 of 2Type of Boring HS Auger Rig B40L IICasing used Yes Size 4"OD Drilling mud used -Boring begun 7-25-86 Boring completed 7-31-86Ground Elevation Grade referred to DatumField Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									PENETRATION TESTS
							0		<u>-0.3'</u> <u>Asphalt</u>
							1		
	1	1.0		4	4	4			
		2.5	8	6	6	6	2		<u>Mixed Fill</u>
		2.5		2	2	2			
	2	4.0	4	6	6	6	3		<u>Crushed Stone</u>
							4		<u>Damp</u> <u>Slag, Cinders</u>
							5		<u>Bits of Coal, Silt, Bricks</u>
		4.0		1	2	2			
	3	5.5	4	6	6	6	6		<u>Moist to Wet</u> <u>(Dry)</u>
							7		<u>Small Amount of Black Sludge</u>
							8		<u>-6.5'</u> <u>in this Sample</u>
		5.5		1	3	16			
	4	7.0	19	6	6	6	9		<u>Medium Grey & Brown Clayey Silt</u>
							10		<u>Some Gravel Broken Rock</u>
							11		<u>(Wet)</u>
							12		<u>-8.7'</u>
							13		<u>Medium to Stiff Brown Silty</u>
		9.5		2	4	4			
	5	11.0	8	6	6	6	14		<u>Clay, Little Grey Clay Seams</u>
							15		<u>Traces of Gravel</u>
							16		<u>Black Shale Fragments</u>
							17		<u>-13.4'</u> <u>(Damp)</u>
							18		<u>Hard Grey & Brown Clay with</u>
		14.5		24	39	51			
	6	16.0	90	6	6	6	19		<u>Soft Black Shale Seams</u>
							20		<u>and Fragments</u>
							21		<u>(Dry)</u>
							22		<u>-17.4'</u>
							23		<u>Refusal at -17.4</u>
							24		<u>Rock Core 17.4 to 22.4</u>
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Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
							20	[Graph Area]	Cored 5' of Rock (Black Shale)
							21		Small Loss of Drill Water
							22		Thinley Bedded Semi-Vertical
							22		Bedding - Recovery 95%
							23		Rock Coring Terminated
							24		
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							40		
							1		

Engineer _____

Job No. BUF-702

Boring No. 5 Date 9-19-86 Sheet 1 of 1

Type of Boring HS Augers Rig B40L II

Casing used _____ Size _____ Drilling mud used _____

Boring begun 7-25-86 Boring completed 7-30-86

Ground Elevation Grade referred to

Field Party: Doak, Misener & Blackwell

Water Level	-9.5'
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Time	Completion of Boring
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Date	7-30-86
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Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									PENETRATION TESTS
							0		-0.3' Asphalt
							1		Mixed Fill Ash Cinders
							2		
	1	1.0		2	2	4			
		2.5	6	2	2	6			
		2.5		1	1	2			Slag, Foundry Sand
	2	4.0	3	2	2	6			
		4.0		2	50				(Damp)
	3	4.5		2	00				-4.5'
							5		Suppected Concrete Auger with Solid Augers
							6		-6.0'
							7		
	4	6.0		2	5	7			Mixed Fill, Black Sand
		7.5	12	2	5	6			Traces of Cinder
							8		
							9		-9.1' (Dry)
							10		Loose Brown & Black
		9.5		2	3	5			Fine to Coarse Silty Sand
	5	11.0	8	2	3	6			Traces of Fine Gravel
							11		
							12		(Wet) Possible Fill
							13		-12.5'
							14		Brown & Black Fine Silty Sand
		13.5		5	11	12			Some Gravel
	6	15.0	23	5	6	6			15.0' (Wet)
							15		Boring Terminated
							16		
							17		
							18		
							19		
							20		
							1		

LOG OF BORING

Job No. BUF-702

Client Niagara Mohawk Power Corp., Albany, NY
 Project North Albany Service Center, Albany, NY

Location of Boring: As Noted on Print

Layed Out By Others

Water Level	-3.5'
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Time	Completion of Boring
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Date	7-30-86
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Boring No. 6 Date 9-19-86 Sheet 1 of 1

Type of Boring HS Auger Rig B40L 11

Casing used _____ - Size _____ - Drilling mud used _____

Boring begun 7-25-86 Boring completed 7-30-86

Ground Elevation Grade referred to

_____ Datum: _____

Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recover. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									PENETRATION TESTS
							0		-0.3' Asphalt
							1		
							2		
	1	1.0		2	1	1			Foundry Sand Fill
		2.5	2	6	6	6	3		
		2.5		2	4	4			(Moist to Wet)
	2	4.0	8	6	6	6	4		-4.0'
							5		Suspected Concrete Foundation
							6		Refusal with Sampling Spoon
							7		Augered thru with Solid Augers
							8		-6.0'
							9		
	3	6.0		4	6	6			Mixed Fill, Silt
		7.5	12	6	6	6	8		Sand Gravel, Bits of
							9		Brick Cinders
							10		-8.5' (Wet)
							11		
	4	9.5		3	5	7			Medium Fine to Coarse Brown
		11.0	12	6	6	6	12		Silty Sand, Little Gravel
							13		Traces of Black Shale Fragments
							14		
							15		(Wet)
							16		-12.7'
							17		
							18		Medium Black & Grey Clayey Silt
							19		Little Gravel, Some Black
	5	13.5		10	13	15			Shale Fragments
		15.0	28	6	6	6	20		-15.0' (Wet)
							21		Boring Terminated
							22		
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LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NY
Project North Albany Service Center, Albany, NYLocation of Boring: As Noted on PrintLayed Out By OthersWater Level -8.2'Time Completion of BoringDate 7-24-86Boring No. 7 Date 9-19-86 Sheet 1 of 1Type of Boring HS Auger Rig B40L IICasing used - Size - Drilling mud used -Boring begun 7-24-86 Boring completed 7-24-86Ground Elevation Grade referred to -Field Party: Doak, Misener & Blackwell Datum: -

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYLocation of Boring: North Albany Service Center, Albany, NYLocation of Boring: As Noted on PrintLayed Out By OthersWater Level 1st Water Noted at -5.5'Time -6.2' Completion of BoringDate 7-24-86Boring No. 8 Date 9-19-86 Sheet 1 of 1Type of Boring HS Auger Rig B40L IICasing used - Size - Drilling mud used -Boring begun 7-24-86 Boring completed 7-24-86Ground Elevation Grade referred to - Datum -Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									<u>PENETRATION TESTS</u>
							0		<u>-0.3'</u> Asphalt
							1		
							2		Mixed Fill
	1	1.0		$\frac{1}{6}$	$\frac{2}{6}$	$\frac{1}{6}$	3		(Dry)
		2.5	3	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	4		
		2.5	$\frac{1}{12}$		$\frac{1}{6}$	$\frac{1}{12}$	5		Slag, Cinders
	2	4.0	12		$\frac{1}{6}$	$\frac{1}{12}$	6		Moist
		4.0		$\frac{1}{6}$	$\frac{1}{6}$		7		Moist to Wet Bits of Coal
	3	5.5	18		$\frac{1}{6}$	$\frac{1}{18}$	8		<u>-7.9'</u>
		5.5		$\frac{1}{6}$	$\frac{2}{6}$	$\frac{1}{6}$	9		Very Soft Dark Brown Silty Clay (Moist)
	4	7.0	3	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{1}{6}$	10		<u>-10.1'</u>
		7.0		$\frac{1}{6}$	$\frac{2}{6}$	$\frac{1}{6}$	11		Medium Grey and Brown Clayey Silt
	5	9.5	17	$\frac{1}{6}$	$\frac{8}{6}$	$\frac{9}{6}$	12		Some Fine Gravel, Broken Rock
		11.0		$\frac{1}{6}$	$\frac{8}{6}$	$\frac{9}{6}$	13		
				$\frac{1}{6}$	$\frac{8}{6}$	$\frac{9}{6}$	14		Traces of Shale Fragments
	6	13.5	13	$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	15		<u>-15.0'</u> (Moist to Wet)
		15.0		$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	16		Boring Terminated
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	17		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	18		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	19		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	20		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	21		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	22		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	23		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	24		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	25		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	26		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	27		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	28		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	29		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	30		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	31		
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				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	61		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	62		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	63		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	64		
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				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	66		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	67		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	68		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	69		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	70		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	71		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	72		
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				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	75		
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				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	94		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	95		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	96		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	97		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	98		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	99		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	100		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	101		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	102		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	103		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	104		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	105		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	106		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	107		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	108		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	109		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	110		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	111		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	112		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	113		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	114		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	115		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	116		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	117		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	118		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	119		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	120		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	121		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	122		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	123		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	124		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	125		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	126		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	127		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	128		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	129		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	130		
				$\frac{6}{6}$	$\frac{7}{6}$	$\frac{6}{6}$	131		

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NY
Project North Albany Service Center, Albany, NY

Location of Boring: As Noted on Print

Layed Out By Others

Water Level -4.6'Time Completion of BoringDate 7-24-86Boring No. 9 Date 9-19-86 Sheet 1 of 1Type of Boring HS Auger Rig B40L IICasing used - Size - Drilling mud used -Boring begun 7-24-86 Boring completed 7-24-86Ground Elevation Grade referred to DatumField Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
							0		-0.2' Asphalt
							1		
							2		Mixed Fill Cinders
	1	1.0		7/6	6/6	4/6	3		Slag, Bits of Brick-Coal
		2.5	10	4/6	3/6	1/6	4		(Dry)
	2	4.0	4	1/6	2/6	1/6	5		Black Sludge Gasey Smell
		5.5	3	1/6	1/6		6		(Wet)
		7.0	18	12	6		7		-6.1' Loose Grey & Brown Clayey Silt
	3	5.5	3	1/6	2/6	1/6	8		Mixed with Black Sludge (Wet)
		7.0	18	12	6		9		-8.5' Some Fill - Gravel
							10		
		9.5		2/6	2/6	2/6	11		Soft Dark Brown & Grey
	5	11.0	4	2/6	2/6	2/6	12		Silty Clay, Traces of
							13		Fine Gravel
							14		-12.9' (Damp to Moist)
							15		
		13.5		5/6	7/6	13/6	16		Medium Brown Clayey Silt
	6	15.0	20	5/6	7/6	13/6	17		-15.0' Little Gravel, Black Shale
							18		Fragments, Traces of Fine
							19		Sand Seams (Moist to Wet)
							20		Boring Terminated
							1		

Engineer

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYLocation North Albany Service Center, Albany, NYLocation of Boring: As Noted on PrintLayed Out By OthersWater Level -8.2'Time Completion of Rock CoringDate 7-31-86Boring No. 10 Date 9-19-86 Sheet 1 of 2Type of Boring HS Auger Rig B40L IICasing used Yes Size 4"OD Drilling mud used -Boring begun 7-24-86 Boring completed 7-31-86Ground Elevation Grade referred to DatumField Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									PENETRATION TESTS
							0		-0.4' Asphalt
							1		
							2		Mixed Fill
	1	1.0		4	2	4			
		2.5	6	6	6	6	3		Slag, Cinder Ash
		2.5		3	2	1			
	2	4.0	3	6	6	6	4		Bits of Coal
									-4.9' (Dry)
		4.0		1	1	2	5		Loose Brown Clayey Silt
	3	5.5	3	6	6	6	6		-6.1' Little Fine Sand Traces of
		5.5		3	5	11			Gravel Shale Fragments
	4	7.0	16	6	6	6	7		(Damp)
									-7.5' Medium Brown Silt, Little
							8		Gravel, Traces of Clay,
							9		Black Shale Fragments
									(Damp)
							10		Medium Brown Clayey Silt
		9.5		3	6	9			Little Gravel
	5	11.0	15	6	6	6	11		Shale Fragments
							12		
									-12.9' (Damp to Moist)
							13		
							14		Medium to Dense Brown Clayey Silt
							15		Traces of Gravel
		14.5		16	15	14			
	6	16.0	29	6	6	6	16		Some Black Shale Fragments
							17		
							18		(Damp)
									-19.0'
	No Sample Recovery			50			19		Refusal at 19.0
				.05			20		with Sampling Spoon
							21		

Engineer _____

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYProject North Albany Service Center, Albany, NY

Location of Boring:

Water Level

Time

Date

Boring No. 10 Date 9-19-86 Sheet 2 of 2

Type of Boring _____ Rig _____

Casing used _____ Size _____ Drilling mud used _____

Boring begun _____ Boring completed _____

Ground Elevation _____ referred to _____ Datum

Field Party: _____

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
							20		Cored 5' of Rock (Black Shale)
							21		No Voids - Thinly Bedded Semi-
							22		Vertical Bedding
							23		Very Small Loss of Drill Water
							24		Recovery 95%
							24 0'		Rock Coring Terminated
							25		
							26		
							27		
							28		
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Engineer _____

[illegible]

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYProject North Albany Service Center, Albany, NY

Location of Boring:

Water Level

Time

Date

Boring No. 11 Date 9-19-86 Sheet 2 of 2

Type of Boring _____ Rig _____

Casing used _____ Size _____ Drilling mud used _____

Boring begun _____ Boring completed _____

Ground Elevation _____ referred to _____ Datum _____

Field Party: _____

Depth of Casing, ft.	Sample No.	Sample depth from to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
							20		
	7	19.5 21.0	14	6 6	6 6	8 8	21		Some Fine Gravel
									(Wet)
							22		-21.8'
							23		Grey Silt Sand
							24		Some Gravel
	8	23.5 25.0	22	10 6	10 6	12 6	25		-25.0'
							26		Boring Terminated
							27		
							28		
							29		
							30		
							31		
							32		
							33		
							34		
							35		
							36		
							37		
							38		
							39		
							40		
							1		

Engineer _____

LOG OF BORING

Job No. BUE-702

Client Niagara Mohawk Power Corp., Albany, NY
North Albany Service Center, Albany, NY

Location of Boring: As Noted on Print
Layed Out By Others

Water Level -6.5'
 Time Completion of Coring
 Date 7-29-86

Boring No. 12 Date 9-19-86 Sheet 1 of 2
 Type of Boring HS Auger Rig B40L II
 Casing used Yes Size 4"OD Drilling mud used -
 Boring begun 7-28-86 Boring completed 7-29-86
 Ground Elevation Grade referred to -

Field Party: Doak, Misener & Blackwell Datur

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
									PENETRATION TESTS
							0		-0.4' Asphalt
							1		
							2		Mixed Fill Slag, Cinders
	1	1.0		10	10	7	3		
		2.5	17	6	6	6	4		
		2.5		2	2	2	5		
	2	4.0	4	6	6	6	6		Bits of Brick Coal
							7		
		4.0		2	2	1	8		
	3	5.5	3	6	6	6	9		
		5.5		2	4	5	10		(Damp to Moist)
	4	7.0	9	6	6	6	11		-6.6'
							12		
							13		
							14		Medium to Stiff
							15		Brown & Grey Silty Clay
							16		
		9.5		2	4	6	17		Little Broken Gravel
	5	11.0	10	6	6	6	18		Black Shale Fragments
							19		
							20		-13.1' (Moist)
							21		
							22		
							23		Loose to Medium Grey
		14.5		4	6	4	24		Clayey Silt, Some Gravel
	6	16.0	10	6	6	6	25		
							26		Little Black Shale Fragments
							27		
							28		(Moist)
							29		-18.6'
							30		Refusal at 18.6
							31		with HS Augers
							32		
							33		
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Engineer _____

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NYProject North Albany Service Center, Albany, NY

Location of Boring:

Water Level

Time

Date

Boring No. 12 Date 9-19-86 Sheet 2 of 2

Type of Boring _____ Rig _____

Casing used _____ Size _____ Drilling mud used _____

Boring begun _____ Boring completed _____

Ground Elevation _____ referred to _____ Datum _____

Field Party: _____

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
							20		Cored 5' of Rock (Black Shale)
							21		No Voids
							22		Small Loss of Drill Water
							23		Shale in Semi-Vertical Bedding
							23.6'		Recovery 92%
							24		Rock Coring Terminated
							25		
							26		
							27		
							28		
							29		
							30		
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							39		
							40		
							1		

Engineer _____

PITTSBURGH TESTING LABORATORY PO LS11512ZJB

LOG OF BORING

Job No. BUF-702

From Niagara Mohawk Power Corp., Albany, NY

ct North Albany Service Center, Albany, NY

Location of Boring: As Noted on Print

Water Level	1st Water Noted at -9.5'
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Time	-8.2' Completion of Boring
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Date	7-25-86
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Boring No. 13 Date 9-19-86 Sheet 1 of 1

Type of Boring HS Auger Rig B40L LI

Casing used - Size - Drilling mud used -

Boring begun 7-25-86 Boring completed 7-25-86

Ground Elevation Grade referred to

Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from-to (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
PENETRATION TESTS									
							0		-0.3' Asphalt
							1		Mixed Fill Foundry Sand Silt Gravel, Bits of Brick
							2		-2.0' (Damp)
1		1.0 2.5	14	$\frac{7}{6}$	$\frac{7}{6}$	$\frac{7}{6}$	3		Brown Fine Silty Sand Little Gravel Mixed with Bits of Cinders Bricks
2		2.5 4.0	6	$\frac{4}{6}$	$\frac{3}{6}$	$\frac{3}{6}$	4		<u>Fill</u>
							5		-5.4' (Dry to Damp)
3		4.0 5.5	7	$\frac{2}{6}$	$\frac{2}{6}$	$\frac{5}{6}$	6		Loose to Medium Brown Fine Silty Sand, Little Gravel Traces of Black Shale Fragments
4		5.5 7.0	11	$\frac{3}{6}$	$\frac{5}{6}$	$\frac{6}{6}$	7		
							8		-8.4' (Dry)
							9		
							10		Medium Grey and Black Fine Silty Sand Some Fine Gravel
5		9.0 10.5	12	$\frac{5}{6}$	$\frac{7}{6}$	$\frac{5}{6}$	11		
							12		-12.7' (Wet) (Gasey Smell)
							13		Very Dense Grey Clayey Silt Traces of Fine Gravel
6		13.5 15.0	54	$\frac{18}{6}$	$\frac{24}{6}$	$\frac{30}{6}$	14		-15.0' (Dry to Damp)
							15		Boring Terminated
							16		
							17		
							18		
							19		
							20		
							1		

Engineer

LOG OF BORING

Job No. BUF-702Client Niagara Mohawk Power Corp., Albany, NY
Project North Albany Service Center, Albany, NY
Location of Boring: As Noted on Print
Layed Out By OthersWater Level 1st Water Noted at -4.5'
Time -4.3' Completion of Boring
Date 7-24-86Boring No. 14 Date 9-19-86 Sheet 1 of 1
Type of Boring HS Auger Rig B40L II
Casing used - Size - Drilling mud used -
Boring begun 7-24-86 Boring completed 7-24-86
Ground Elevation Grade referred to -Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
							0		Asphalt
							1		Fill
							2		
	1	1.0		6	8	7	3		Coal
		2.5	15	6	6	6	4		(Moist)
	2	2.5		3	3	4	5		Slag
		4.0	7	6	6	6	6		(Wet)
							7		Cinder
	3	4.0		2	2	1	8		Grey Clayey Silt
		5.5	3	6	6	6	9		Some Fine Gravel
	4	5.5		1	2	4	10		(Wet)
		7.0	6	6	6	6	11		Grey and Brown Clayey Silt
							12		Little Grey Clay Seams
	5	9.5		1	3	5	13		Fine Gravel
		11.0	8	6	6	6	14		(Wet)
							15		Hard Brown Clay with Black Shale Fragments
	6	13.5		43	120		16		(Dry)
		14.5		6	6"		17		Boring Terminated
							18		
							19		
							20		
							21		

Engineer _____

LOG OF BORING

Job No. BUF-702

Client Niagara Mohawk Power Corp., Albany, NY
Project North Albany Service Center, Albany, NY

Location of Boring: As Noted on Print

Layed Out By Others

Water Level	-5.5'
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Time	Completion of Boring
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Date	7-30-86
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Boring No. 15 Date 9-19-86 Sheet 1 of 1

Type of Boring HS Auger Rig B40L II

Casing used - Size - Drilling mud used -

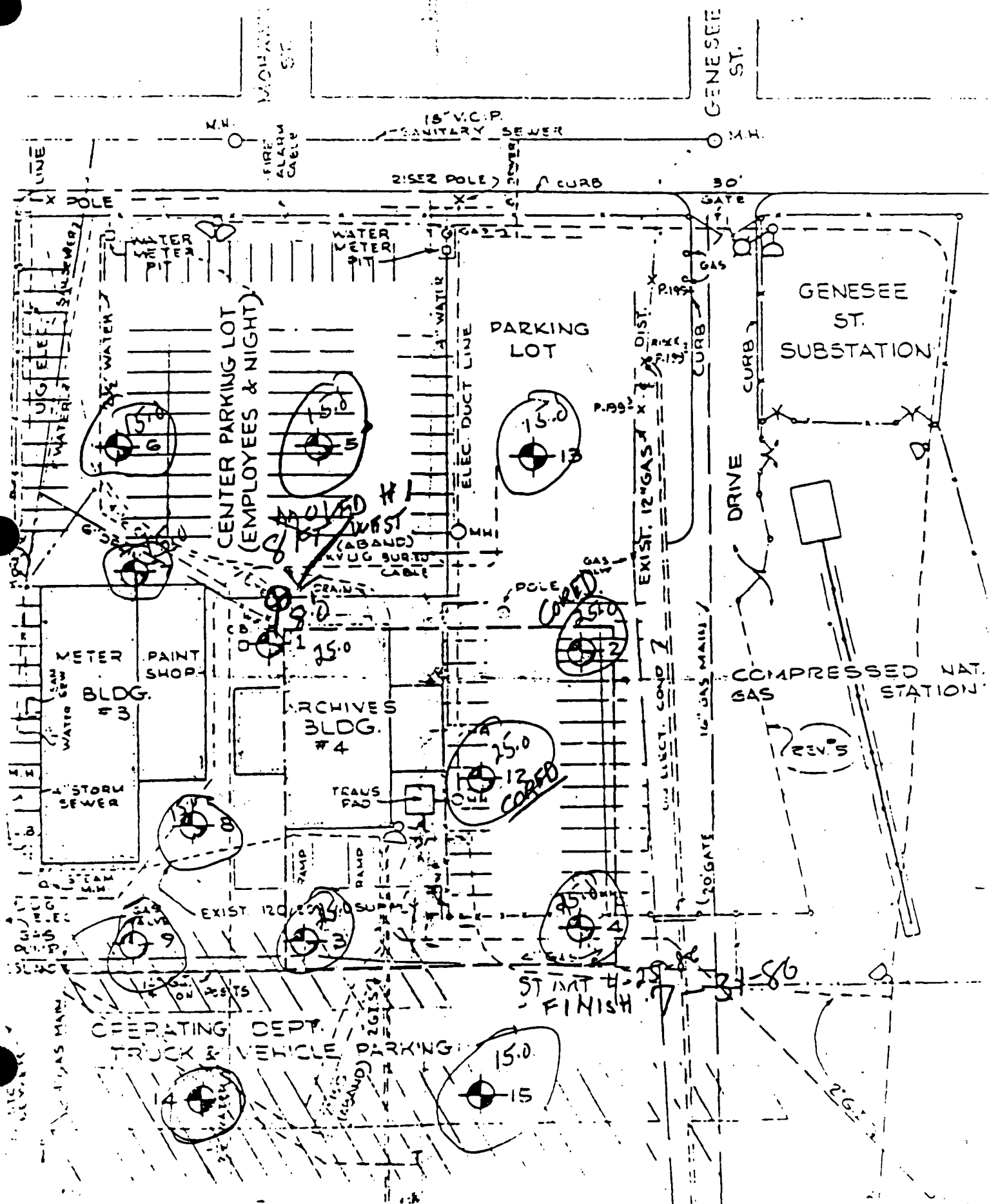
Boring begun 7-30-86 Boring completed 7-30-86

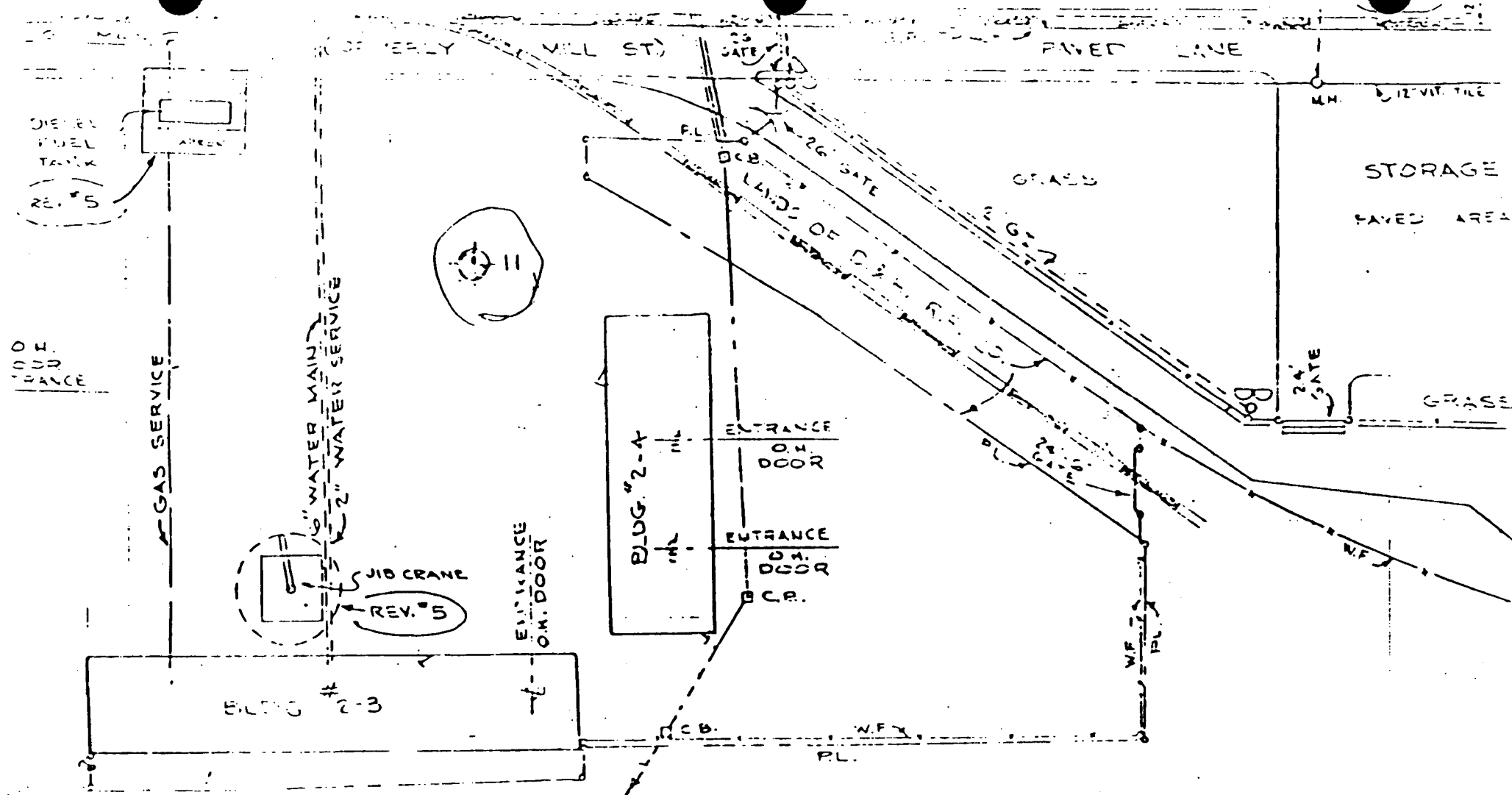
Ground Elevation Grade referred to

_____ Datum

Field Party: Doak, Misener & Blackwell

Depth of Casing, ft.	Sample No.	Sample depth from top (in feet)	Blows/foot on Sampler	ID of Sampler (inches)	Tot. length of recov. sample	Length of Lab. sample	DEPTH IN FEET	SOIL GRAPH	DESCRIPTION
									Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths wash water lost, observed fluctuations in water level, notes on drilling ease, etc.
		PENETRATION TESTS					0		Asphalt
							1		
							2		Mixed Fill
	1	1.0		8	6	5	3		
		2.5	11	6	6	6	4		
		2.5		4	4	4	5		
	2	4.0	8	6	6	6	6		Bits of Coal
							7		
		4.0		3	2	2	8		
	3	5.5	4	6	6	6	9		Slag, Cinders, Brick
		5.5		2	1	2	10		(Wet)
	4	7.0	3	6	6	6	11		
							12		
							13		Some Black Sludge
							14		
							15		in Sample No. 4
		9.5		3	3	12	16		
	5	11.0	15	6	6	6	17		
							18		
							19		Medium Grey Clayey Silt
							20		
							21		Some Fine Gravel
							22		
							23		(Wet)
							24		
		13.5		8	16	23	25		
	6	15.0	39	6	6	6	26		Dense Brown Clayey Silt
							27		Little Fine Sand Gravel
							28		Black Shale Fragments (Damp)
							29		Boring Terminated
							30		
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REPORT

Laboratory No. 876486

ORDER NO. BUF-702

DATE September 2, 1986

Client: Niagara Mohawk Power Company

Sample Description: Five (5) Soil Samples
(B-4 S-4) (B-9 S-Xtra Sample)
(B-15 S-3) (B-6 S-3) (B-5 S-4)

Submitted By: PTL-II - Albany

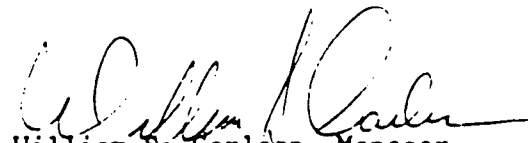
Submitted To: PTL-II - Chemical Dept.

Method of Test: 40 CFR Part 261
Direct Current Plasma SpectroscopyReported To: PTL-II - Buffalo
PTL-II - Albany

Determination	B-9 S-Xtra	B-4 S-4	B-5 S-4
Ignitability	Negative	Negative	Negative
Corrosivity, mmpy	.088	.997	1.41
Reactivity	Reactive Evolves H ₂ S	Reactive Evolves H ₂ S	Not Reactive
EP Toxicity Test, mg/l			
Arsenic	<0.01	<0.01	<0.01
Barium	0.87	0.63	0.26
Cadmium	0.08	0.01	0.01
Chromium	0.07	0.04	<0.01
Lead	0.45	0.22	0.02
Mercury	<0.01	<0.01	<0.01
Selenium	0.70	0.80	0.78
Silver	3.3	<0.01	<0.01

Determination	B-9 S-Xtra	B-4 S-4	B-5 S-4
Endrin, mg/l	None Detected	None Detected	None Detected
Lindane	None Detected	None Detected	None Detected
Methoxychlor	None Detected	None Detected	None Detected
Toxophene	None Detected	None Detected	None Detected
2-4D	None Detected	None Detected	None Detected
2,4,5 - TP Silvex	None Detected	None Detected	None Detected

Sample	PCB's
B-6 S-3	None Detected
B-15 S-3	None Detected


William S. Carlson, Manager
Chemical Department

cc: 1-PTL-II/Buffalo
1-PTL-II/Albany
cg

0006-D
02 8701-48



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

Niagara Mohawk Operations HQ
Site Name

NYD980664338
EPA Site ID Number

1125 Broadway
Aibany, New York
Address

02-8701-48
TDD Number

Date of Site Visit: Off-site Reconnaissance 2/10/87

SITE DESCRIPTION

Niagara Mohawk Operations HQ is a large active facility located in an industrial area between Broadway and Bridge Street off Interstate 90. The site is bounded to the east by the Hudson River, to the west by two-story office buildings, to the north by Interstate 90, and to the south by Bridge Street. In 1986, the NYDEC conducted a site investigation and found PCB's and Mercury stored in 20-25 drums outside the facility. No leaks or spills were observed. The NYDEC concluded no environmental problem or hazard existed.

PRIORITY FOR FURTHER ACTION: High ☐ Medium ☐ Low ☒ None ☐

RECOMMENDATIONS

A site inspection is recommended on a time available basis. The slight potential for leaks or spills as well as the close proximity of the Hudson River to the site warrant soil, groundwater and surface water sampling.

Prepared by: David G. Osinski
of NUS Corporation

Date: 3/17/87

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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980664338

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Niagara Mohawk Operations HQ 1125 Broadway
03 CITY 04 STATE 05 ZIP CODE 06 COUNTY 07 COUNTY CODE 08 CONG DIST.
Albany NY 12201 Albany 001 23
09 COORDINATES
LATITUDE LONGITUDE
4 20 4 0' 1 0" N 0 7 30 4 4' 3 0" W

10 DIRECTIONS TO SITE (Starting from nearest public road)

From Route 87 N take Exit 23 to Route 787 N. Turn left on Clinton and turn right on Broadway.

III. RESPONSIBLE PARTIES

01 OWNER (if known) 02 STREET (Business, mailing, residential)
Niagara Mohawk Operations HQ 1125 Broadway
03 CITY 04 STATE 05 ZIP CODE 06 TELEPHONE NUMBER
Albany NY 12201 (518) 471-3800
07 OPERATOR (if known and different from owner) 08 STREET (Business, mailing, residential)
09 CITY 10 STATE 11 ZIP CODE 12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: (Specify) ☐ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3001 DATE RECEIVED: 6 / 4 / 86 ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / /
☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION BY (Check all that apply)
☒ YES DATE: 06 / 04 / 86 ☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ NO ☐ E. LOCAL HEALTH OFFICIAL ☒ F. OTHER: NYDEC
CONTRACTOR NAME(S): (Specify)

02 SITE STATUS (Check one) 03 YEARS OF OPERATION

☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN ☒ UNKNOWN
BEGINNING ENDING

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

A NYDEC site investigation revealed the presence of PCB and Mercury in storage areas both inside and outside the facility.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

A potential hazard exists if material stored in drums spilled or leaked on the site.

IV. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☒ C. LOW (Inspection on time available basis) ☐ D. NONE

(No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT 02 OF (Agency/Organization) 03 TELEPHONE NUMBER
Diana Messina U.S. EPA Region 2, Edison, N.J. (201) 321-6776

04 PERSON RESPONSIBLE FOR ASSESSMENT 05 AGENCY 06 ORGANIZATION 07 TELEPHONE NUMBER 08 DATE
David G. Osinski U.S. EPA NUS FIT 11 (201) 225-6160 3 / 17 / 87

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980664338

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)		02 WASTE QUANTITY AT SITE	03 WASTE CHARACTERISTICS (Check all that apply)		
☒ A. SOLID	☐ E. SLURRY	(Measures of waste quantities must be independent)	☒ A. TOXIC	☐ E. SOLUBLE	☐ I. HIGHLY VOLATILE
☐ B. POWDER, FINES	☒ F. LIQUID		☐ B. CORROSIVE	☐ F. INFECTIOUS	☐ J. EXPLOSIVE
☐ C. SLUDGE	☐ G. GAS		☐ C. RADIOACTIVE	☐ G. FLAMMABLE	☐ K. REACTIVE
☐ D. OTHER: _____ (Specify)			☒ D. PERSISTENT	☐ H. IGNITABLE	☐ L. INCOMPATIBLE
		TONS _____ CUBIC YARDS _____ NO. OF DRUMS 25-50	☐ M. NOT APPLICABLE		

III. WASTE TYPE

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

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

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Polychlorinated Biphenyls	1336-36-3		500	ppm
MES	Mercury	7439-97-6			

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

1953 - United States Geological Survey Topographical Map, Albany, N.Y. Quad and Troy South Quad.
New York State Department of Environmental Conservation.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 0980664338

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

A potential exists for groundwater contamination since 20-25 drums are stored outside the facility. If there is a spill or leakage, the material may infiltrate into the groundwater. The groundwater is not used for drinking purposes.

01 X B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 93,363 04 NARRATIVE DESCRIPTION

A potential exists for surface water contamination since the Hudson River borders the facility on the East side. The surface water is not used for drinking purposes.

01 X C. CONTAMINATION OF AIR 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 148,214 04 NARRATIVE DESCRIPTION

A very slight potential for contamination of air exists from material that may have leaked or been spilled onsite.

01 X D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 45,789 04 NARRATIVE DESCRIPTION

A slight potential exists for fire as material is flammable.

01 X E. DIRECT CONTACT 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 13,749 04 NARRATIVE DESCRIPTION

A slight potential exists since the material stored outside the facility is not completely fenced in.

01 X F. CONTAMINATION OF SOIL 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (ACRES) 04 NARRATIVE DESCRIPTION

A potential exists for soil contamination since 20-50 drums are stored outside the facility where leakage into the ground may occur.

01 G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

No potential exists for drinking water contamination since the Alcove Reservoir, located about 12 miles south of Albany, provides the drinking water.

01 X H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

A potential for worker exposure exists since the site is still active.

01 X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 96,363 04 NARRATIVE DESCRIPTION

A potential for contamination of the Hudson River exists if material leaked or was spilled onsite. Since the Hudson River is used for irrigation purposes, the population could be exposed to the material.

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

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980664338

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

A potential exists for damage to flora if any contaminants leaked or were spilled on site.

01 ☒ K. DAMAGE TO FAUNA

04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

A potential exists for damage to fauna if any contaminants leaked or were spilled on site.

01 ☒ L. CONTAMINATION OF FOOD CHAIN

04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

A potential exists for contamination of food chain if any contaminants leaked or were spilled on site.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES

(Spills/runoff/standing liquids/leaking drums)

03 POPULATION POTENTIALLY AFFECTED: 13,749

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

04 NARRATIVE DESCRIPTION

A slight potential for unstable containment of wastes exists since the drums stored outside the facility may leak onto the ground.

01 ☒ N. DAMAGE TO OFFSITE PROPERTY

04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

A slight potential exists for damage to offsite property. If there is a spill or leak from the drums, the material may migrate to the Hudson River.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs

04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

A potential for contamination of sewers exists since there are sewers present at the site. If there is a spill or leak from the drums, the material may contaminate the sewers.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING

04 NARRATIVE DESCRIPTION

02 _ OBSERVED (DATE: _____)

☒ POTENTIAL _ ALLEGED

A potential for illegal dumping exists since the site is not completely fenced-in.

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

No other environmental problem or hazard is known to exist.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 148,214

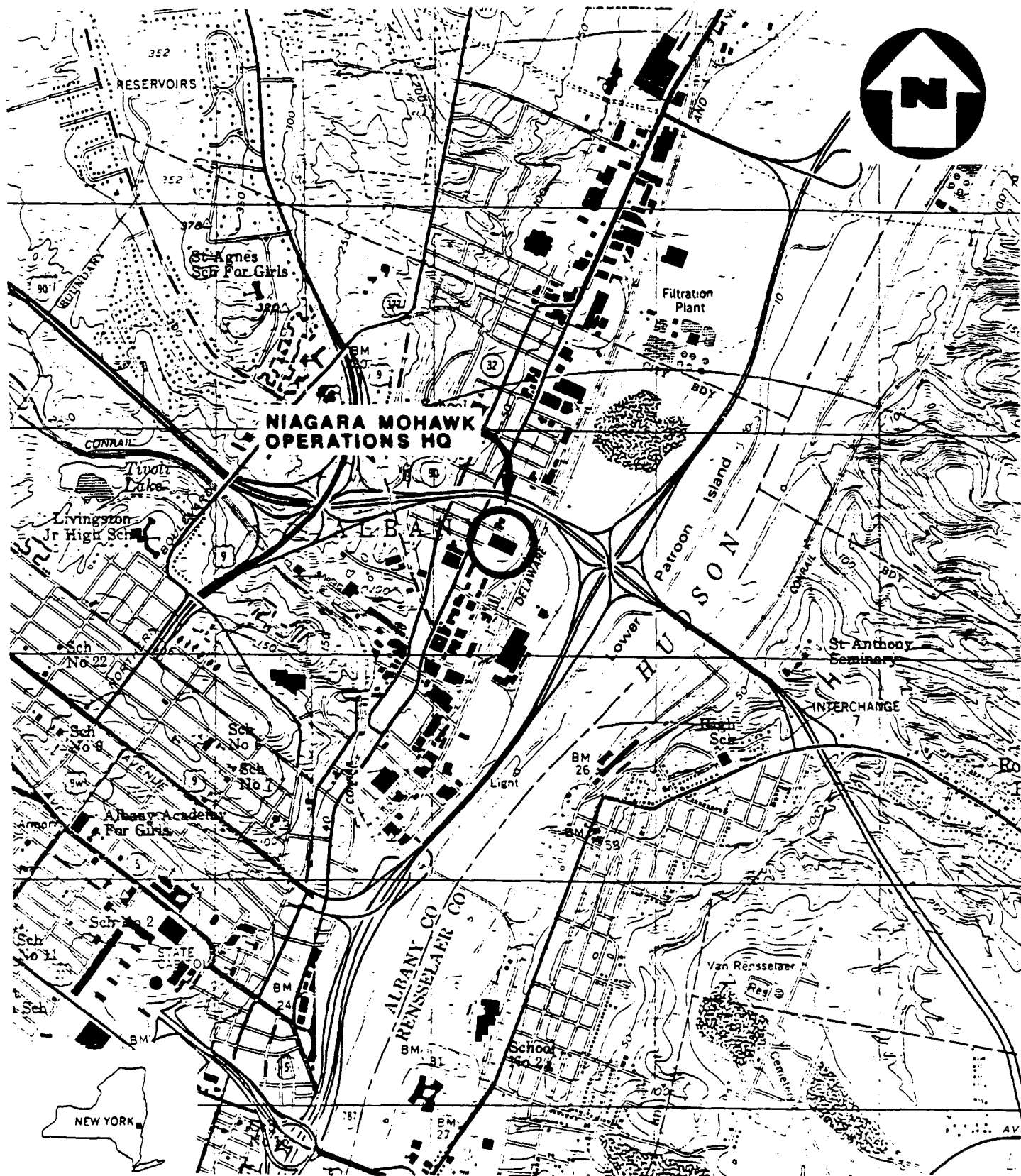
IV. COMMENTS

In 1986, the NYDEC conducted a reconnaissance and waste inspection. According to their findings, no environmental problem or hazard is known to exist.

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

2/10/87 - Offsite Reconnaissance, NUS Corporation, FIT II.
New York State Department of Environmental Conservation.
General Software Corporation. 1984 Draft Graphical Exposure Modeling System (GEMS) User's Guide.

APPENDIX A
MAPS AND PHOTOGRAPHS



(QUAD) TROY SOUTH, N.Y.

SITE LOCATION MAP

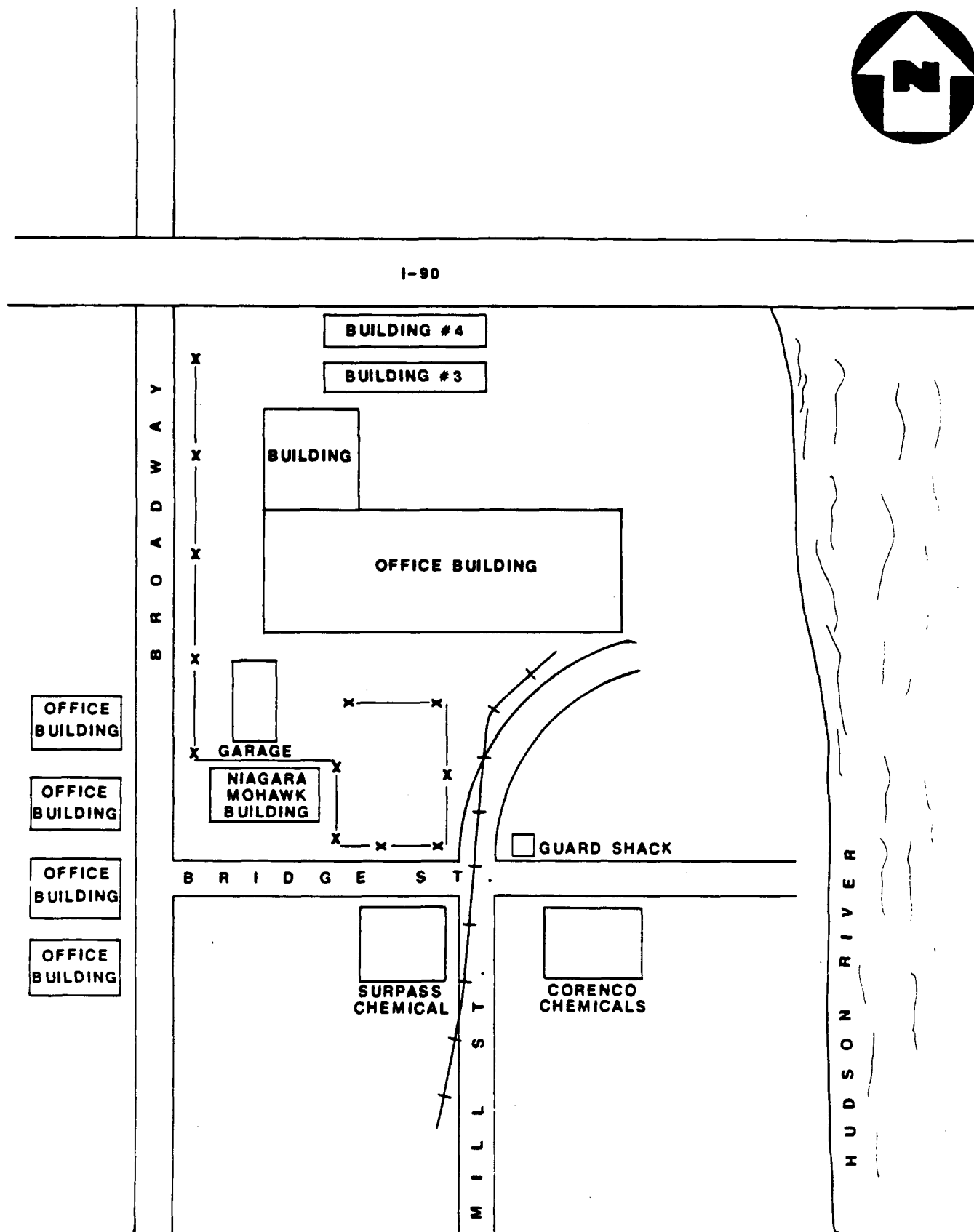
NIAGARA MOHAWK OPERATIONS HQ, ALBANY, N.Y.

SCALE: 1" = 2000'

FIGURE 1

NUS
CORPORATION

A Halliburton Company



SITE MAP
NIAGARA MOHAWK
OPERATIONS HQ, ALBANY, N.Y.
NOT TO SCALE

FIGURE 2



NIAGARA MOHAWK OPERATIONS HQ
ALBANY, NEW YORK
TDD #02-8701-48
FEBRUARY 10, 1987

PHOTOGRAPH LOG

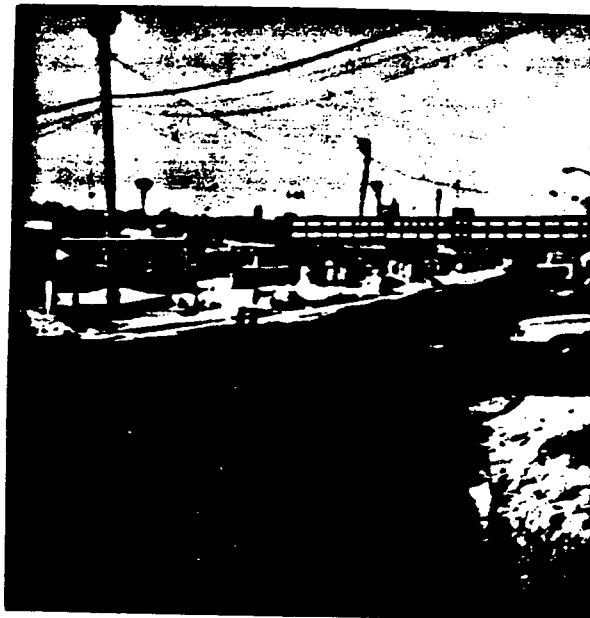
NIAGARA MOHAWK OPERATIONS HQ
ALBANY, NEW YORK
TDD #02-8701-48
FEBRUARY 10, 1987

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS TAKEN BY SCOTT KRALL

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-1	View from the west corner of the site, across Bridge Street, looking north.	1610
1P-2	View from the east corner of the site, across Mill Street, looking northwest.	1615

NIAGARA MOHAWK OPERATIONS HQ, ALBANY, NEW YORK



1P-2

February 10, 1987 1615
View from the east corner of the site, across Mill Street,
looking northwest.
Photographer: Scott Krall



NIAGARA MOHAWK OPERATIONS HQ, ALBANY, NEW YORK



1P-1

February 10, 1987

1610

View from the west corner of the site, across Bridge Street, looking north.

Photographer: Scott Krall

APPENDIX B

BACKGROUND INFORMATION

60

Data List of Dataset: HY02 Number of Records = 6

REC #	POP	HOUSE	DISTANCE	SECTOR
1	400	189	0.400000 0-10	1
2	4574	1844	0.810000 14-12	1
3	8575	4048	1.200000 12-1	1
4	32040	18458	3.200000 1-2	1
5	50574	20802	4.800000 2-3	1
6	51651	18215	6.400000 3-4	1

42° 40' 10" Lat.
73° 44' 30" Long.

Products of combustion of polyamide-6 in furnace maintained at 800 degrees centigrade (APFRAD 35,461,77)

TOXICITY DATA: 3 CODEN:
ihl-mus LC50:23 mg/m3/10M APFRAD 35,461,77

Reported in EPA TSCA Inventory, 1980.
THR: HIGH ihl

POLYAMINE D

NIOSH #: TQ 0525000

TOXICITY DATA: 2 CODEN:
skn-rbt 500 mg open MLD UCDS** 4/1/64
eye-rbt 50 mg SEV UCDS** 4/1/64
ori-rat LD50:2590 mg/kg UCDS** 4/1/64
skn-rbt LD50:880 mg/kg UCDS** 4/1/64

THR: MOD orl, skn. Skn and eye irr.
Disaster Hazard: When heated to decomp it emits tox fumes of NO₂.

POLYAMINE T

NIOSH #: TQ 0600000

TOXICITY DATA: 3-1 CODEN:
skn-rbt 500 mg open MLD UCDS** 7/16/65
ori-rat LD50:7460 mg/kg UCDS** 7/16/65
skn-rbt LD50:20 mg/kg UCDS** 7/16/65

THR: HIGH skn; LOW orl. A skn irr.
Disaster Hazard: When heated to decomp it emits tox fumes of NO₂.

BETA-POLY(1,3-BUTADIENE)STYRENE, COPOLYMER

CAS RN: 9003558 NIOSH #: WL 6000000

SYN: KOPOLYMER BUTADIEN STYRENOVY (CZECH)

TOXICITY DATA: 2 CODEN:
eye-rbt 500 mg/24H MOD 28ZPAK -257,72

Reported in EPA TSCA Inventory, 1980.
THR: An eye irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

POLYCHLORINATED BIPHENYLS

CAS RN: 1336363 NIOSH #: TQ 1350000

Bp: 340°-375°, flash p: 383°F (COC), d: 1.44 @ 30°. For toxicity information, see individual mixtures below. A series of technical mixtures consisting of many isomers and compounds that vary from mobile oily liquids to white crystalline solids and hard noncrystalline resins. Technical products vary in composition, in the degree of chlorination and possibly according to batch (IARC** 7,262,74).

SYNS:

AROCLOR
CHLOPHEN
CHLORINATED BIPHENYL
CHLORINATED DIPHENYL
CHLORINATED DIPHENYLENE

CHLOREXTOL
CHLORO BIPHENYL
CHLORO-1,1-BIPHENYL
CLOPHEN
KANECHLOR S

POLYCHLORINATED BIPHENYL (AROCLOR 1221) 2249

NOFLAMOL
PCBS
PHENOCHLOR
POLYCHLORINATED BIPHENYL
POLYCHLORORIPHENYL
PYRALENE
PYRANOL
SANTOTHERM
THERMINOL PR-1

TOXICITY DATA:

Carcinogenic Determination: Human Suspected IARC** 18,43,78. *Toxicology Review*: EVHPAZ 1,105,72; JOCMA7 18,109,76; FEPRA7 34,1675,75; ARVPAX 14,139,74; ARPAAQ 94,125,72; CHRYAQ 49(4), 14,76; STEVA8 2(4),305,74; BISNAS 20,958,70; 27ZTAP 3,34,69. Occupational Exposure to Polychlorinated Biphenyls recm std: Air: TWA 1.0 ug/m3 NTIS**. "NIOSH Manual of Analytical Methods" VOL 1 244,253, VOL 2 S121, VOL 4 S120*. NIOSH Current Intelligence Bulletin 7, 1975. Reported in EPA TSCA Inventory, 1980. EPA TSCA 8E No: 07780209. Followup Reply Received as of April, 1979.

THR: A susp hmn CARC. HIGH-MOD acute orl, ihl, skn. Also causes a chloracne. Like the chlorinated naphthalenes, the chlorinated diphenyls have two distinct actions on the body, namely, a skn effect and a toxic action on the liver. The lesion produced in the liver is an acute yellow atrophy. This hepato toxic action of the chlorinated diphenyls appears to be increased if there is exposure to carbon tetrachloride at the same time. The higher the chlorine content of the diphenyl compound, the more toxic is it liable to be. Oxides of chlorinated diphenyls are more tox than the unoxidized materials. The skin lesion is known as chloracne, and consists of small pimples and dark pigmentation of the exposed areas, initially. Later, comedones and pustules develop. In persons who have suffered systematic intoxication, the usual signs and symptoms are nausea, vomiting, loss of weight, jaundice, edema and abdominal pain. Where the liver damage has been severe the patient may pass into coma and die.

Fire Hazard: Slight, when exposed to heat or flame.

Disaster Hazard: Dangerous; when heated to decomp, they emit highly tox fumes.

For further information see PCB's, Vol. 3, No. 4 of DPIM Report.

POLYCHLORINATED BIPHENYL (AROCLOR 1221)

CAS RN: 11104282

NIOSH #: TQ 1352000

SYNS:

AROCHLOR 1221

CHLORODIPHENYL (21% Cl)

TOXICITY DATA: 2 CODEN:
ori-rbt LD50:3980 mg/kg ARVPAX 14,139,74
skn-rbt LDLo:3169 mg/kg ARVPAX 14,139,74

Carcinogenic Determination: Human Suspected IARC** 18,43,78. *Toxicology Review*: ARVPAX 14,139,74; RREVAH 44,1,73; STEVA8 2(4),305,74; BISNAS 20,958,70. Occupational Exposure to Polychlorinated Biphenyls recm Std: Air: TWA 1.0 ug/m3 NTIS**. THR: MOD orl, skn. Susp hmn CARC. See also PCB's. Disaster Hazard: When heated to decomp it emits tox fumes of Cl⁻.

SYN: MERCURY NUCLEATE, SOLID (DOT)

TOXICITY DATA: 3

DOT: Poison B, Label: Poison FEREAC 41,57018,76.

Occupational Exposure to Inorganic Mercury recm std:
Air: TWA 0.05 mg(Hg)/m³ NTIS**.

THR: A poison. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits tox fumes of Hg.

MERCUROPHEN

CAS RN: 17140737

NIOSH #: OW 4550000

mf: C₆H₄HgNO₄·Na; mw: 377.70

Brick-red odorless powder. Sol in hot H₂O.

TOXICITY DATA: 3

CODEN:

ivn-rat LDLo: 8 mg/kg

12VXA5 8,661,68

ims-rat LDLo: 12 mg/kg

12VXA5 8,661,68

ivn-rbt LDLo: 4 mg/kg

12VXA5 8,661,68

Occupational Exposure to Inorganic Mercury recm std:

Air: TWA 0.05 mg(Hg)/m³ NTIS**.

THR: HIGH ivn, ims. See also mercury compounds. Poison.

Disaster Hazard: When heated to decomp it emits very tox fumes of NO₂ and Hg vapors.

MERCUROPHYLLINE

CAS RN: 8012348

NIOSH #: OV 8650000

SYNS:

MERCUPUBIN

MERCUZANTHIN

TOXICITY DATA: 3-2

CODEN:

ivn-hmn TDLo: 28 mg/kg/CNS

JAMAAP 117,1806,41

scu-mus LD50: 163 mg(Hg)/kg

JPETAB 105,336,52

ivn-mus LD50: 1410 mg/kg

JPETAB 99,149,50

ivn-cat LDLo: 250 mg/kg

JPETAB 99,149,50

ivn-rbt LDLo: 177 mg/kg

JPETAB 99,149,50

Occupational Exposure to Inorganic Mercury recm std:

Air: TWA 0.05 mg(Hg)/m³ NTIS**.

THR: A hmn CNS. HIGH scu, ivn. MOD ivn. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits tox fumes of Hg.

MERCUROUS CHLORIDE

CAS RN: 7546307

NIOSH #: OV 8750000

mf: Cl₂Hg₂; mw: 472.09

White, odorless, tasteless, heavy powder or crystals. Sunlight causes it to decomp into mercuric chloride and metallic Hg. Insol in H₂O, alc and ether. Protect from light. Subl @ 400°; d: 7.150.

SYNS:

MERCURY(I) CHLORIDE
C.I. 77764

CALOMEL

CALOMELANO (ITALIAN)

CHLORURE MERCUREUX
(FRENCH)

CLORURO MERCUROSO (ITALIAN)

KALOMEL (GERMAN)

MERCUROCHLORIDE (DUTCH)

MERCURY MONOCHLORIDE

MERCURY PROTOCHLORIDE

MILD MERCURY CHLORIDE

QUECKSILBER(I)-CHLORID (GERMAN)

SUBCHLORIDE OF MERCURY

TOXICITY DATA: 3

src-bcs 50 mmol/L

ori-rat LD50: 210 mg/kg

CODEN:

MUREAV 77,109,80

WRPCA2 9,119,70

Toxicology Review: SDGTB3 1(2),177,71; RREVAH 42,103,72; 27ZTAP 3,91,69. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m³ NTIS**. Reported in EPA TSCA Inventory, 1980.

THR: MUT data. HIGH ori. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits very tox fumes of Cl⁻ and Hg.

Human Tox: Excessive doses may cause Hg poisoning.

Antidote: BAL (Dimercaprol). If laxation from oral mercurous chloride should not occur, saline laxative must be administered to prevent possibility of Hg poisoning.

Med Incomp: Bromides, iodides, alkali chlorides, sulfates, sulfites, carbonates, hydroxides, lime water, acacia, ammonia, golden antimony sulfide, cocaine, cyanides, copper salts, hydrogen peroxide, iodine, iodoform, Pb salts, silver salts, soap, sulfides.

MERCURY

CAS RN: 7439976

NIOSH #: OV 4550000

af: Hg; aw: 200.59

Silvery liquid, metallic element. mp: -38.89°, bp: 356.9°, d: 13.546, vap. press: 1 mm @ 126.2°. vap press: @ 25° = 2 × 10⁻³ mm.

SYNS:

COLLOIDAL MERCURY

NCI-C60399

KWIK (DUTCH)

QUECKSILBER (GERMAN)

MERCURE (FRENCH)

QUICK SILVER

MERCURIO (ITALIAN)

RTEC (POLISH)

MERCURY, METALLIC (DOT)

TOXICITY DATA: 3

CODEN:

ihl-rat TCLo: 890 ng/m³/24H (16W male)

GISAAA 45(3),72,80

ihl-rat TCLo: 7440 ng/m³/24H (16W male)

GISAAA 45(3),72,80

ipr-rat TDLo: 400 mg/kg/14D-I:ETA

ZEKBAI 61,511,57

ihl-wmn TCLo: 150 ug/m³/46D:GIT

AEHLAU 33,186,78

ihl-wmn TCLo: 150 ug/m³/46D:CNS

AEHLAU 33,186,78

ihl-rbt LCLo: 29 mg/m³/30H

AMHBC 7,19,53

TLV: Air: 0.05 mg(Hg)/m³ (skin) DTLVS* 4,254,80.

Toxicology Review: AJOGAH 126(3),390,76; JTEHD6 2(3),491,77; TRBMAV 33(1),85,75; PHJOAV 213(5781),159,74; JDSACAE 58(12),1767,75; CPEDAM 13,783,74; QURBAW 7(1),75,74; AEMBAP 48,463,74; JAVMA4 164(3),277,74; 31ZNAA 2,365,73; AEMBAP 40,239,73; CTOXAO 5(2),151,72; BIOGAL 41(7),208,75; ADTEAS 5,51,72; RREVAH 42,103,72; FOREAE 7,313,42; NISIA9 27(9),942,74; MIBUBI 9(4),321,75; STEVA8 2(4),341,74; ENVRAL 13,36,77; 85CVA2 5,63,70; JOCMA7 2,337,60; PEXTAR 12,102,69; PDTNBH 6,204,77.

OSHA Standard: Air: CL 1 mg/10m³ (SCP-N) FEREAC 39,23540,74. DOT: ORM-B, Label: None FEREAC 41,57018,76. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m³ NTIS**. "NIOSH Manual of Analytical Methods" VOL 1

1750 MERCURY AMIDE CHLORIDE

145,165,167, VOL 4 S199*, VOL 5 175#. Reported in EPA TSCA Inventory, 1980.

THR: A hmn GIT, CNS. An exper ETA. HIGH ihl. See also mercury compounds. Reacts violently with acetylene, NH_3 , BPI_2 , Cl_2 , ClO_2 , CH_3N_3 , Na_2C_2 , nitromethane, (butyne diol + acid).

Incomp: Acetylenic compounds; ammonia; boron diiodophosphide; ethylene oxide; metals; methyl azide; methylsilane, oxygen; oxidants; tetracarbonylnickel, oxygen.

For further information see Vol. 1, No. 3 of *DPIM Report*.

MERCURY AMIDE CHLORIDE

CAS RN: 10124488 NIOSH #: OV 7020000
mf: ClH_2HgN ; mw: 252.07

White pulverulent lumps or powder.

SYNS:

AMINOMERCURIC CHLORIDE
MERCURIC AMMONIUM CHLORIDE, SOLIO
MERCURIC CHLORIDE, AMMONIATED

MERCURY AMINE CHLORIDE
MERCURY AMMONIATED
WHITE MERCURY PRECIPITATED
WHITE PRECIPITATE

TOXICITY DATA:

Aquatic Toxicity Rating: TLM96:under 1 ppm
WQCHM* 3,-,74. *Toxicology Review*: SDGTB3 1(2),177,71; 27ZTAP 3,15,69. DOT: Poison B, Label: Poison FEREAC 41,57018,76. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.

THR: A poison. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits very tox fumes of Cl^- , NO_x and Hg.

MERCURY(II)-o-ARSENATE

CAS RN: 7784374 NIOSH #: OV 7040000
mf: $\text{AsHO}_4 \cdot \text{Hg}$; mw: 340.52

Yellow powder; mp: decomp. Insol in H_2O , sol in HCl or HNO_3 .

SYN: MERCURIC ARSENATE

TOXICITY DATA: 3

Aquatic Toxicity Rating: TLM96:under 1 ppm
WQCHM* 3,-,74. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m3 NTIS**. Occupational Exposure to Inorganic Arsenic recm std: Air: CL 2 ug/m3/15M NTIS**.

THR: A poison. See also mercury and arsenic compounds.

Disaster Hazard: When heated to decomp it emits very tox fumes of Hg and As.

MERCURY(I) AZIDE

mf: Hg_2N_6 ; mw: 485.22

THR: Explodes on heating in air. HIGH tox. See also azides, mercury compounds.

Disaster Hazard: When heated to decomp it emits very tox fumes of NO_x and Hg.

MERCURY(II) AZIDE

mf: HgN_6 ; mw: 284.65

THR: High friction sensitivity; brisance on explosion. HIGH tox. See also mercury compounds, azides.

Disaster Hazard: When heated to decomp it emits very tox fumes of Hg and NO_x .

MERCURY(II) BENZOATE

CAS RN: 583153 NIOSH #: OV 7060000
mf: $\text{C}_{14}\text{H}_{10}\text{O}_4 \cdot \text{Hg}$; mw: 442.83

White crystalline powder; odorless. mp: 165°. Very sol in NaCl soln; slightly sol in alc. Protect from light.

SYNS:

MERCURIC BENZOATE

MERCURIC BENZOATE, SOLID (DOT)

TOXICITY DATA: 3

Aquatic Toxicity Rating: TLM96:under 1 ppm
WQCHM* 3,-,74. DOT: Poison B, Label: Poison FEREAC 41,57018,76. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m3 NTIS**.

THR: A poison. See also mercury compounds.

Disaster Hazard: When heated to decomp it emits tox fumes of Hg.

MERCURY(I) BROMIDE (1:1)

CAS RN: 10031182 NIOSH #: OV 7410000
mf: Br_2Hg ; mw: 280.50

White-yellow tetrg cryst or powder; odorless. d: 7.307; vap d: 19.3. Darkens on exposure to light. Sublimes @ approx 390° (decomp); Insol in H_2O , alc, ether; decomp by hot HCl or alkali bromides. Protect from light.

SYN: MERCUROUS BROMIDE, SOLID (DOT)

TOXICITY DATA: 3

Aquatic Toxicity Rating: TLM96:under 1 ppm
WQCHM* 3,-,74. DOT: Poison B, Label: Poison FEREAC 41,57018,76. Occupational Exposure to Inorganic Mercury recm std: Air: TWA 0.05 mg(Hg)/m3 NTIS**.

THR: A poison. See also mercury compounds and bromides.

Disaster Hazard: When heated to decomp it emits very tox fumes of Br^- and Hg.

MERCURY(II) BROMIDE (1:2)

CAS RN: 7789471 NIOSH #: OV 7415000
mf: Br_2Hg ; mw: 360.41

White crystals or cryst powder. Sensitive to light; mp: 237°; bp: 322° (sublimes); d: 6.109 @ 25°; vap press: 1 mm @ 136.5°; sublimes @ higher temp; very sol in hot alc, methanol, HCl, HBr, alkali bromide solns; slightly sol in chloroform.

SYNS:

MERCURIC BROMIDE

MERCURIC BROMIDE, SOLID (DOT)

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO:

DATE:

3/3/87

TIME:

0820

DISTRIBUTION:

file - Niagara Mohawk Operations HQ
NYB2 02-8701-48

BETWEEN:

Gary Johnson

OF:

NYDEC

PHONE:

(518)382-0680

AND:

DISCUSSION:

To inquire information needed to complete a PA.
Another call was made at 0850.

Location of site: 1125 Broadway

The NYDEC conducted a Waste Inspection (Recor) on
June 4, 1986.

Material found on site: transformers, drums, and
storage areas. { 50 drums inside facility
20-25 drums outside facility

Substances contained in drums: PCB's and Mercury

The concentration of PCB's: 50-500 ppm.

Population potentially affected: unknown

According to the NYDEC Report, no environmental hazards or
problems exist.

ACTION ITEMS:

No future plans will be conducted on site.

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO:

DATE:

3/17/87

TIME:

1550

DISTRIBUTION:

File- Niagara Mohawk Operations HQ / Albany
02-8701-48 NYBZ

BETWEEN:

Cliff Forando

OF:

Albany County
Health Dept.

PHONE:

(518) 445-7811

AND:

DISCUSSION:

To determine what is the drinking water source
for the area around this site.

Groundwater and surfacewater is not used
for drinking purposes.

Residents use the water from the City of Albany
ie, Alcove Reservoir.

ACTION ITEMS:

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO:

DATE:

3/18/87

TIME:

0845

DISTRIBUTION:

File - Niagara Mohawk Operations HQ / Albany
02-8701-48 NYB2

BETWEEN:

Peter Dillilo

OF:

Albany County
Health Dept

PHONE:

(518) 434-5148

AND:

DISCUSSION:

To determine if sewers are present at this site.

Yes.

Blueprints are available at City Hall (Albany)
3rd floor, should anyone like to have copies
made for documentation / information purposes.

ACTION ITEMS:

EMPIRE

SOILS INVESTIGATIONS INC.

5 KNABNER ROAD • P.O. BOX 2199 • BALLSTON SPA, NY 12020 • 518/899-7491 FAX 518/899-7496

TRANSMITTAL

DATE: 7-20-92

NAME NIAGARA MOHAWK POWER CORP.

ADDRESS 300 ERIE BLVD. WEST

BLDG. C-1, ENVIRONMENTAL AFFAIRS

SYRACUSE, NY 13202

ATTENTION OF: PETER NELSON, P.E.

RE: BLDG. 4 - N. ALBANY STA. JOB NO.: AD-92-43

ALBANY, NY

WE ARE SENDING YOU: ☒ Herewith ☐ Under Separate Cover
☐ Report ☒ Subsurface Logs ☐ Brochures
☐ Drawings ☐ Samples ☐

No. Copies	Title or description
<u>1</u>	<u>FINAL LOGS</u>
<u>1</u>	<u>SUBSURFACE INVESTIGATION PLAN</u>
<u>1</u>	<u>KEY TO LOGS</u>

THESE ARE: ☒ For Your Information ☐ Per Your Request ☐ Other

REMARKS: _____

SENT BY:

☒ First Class Mail
☐ Federal Express
☐ Messenger
☐ Certified Mail # _____
☐

Very truly yours,

RON AUSBURN

DATE

STARTED 6/9/92

FINISHED 6/9/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-1

SURF. ELEV 96.8'

G.W. DEPTH See Note

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/8	6/12	12/18	N			
	1	6	6	21	27		FILL: Gray fine SAND & SILT, little fine gravel; coal noted in sample 2 (Wet - Firm)	Auger refusal at 3.8' on 1st attempt. Offset 2' east and completed boring.
	2	20	100	4				
5		16	10		20		Brown fine SAND & SILT (Wet - Firm)	
	3	10	7					
10		8	6		18		Gray fine to coarse SAND & SILT, Some fine to medium Gravel (Moist - Firm)	Samples wet from approx. 2' to 6'.
	4	12	8					
15		15	34		51		Glacial till: Gray SILT with embedded SAND, GRAVEL & ROCK FRAGMENTS (Moist - Very Compact)	
	5	17	19					
20							Boring Terminated @ 18.3' Auger Refusal	
25								
30								
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER: DRILL RIG TYPE: By Geologist

METHOD OF INVESTIGATION 4 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/3/92

FINISHED 6/3/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-2

SURF. ELEV 97.1'

G.W. DEPTH See Note

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/8	8/12	12/18	N			
		3	3			6	FILL: Brown SILT embedded SAND &	Note: Water level 5.6' below grade, morning of 6/5/92.
	1	3	3		8		GRAVEL, occasional embedded coal/ash &	
		4	3		5		ash layers	
	2	2	2				(Moist - Loose)	
		4	4		7			
5	3	3	4				Sample 3 Wet	
10		1	2		4		Gray to black fine to medium SAND,	
	4	2	3				trace silt	
							(Saturated - Loose)	
15		23	7		18		Gray SILT, little embedded rock	
	5	11	9				fragments	
							(Damp - Stiff)	
20		23	35		72		ROCK FRAGMENTS	
	6	37	47				(Wet - Very Compact)	
							Boring Terminated @ 22'	
25								
30								
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER: DRILL RIG TYPE: By Geologist

METHOD OF INVESTIGATION 3 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/4/92

FINISHED 6/9/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-3

SURF. ELEV 96.3'

G.W. DEPTH See Note

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	N			
	1	6	4	4	8		FILL: Brown SILT & fine SAND with embedded GRAVEL, BRICK & ASH (Moist - Loose/Firm)	No water present in borehole prior to coring. Samples become wet at approx. 4'.
		6	6		11			
	2	5	8					
5		3	1		4		Gray fine SAND, Some Silt, Some embedded gravel (Wet - Loose)	Core drilled glacial till from 17' to 24'. Run 1: 17' - 19' 0.9' Recovery (45%) Run 2: 19' - 24' 1.3' Recovery (26%) NX Core
	3	3	4					
10								
		6	7		15		Similar; firm	
	4	8	10					
15								
		40	25		61		Glacial till: Gray SILT with embedded SAND, GRAVEL, BOULDERS & ROCK FRAGMENTS (Moist/Wet - Very Compact)	
	5	36	45					
20								
25							Boring Terminated @ 24'	
30								
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER:

DRILL RIG TYPE:

By Geologist

METHOD OF INVESTIGATION 4 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/5/92

FINISHED 6/5/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-4

SURF. ELEV 96.8'

G.W. DEPTH See Note

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	N			
	1	10	8	12	20		FILL: Brown SILT & fine SAND with embedded GRAVEL & BRICK (Moist - Firm)	Note: Samples become wet at approx. 5'.
	2	6	6					
5	3	5	3		6		Brown fine to medium SAND & SILT (Moist/Wet - Loose)	
	4	7	6				Grades fine to coarse sand in Sample 3 Similar; wet	
10	5	10	15				Glacial till: Gray SILT with embedded SAND, GRAVEL & ROCK FRAGMENTS (Wet - Very Compact)	
15	6	25	29		68		Gray-black SHALE FRAGMENTS	Boring Terminated @ 22'
	7	39	98					
20								
25								
30								
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER:

DRILL RIG TYPE:

By Geologist

METHOD OF INVESTIGATION 4 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/8/92

FINISHED 6/8/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-5

SURF. ELEV 99.2'

G.W. DEPTH 8.9' at completion

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/5	5/12	12/15	N			
1	1	17	20	17	37		FILL; Brown fine SAND & SILT; little coal & ash in Sample 2 (Moist - Firm/Compact)	
2	2	11	12					
3	3	4			6		Greenish-gray ORGANIC SILT & SILT, trace fine sand (Moist - Medium)	
4	4	2	2					
5								
6								
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N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER: DRILL RIG TYPE: By Geologist

METHOD OF INVESTIGATION 3 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/11/92

FINISHED 6/11/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-6

SURF. ELEV 99.5'

G.W. DEPTH 10.4' at
completion

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/8	6/12	12/18	N			
							ASPHALT 0.2'	
	1	10	11	8	19		FILL: Brown fine to medium SAND, little fine gravel, trace silt (Moist - Loose/Firm)	
		6	2		4			
	2	2	2					
5		6	5		8			
	3	3	3				Brown PEAT noted at bottom of Sample 3	
10		6	3		6		Gray CLAY & SILT (Wet - Medium)	
	4	3	6					
15		12	27		59		Gray SILT, little fine sand, with embedded GRAVEL (Possible fill or soil reworked by river currents) (Wet - Very Compact)	
	5	32	29					
20		39	24		57			
	6	33	40					
25		7	55	100	3		Shale fragments noted	
30							Boring Terminated @ 27.1' Auger Refusal	
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER:

DRILL RIG TYPE:

By Geologist

METHOD OF INVESTIGATION 3 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/11/92

FINISHED 6/12/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-7

SURF. ELEV 99.7'

G.W. DEPTH 9.2' at
completion

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/8	8/12	12/18	N			
							ASPHALT 0.2'	
	1	12	23	27	50		FILL: Black to tan ASH, COAL, BRICK, etc.	
		19	20		33			
	2	13	12					
5		4	8		16			
	3	8	7					
10		3	4		8		FILL: Brown-gray SILT with embedded SAND & GRAVEL (layered) (Moist/Wet - Medium)	
	4	4	5					
15		7	18		63		Gray SILT with embedded SAND & GRAVEL, occasional embedded brick fragments (possible fill or soil reworked by river currents) (Wet - Very Compact)	
	5	45	23					
20		6	65	100	2			
25		7	100	4				
30							Boring Terminated @ 26.9' Auger Refusal	
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER: DRILL RIG TYPE: By Geologist

METHOD OF INVESTIGATION 3 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/10/92

FINISHED 6/10/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-8

SURF. ELEV 99.7'

G.W. DEPTH See Note

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	N			
							ASPHALT 0.3'	
	1	10	12	15	27		FILL: Black COAL & ASH (Moist - Firm)	
		29	15		25			
	2	10	10				FILL: Brown fine to medium SAND, Some Silt & Gravel, brick fragments	
		7	10		26		(Moist/Wet - Firm)	
5	3	16	16					Samples become wet at approx. 5'.
10								
		5	12		26		FILL: Brown fine SAND & SILT with embedded GRAVEL, trace ash	
	4	14	16				(Wet - Firm)	
15								
		11	10		23		Similar	
	5	13	14					
20								
	6	12	100/.1				Brown SILT & CLAY with embedded SAND & GRAVEL	
							(Wet - Very Compact)	
25								
	7	87	100/.2				Glacial till: Gray SILT with embedded GRAVEL & SHAPE FRAGMENTS	Drilled ahead of augers with tricone roller bit, from 25' to 30'.
							(Moist - Very Compact)	
30								
	8	100/.4					Weathered SHALE FRAGMENTS	
							Boring Terminated @ 30.4'	
35								
40								

N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

DRILLER:

DRILL RIG TYPE:

By Geologist

METHOD OF INVESTIGATION 3 1/4" I.D. Hollow Stem Augers

DATE

STARTED 6/8/92

FINISHED 6/9/92

SHEET 1 OF 1

EMPIRE**SOILS INVESTIGATIONS****SUBSURFACE LOG**

HOLE NO. B-9

SURF. ELEV 100.2'

G.W. DEPTH See Note

PROJECT Bldg. 4 Renovations

LOCATION Albany, NY

NMPC N. Albany Station

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER				REC	SOIL OR ROCK CLASSIFICATION	NOTES
		0/8	8/12	12/18	N			
							ASPHALT 0.1'	Drilled to 20' on 6/8/92.
	1	2	4	6	10		FILL: Brown medium to coarse SAND & GRAVEL, Some Silt, cobbles, brick (Moist - Firm)	Water level 6.1' inside augers, morning of 6/9/92.
		8	12		25			
	2	13	16					
5		18	6		9		Black fine SAND FILL, Sample 3 (Wet - Loose)	
	3	3	1					
10			8	5		7	FILL: Gray CLAY & SILT with embedded GRAVEL (Wet - Medium)	Organic silt seam noted in Sample 4.
	4	2	6					
15			3	3		9	FILL: Brown to gray SILT with embedded SAND & GRAVEL, brick fragments in Sample 5 (Wet - Medium)	
	5	6	20					
20		97	35			54	Weathered SHALE (Wet - Very Compact)	
	6	19	20					
		21	18			59		
	7	41	100.2					
25							Boring Terminated @ 23.3' Auger Refusal	
30								
35								
40								

N = NO. BLOWS TO DRIVE 2' SPOON 12" WITH A 140 LB. PIN WT. FALLING 30" PER BLOW CLASSIFICATION: Visual

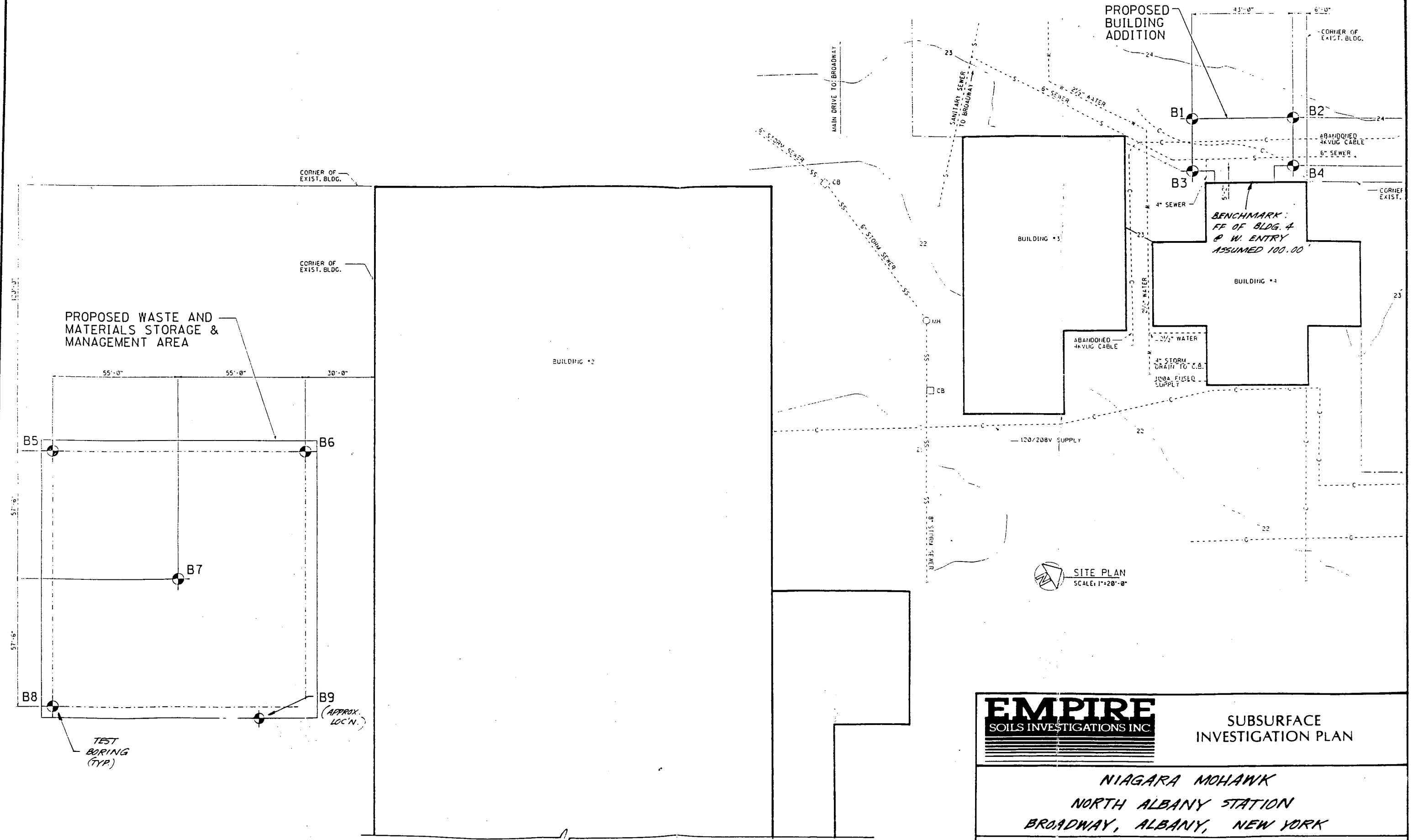
DRILLER: DRILL RIG TYPE: By Geologist

METHOD OF INVESTIGATION 3 1/4" I.D. Hollow Stem Augers

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between the sampled intervals. The data presented on the Subsurface Logs together with the recovered samples will provide a basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their significance relative to each other. Often analyses of standard boring data indicate the need for additional testing or sampling procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and the recovered samples must be performed by Professionals. The information presented in the following defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered.

1. The figures in the Depth column defines the scale of the Subsurface Log.
2. The sample column shows, graphically, the depth range from which a sample was recovered. See Table 1 for a description of the symbols used to signify the various types of samples.
3. The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.
4. Blows on Sampler — shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches of penetration is recorded. The first 6 inches of penetration is considered to be a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N. The outside diameter of the sampler, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log.
5. Blows on Casing — shows the number of blows required to advance the casing a distance of 12 inches. The casing size, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under the Method of Investigation at the bottom of the Subsurface Log.
6. All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist or geotechnical engineer, unless note otherwise. The visual descriptions are made on the basis of a combination of the driller's field descriptions and observations and the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification (ASTM D 2487-83) with regard to the particle size and plasticity. (See Table No. II) Additionally, the relative portion, by weight, of two or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D. M. Burmister, ASTM Special Technical Publication 479, June 1970. (See Table No. III) The description of the relative soil density or consistency is based upon the penetration records as defined on Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet and saturated. Water introduced in the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe materials in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and samplers blows or through the "action" of the drill rig as reported by the driller.
7. The description of the rock shown is based on the recovered rock core and the driller's observations. The terms frequently used in the description are included in Table VI.
8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines are based on the driller's field observations.
9. Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that drill water used to advance the boring may have influenced the observations. The ground water level typically will fluctuate seasonally. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or water observation wells.
10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total pieces of NX core exceeding 4 inches in length divided by the core run. The size core barrel used is also noted.

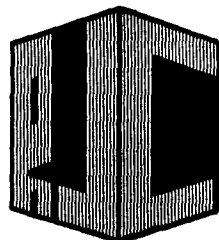


SITE PLAN
SCALE: 1"=20'-0"

EMPIRE SOILS INVESTIGATIONS INC. 		SUBSURFACE INVESTIGATION PLAN	
NIAGARA MOHAWK NORTH ALBANY STATION BROADWAY, ALBANY, NEW YORK			
DR. BY: JH	SCALE: 1" = 40'	PROJ. NO.: AD-92-43	
REV'D. BY:	DATE: 7/92	DRWG. NO.: 1	

BASE MAP PREPARED BY NIAGARA MOHAWK POWER CORPORATION - 5/27/92.

ROBERT J. CARLIN
AND ASSOCIATES



SOILS & FOUNDATION ENGINEERS

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ROBERT J. CARLIN, P.E.
ROBERT B. SIMPSON, P.E.

28 December 1992

Highland Associates
Highland Center, Suite 205
Clarks Summit, PA 18411

Att: Mr. Philip Baldoni

Re: Report on Subsurface Soil and Foundation Investigation
Proposed Tank Pad and Building No. 2 Warehouse Floor
Niagara Mohawk Power Corporation
North Albany, N.Y. (92-116)

Dear Mr. Baldoni:

In accordance with your request, we have completed a subsurface soil and foundation investigation at the referenced site. The purpose of this study was to determine the nature and engineering properties of the subsurface soil and groundwater conditions, and to recommend an economical foundation scheme for the proposed tank pad and an economical method to repair or replace the existing warehouse floor slab.

We understand that Niagara Mohawk plans to construct a new tank pad to the south of the existing service building and adjacent to three existing oil tanks. This new pad will support two 5,000 gallon oil tanks, two 10,000 gallon oil tanks and an area for tanker truck loading and unloading. We also understand that Niagara Mohawk intends to replace the floor slab which has settled in the warehouse portion of Building No. 2.

To guide us in our study, we have been supplied with a floor plan of Building No. 2 prepared by Einhorn, Yaffee, Prescott, Krouner, a topographic survey of the Service Building Storage Yard provided by Highland Associates, and a sketch of the proposed tank pad also prepared by Highland Associates. The location of the proposed tank pad and warehouse floor are shown on separate enclosed Boring Location Plans.

Our scope of work for this project included the following:

1. Reviewed the locations of the proposed tank pad and warehouse floor slab, the existing site conditions, the expected soil conditions, and planned this study.
2. Retained General Borings, Inc. to advance three soil borings.
3. Laid out the borings in the field, provided full time inspection of the borings, obtained soil samples, and prepared detailed boring logs.
4. Retained AnalytiKEM, Inc. to perform laboratory analysis on selected soil samples for Polychlorinated Biphenols (PCB), Semi-Volatile Organic Compounds (SVOC), and Volatile Organic Compounds (VOC).
5. Analyzed the field and analytical laboratory data and prepared this report containing the results of this study.

SITE DESCRIPTION

The new tank farm area is located adjacent to three existing tanks that are used to store PCB contaminated oil. This area is on the south side of the existing Building No. 2. The proposed pad area is relatively flat with an asphalt pavement covering most of the area.

The existing warehouse floor slab will be discussed later in this report.

SOIL CONDITIONS

To determine the subsurface soil conditions, we advanced a series of 3 test borings at the locations shown on the enclosed plans. Detailed test boring logs have been prepared and are included in this report. All soil samples were visually identified by our inspector.

The soil descriptions shown on the boring logs and listed below are based on the Burmister Classification System. In this system, the soil is divided into three components: Sand, Silt and Gravel. The major component is indicated in all capital letters, the lesser in lower case letters. The quantity of each lesser component is indicated by the following modifiers:

<u>Modifier</u>	<u>Quantity</u>
trace	0 - 10%
little	10% - 20%
some	20% - 35%
and	35%- 50%

When the site soils are plastic, the following descriptions have been used to describe the material passing the No. 200 sieve:

	<u>Plasticity</u>	<u>Plasticity Index</u>
Clayey Silt	Slight	1 to 5
SILT & CLAY	Low	5 to 10
CLAY & SILT	Medium	10 to 20
Silty CLAY	High	20 to 40
CLAY	Very High	40+
Organic Silt	Material passing the No. 200 sieve which exhibits plastic properties within a certain range of moisture content and exhibits organic characteristics.	

The subsurface soil and groundwater conditions will be discussed separately in the respective evaluation sections for the tank pad area and building No. 2 warehouse floor reconstruction below.

EVALUATION

The planned construction at the existing Niagara Mohawk North Albany facility is to construct a new tank farm area for PCB oil on the southern side of the existing service building and to rebuild the existing floor slab in the warehouse portion of Building No. 2.

For the evaluation of these two areas, we have separated the evaluation section of this report into two categories, 1) Tank Pad Area and 2) Floor Slab Reconstruction for Building No. 2. Both will be discussed in detail below.

I. Tank Pad Area

The subsurface soil conditions encountered in borings B-1 and B-2, performed within the planned tank pad area may be summarized as follows:

1. The surface layer at borings B-1 and B-2 is an asphalt pavement. Underneath the asphalt in both borings is miscellaneous FILL consisting of varying amounts of sand, silt and gravel with ash, brick, and wood. This layer extends to a depth of approximately 5'6".
2. Beneath the miscellaneous Fill in borings B-1 and B-2 is a medium stiff layer of gray to dark gray Organic SILT, little (-) fine Sand. (Organic Silt) ranging from 1'0" to 1'9" in thickness.
3. Below the Organic Silt is a soft layer of dark brown Organic Clayey, peaty SILT (Peaty Silt). This layer extends to a depth of 8'0" below the existing ground surface.
4. Underneath the Peaty Silt is a loose stratum of gray clayey SILT, little coarse to fine Sand, trace (-) fine Gravel (Clayey Silt). This stratum extends from 8'0" to 11'6" below the existing ground surface.
5. The last stratum that was encountered in borings B-1 and B-2 consists of medium dense to very dense gray coarse to fine SAND, little (+) Silt, little (+) coarse to fine Gravel with highly decomposed shale fragments (Sand). This stratum extended from a depth of 11'6" to where borings B-1 and B-2 were terminated, approximately 17 to 18 feet below existing grades.

Groundwater was encountered in all of the test borings at a depth of approximately 6.5 to 7.0 feet below existing grades.

To prepare the planned tank area for construction, the existing asphalt pavement must be broken into pieces about six inches or smaller and the broken pieces may be left in place. The two borings indicate that the asphalt thickness ranges from 1.0

to 1.5 inches. The entire area shall then be proofrolled by 5 passes of a large vibratory roller. The proofrolling operation is required to densify the in-situ fill that exists beneath the pavement. If any areas are observed to be soft and weave, they shall be excavated and replaced with new compacted fill as described below.

The existing grades throughout the proposed tank farm area range from +18.5 to +19.2 and the planned subgrade elevation for new concrete tank pad is approximately +20.5. Based on these grades, about 1 to 2 feet of fill will be required to achieve the proposed elevations. The new fill shall consist of a well graded stone with a maximum gravel size of 3/4 inch and a maximum of 5% silt sized particles. The fill shall be placed in one foot layers and compacted to 95% Maximum Modified Density (ASTM D-1557). Each lift must be tested and approved before placing subsequent layers.

The compacted fill shall extend at least 3 feet beyond the concrete tank pad at finished grade (+20.5) and slope down on a 1 horizontal to 1 vertical slope to the existing subgrade. For example, if 2 feet of fill is required to reach the planned finished concrete pad elevation, the compacted fill must extend 2 plus 3 feet or 5 feet from the proposed pad limits at the existing subgrade elevation.

After the compacted fill has been completed, it may be used to support the proposed concrete tank pad. The pads shall be designed utilizing a net bearing pressure of 0.5 TSF. Since the compacted fill material is free draining, it will not be subject to frost heave. Therefore, the tank pad foundations may bear on the surface of the stone fill.

The borings indicate that a thin layer of organic silt and slightly organic clayey silt exist throughout the entire tank farm area. These combined layers are about 2.5 feet thick and will compress slightly due to the weight of the new fill, concrete pad, and the new tanks. We have calculated that the total settlement that may occur is between 0.3 and 0.6 inches. Differential settlements will be approximately 0.15 to 0.25 inches. These settlements are within tolerable limits for the planned tank farm.

Planned Tank Farm Building

A structural steel building is planned to enclose the new tank farm. The structure will be supported on a series of shallow spread footings.

The planned outside grade around the new structure will be approximately +18.5. The footings will bear at a depth of 4 feet for frost protection, thus placing the bottom elevation of the footings at about elevation of +14.5.

Borings B-1 and B-2 indicate that a soft layer of organic silt and peaty silt exist at about elevation +13.0 which is about 1.5 feet below the new spread footing foundations. The concentrated load from these footings applied directly above the soft organic silt will cause the soft organic silt layers to consolidate resulting in a settlement of 1 to 2 inches. This settlement is unacceptable for the proposed structure.

To eliminate the potential for damaging differential settlements, the building loads must be transferred to the virgin gray medium stiff sandy clayey silt beneath the existing fill. Borings B-1 and B-2 indicate that unsuitable material extends to a depth of 8.0 feet below the existing ground surface throughout the planned building area. There are two alternate shallow spread footing foundation schemes that may be considered. These are (1) to construct the foundation directly on the undisturbed soil beneath the unsuitable soil or (2) to excavate the unsuitable material from within the foundation area down to the virgin sandy clayey silt, place a geotextile fabric on the exposed subgrade, and then place 2 feet of crushed stone on top of the fabric. Both alternatives will be discussed below.

I. To Construct a Spread Footing Foundation Directly on the Undisturbed Sandy Clayey Silt

The undisturbed sandy clayey silt exists at a depth of approximately 8.0 feet within the planned building area. For this scheme, the shallow spread footing foundations must bear in the medium stiff sandy clayey silt beneath the existing fill and organic silt. An allowable bearing pressure of 1.5 TSF may be used for design of the foundations. All exterior footings shall bear at a minimum depth of 4.0 feet below the finished outside grade for protection from frost. Interior foundations must bear in the virgin soil beneath the fill. If the virgin soil exists at shallow depths, for example, just below the proposed floor slab elevation, then the interior footings may bear in the virgin soil beneath the floor slab provided that the building is heated during the winter.

Groundwater was encountered in both of the borings advanced within the planned building at depths ranging from 6'7" to 6'10" below the existing ground surface elevations. Based on these depths, groundwater will be encountered in the foundation excavations. The flow will be moderate at first and then it should taper off with time. We believe that a majority of this water is trapped within the existing fill and on top of the relatively impermeable undisturbed sandy clayey silt. The use of sumps and pumps will be required to keep the foundation excavations dry.

It is our opinion that the combination of construction activity and groundwater in the foundation excavations may disturb the exposed sandy clayey silt subgrade. The virgin sandy clayey silt contains a high percentage of silt which makes this material very susceptible to becoming disturbed. If the foundation bearing soil becomes disturbed due to these conditions, the soft areas must be removed and replaced with a new granular material compacted to 95% Maximum Modified Density. Due to these potential complications, the following alternative should be considered.

II. Shallow Spread Footings Placed on Crushed Stone and Fabric

In order to limit construction activity directly on the gray sandy clayey silt beneath the fill and organic silt, we recommend that 1) the foundation excavations be advanced through the unsuitable fill and organic silt down to the virgin soil, 2) that a Mirafi 500X or equivalent geotextile fabric then be placed on the exposed subgrade and

3) that the excavation be filled with a maximum of 2 feet of a clean 3/4 inch crushed stone. The new foundations will bear on this crushed stone. If the virgin soil exists at shallow depths, for example, 1 to 2 feet below the proposed finished outside grade of the building, then the footings may bear directly in the sandy clayey silt at a minimum depth of 4 feet which is required for frost protection as described below.

The crushed stone and fabric will provide a firm uniform base to construct the new foundations and it will also provide a drainage medium to keep the excavations dry during the construction.

The new foundations may be designed utilizing a net allowable bearing pressure of 1.5 TSF bearing on the 3/4 inch clean crushed stone or the undisturbed gray sandy clayey silt. All of the exterior footings shall bear at a minimum depth of 4 feet below the finished outside grade for protection from frost. Interior footings may bear either in the virgin soil or on 3/4 inch crushed stone as described above. Depending on the depth of unsuitable fill, the interior footings may bear just beneath the new floor slab as described for alternative No. 1.

Retaining Wall

A 2 foot high retaining wall is planned around the new tank farm. This wall can be a poured in place reinforced concrete retaining wall or it can be a pre-fabricated wall such as a concrete Double Wall.

The small retaining wall footings may bear in the existing fill. The footings shall be designed as spread footings utilizing a net design bearing pressure of 1.0 TSF.

The wall shall be designed as a yielding retaining wall which will result in the Active Earth Pressure condition. The horizontal pressure that the soil will exert behind the retaining wall is determined by the in-situ soil density and the coefficient of active earth pressure (K_a) for a yielding wall. We assume that the in-place density of the soil behind the walls will be 130 pcf and that K_a will be 0.30. These assumptions result in an equivalent fluid pressure of 39 psf against the retaining wall.

II. Floor Slab Reconstruction for Building No. 2

The existing first floor slab in the warehouse section of Building No. 2 has settled significantly. As a result, the existing concrete slab has cracked throughout the entire warehouse area. During our subsurface soil and foundation investigation, we observed that the existing slab has settled approximately 3 to 6 inches, relatively uniformly throughout the warehouse area. The existing slab is approximately 6" thick and it was designed as a slab on grade. The building columns have been pile supported and these columns have not moved. Therefore the floor slab above the caps is at the original elevation and between the pile caps, the slab is about 6 inches lower. This results in a very uneven surface.

of the structure in the organic soil. This phenomenon occurs very slowly over time and from experience, continues in measurable amounts for a period of 20 to 40 years. We have estimated that if the existing floor slab is not replaced, the slab may settle an additional 0.25" to 0.75" in the next 5 years.

To limit the magnitude of future settlement, we considered a reconstruction scheme for the new floor slab that results in a reduction in the overburden pressure to the compressible organic silt layer. The proposed floor slab section will consist of 12 inches of lightweight fill and a 6 inch concrete slab. The weight of this new floor slab system is lighter than the present system. This will virtually eliminate the possibility of future settlement due to primary consolidation and densification of the in-situ fill. Secondary settlement and settlement due to the decomposition of wood within the fill will occur and the magnitude is discussed below.

The design scheme discussed below will reduce the magnitude for future settlement. There is not enough data available to design a scheme to virtually eliminate future settlement.

To reduce the potential for future settlement, we recommend the following:

1. Remove the existing concrete floor slab plus an additional 12 inches of miscellaneous fill.
2. Proofroll the entire area with 2 passes of a large vibratory roller to densify the in-situ fill. If any areas are observed to be soft during the proofrolling operation, they must be removed and replaced with new compacted fill. The new fill shall be a sand and gravel containing less than 15% Silt placed in one foot layers and compacted to 92% Maximum Modified Density (ASTM D-1557).
3. Place a Mirafi 500X geotextile fabric or equivalent on the exposed subgrade.
4. Place a 12 inch layer of lightweight fill (Solite) that weighs less than 70 pcf.

The new floor slab may be designed as a slab on grade bearing on the new lightweight fill.

This scheme will reduce the magnitude for future settlement. We estimate that future settlement as a result of secondary consolidation will be in the range of 0.25 to 0.5 inches over the next 10 to 15 years.

GENERAL

A significant amount of coal tar is present in the existing fill beneath the warehouse floor slab near boring B-3. At this time the extent of the coal tar contamination is not known. If the coal tar contaminated soil is to remain in place during construction, we recommend that a complete health and safety plan be prepared prior to construction. We have included some guidelines for this plan in the appendix of this report.

A series of soil samples were collected for analytical testing. The results will be available in about two weeks and we will submit a supplemental letter containing the results of these tests.

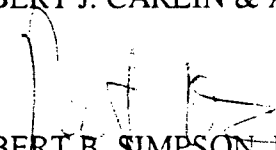
To insure a successful project, we recommend that the excavations for the foundations, the placement of stone, lightweight fill and fabric, and the proofrolling of the floor slab and tank pad subgrade be performed under the full time inspection of a qualified Soils Engineer.

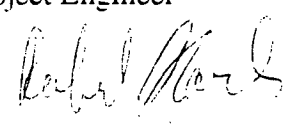
If conditions encountered during construction vary significantly from those stated in this report, this office should be notified immediately so that further recommendations can be made.

Thank you for letting us assist you on this project.

Very truly yours,

ROBERT J. CARLIN & ASSOCIATES


ROBERT B. SIMPSON, P.E.
Project Engineer

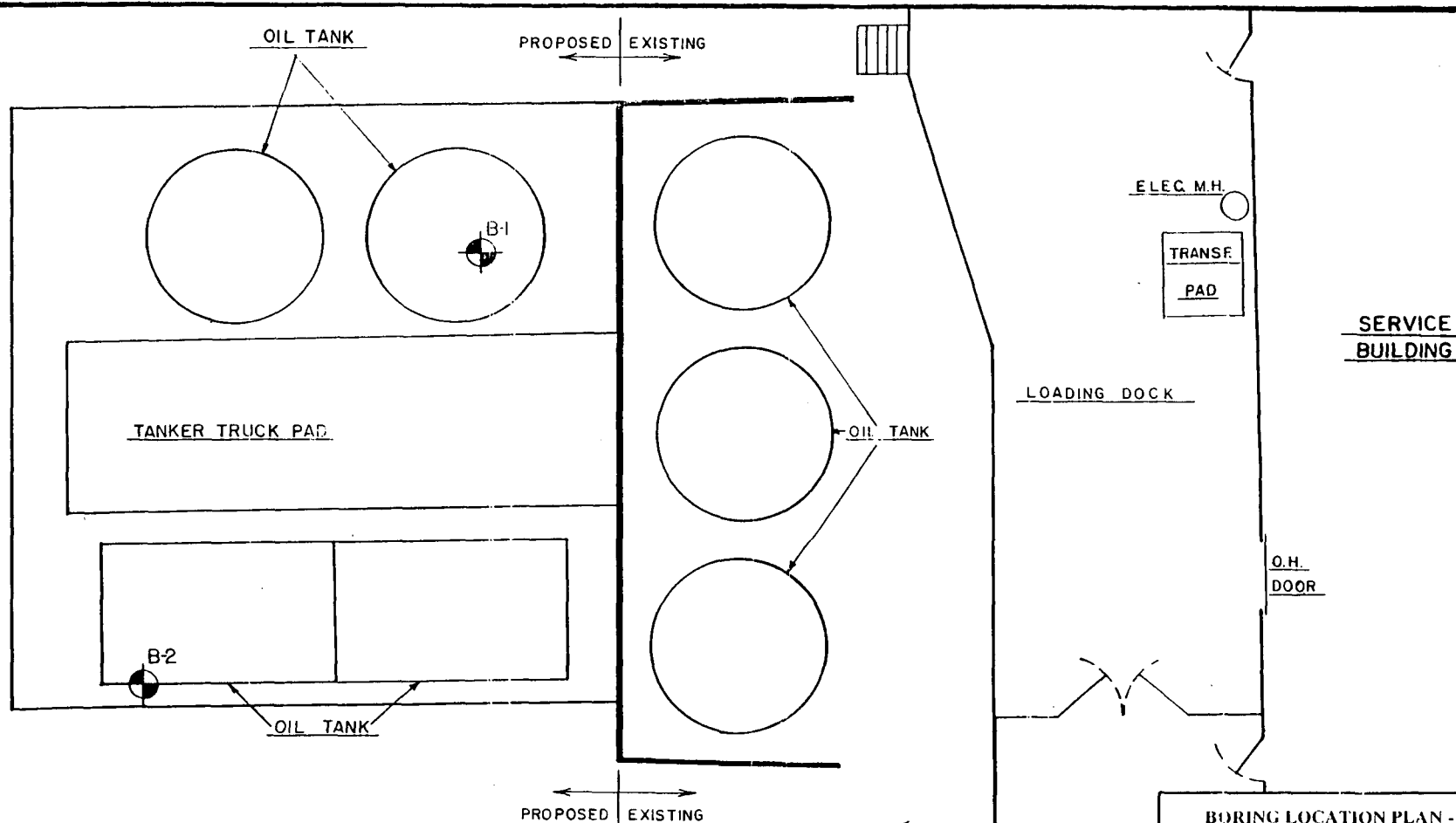

ROBERT J. CARLIN, P.E.

RBS/lzd

ROBERT J. CARLIN & ASSOCIATES South Amboy, N.J.				TEST BORING LOG				BORING NUMBER B-1	
Project: Proposed Tank Farm, Niagara Mohawk Power Co.				SHEET NO.: 1 of 1				JOB NUMBER: 92-116	
Client: Highland Associates				ELEVATION: +18.6				Drilling Contractor: General Boring, Inc.	
ROUNDWATER				CASING	SAMPLE	CORE	TUBE	DATUM:	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS		START DATE: 16 Nov 92	
16 Nov 92	1100	6'10"	HSA	DIA.	2 1/2	1 3/8		FINISH DATE: 16 Nov 92	
				WGHT		140		DRILLER: MJ	
				FALL		30"		INSPECTOR: RBS	
Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	IDENTIFICATION				REMARKS	
1		S-1	85	<u>Asphalt (1 1/2") , Stone (3")</u>				4.5"	
			50	Misc FILL (Bl cf S, l (-) S, s (-) cf G)					Rec = 14"
			33						dry
2			32						coal tar odor
			9	Misc FILL (Bl, gr S, S & G)					
3		S-2	6						Rec = 18"
			11	<u>Miscellaneous FILL (Black,</u>					moist
4			15	<u>gray coarse to fine Sand, some</u>					strong coal tar odor
				<u>Silt, some coarse to fine Gravel, ashes)</u>					
5									
			5	do				5'6"	
6		S-3	6	Dk gr O S, l (-) f S					Rec = 18"
			5	<u>Dark gray Organic SILT,</u>				6'6"	moist
7			3	<u>little fine Sand</u>					
			2	Dk br O PTy S					
8		S-4	3	<u>Dark brown Peaty SILT</u>				8'0"	Rec = 15"
			4	Gr S & C					moist
9			5						
				<u>Gray Clayey SILT, trace fine Sand</u>					
10									
			4	Gr Cy S, t (+) f S					
11		S-5	3						Rec = 15"
			4					11'6"	wet
12			6	Gr cf S, l (-) S					
13									
				<u>Gray coarse to fine SAND, little</u>					
14				<u>(-) Silt, little fine Gravel</u>					
15									
			8	Gr cf S, l (-) S, l f G					
16		S-6	11						Rec = 16"
			13						wet
17			12						
18		S-7		Highly decomposed SHALE				18'3"	very hard @ 18" possible rock, pos Shale
				<u>End of Boring @ 18'3"</u>					
19									
20									

ROBERT J. CARLIN & ASSOCIATES South Amboy, N.J.				TEST BORING LOG				BORING NUMBER B-2	
Project: Proposed Tank Farm, Niagara Mohawk Power Co.								SHEET NO.: 1 of 1	
Client: Highland Associates								JOB NUMBER: 92-116	
Drilling Contractor: General Boring, Inc.								ELEVATION: +19.0	
GROUNDWATER				CASING	SAMPLE	CORE	TUBE	DATUM:	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS		START DATE: 16 Nov 92	
17 Nov 92	1430	6'7"	HSA	DIA.	2 1/2	1 3/8		FINISH DATE: 16 Nov 92	
				WGHT		140		DRILLER: MJ	
				FALL		30"		INSPECTOR: RBS	
Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION			REMARKS	
1		S-1	40		<u>Asphalt-1", Stone-2"</u> 0'3"			Rec = 18" dry strong coal tar odor	
			27		FILL (Br, bl S, S, G)				
2			20						
			17						
3		S-2	24		Misc FILL (S, S, G, brick, wood)			Rec = 14" moist pc wood in tip	
			15						
4			10						
			10	do	<u>Miscellaneous FILL (Brown, black Sand, Silt, Gravel, ashes, brick, trace amount of wood)</u>				
5								5'3"	
			4		Gr slightly Or S, l (-) f S				
6		S-3	4		<u>Gray Slightly Organic SILT, little fine Sand</u>			Rec = 16" moist	
			5						
7			5					7'0"	
			1		Gr Or Cy S				
8		S-4	1		<u>Gray Organic Clayey SILT</u> 8'0"			Rec = 15" moist to wet	
			3		Gr cf S, l (+) Cy S				
9			4						
					<u>Gray Clayey SILT little (+), coarse to fine Sand, trace fine Gravel</u>				
10			5						
11		S-5	7		Gr Cy S, l (+) cf S, t f G: root fibers			Rec = 12" moist to wet	
			13					11'6"	
12			35		Gr cf S, s Cy S, s cf G				
			10						
13		S-6	27		<u>Gray coarse to fine SAND, some Clayey Silt, some coarse to fine Gravel, highly decomposed Shale</u>			Rec = 13" wet	
			20						
14			24						
15									
			20		Highly decomposed gr SHALE				
16		S-7	33					Rec = 14" wet	
			38						
17			42					17'0"	
					<u>End of Boring @ 17'0"</u>				
18									
19									
20									

ROBERT J. CARLIN & ASSOCIATES South Amboy, N.J.				TEST BORING LOG				BORING NUMBER B-3	
Project: Proposed Tank Farm, Niagara Mohawk Power Co.								SHEET NO.: 1 of 1	
Client: Highland Associates								JOB NUMBER: 92-116	
Drilling Contractor: General Boring, Inc.								ELEVATION:	
GROUNDWATER				CASING	SAMPLE	CORE	TUBE	DATUM:	
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS		START DATE: 17 Nov 92	
17 Nov 92	1000	6'8"	HSA	DIA.	2 1/2	1 3/8		FINISH DATE: 17 Nov 92	
				WGHT		140		DRILLER: MJ	
				FALL		30"		INSPECTOR: RBS	
Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	IDENTIFICATION				REMARKS	
				Concrete 0'6"					
1		S-1	11	FILL (Bl, gr br cf S, s \$, l (-) f G)				Rec = 17" dry mild coal tar odor	
	7								
2			4						
		S-2	3	FILL (Black coarse to fine SAND, some Silt, little fine Gravel)				Rec = 20" dry strong coal tar odor	
3			8						
			9						
4		S-3	11	do, s Cy \$				Rec = 18" wet strong coal tar odor	
			7	do (Fill w/lrg pcs wood)					
6			4						
		S-4	3					Rec = 20" wet strong coal tar odor	
7			4						
			4						
8			3						
			7						
9			13	do (bl. 2" pc wood in tip)				9'0"	
				End of Boring @ 9'0"					
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



GENERAL NOTES:

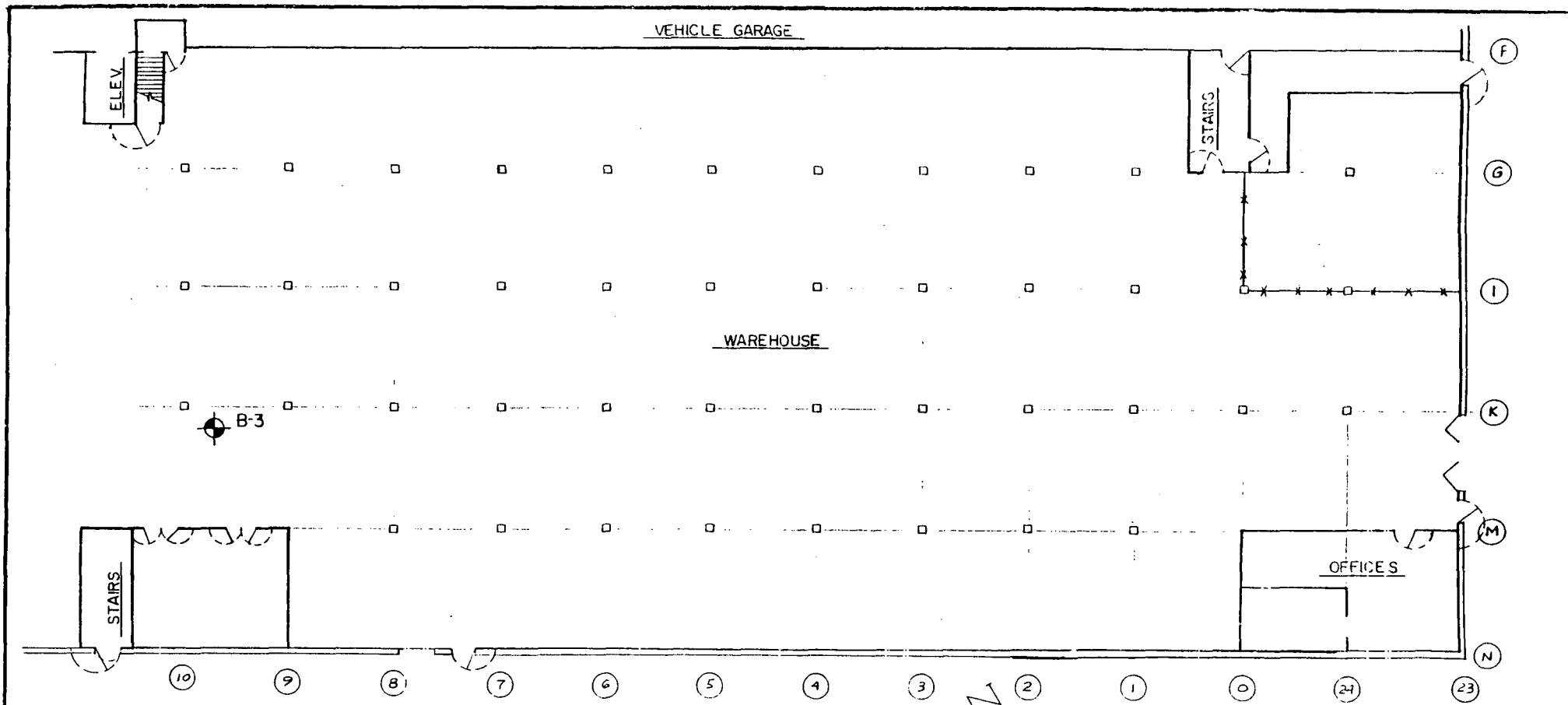
1. General layout was obtained from a survey provided by Highland Associate, entitled "North Albany Service Building Topographic Survey Storage Yard" dated 16 Oct. 1992 DWG No. C-16925-E, SHEET 1.
2. Borings were laid out in the field by Robert J. Carlin & Associates (RJCA).
3. Borings were performed by General Borings, Inc., on 16 & 17 Nov. 1992, under the full time inspection of RJCA.
4. Location are approximate.

BORING LOCATION PLAN - BORINGS B-1 & B-2

NIAGARA MOHAWK POWER CORPORATION
ALBANY NEW YORK
NORTH ALBANY BUILDING 2 RENOVATION

ROBERT J. CARLIN, P.E.

14491		21 Dec	
LICENSE NO.		DATE	
DRAWN CJB	DATE 2 Dec 92	SIGNATURE Robert J. Carlin	
CHECKED RJC	SCALE 1" = 10'	Robert J. Carlin and Associates	
PROJECT NO. 92-116	DWG. NO.	875 Route 9 Schenectady, N.Y.	
APPROVED		Consulting Soils and Foundation Engineers	



GENERAL NOTES:

1. General layout was obtained from a drawing prepared by Einhorn Yaffee Prescott Krouner, entitled "North Albany Building 2 Renovation - Spec. No. E83.07" dated 23 Aug. 1983 DWG No. C-24122-E.
2. Borings were laid out in the field by Robert J. Carlin & Associates (RJCA).
3. Borings were performed by General Borings, Inc. on 16 & 17 Nov. 1992, under the full time inspection of RJCA.
4. Location is approximate.

BORING LOCATION PLAN - BORING B-3

**NIAGARA MOHAWK POWER CORPORATION
ALBANY NEW YORK
NORTH ALBANY BUILDING 2 RENOVATION**

ROBERT J. CARLIN, P.E.

DESIGNED RJC	SCALE 1/8" = 1'-0"	Robert J. Carlin and Associates 875 Route 9 South Amboy, N.J. Consulting Structural Foundation Engineers
PROJECT NO. 92-116	DWG NO.	
APPROVED		

Appendix C - Aerial Photographs

1. Circa 1950
2. 4/21/1986



North Albany 4/21/86

