DEC 27 2001

GENERAL CABLE SITE
ROD MILL PARCEL
PETROLEUM SPILL REMEDIATION
WORK PLAN (revised 12/26/01)
(Index # D6-0001-97-07)

ROME, NEW YORK 13440

Jack Eisenbach Engineering, P.C.

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ROD MILL PARCEL
PETROLEUM SPILL REMEDIATION
WORK PLAN (revised 12/26/01)
(Index # D6-0001-97-07)
ROME, NEW YORK 13440

JEE PROJECT NO: 8514

DATE ISSUED:

DECEMBER 26, 2001

Prepared For:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Prepared By:
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Managing Engineer

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1.0 INTRODUCTION

This Work Plan presents the proposed scope of remediation work for the petroleum spill located at the Rod Mill Parcel of the General Cable Site in Rome New York. The remediation work is to be completed as part of the Voluntary Remedial Agreement (VRA) between Charles A. Gaetano (Owner) and the New York State Department of Environmental Conservation (NYSDEC) (see Figures 1 & 2 for site location).

2.0 BACKGROUND

The spill was originally discovered during a Phase II investigation completed at the Site, prior to the VRA, by Remediation Technologies in 1997 (RETEC, 1997a). Since then, JEE has investigated the extent of the spill for the Owner under the VRA. The findings of JEE's spill investigation were reported in the Rod Mill Parcel Environmental Remediation Closure Report (Rod Mill Closure Report, April 26, 2001) see appendix-A for copy of report extract.

The NYSDEC reviewed the findings in the Rod Mill Parcel Closure Report and requested the spill be further investigated and remediated (NYSDEC, July 5, 2001) to comply with the terms of the VRA.

This Work Plan has been developed to address the investigation and spill remediation requirements of the VRA.

3.0 SCOPE OF REMEDIATON

Remediation of the petroleum spill shall involve excavation of the impacted soil with off site disposal. The concrete and paved surfaces improvements located above the spill area will be removed and reused as clean hard fill. All soil will be excavated, screened for impact and managed on-site for reuse, or for off-site disposal. Visually contaminated groundwater will be pumped from the excavation and disposed of off site.

3.1 Soil Excavation and Field Assessment

During the excavation the soil will be field screened for the presence of petroleum odors, staining, and Volatile Organic Compounds (VOCs). VOCs will be assessed using a photo-ionization detector (PID)[1]. Field observations pertaining to the soil characteristics such as soil classification, color, odor, and PID readings will be recorded in the field logs.

The excavation shall begin in the area identified with the greatest impact (Boring B-3, see Figure-3), as observed in previous investigations. The excavation will move away from the impacted area until soil samples do not exhibit significant visual, olfactory or PID evidence of petroleum compounds. The impacted soil will be removed to the horizontal limits defined by the property boundaries. The horizontal extent of the excavation will proceed to the property boundaries, if necessary, with the excavation sloping of 1 to 1 ratio. Shoring of the excavation may be used if the shoring will allow

[1] PID-Photoionization detector, used for detection of volatile organic compounds (11.7eV lamp)

for the removal of additional source (petroleum) material. The vertical extent of excavation will continue down to groundwater table, if needed, to approximately 12 to 15 below ground surface.

Impacted soil that is stockpiled on-site will be placed on plastic and covered until it is removed for disposal. Excavated soil that reveals no signs of impact will be stockpiled separately onsite and classified for reuse.

3.2 Soil Sampling

Upon completion of the excavation, soil samples will be collected from the walls and bottom of the excavation according to the STARS Memo#1 Guidelines (STARS Memo#1). The samples will be analyzed by EPA methods 8260 (VOCs) and 8270 (BNA) totals. All sample results will be compared to the NYSDEC TAGM 4046 (TAGM 4046), as amended Dec 20, 2000, Recommend Soil Cleanup Objectives to determine if the appropriate levels of remediation has been met.

Selected soil samples will also be analyzed for the presence of Polychlorinated Biphenyls (PCBs) using EPA 8080.

The locations of all samples will be determined in the field by the field engineer in coordination with NYSDEC representatives.

3.3 Backfill of Excavation

If impacted soil is left remaining in the excavation; for example, at the property boundaries, the excavation will be lined with plastic prior to placing gravel backfill. These measures will be taken to prevent recontaminating the backfill material.

3.4 Groundwater Remediation

Impacted groundwater will be pumped from open excavation into a tanker truck. The water will then be removed off-site for treatment and disposal. The excavation is intended to remove the source of the impact and is not intended to serve as means for groundwater remediation.

3.5 Groundwater Sampling

Groundwater samples will be collected from the open excavation and analyzed by EPA 624 (VOCs) and EPA 625 (BNAs). All results will be compared to the TAGM 4046 Groundwater Standards. Groundwater samples will be collected from a temporary sump in the open excavation by using a vacuum pump with polyethylene tubing, and an in-line sampling container.

4.0 QUALITY ASSURANCE

4.1 Closure Sampling

Soil and water samples will be collected by the procedures identified in the Sampling, Analysis & Monitoring Plan (SAMP, 1999) completed for the site by JEE, dated June 23, 1999.

4.2 Laboratory Qualifications and Reporting Requirements

Friends Laboratory Inc., is a contract laboratory that shall be providing analytical services for the project. All analytical reporting will be NYS DEC ASP Category B Deliverables.

4.3 Health & Safety Plan

All excavation work will be completed in compliance with the Excavation and Trenching Safety Procedures included as Appendix B ,and the safety guidelines identified in Site Specific Health and Safety Plan, completed for the site by JEE, dated February 2, 1999.

4.4 Community Air Monitoring Program

Air sampling will be completed during the remedial excavation according to the Community Air Monitoring Program identified in Sampling, Analysis & Monitoring Plan the site, dated June 23, 1999

5.0 REPORTING AND RECOMMENDATIONS

After the analytical results have been received and validated, a Phase III remediation report will be prepared by JEE. This report will include a description of the remediation, including sampling procedures, sample locations, sampling logs, analytical results, data validation reports, waste manifests, quantities removed and disposal receipts for all removed wastes. All sampling results will be compared to the TAGM 4046 Recommend Soil Cleanup Objectives to determine if appropriate levels of remediation has been met.

The remediation report will be forwarded to the NYSDEC for approval as an amendment to the Rod Mill Closure report.

6.0 REFERENCES

1.) Health and Safety Plan, 1999. Site Specific Health and Safety Plan; Jack Eisenbach Engineering, February 2, 1999.

2.) NYSDEC, July 5, 2001. Correspondence from NYSDEC to Jack Eisenbach Engineering., P.C., Dated July 5, 2001.

3.) RETEC, 1997a. "Phase II Investigation of the Former General Cable Manufacturing Site, Rome, New York." July 1997.

4.) Rod Mill Parcel, April 26, 2001. "Rod Mill Parcel Environmental Remediation Closure Report" Prepared by Jack Eisenbach Engineering, P.C., April 26, 2001.

5.) SAMP, 1999. Sampling, Analysis & Monitoring Plan; Jack Eisenbach Engineering, P.C. June 23, 1999.

6.) STARS Memo #1. "STARS Memo #1 Petroleum- contaminated Soil Guidance Policy" Prepared by New York State Department of Environmental Conservation, Division of Construction Management, Bureau of Spill Prevention and Spill Response; Spill Technology and Remediation Series, August 1992.

7.) TAGM 4046. Technical and Administrative Guidance Memorandum: Determination off Soil Cleanup Objectives and Cleanup Levels; O'Toole, Jr., NYSDEC Division of Hazardous Waste Remediation, January 1994.

FIGURE 1

Site Location Map

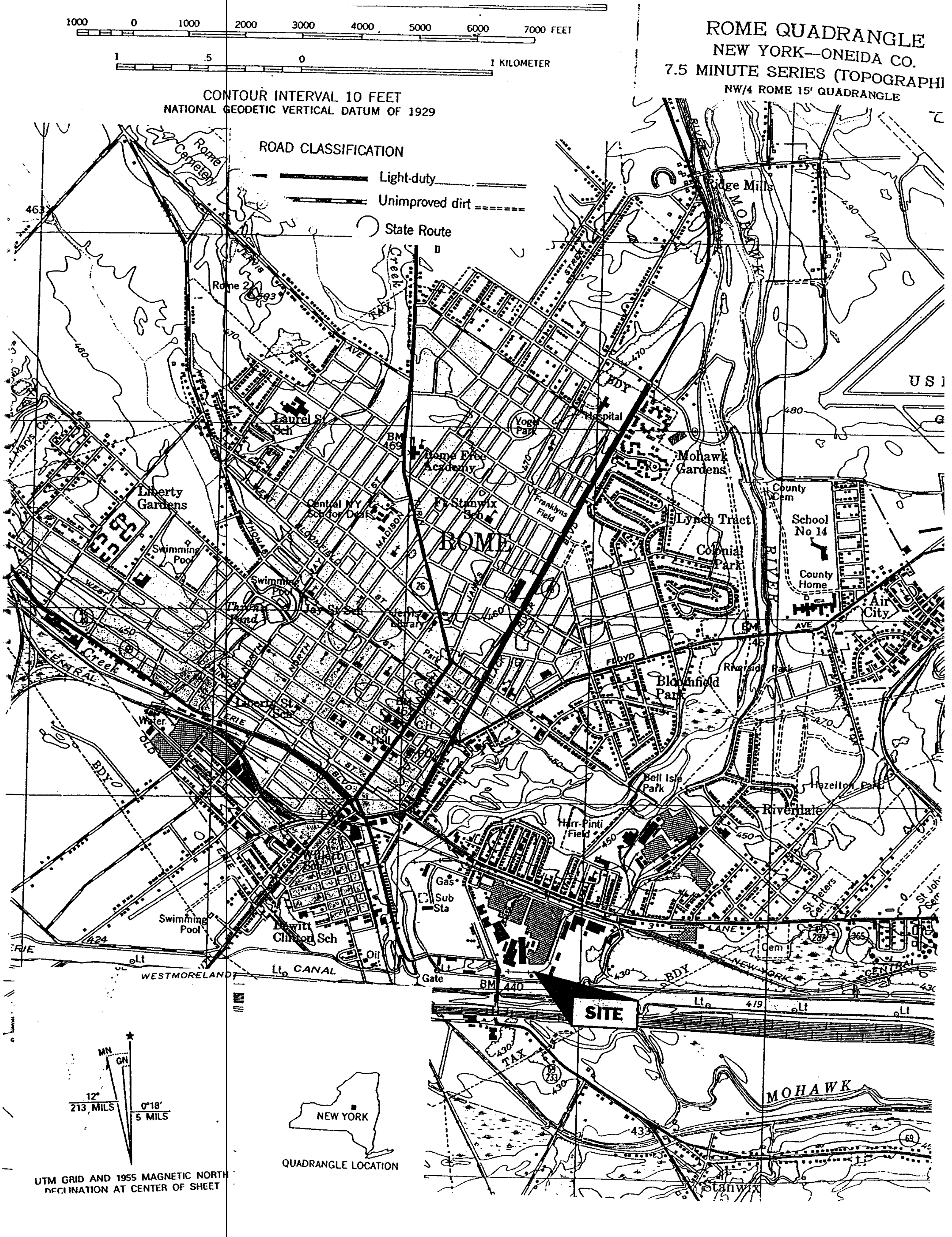
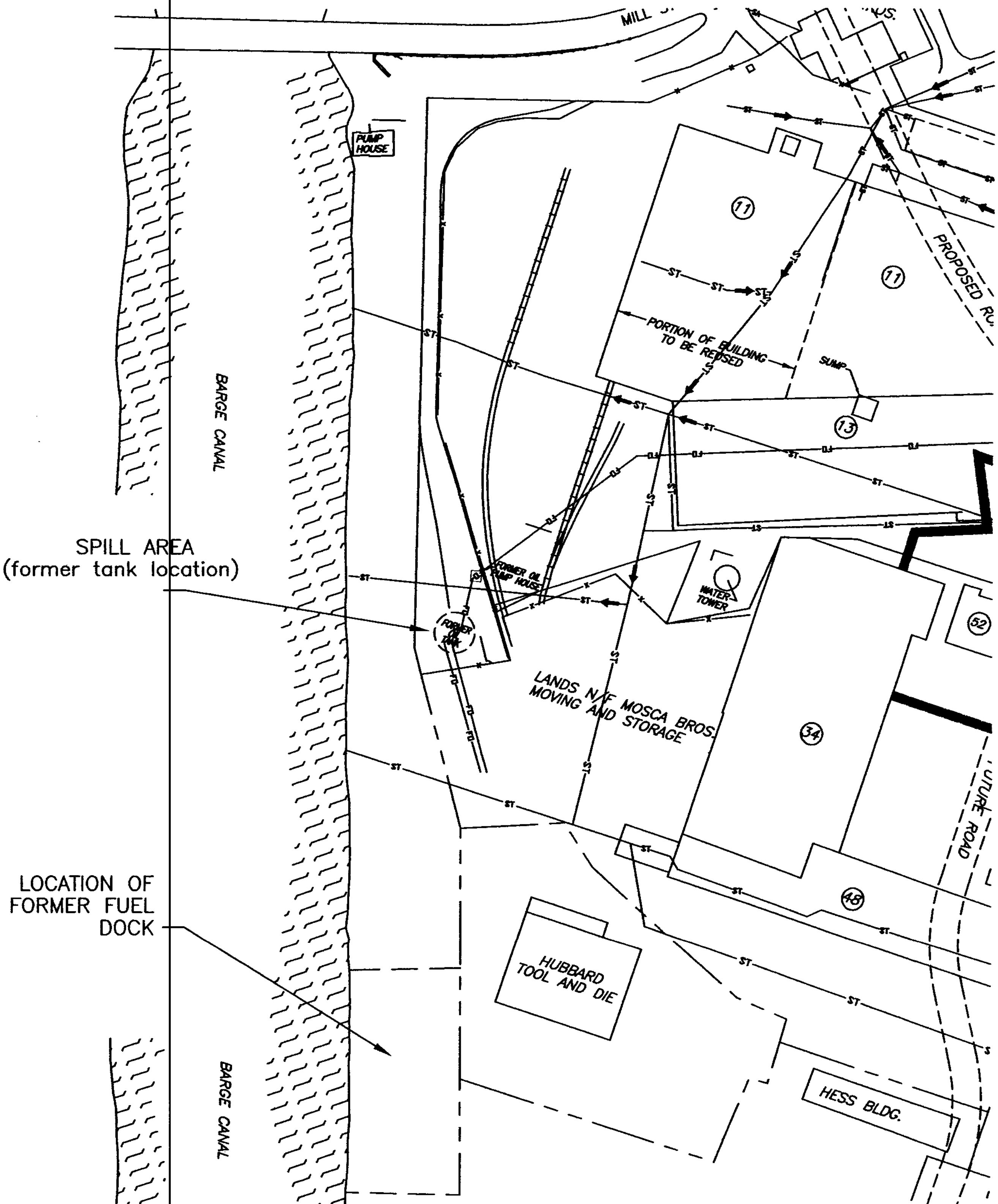

ROME QUADRANGLE
NEW YORK—ONEIDA CO.
7.5 MINUTE SERIES (TOPOGRAPHI
NW/4 ROME 15' QUADRANGLE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
Light-duty
Unimproved dirt
State Route
Rome Cemetery
Rome 2
Laurel St Sch
Rome Free Academy
Liberty Gardens
Swimming Pool
Central NY Sch for Deaf
Ft Stanwix Sch
ROME
Vogel Park
Hospital
Mohawk Gardens
Franklyns Field
Lynch Tract
Colonial Park
County Cem
School No 14
County Home
Air City
Riverside Park
Bloomfield Park
Jay St Sch
Jervis Library
Liberty St Sch
City Hall
Water
Bell Isle Park
Hazelton Park
Riverdale
Harr-Pinti Field
Willett Sch
Gas
Sub Sta
Swimming Pool
Dewitt Clinton Sch
Oil
Gate
CANAL
WESTMORELAND
BM 440
SITE
St Peters Cem
Cem
MOHAWK
Stanwix
Ridge Mills
MN
GN
12°
213 MILS
0°18'
5 MILS
NEW YORK
QUADRANGLE LOCATION
UTM GRID AND 1955 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

FIGURE 2

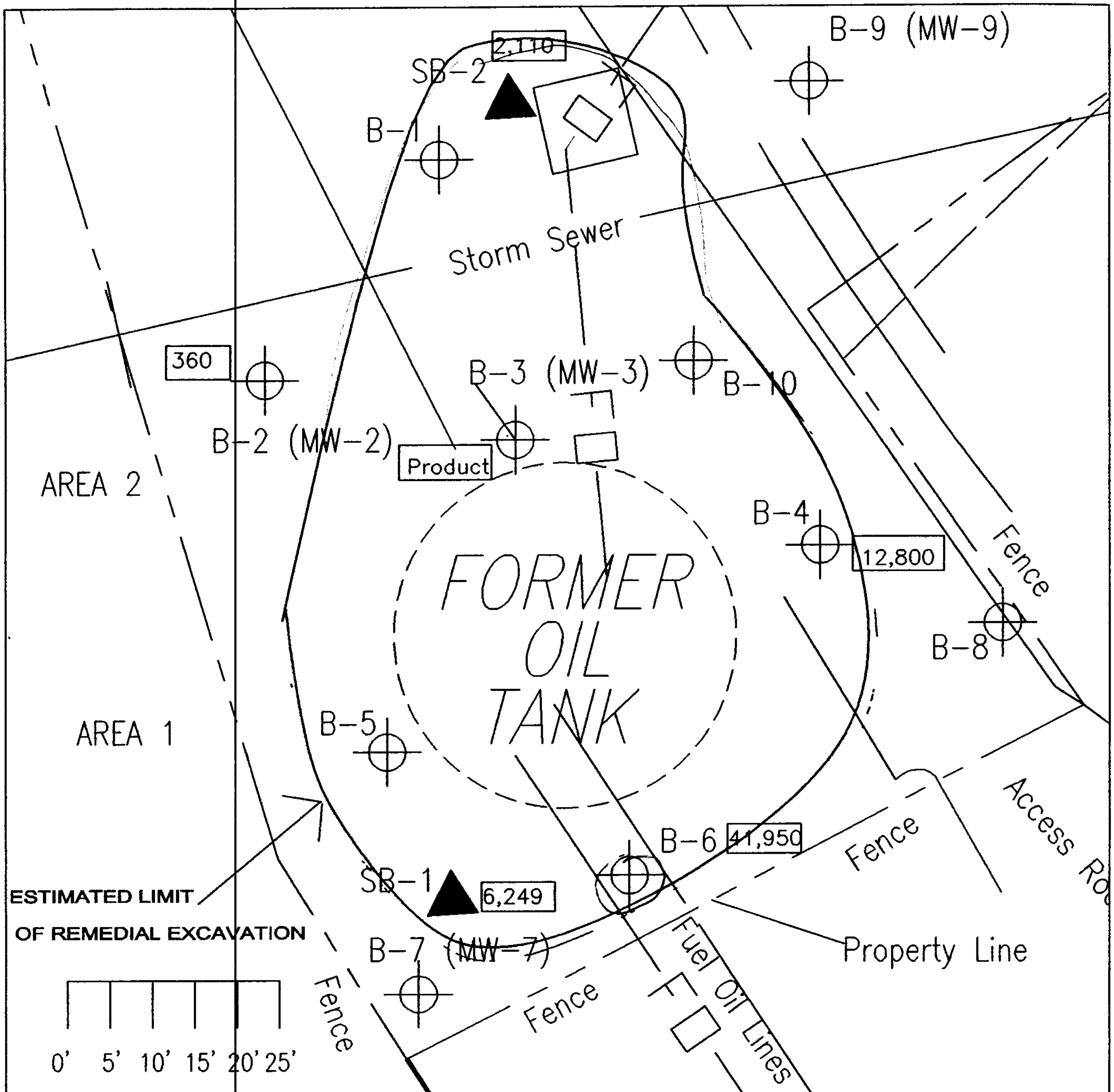
Site Plan



JACK EISENBACH ENGINEERING, P.C. 291 Genesee Street, Utica, NY 13501 315-735-1916 168 Carlton Street, Buffalo, NY 14263 716-882-3903	DATE: 4/25/00 DRAWN: MPR NO.: 1	GENERAL CABLE SITE ROD MILL PARCEL	FIG. 2

FIGURE 3

Remediation Area



KEY:

Soil Boring– SB (Monitoiring Well– MW) Location

Soil Boring by RETEC, 1997 Phase 2

12,800 Conentrations in Soil Sampling (ppb)

SOIL SAMPLING CONCENTRATIONS (ppb)
(SUM OF REPORTED VALUES)

JACK EISENBACH ENGINEERING, P.C. 291 Genesee Street, Utica, NY 13501 315-735-1916 168 Carlton Street, Buffalo, NY 14263 716-882-3903	DATE: 11/13/01 DRAWN: MPR NO.: 8514	GENERAL CABLE ROD MILL PARCEL ESTIMATED EXTENT OF SPILL AREA REMEDIAL EXCAVATION

Fig.3

APPENDIX-A

Spill Investigation Report (Text, Tables and Figures only), Extract from JEE Rod Mill Parcel Closure Report, April 26, 2001

PETROLEUM SPILL INVESTIGATION

ROD MILL PACEL
GENERAL CABLE SITE
ROME, NEW YORK
(Index # D6-0001-97-07)

JEE PROJECT NO: 8514

Jack Eisenbach Engineering, P.C.

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PETROLEUM SPILL INVESTIGATION

ROD MILL PACEL
GENERAL CABLE SITE
ROME, NEW YORK
(Index # D6-0001-97-07)

Prepared For:
NEW YORK STATE DEPARTMENT
OF
ENVIRONMENTAL CONSERVATION

JEE PROJECT NO: 8514

DATE ISSUED: April 26, 2001

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1.0 INTRODUCTION

This Report presents the findings of the Petroleum Spill Investigation ("the Investigation") completed at the Rod Mill Parcel of the portion of the former General Cable Manufacturing site now known as the East Rome Business Park (the "Site"). The Investigation was completed as part of a Voluntary Remedial Agreement (VRA, March 8, 1999), Index #D6-0001-97-07 between Charles Gaetano ("Owner") and the New York State Department of Environmental Conservation ("Department"). The required work for the Investigation is identified in the *Remedial Action Work Plan, Rod Mill Parcel* (Work Plan, May 5, 1998), attached to the VRA as Exhibit "F" and the *General Cable Site, Rod Mill Parcel Petroleum Spill Investigation Work Plan* (Revision # 1, April 26, 2000) approved by the Department in its letter to Jack Eisenbach Engineering, P.C. ("JEE"), dated May 2, 2000.

The purpose of the Investigation was to determine the nature and extent of the previously discovered petroleum spill, and to determine if an adjacent storm water line was acting as a conduit for migration of the spill. The spill was originally discovered in 1997 during soil borings of a Phase II Investigation completed by Remediation Technologies (RETEC,1997). The spill was identified in the area of a former 150,000-gallon (fuel oil) aboveground storage tank (AST). The sampling results from RETEC's Phase II revealed no petroleum compounds above the Department's STARS Memo #1 Guidance Values (STARS).

STARS Guidance Values are the criteria (standards) for evaluation of all soil and groundwater sampling completed for the Investigation. All results have been tabulated and are included herein for the Department's review.

2.0 REPORT ORGANIZATION

The remainder of this Report is organized as follows:

- Section 3.0 summarizes previous investigations.
- Section 4.0 outlines the scope of work and the investigation procedures.
- Section 5.0 presents the results of the field observations.
- Section 6.0 presents the results of the sample analysis.
- Section 7.0 lists JEE's conclusions and recommendations.
- Section 8.0 lists the references cited.

3.0 PREVIOUS INVESTIGATIONS

In 1997, Remediation Technologies performed a Phase II investigation for the Old General Cable Site. During this investigation, two soil borings (SB-1 and SB-2) were installed in the area of the former 150,000 gallon aboveground tank (AST) and a petroleum spill was discovered. Soil samples were collected from each of the borings and analyzed (see Appendix CA for boring RETEC'S plan and sample results). The sample results revealed no compounds in excess of the STARS Memo #1 Guidance Values for fuel oil contaminated soils.

4.0 INVESTIGATION PROCEDURES

Refer to Figures C1& C2. C1 is the Site Location Plan and C2 is the Site Plan showing the Area of Investigation.

4.1 Soil Boring Installation

A total of ten (10) soil borings were installed throughout the Site (see Figure C3). The borings were installed using a track mounted Geo Probe rig. The borings were advanced in 4 foot intervals using 2-inch push rod sampling with macro-core lined tube samplers. All liners were disposed of after each use and all sampling tubes were decontaminated with an Alconox detergent solution between uses.

4.2 Soil Assessment

During the installation of the soil borings, the soil was field screened for the presence of petroleum odors, staining, and volatile organic compounds (VOCs) using a PID[1]. All PID readings and field observations were recorded in the boring logs (see Appendix CB).

4.3 Soil Sample Collection

Soil samples were collected from Borings B-2, B-4 and B-6. The samples were collected from depths revealing the highest PID readings or heaviest staining. When no PID readings or staining was observed, samples were collected from soil in contact with the groundwater table (capillary fringe zone). All soil samples collected were placed on ice and delivered to the laboratory via chain of custody.

All sample collection was in accordance with the Department approved Petroleum Spill Investigation Work Plan (Revision # 1, April 26, 2000) and the Sampling Analysis and Monitoring Plan (SAMP, 1999). Sampling, including collection of Field Replicate Samples, Rinsate Blanks, Field Blanks, Blank Samples, and Field Duplicates were collected to provide for NYS DEC ASP Category B deliverables.

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[1] PID-Photoionization detector, used for detection of volatile organic compounds (11.7eV lamp)

4.4 Temporary Monitoring Well Installation

A total of four (4) temporary 1-inch PVC, 0.010-inch slotted screened, monitoring wells were installed in Borings B-2, B-3, B-7 and B-9. Each well was 20-feet deep with a 1/2 inch sand pack and finished with a bentonite clay seal at the surface.

The monitoring wells were developed by using a peristaltic pump and purging a minimum of three volumes of water until the water being removed had no visible silt loading or discoloration.

4.5 Groundwater Assessment

Groundwater observations were made by using clear PVC hand bailers to collect a water sample for visual inspection. Notes were recorded on color, presence of product or sheen (see Appendix CC for field logs).

The depth to groundwater was measured, surveyed and plotted as a groundwater contour map to determine direction of movement. Groundwater is discussed in detail in Section 5.2.

4.6 Groundwater Sampling

Groundwater samples were collected during the Investigation by two means. The first method was by collection of water through the temporary monitoring wells using a peristaltic pump and designated drop tubing. Water samples from MW-3 (B-3), MW-7 (B-7) and MW-9 (B-9) were collected using this method.

The other method was by collecting water from a boring by advancing a stainless steel retractable well point. The point is advanced down to below the water table and then casing surrounding the screen is retracted. The water is pumped until no visual sediment loading is present and then a sample is collected. Samples from B-1, B-5, and B-8 were collected using the second method. The well point was decontaminated with Alconox soap solution between uses.

5.0 FIELD OBSERVATIONS

5.1 Geology

During the installation of the soil borings, the soil of the Site was observed to consist of brown and gray clays that ranged from 4 to 12-feet below ground surface (bgs). From 12 to 16 feet bgs, the clay begins to mix with silt and small fine gravel. The area 17 to 20-feet bgs consists of wet, medium to coarse gravel and sand. Refer to Appendix CB for details in the Boring Logs.

Fill material consisting of brick and concrete were observed in the upper layers between 0 to 4-feet bgs.

5.2 Hydrology

Groundwater elevations were measured through the temporary wells and plotted as a groundwater contour map. Review of the contours reveals the groundwater to be moving in a northeast direction (see Appendix-CC, Figure CC1). This direction is in contrary to what might be expected for the Site and to the direction of movement established by RETEC in its Phase II investigation of the Site (see Appendix-CC, Figure CC2 for RETEC's Groundwater Map).

JEE believes that the localized fill and underground utilities in the area of the former AST has affected the water levels in the monitoring wells and direction of movement cannot accurately be established with the four (4) well points in this area. RETEC determined the groundwater direction using multiple wells across the Site. The direction established by RETEC, south-southeast, is therefore considered to be more accurate, and for purposes of this report will be considered to be the direction of groundwater movement for the Site.

5.3 Soil Condition

Petroleum impacted soil was observed in all 10 soil borings ranging from a slight petroleum odor with minor staining to strong petroleum odors with the presence of free-phase product in Boring B-3 (refer to Boring logs in Appendix CB for details).

5.4 Groundwater Condition

Groundwater was measured to be approximately 12 to 13 feet below ground surface. Free-phase product was identified in MW-3 (B-3). Petroleum odors and sheen were observed on the groundwater in MW-2 (B-2) and MW-7 (B-7).

<u>6.0 SAMPLE RESULTS</u>

6.1 Soil Sampling

The soil samples were analyzed and reported by Friends Laboratory, Inc. of Waverly, New York. The soil samples were analyzed for STARS Memo #1 Parameters by US EPA Methods 8021(volatile organic compounds) and 8270 base neutrals (semi-volatile organic compounds). All analysis was completed using totals and compared to the STARS Alternative Guidance Values.

Soil sample results from Borings B-2, B-4, and B-6 detected petroleum compounds in each sample in excess of the STARS Memo #1 Alternative Guidance Values. Table C1 is a tabulation of the results and comparison to the STARS values.

6.2 Groundwater Sampling

The groundwater samples were analyzed and reported by Friends Laboratory, Inc. The groundwater samples were analyzed for STARS Memo #1 Parameters by EPA Methods 8021(volatile organic compounds) and 8270 base neutrals (semi-volatile organic compounds). All results were compared to the STARS TCLP Extraction Guidance Values.

Groundwater sample results from Borings B-1, B-3 (MW-3), B-5, B-7 (MW-7), B-8, and B-9 (MW-9) reveal at least one compound in each sample in excess of the STARS TCLP Extraction Guidance Values. Table C2 is a tabulation of the results and comparison to the STARS values.

7.0 CONCLUSIONS AND RECOMMENDATIONS

In order to gain an understanding of the extent of the spill, JEE plotted the total sum of reported values for the soil sampling as Figure C4. Review of this figure reveals petroleum compounds in the highest concentrations directly in the immediate area of the former AST, and in the area of the underground piping. Concentrations at Boring B-2 (adjacent to the storm line) show minimal impact in this area. Based on this, JEE believes that the bedding of the storm line is not significantly acting as a conduit for spill migration, although more investigation is warranted.

Figure C5 is a plotting of the total sum of reported values for the groundwater sampling. Review of this figure reveals petroleum compounds in the highest concentrations at B-3 (MW-3) and this is in the immediate area of the former AST and the area of the underground fuel oil piping.

Based upon field observations and laboratory analysis, JEE has identified the presence of free-phase petroleum product in the immediate vicinity of the former aboveground tank and this is believed to be concentrated in the areas of the underground fuel oil lines. JEE believes, based on the concentrations and locations of samples collected, that the petroleum impact extends beyond the boundary of the Rod Mill Parcel in the eastern direction along the fuel lines.

JEE recommends additional investigation to assess the extent of the petroleum impacts both on and off Site. Once the extent is determined, a remediation plan for the entire impacted area can be developed.

8.0 REFERENCES

1.) Volunteer Remediation Agreement, Index # D6-001097-01, New York State Department of Environmental Conservation, March 8, 1999.

2). *Rememedial Action Work Plan, Rod Mill Parcel,* Jack Eisenbach Engineering, P.C., May 5, 1998.

3.) *Rod Mill Parcel Petroleum Spill Investigation Work Plan*, Jack Eisenbach Engineering, P.C. (Revision #1, April 26, 2000).

4.) *Phase II Investigation of The East Rome Business Park Core Area, Rome, New York,* Remediation Technologies, Inc., July 1997.

5.) New York State Department of Environmental Conservation, Division of Construction Management, Bureau of Spill Prevention and Spill Response; Spill Technology and Remediation Series (STARS) Memo #1, Petroleum-Contaminated Soil Guidance Policy, August 1992.

6.) *Sampling Analysis and Monitoring Plan*, Jack Eisenbach Engineering, P.C., June 23, 1999.

GENERAL CABLE
Table C1
Rod Mill Petroleum Spill Investigation
Soil Sample Results (Totals) Compared to STARS TCLP Alternative Guidance Values

Table C1

Compound	STARS[1] LIMITS	Boring ID (depth) B-2 (15'-16')	B-4R (8'-12')	B-4 (8'-12')	B-6 (12'-16')
EPA METHOD 8021 (ug/kg)					
Benzene	14	U	U	**40**	U
Ethylbenzene	100	U	U	65	U
Toluene	100	U	U	**370**	U
o-Xylene	100	U	U	**190**	U
p-Xylene/ m-Xylene	100	U	U	**540**	U
Isopropylbenzene	100	U	U	U	U
n-Propylbenzene	100	U	U	U	U
p-Isopropytoluene	100	U	U	U	U
1,2,4-Trimethylbenzene	100	U	**1900**	**160**	**5700**
1,3,5-Trimethylbenzene	100	U	**870**	45	U
n-Butylbenzene	100	U	**3400**	23	**7300**
sec-Butylbenzene	100	U	**300**	U	U
tert-Butylbenzene	100	U	U	U	U
4-Isopropyltoluene	100	U	U	U	U
Naphthalene	200	**360**	**4000**	U	**24000**
Metyl-tert-butyl-ether (MTBE)	500	U	U	U	U
EPA METHOD 8270 (ug/kg)					
Naphthalene	200	U	U	U	**580**
Anthracene	1000	U	U	U	310
Fluorene	1000	U	790	U	**1300**
Phenenthrene	1000	U	**1000**	U	**1800**
Pyrene	1000	U	U	U	240 J
Acenaphthene	400	U	**540**	U	**960**
Benzo(a)anthracene	0.04[2]	U	U	U	U
Fluoranthene	1000	U	120 J	U	U
Benzo(b)fluoranthene	0.04[2]	U	U	U	U
Benzo(k)fluoranthene	0.04[2]	U	U	U	U
Chrysene	0.04[2]	U	U	U	U
Benzo(a)pyrene	0.04[2]	U	U	U	U
Benzo(g,h,I)perylene	0.04[2]	U	U	U	U
Indeno(1,2,3-cd)pyrene	0.04[2]	U	U	U	U
Dibenzo(a,h)anthracene	1000	U	U	U	U
Sum of Reported Values		**360**	**12800**	**1433**	**41950**

U - None Detected
N/A - Not Available/Not Applicable
J - result estimated below the quantitation limit
[1] - NYSDEC Spill Technology and Remediation Series (STARS) Memo #1, Petroleum- Contaminated Soil Guidance Policy, August 1992, TCLP Alternative Guidance Values
[2] - Due to the high detection limit for a solid matrix, the TCLP Extraxtion Method must be used to demonstrtate groundwater quality protection for these compounds
BOLDFACE values exceed regulatory limits
(ug/kg) - micrograms per kilogram (equivalent to parts per billion)

GENERAL CABLE
Table C2
Rod Mill Petroleum Spill Investigation
Groundwater Sample Results Compared to STARS TCLP Extraction Guidance Values

Table C2

Boring ID (MW ID)

Compound	STARS[1] LIMITS	B-1	B-3 (MW-3)	B-5	B-7 (MW-7)	B-8	B-9 (MW-9)	B-9R (MW-9R)
EPA METHOD 8021 (µg/L)								
Benzene	0.7	U	U	U	U	U	U	U
Ethylbenzene	5	U	U	U	U	U	U	U
Toluene	5	U	U	U	U	U	U	U
o-Xylene	5	U	U	U	U	U	U	U
p-Xylene/ m-Xylene	5	U	U	U	U	U	U	U
Isopropylbenzene	5	U	U	U	U	U	1	U
n-Propylbenzene	5	U	U	U	U	U	2	U
p-Isopropytoluene	5	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	5	U	U	**19**	**18**	**5**	**11**	2
1,3,5-Trimethylbenzene	5	U	U	**11**	U	2	3	U
n-Butylbenzene	5	1	U	**35**	**13**	**5**	**19**	3
sec-Butylbenzene	5	U	U	U	U	U	**9**	U
tert-Butylbenzene	5	U	U	U	U	U	U	U
4-Isopropyltoluene	5	U	U	U	U	U	2	U
Naphthalene	10	**23**	**39**	**95**	**36**	U	**38**	2
Metyl-tert-butyl-ether (MTBE)	50	U	U	U	U	U	U	U
EPA METHOD 8270 (µg/L)								
Naphthalene	10	U	**400**	U	**26**	U	U	U
Anthracene	50	U	**200**	U	U	U	U	U
Fluorene	50	U	**680**	U	7	U	U	U
Phenenthrene	50	U	**1400**	U	U	U	U	U
Pyrene	50	U	**190**	U	U	U	U	U
Acenaphthene	20	U	**560**	U	U	U	U	U
Benzo(a)anthracene	0.002[2]	U	U	U	U	U	U	U
Fluoranthene	50	U	**190**	U	U	U	U	U
Benzo(b)fluoranthene	0.002[2]	U	U	U	U	U	U	U
Benzo(k)fluoranthene	0.002[2]	U	U	U	U	U	U	U
Chrysene	0.002[2]	U	U	U	U	U	U	U
Benzo(a)pyrene	0.002[2]	U	U	U	U	U	U	U
Benzo(g,h,l)perylene	0.002[2]	U	U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	0.002[2]	U	U	U	U	U	U	U
Dibenzo(a,h)anthracene	50	U	U	U	U	U	U	U
Sum of Reported Values		**24**	**3659**	**160**	**100**	**12**	**85**	**7**

U - None Detected
N/A - Not Available/Not Applicable
J - result estimated below the quantitation limit
1 - NYSDEC Spill Technology and Remediation Series (STARS) Memo #1, Petroleum- Contaminated Soil Guidance Policy, August 1992, TCLP Extractio
2 - Due to the high detection limit for a solid matrix, the TCLP Extraxtion Method must be used to demonstrtate groundwater quality protection for these com
BOLDFACE values exceed regulatory limits

FIGURE C1

SITE LOCATION MAP

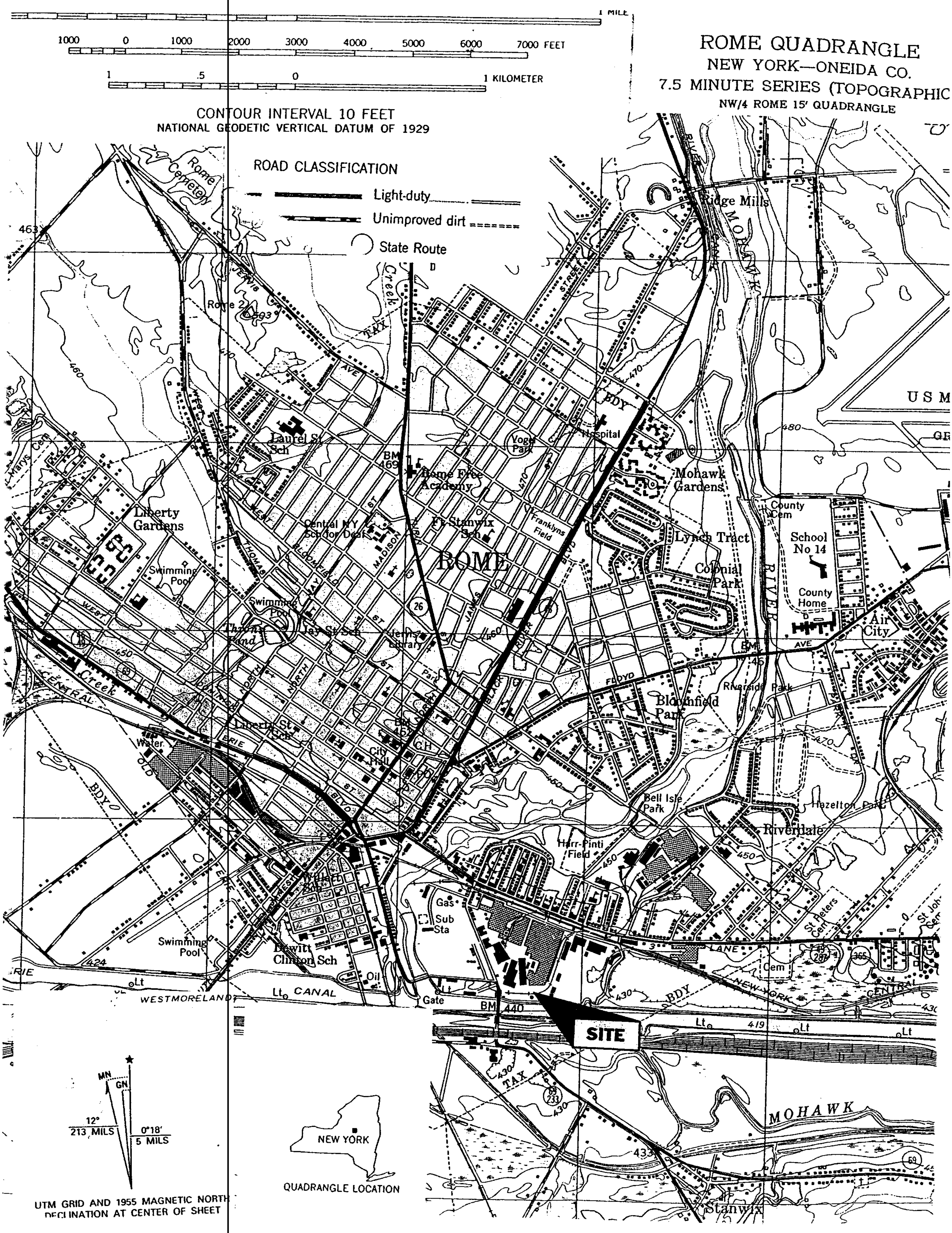
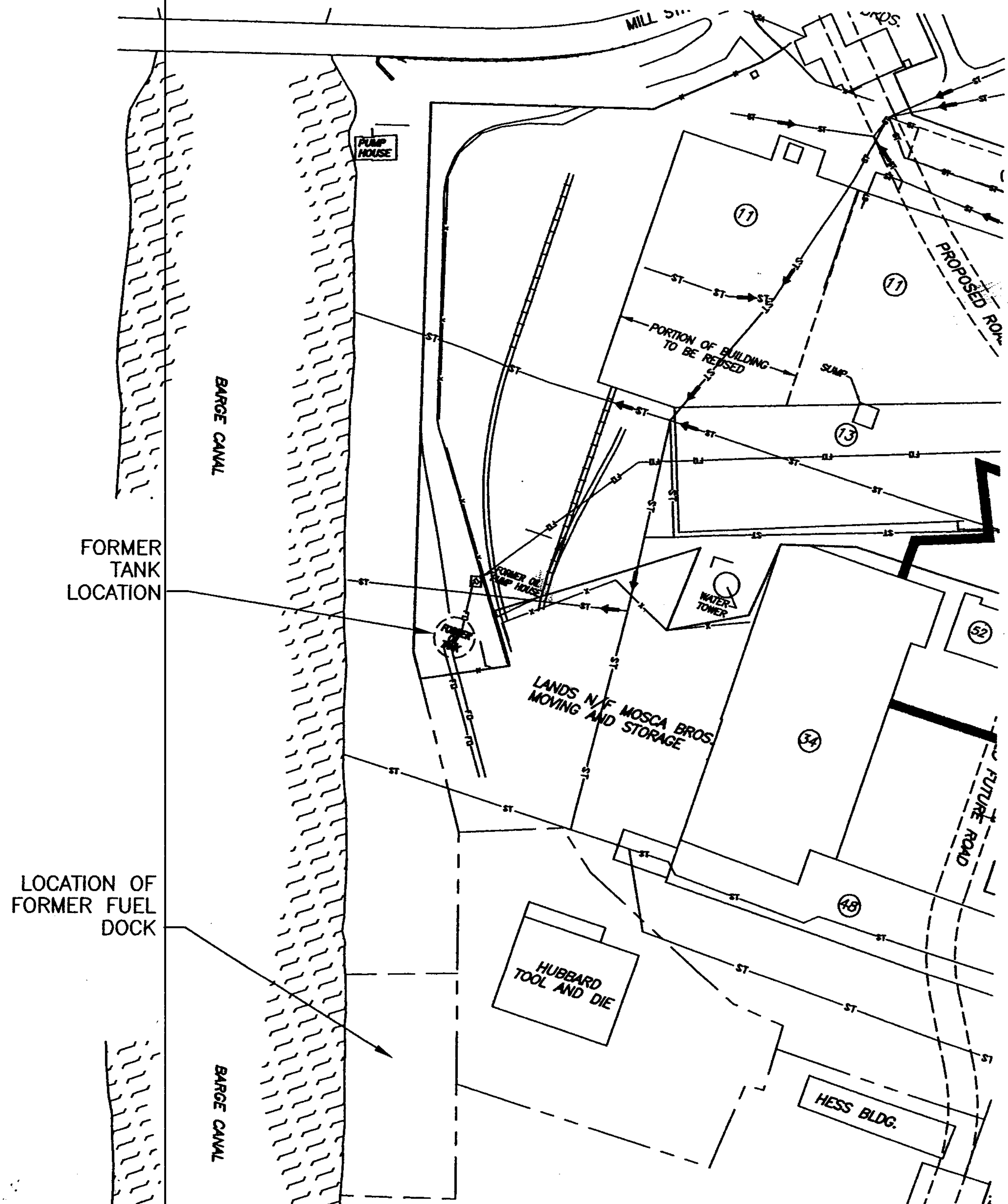

ROME QUADRANGLE
NEW YORK—ONEIDA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC
NW/4 ROME 15' QUADRANGLE
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
Light-duty
Unimproved dirt
State Route
SITE
ROME
Rome Cemetery
Ridge Mills
Laurel St Sch
Rome Free Academy
Vogel Park
Hospital
Mohawk Gardens
Liberty Gardens
Central N Y Sch for Deaf
Ft Stanwix Sch
Franklyns Field
Lynch Tract
Colonial Park
County Cem
School No 14
County Home
Air City
Swimming Pool
Jay St Sch
Jervis Library
Bloomfield Park
Riverside Park
Liberty St Sch
City Hall
Water
Bell Isle Park
Hazelton Park
Riverdale
Harr-Pinti Field
Willett Sch
Gas
Sub Sta
Dewitt Clinton Sch
Oil
Gate
BM 440
CANAL
WESTMORELAND
St Peters Cem
Cem
MOHAWK
RIVER
Stanwix
USM
MN
GN
12°
213 MILS
0°18'
5 MILS
UTM GRID AND 1955 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
NEW YORK
QUADRANGLE LOCATION

FIGURE C2

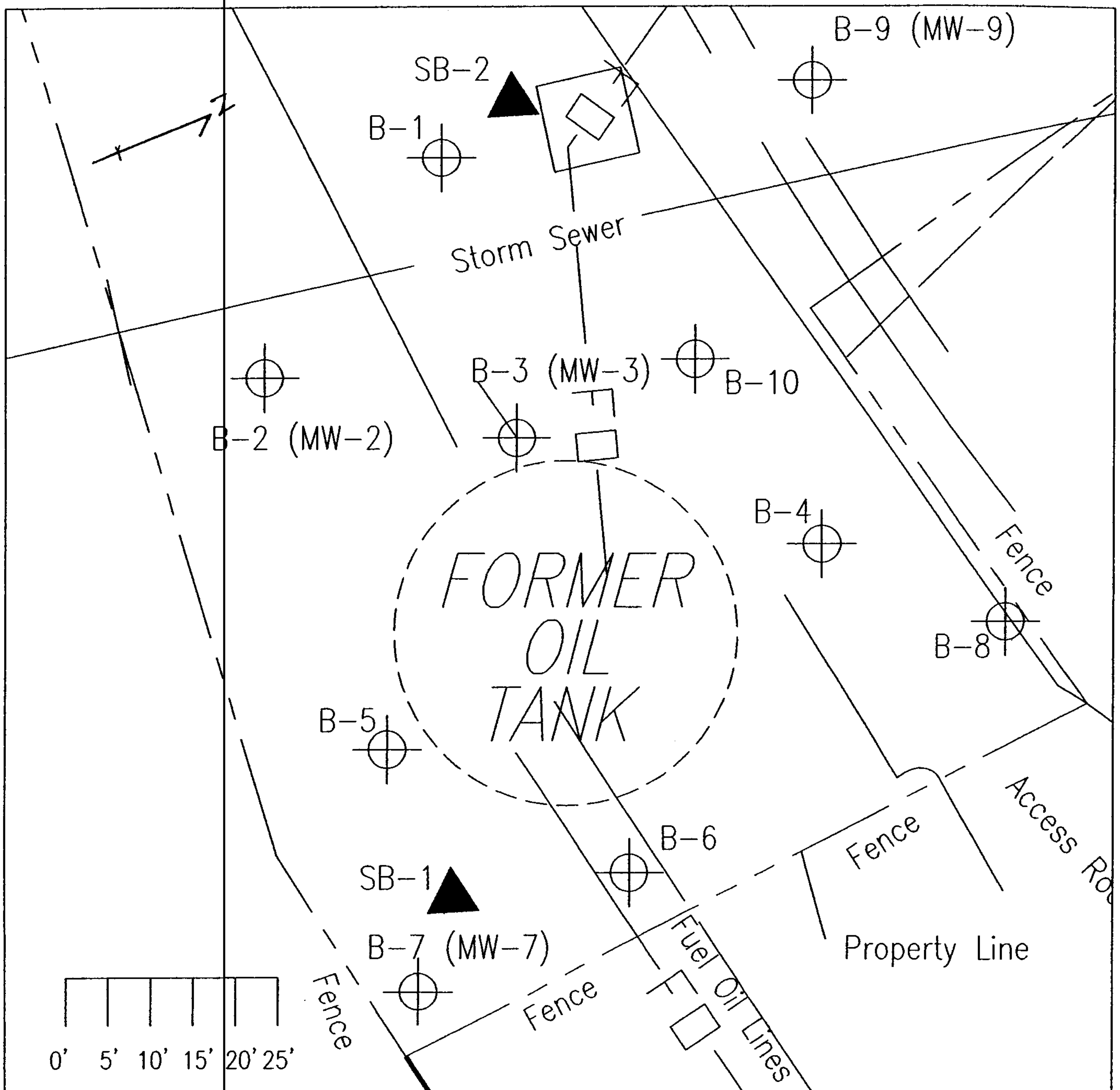
SITE PLAN
SHOWING INVESTIGATION AREA



JACK EISENBACH ENGINEERING, P.C. 291 Genesee Street, Utica, NY 13501 315-735-1916 168 Carlton Street, Buffalo, NY 14263 716-882-3903	DATE: 4/25/00 DRAWN: MPR NO.: 1	GENERAL CABLE SITE ROD MILL PETROLEUM INVESTIGATION SITE PLAN	FIG. C2

FIGURE C3

BORING LOCATION PLAN

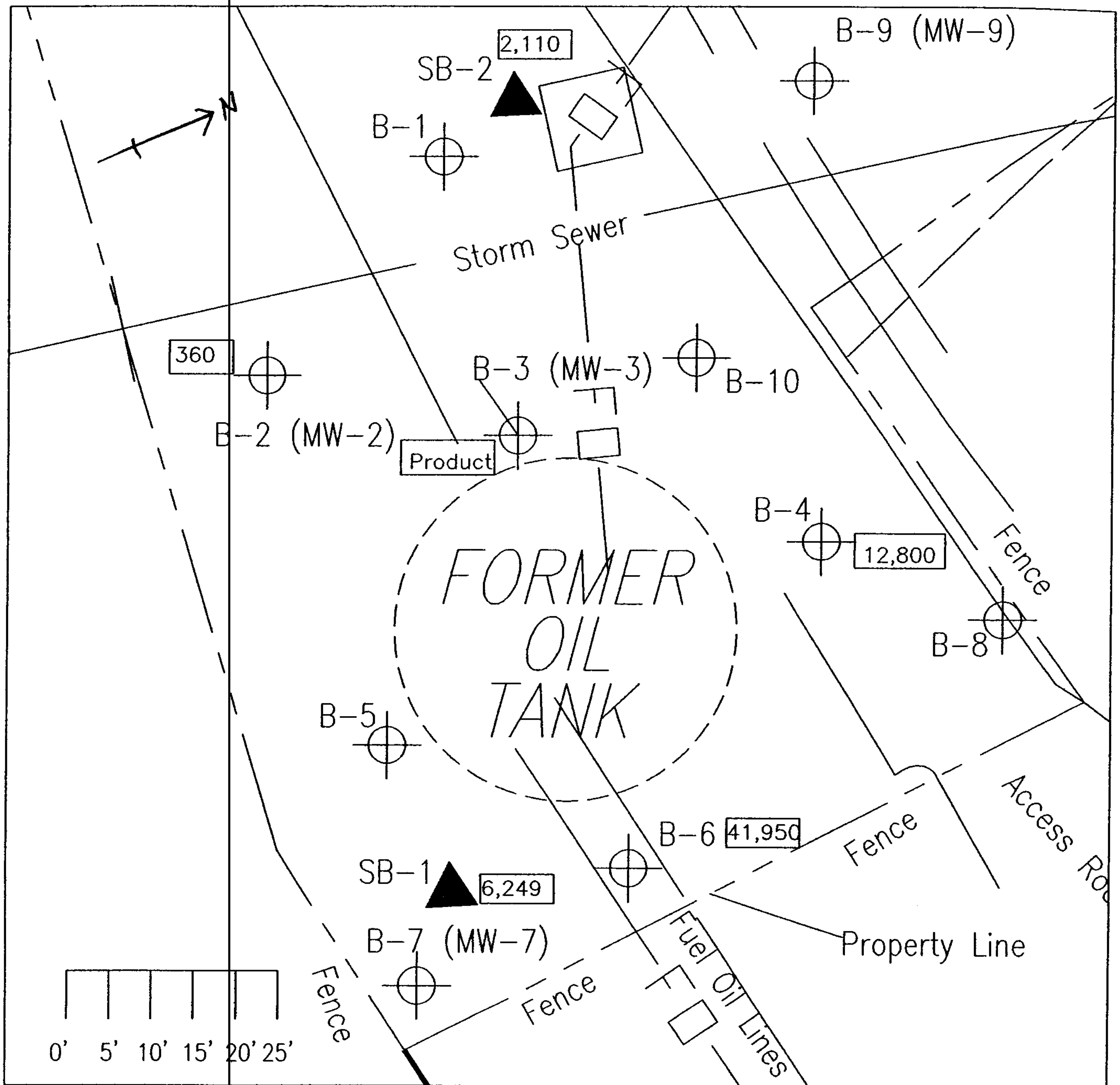


KEY:

Soil Boring– SB (Monitoiring Well– MW) Location

Soil Boring by RETEC, 1997 Phase 2

JACK EISENBACH ENGINEERING, P.C. 291 Genesee Street, Utica, NY 13501 315-735-1916 168 Carlton Street, Buffalo, NY 14263 716-882-3903	DATE: 4/27/01 DRAWN: MPR NO.: 8514	GENERAL CABLE ROD MILL PARCEL SOIL BORING & MONITORING WELL LOCATION PLAN	C3



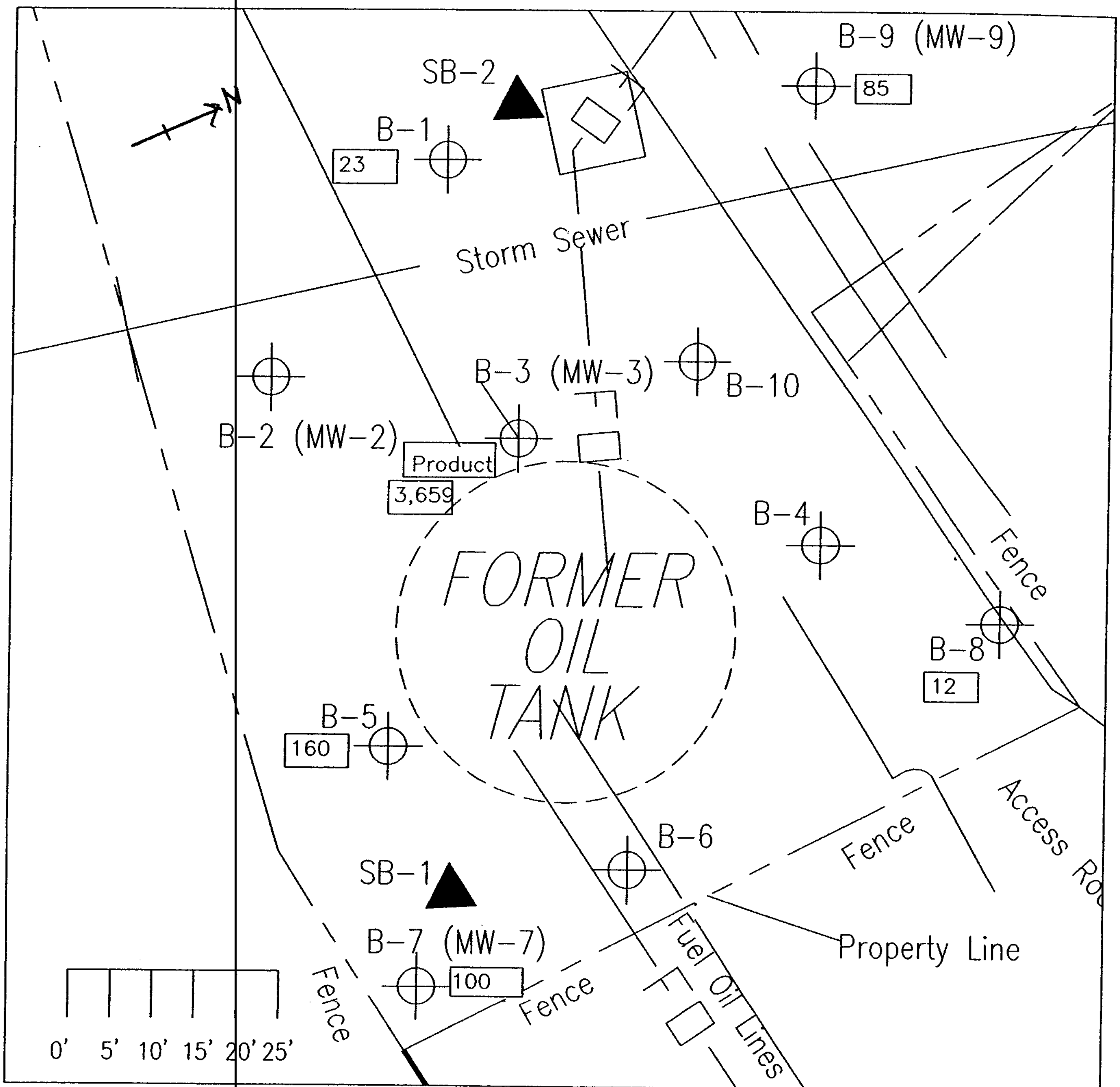
KEY:

Soil Boring– SB (Monitoiring Well– MW) Location

Soil Boring by RETEC, 1997 Phase 2

12,800 Conentrations in Soil Sampling (ppb)

JACK EISENBACH ENGINEERING, P.C. 291 Genesee Street, Utica, NY 13501 315-735-1916 168 Carlton Street, Buffalo, NY 14263 716-882-3903	DATE: 4/27/01 DRAWN: MPR NO.: 8514	GENERAL CABLE ROD MILL PARCEL SOIL SAMPLING CONCENTRATIONS (ppb) (SUM OF REPORTED VALUES)	C4



KEY:

Soil Boring– SB (Monitoiring Well– MW) Location

Soil Boring by RETEC, 1997 Phase 2

12,800 Conentrations in Groundwater Sampling (ppb)

JACK EISENBACH ENGINEERING, P.C. 291 Genesee Street, Utica, NY 13501 315-735-1916 168 Carlton Street, Buffalo, NY 14263 716-882-3903	DATE: 4/27/01 DRAWN: MPR NO.: 8514	**GENERAL CABLE ROD MILL PARCEL** GROUNDWATER SAMPLING CONCENTRATIONS (ppb) (SUM OF REPORTED VALUES)	**C5**

EXCAVATION/TRENCHING OPERATIONS

To purpose is this section is to establish safe operating procedures for excavation/trenching operations at Jack Eisenbach Engineering work sites. Applies to all activity where excavation or trenching operations take place.

Excavations – Any manmade cavity or depression in the earth's surface, including its sides, walls or faces formed by earth removal and producing unsupported earth conditions by reasons of the excavation.

Trench – A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet.

All employees must understand and follow the procedures outlined in this guideline during all excavation and trenching operations.

The Health and Safety Officer (HSC) is responsible for ensuring these procedures are implemented at each work site.

The principle hazards associated with excavation/trenching are:

Suffocation, crushing or other injury from falling material.
Damage/failure of installed underground services and consequent hazards.
Tripping, slipping or falling.
Possibility of explosive, flammable, toxic or oxygen-deficient atmosphere in excavation.

Prior to excavation, determine the presence and location of any underground chemical or utility pipes, electrical, telephone or instrument wire or cables. Identify the location of underground services by stakes or markers.

De-energize or isolate underground services during excavation. If not possible, or location is not definite, method of excavation shall be established to minimize hazards by such means as:

Use of hand tools in area of underground services.
Insulating personnel and equipment from possible electrical contact.
Use tools or equipment that will reduce possibility of damage to underground services and hazard to worker.

Areas to be excavated shall be identified and segregated by means of barricades, ropes and/or signs to prevent access of unauthorized personnel and equipment. Suitable means shall be provided to make barriers visible at all times.

Provide means of diverting surface water from excavation.

Shoring or bracing that may be required for a competent person shall designate installed equipment adjacent to the excavation.

Structural ramps that are used solely by employees as a competent person shall design a means of access or egress from the excavation.

Procedures for doing the excavation are as follows:

Determine the need for shoring/sloping – the type of soil will establish the need for shoring, slope of the excavation, support systems, and equipment to be used. The soil condition may change as the excavation proceeds. Appendices A,B,C,D,E and F of the OSHA Excavation Regulation, 29 CFR 1926 Subpart P (Attachment 1) are to be used in defining shoring and sloping requirements.

Mobile equipments – for safe use of mobile industrial equipment in or near the excavation, the load carrying capacity of soil shall be established and suitable protection against collapse of soil provided by the use of mats, barricades, restricting the location of equipment or shoring.

Excavated material (spoil) shall be stored at least 2 feet from the edge of the excavation.

All trench (vertical sides) excavations greater than 5 feet in depth shall be shored.

Ladders or other means of access/egress to excavations shall be provided at a maximum spacing of 100 feet on the perimeter of open excavations and 25 feet for trench excavations greater than 4 feet in depth.

The excavations shall be inspected daily for changes in conditions. Look for the presence of ground3ater, change in soil condition or effects of weather such as rain or freeze. A safe means of continuing the work shall be established based on changes in condition.

Appropriate monitoring for gas, toxic or flammable materials will be conducted to establish the need for respiratory equipment, ventilation or other measures required to continue the excavation safely.

Adequate means of dewatering the excavation shall be provided as required.

A signal person shall be provided to direct powered equipment if working in the excavation with other personnel.

A signal person shall be provided when backfilling excavations to direct powered equipment working in the excavation with other personnel.

Warning vests will be worn when employees are exposed to public vehicular traffic.

Employees shall stand away from vehicles being loaded or unloaded, and shall not be permitted underneath loads handled by lifting or dragging equipment.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available if hazardous atmospheric conditions exist or may be expected to develop. The specifics will be determined by the HSC/HSM.

Walkways or bridges with standard guardrail shall be provided where employees or equipment are required or permitted to cross over excavations.

NO EMPLOYEE SHALL ENTER AN EXCAVATION, WHICH FAILS TO MEET THE REQUIREMENTS OF THESE GUIDELINES.

#1

TRENCH SAFETY

- Soil Types
  - Trench configuration defined by soil type
    - Type A
    - Type B
    - Type C
    - Stable rock
- Sloping and Benching of Excavation Walls
  - A system of employee protection
  - Soil classification
  - Maximum allowable slopes

Soil Types

- Type A soil
  - Cohesive soil with an unconfined compressive strength of 1.5 ton/sq. ft (TSF) or greater. Examples -
    - clay
    - silty clay
    - sandy clay
    - clay loam
    - cemented (caliche)
    - hard pan soil
  - Soil is not type A if fissured, subject to vibration, or has been previously disturbed

Soil Types

- Type B soil
  - Cohesive soil with an unconfined compressive strength of >0.5 tsf but < 1.5 tsf
  - Certain granular soils including angular gravel, silt, silt loam, and sandy clay loam
  - Previously disturbed soils except type C soil
  - Soil that meets the requirements form type A but is fissured, or subject to vibration
  - dry rock that is not stable

Soil Types

- Type C soil
  - Cohesive soil with an unconfined compressive strength of 0.5 tsf or less.
  - Granular soils including gravel, sand and loamy sand
  - Submerged soil or soil from which water is freely seeping
  - Submerged rock that is not stable
- Stable Rock - natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Identifying Soil Types

- Pocket Penetrometer - OSHA accepts their use for soil classification. Follow the directions that come with the instrument.

- Plasticity Test - Mold a moist sample of the soil into a ball then roll out into a thread about 1\8 inch in diameter without the thread crumbling. If you can do this, the soil is cohesive.

- Thumb Penetration test - On a large clump or undisturbed area of soil, push in your thumb. If great effort is required, then soil is type A. If your thumb easily penetrates several inches, it is type C.

- Dry Strength test - granular soil upon drying breaks up into powder with very little pressure applied. If the soil breaks into clumps and the clumps can only be broken with great difficulty, then the soil

- Testing lab - a soils testing lab can determine the unconfined cohesive strength of the soil

Identifying the Soil Type

- Visual Method
  - Examine the soil in all locations of the excavation
  - Estimate particle size ranges and approximate amounts of each particle size
  - See if the soil stays in clumps. This indicates cohesive soil.
  - Look at the sides of the excavation to check for fissures and cracks.
  - Look at the surrounding area for signs of disturbance and utilities.
  - Look for layers in the sides of the excavation
  - Look for seeping water
  - Look for sources of vibration (nearby road, use of heavy equipment, etc.)

SLOPING AND BENCHING

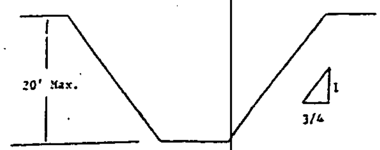
- The type and angle of sloping you make in the excavation depends on the classification of the soil.

- The purpose of the sloping system is to protect employees from cave-ins.

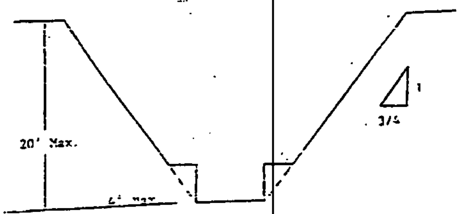
- Excavations greater that 20 feet deep must be designed by a registered professional engineer.

MAXIMUM ALLOWABLE SLOPES

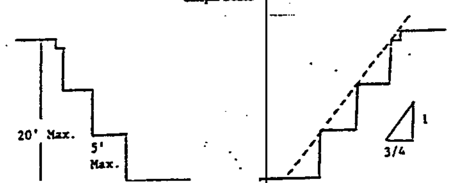
- Type A soil - 3/4 : 1 (53 degrees from the horizontal)



Simple Slope—General

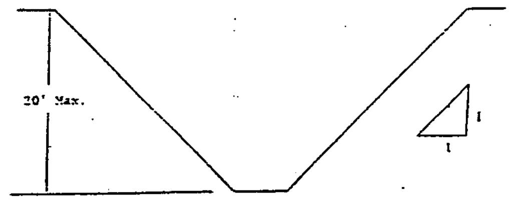


Simple Bench

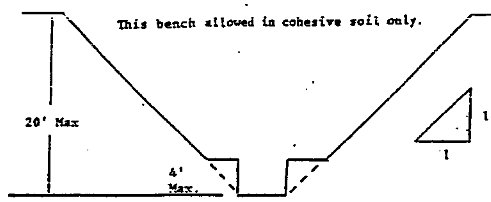


MAXIMUM ALLOWABLE SLOPES

- Type B soil - 1 : 1 (45 degrees from the horizontal)



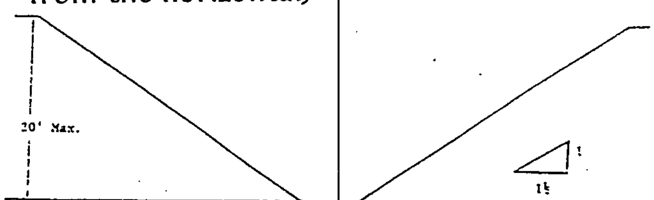
Simple Slope



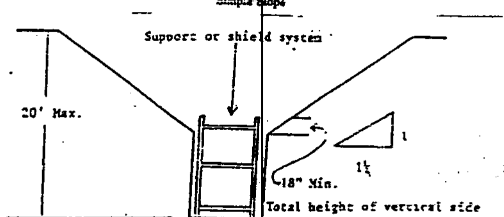
Single Bench

MAXIMUM ALLOWABLE SLOPES

- Type C soil - 1 1/2 : 1 (34 degrees from the horizontal)



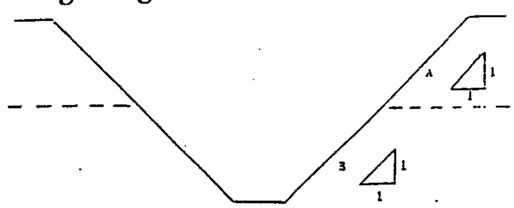
Simple Slope



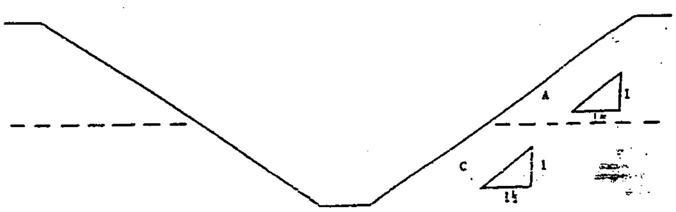
Vertical Sided Lower Portion

MAXIMUM ALLOWABLE SLOPES

- Examples of other types of slope and benching designs



A OVER B



A OVER C

MAXIMUM ALLOWABLE SLOPES

- Examples of other types of slope and benching designs