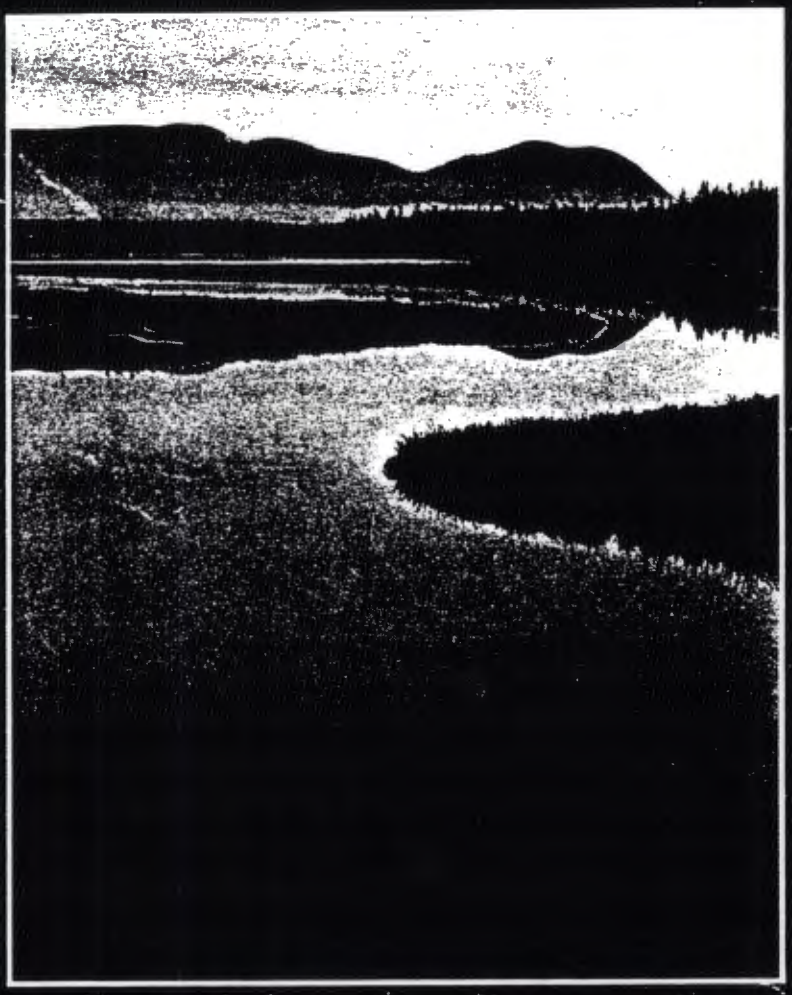

McLaren Hart

REPORT ON PRE-REMEDIAL DESIGN SAMPLING
SYRACUSE CHINA CORPORATION
2900 COURT STREET
SYRACUSE, NEW YORK

REPORT ON PRE-REMEDIAL DESIGN SAMPLING

SYRACUSE CHINA CORPORATION
2900 COURT STREET
SYRACUSE, NEW YORK 13221-4820

Prepared for:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD
ALBANY, NEW YORK 12205

ATTENTION:
MR. WAYNE MIZERAK, P.E.
BUREAU OF ENVIRONMENTAL REMEDIATION

Prepared by:

MCLAREN/HART, INC.
28 MADISON AVENUE EXTENSION
ALBANY, NEW YORK 12203

MCLAREN/HART PROJECT Nº: 14-0802581-001-001

NOVEMBER 19, 1997

Prepared by:

Adrian D. Bilger

Adrian Bilger
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Reviewed by:

Andrew J. Barber

Andrew J. Barber
Principal Environmental Scientist

McLaren-Hart

TABLE OF CONTENTS

FIGURES

TABLES

ATTACHMENT

1.0 INTRODUCTION

This report provides the results of pre-remedial design activities at the Syracuse China Landfill (see Figure 1), conducted during the week of October 27 - 31, 1997. Procedures for field tasks are described in the Pre-Remedial Design Sampling Work Plan, which was approved by the New York State Department of Environmental Conservation (NYSDEC), and are summarized below:

- The area and depth of lead concentrations in the wetland soils was defined using an on-site X-Ray Fluorescence ("XRF") instrument. A total of 66 samples (and one duplicate sample) was taken and analyzed on-site with the XRF. Ten split samples were submitted to an independent laboratory for confirmatory analysis. Results of the on-site and laboratory analysis of soil samples are presented in Table 1.

- Three new monitoring wells were installed to determine the elevation of the water table relative to the bottom of the landfilled waste on the northern edge of the landfill. Two monitoring wells were installed along this northern edge, and one monitoring well was installed upgradient of the landfill to the south inside Syracuse China's main plant fence line. Two full rounds of synoptic water level measurements were collected, including the three new monitoring wells in the network. Water levels taken during this two-week period are presented in Table 2. In addition to the installation of these three new monitoring wells, one existing well that had been previously damaged was repaired by replacing the protective casing and surface seal.

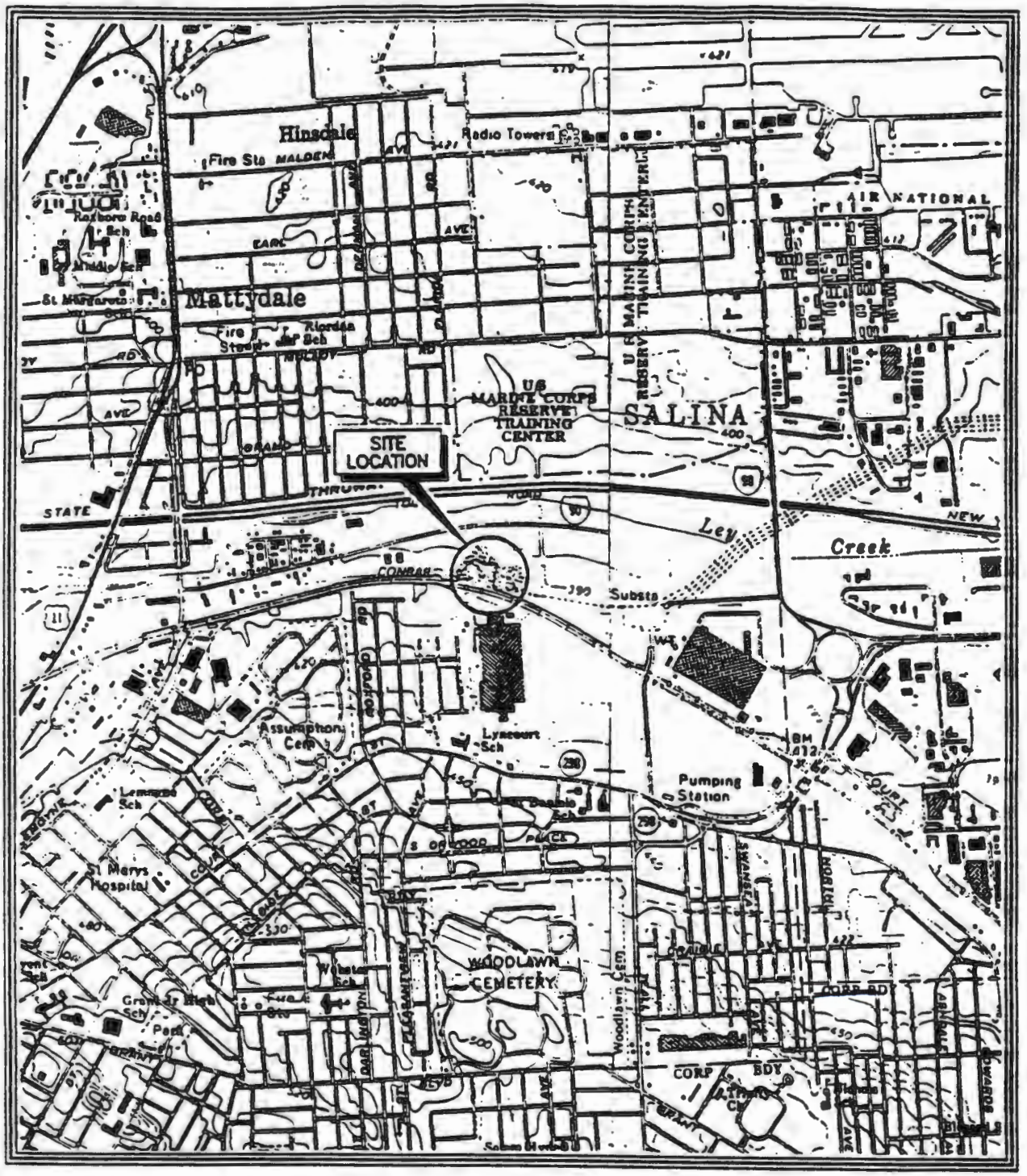


FIGURE 1

McLAREN/HART
ENVIRONMENTAL ENGINEERING CORPORATION
28 Madison Avenue Extension
Albany, NY 12203

SITE LOCATION MAP

SYRACUSE CHINA COMPANY
SYRACUSE CHINA SITE LANDFILL

CITY OF SYRACUSE ONONDAGA COUNTY, NY

DWG NO SYR1 - 9/97

2.0 RESULTS

2.1 Wetland Soil Sampling

Sampling of the wetland soils proceeded in a stepwise manner. Determinations were made in the field with NYSDEC approval as to the locations and depths of samples that were taken. Figure 2 shows the approximate locations of the samples that were collected.

On the first day of sampling, a total of five background samples was collected northwest of the landfill along the southern side of Factory Avenue (west of the landfill access road from Factory Avenue). Results for ambient/background samples are presented in Table 1. A Wildco sediment sampler was first employed, but a change was made to utilize a MacroCore sampler due to the texture of the soil samples. The MacroCore sampler is approximately four feet in length and two inches in diameter.

A fence post driver was used to drive the MacroCore into the ground to a depth of approximately two and one-half feet, depending upon site conditions. The MacroCore was lined with an acetate liner, in which the sample was retained. Once removed from the core barrel, the liner was split open vertically to reveal a profile of the soils recovered from the wetlands. The core was examined, logged, and jarred according to the different depth intervals, (0-6", 6-12", 12-18", 18-24", and 24-30"). These samples were then taken to the on-site laboratory where they were prepared and analyzed. After each use, the MacroCore was decontaminated using laboratory grade detergent and distilled water. Logs of each wetland soil boring are attached.

The sampling efforts next moved to the axis of the drainage pathway through the wetlands. A total of three samples was taken along this axis. From these points, the sampling continued and spread out across the wetlands, as noted on Figure 2.

In a field review of the lead concentrations, it was noted that the highest lead concentrations were detected in a white/gray layer of clay which was encountered at several locations. This layer varied in thickness from two inches to fifteen inches, and ranged in color from an almost pure white to a reddish tan. Some distinguishing features found in this clay layer in a few locations, for example, are clay laminae, plant matter, and some fine sandy zones.

It was noted that the highest lead concentrations were detected in the upper foot of wetland soil; lead concentrations in excess of 100 mg/kg were detected in only three of 22 samples collected below a depth of one foot. These three samples came from the SB-17 and SB-18 locations.

After establishing that the highest lead concentrations correlated with the white clay layer, the areal extent of the clay layer was determined by digging holes at selected locations throughout the wetlands area with a shovel. The white clay layer was detected in the wetlands area bounded to the north by the preferential drainage pathway, to the south by the landfill, to the east by the preferential drainage pathway (except for a small area surrounding boring SB-13), and to the west by the access road to the landfill off of Factory Avenue. The white/gray clay layer was not found to be present west of the access road, or in the other two sample locations east of the drainage pathway. Once the areal extent of the clay layer was determined, several more samples were collected towards the perimeter of the wetlands.

2.2 Hydraulic Monitoring

The hydraulic monitoring portion of this investigation concentrated on supplementing existing water level elevation data with the installation of three additional monitoring wells. During the installation of these new monitoring wells, continuous split-spoon samples were taken in order to determine the elevation of the bottom of landfilled waste in the two northern borings, as well as to define the elevation of the water table at the three locations. In boring MW-08, the bottom of the landfilled waste was reached at four and one-half feet below grade, and the apparent water table was reached at approximately six feet below grade. In boring MW-10, the bottom of the landfilled waste was reached at one and one-half feet below grade, with the apparent water table encountered at five feet below grade. Two rounds of synoptic water levels were taken two weeks apart after development of the wells, and are presented in Table 2. A new water table elevation map was also constructed from the first round of water levels (see Figure 3).

Based on the data and site observations (*e.g.*, trenches) from the Remedial Investigation and the Pre-Remedial Design hydraulic monitoring program, the groundwater is not in contact with the fill material. The results of the hydraulic monitoring data demonstrate that the water table is approximately one and one-half to three and one-half feet below the bottom of the waste.

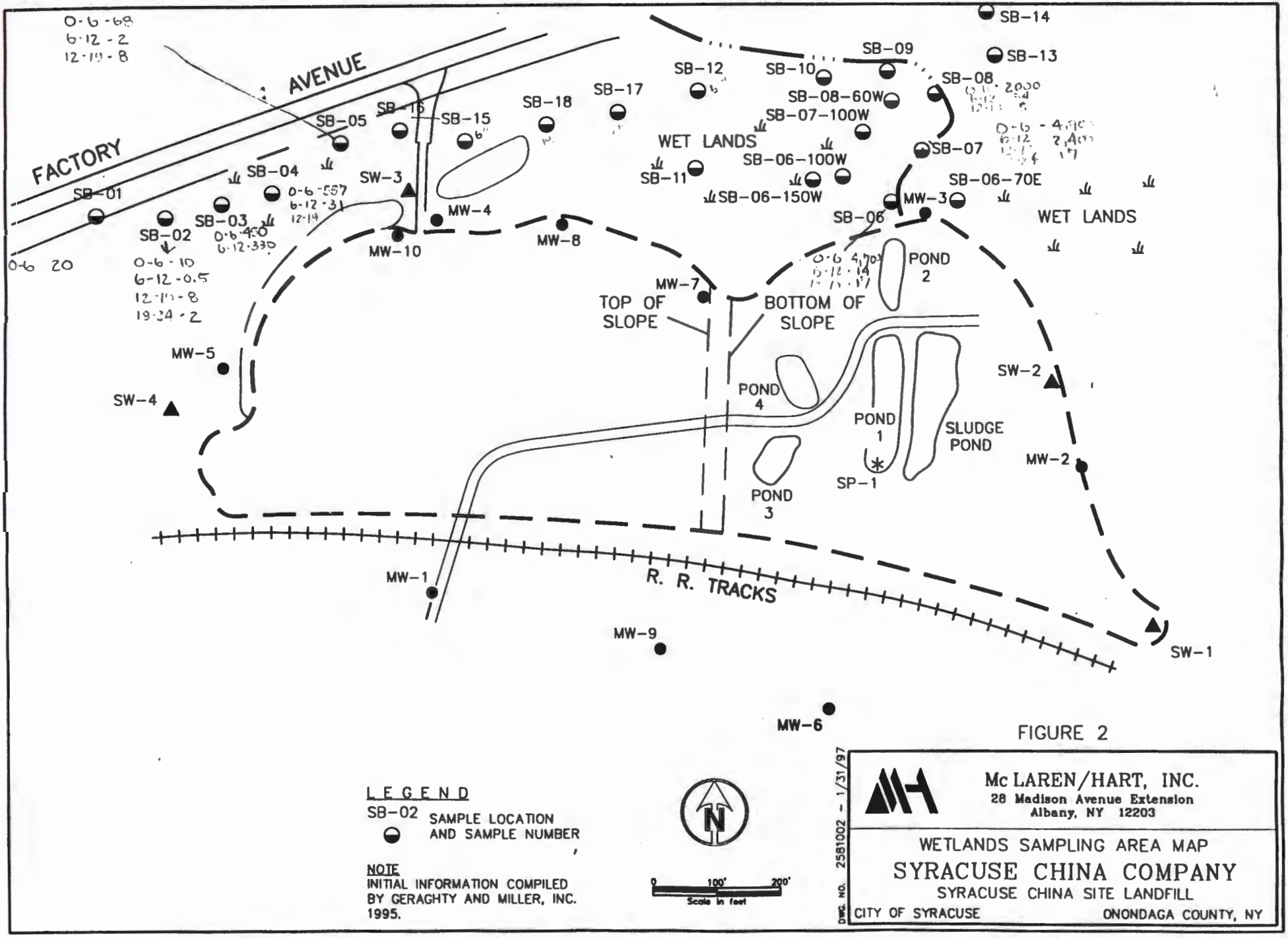


FIGURE 2

LEGEND

SB-02 SAMPLE LOCATION AND SAMPLE NUMBER

NOTE
INITIAL INFORMATION COMPILED BY GERAGHTY AND MILLER, INC. 1995.

0 100' 200'
Scale in feet

Mc LAREN/HART, INC.
28 Madison Avenue Extension
Albany, NY 12203

WETLANDS SAMPLING AREA MAP
SYRACUSE CHINA COMPANY
SYRACUSE CHINA SITE LANDFILL
CITY OF SYRACUSE ONONDAGA COUNTY, NY

DWG. NO. 2581002 - 1/31/97

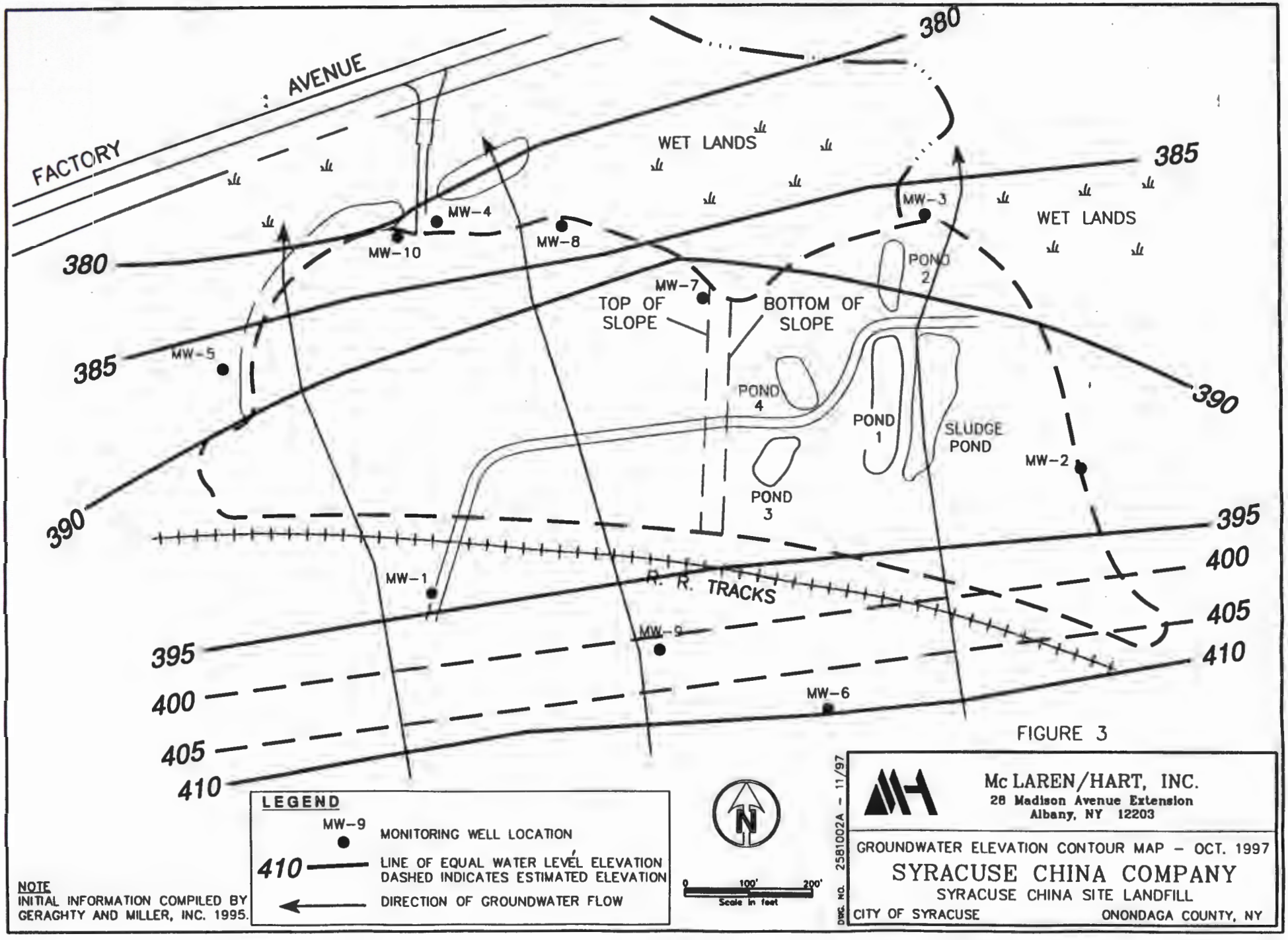

FACTORY
AVENUE
WET LANDS
WET LANDS
380
385
390
395
400
405
410
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
TOP OF SLOPE
BOTTOM OF SLOPE
POND 1
POND 2
POND 3
POND 4
SLUDGE POND
R. R. TRACKS
LEGEND
MW-9 MONITORING WELL LOCATION
410 LINE OF EQUAL WATER LEVEL ELEVATION DASHED INDICATES ESTIMATED ELEVATION
DIRECTION OF GROUNDWATER FLOW
N
0 100' 200'
Scale in feet
NOTE
INITIAL INFORMATION COMPILED BY GERAGHTY AND MILLER, INC. 1995.
DWG. NO. 25810024 - 11/97
Mc LAREN/HART, INC.
28 Madison Avenue Extension
Albany, NY 12203
GROUNDWATER ELEVATION CONTOUR MAP - OCT. 1997
SYRACUSE CHINA COMPANY
SYRACUSE CHINA SITE LANDFILL
CITY OF SYRACUSE
ONONDAGA COUNTY, NY

FIGURE 3

3.0 CONCLUSIONS

Based on the results of the wetland soil sampling and the hydraulic monitoring, the following conclusions can be drawn:

- There is a distinct correlation between the highest lead concentrations and the white clay layer found throughout the wetland area, and the highest lead concentrations are confined to the top one foot of soil.

- The results of the hydraulic monitoring investigation indicate that the water table ranges one and one-half to three and one-half feet below the bottom of landfilled waste. The ROD mentions an upgradient groundwater interceptor trench as a means to lower the water table below the fill. The hydraulic monitoring data, along with visual observations, have determined that groundwater is not in contact with fill material. Therefore, a groundwater interceptor trench or "other appropriate system," beyond the installation of a cap, will not be necessary to prevent leaching of lead into the groundwater.

TABLE 1
SYRACUSE CHINA
Soil Sampling Analytical Results

SAMPLE DATE	SAMPLE ID	LEAD CONCENTRATION (mg/kg)	CONFIRMATORY CONCENTRATION (mg/kg)
10/27/97	SB-01 (0"-6")	20	
10/27/97	SB-02 (12"-18")	8	
10/27/97	SB-02 (0"-6")	10	9.2
10/27/97	SB-05 (12"-18")	8	
10/27/97	SB-05 (6"-12")	2	
10/27/97	SB-02 (18"-24")	2	
10/27/97	SB-02 (6"-12")	0.5	
10/27/97	SB-04 (6"-12")	31	33.5
10/27/97	SB-03 (0"-6")	450	464
10/27/97	SB-05 (0"-6")	68	
10/27/97	SB-04 (0"-6")	557	617
10/28/97	SB06 (0"-6")	4700	
10/28/97	SB06 (6"-12")	330	51.3
10/28/97	SB06 (12"-18")	14	
10/28/97	SB06 (18"-24")	17	
10/28/97	SB07 (0"-6")	1200	4900
10/28/97	SB07 (6"-12")	2400	
10/28/97	SB07 (12"-18")	17	

TABLE 1
SYRACUSE CHINA
Soil Sampling Analytical Results

SAMPLE DATE	SAMPLE ID	LEAD CONCENTRATION (mg/kg)	CONFIRMATORY CONCENTRATION (mg/kg)
10/28/97	SB08 (0"-6")	2000	
10/28/97	SB08 (6"-12")	34	
10/28/97	SB08 (12"-18")	5	
10/28/97	SB08 (18"-24")	16	
10/28/97	SB06-100W (0"-6")	3800	
10/28/97	SB06-100W (6"-12")	1700	
10/28/97	SB06-70E (0"-6")	1800	
10/28/97	SB06-70E (6"-12")	26	
10/28/97	SB09 (0"-6")	4200	
10/28/97	SB09 (6"-12")	7000	
10/28/97	SB10 (0"-6")	4800	
10/28/97	SB10 (6"-12")	9000	
10/28/97	SB08-60W (0"-6")	6100	
10/28/97	SB08-60W (6"-12")	7500	
10/28/97	SB08-60W (12"-18")	46	
10/28/97	SB06-70EDUP (0"-6")	2700	
10/28/97	SB07-100W (0"-6")	8200	
10/28/97	SB07-100W (6"-12")	12	

TABLE 1
SYRACUSE CHINA
Soil Sampling Analytical Results

SAMPLE DATE	SAMPLE ID	LEAD CONCENTRATION (mg/kg)	CONFIRMATORY CONCENTRATION (mg/kg)
10/28/97	SB06-150W (0"-6")	9400	
10/28/97	SB06-150W (6"-12")	52	
10/28/97	SB06-150W (12"-18")	16	
10/28/97	SB06-150W (18"-24")	13	
10/29/97	SB11 (0"-6")	16000	13600
10/29/97	SB11 (6"-12")	30	
10/29/97	SB11 (12"-18")	4	
10/29/97	SB12 (0"-6")	370	235
10/29/97	SB12 (6"-12")	11	
10/29/97	SB12 (12"-18")	11	
10/29/97	SB13 (0"-6")	6600	
10/29/97	SB13 (6"-12")	260	
10/29/97	SB13 (12"-18")	31	
10/29/97	SB13 (18"-24")	15	
10/29/97	SB14 (0"-6")	4500	
10/29/97	SB14 (6"-12")	46	
10/29/97	SB14 (12"-18")	16	
10/29/97	SB15 (0"-6")	1900	

TABLE 1
SYRACUSE CHINA
Soil Sampling Analytical Results

SAMPLE DATE	SAMPLE ID	LEAD CONCENTRATION (mg/kg)	CONFIRMATORY CONCENTRATION (mg/kg)
10/29/97	SB15 (6"-12")	29	
10/29/97	SB15 (12"-18")	25	
10/29/97	SB16 (0"-6")	24	10.4
10/29/97	SB16 (6"-12")	13	
10/29/97	SB16 (12"-18")	13	
10/29/97	SB17 (0"-6")	2100	1090
10/29/97	SB17 (6"-12")	5100	
10/29/97	SB17 (12"-18")	3500	
10/29/97	SB17 (18"-24")	790	
10/29/97	SB18 (0"-6")	6900	
10/29/97	SB18 (6"-12")	2500	
10/29/97	SB18 (12"-18")	4000	
10/29/97	SB18 (18"-24")	63	

TABLE 2
SYRACUSE CHINA
Water Level Elevations

WELL ID	TOTAL SOUNDED DEPTH	WATER LEVEL 10/31/97 (BLS)	WATER LEVEL ELEVATION 10/31/97	WATER LEVEL 11/17/97 (BLS)	WATER LEVEL ELEVATION 11/17/97	STICK-UP
MW-1	24.48'	19.07'	394.71'	20.62'	393.16'	2.26'
MW-2	13.10'	2.49'	392.35'	4.06'	390.78'	2.40'
MW-3	12.13'	0.92'	386.91'	3.81'	384.02'	3.00'
MW-4	13.33'	2.66'	382.93'	4.93'	380.66'	2.60'
MW-4I	20.02'	1.52'	383.88'	2.84'	382.56'	1.42'
MW-5	13.40'	2.77'	387.63'	5.38'	385.02'	3.22'
MW-6	15.50'	3.06'	410.13'	6.94'	408.67'	2.50'
MW-7	17.20'	3.53'	391.14'	4.07'	390.60'	1.36'
MW-8	16.81'	4.89'	382.07'	6.67'	382.20'	1.88'
MW-9	27.43'	--	--	20.59'	393.84'	1.93'
MW-10	14.59'	3.06'	380.18'	5.19'	380.50'	2.40'

-- Measurement not taken.

ATTACHMENT 1
SOIL BORING LOGS

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB01				
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY			
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger				
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY				
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/27/97-10/27/97	
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.	SCREEN: TYPE	MAT.	LENGTH DIA. SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE DATE
REMARKS: **Used to establish background concentrations.**				

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown peat, moist. Sediment sample collected at 0-6".				
					0.5				
					Brown silty sand, moist.				
1									
					2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

BORING/WELL NO.: SB02				
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY			
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger				
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY				
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/27/97-10/27/97	
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.	SCREEN: TYPE	MAT.	LENGTH DIA. SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE DATE

REMARKS: **Used to establish background concentrations.**

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown peat, wet. Sediment sample collected at 0-6".				
					0.5 Brown silty sand, moist. Sediment sample collected at 6-12".				
1					Sediment sample collected at 12-18".				
					Sediment sample collected at 18-24".				
					2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB03
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/27/97-10/27/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	/
REMARKS:	Used to establish background concentrations.

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown peat, wet. Sediment sample collected at 0-6".				
					0.5				
					Brown silty sand, moist.				
1									
					2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China
Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay
Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB04
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/27/97-10/27/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	

REMARKS: **Used to establish background concentrations.**

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown peat, wet. Sediment sample collected at 0-6". 0.5				
1					Brown silty sand, moist. Sediment sample collected at 6-12". 2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB05	
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger	
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY	
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:
SAMPLING METHOD: Grab	START/FINISH DATE: 10/27/97-10/27/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.:
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	
REMARKS: Used to establish background concentrations.	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown peat, wet. Sediment sample collected at 0-6".				
					0.5				
					Brown silty sand, moist. Sediment sample collected at 6-12".				
1					Sediment sample collected at 12-18".				
					Sediment sample collected at 18-24".				
					2.0				
2					End of Boring				

Clay; Clay with Sand; Clay with Peat; Peat; Broken China

Sand; Sand with Silt; Sand with Clay; Silt with Sand; Silt with Clay

Silt with Gravel; Bentonite; Fine Sand; Fine Sand w/Slotted Screen; Fine Sand at Bottom

12"

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB06
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/28/97-10/28/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE — DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown to grey clay. Sediment sample collected at 0-6".				
					0.5 Black peat. Sediment sample collected at 6-12".				
1					1.0 Dark grey clay. Sediment sample collected at 12-18".				
					Light grey clay. Sediment sample collected at 18-24".				
2					2.0 End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

12

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB06100W	
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger	
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY	
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:
SAMPLING METHOD: Grab	START/FINISH DATE: 10/28/97-10/28/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.:
SCREEN: TYPE MAT. LENGTH DIA. SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Organic peat. Sediment sample collected at 0-6"				
					0.3				
					Light tan clay, mottled grey.				
					0.5				
					Peat Sediment sample collected at 6-12".				
1									
					1.5				
					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB06150W			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/28/97-10/28/97

WELL INSTALLED? YES ☐ NO ☒ | CASING MAT./DIA. | SCREEN: TYPE MAT. LENGTH DIA. SLOT SIZE

ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN / GW SURFACE DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE — DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Tan clay. Sediment sample collected at 0-6".				
					0.3 Dark brown-black clay with peat. Sediment sample collected at 6-12".				
1					1.0 Fine brown sand. Sediment sample collected at 12-18". Sediment sample collected at 18-24".				
2					2.0 End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB0670E
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/28/97-10/28/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. Sediment sample and duplicated collected at 0-6".				
					0.5				
1					Black clay, peat. Sediment sample collected at 6-12"				
					1.5				
					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

12

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB07
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/28/97-10/28/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.
SCREEN: TYPE	MAT. LENGTH DIA. SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN / GW SURFACE DATE
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown clay. Sediment sample collected at 0-6". 0.5				
					Peat, organic. Sediment sample collected at 6-12". 1.0				
1					Mottled brown and grey clay. Sediment sample collected at 12-18". 1.5				
					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

12

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB07100W
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/28/97-10/28/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.
SCREEN: TYPE	MAT. LENGTH DIA. SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN / GW SURFACE DATE
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. Sediment sample collected at 0-6".				
					0.5 Dark clay with peat. Sediment sample collected at 6-12"				
1					1.0 Tan clay.				
					1.5 Peat.				
					1.8 Dark clay.				
2					2.0 End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6"

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB08			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/28/97-10/28/97

WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.	SCREEN: TYPE	MAT.	LENGTH	DIA.	SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE		DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Clay. Some organic roots, plant. Sediment sample collected at 0-6". 0.5				
					Peat. Sediment sample collected at 6-12". 1.0				
1					Peat/clay. Sediment sample collected at 12-18". 1.5				
					Mottled grey brown clay. Sediment sample collected at 18-35". 2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB0860W			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT	SAMPLING METHOD: Grab	START/FINISH DATE: 10/28/97-10/28/97

WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.	SCREEN: TYPE	MAT.	LENGTH	DIA.	SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE		DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown/black peat with roots. Sediment sample collected at 0-6". 0.5				
					Tan clay with roots. Sediment sample collected at 6-12". 1.0				
1					Black Peat. Sediment sample collected at 12-18". 1.5				
					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China
Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay
Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

12

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB09			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/28/97-10/28/97

WELL INSTALLED? YES ☐ NO ☒ | CASING MAT./DIA. | SCREEN: TYPE MAT. LENGTH DIA. SLOT SIZE

ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat Sediment sample collected at 0-6". Sediment sample collected at 6-12".				
1					1.0 End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

12"

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB10	
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger	
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY	
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:
SAMPLING METHOD: Grab	START/FINISH DATE: 10/28/97-10/28/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.:
SCREEN: TYPE MAT. LENGTH DIA. SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Dark brown to black peat. Sediment sample collected at 0-6". Sediment sample collectd at 6-12".				
					0.8 Grey-black clay with organic material.				
1					1.0 End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB11
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/29/97-10/29/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE (FT. ABOVE M.S.L.)	/
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE — DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. Sediment sample collected at 0-6". 0.3				
					White to tan clay. 0.5				
					Peat, Sediment sample collected at 6-12". 1.0				
1					Sediment sample collected at 12-18". Till. 1.5				
					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB12
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/29/97-10/29/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	/
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. Sediment sample collected at 0-6".				
					0.5 Clay. Sediment sample collected at 6-12".				
1					1.0 Sand with silt. Sediment sample collected at 12-18".				
					2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB13
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/29/97-10/29/97
WELL INSTALLED? YES ☐ NO ☒	
CASING MAT./DIA.	
SCREEN: TYPE / MAT. / LENGTH / DIA. / SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE	/
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. Sediment sample collected at 0-6". 0.3				
					Clay. 0.5				
1					Dark peat, organic. Sediment sample collected at 6-12". Sediment sample collected at 12-18". 1.5				
					Grey sand with silt. Sediment sample collected at 18-24". 2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB14			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/29/97-10/29/97

WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.	SCREEN: TYPE	MAT.	LENGTH	DIA.	SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE		DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown-black peat.				
					Sediment sample collected at 0-6".				
					Black peat.				
					Sediment sample collected at 6-12".				
1					Sediment sample collected at 12-18".				
					1.8				
					Grey sand.				
2					2.0 End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

6

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB15			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/29/97-10/29/97

WELL INSTALLED? YES ☐ NO ☒ | CASING MAT./DIA. | SCREEN: TYPE MAT. LENGTH DIA. SLOT SIZE

ELEVATION OF: (FT. ABOVE M.S.L.) GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. 0.2				
					White clay. Sediment sample collected at 0-6". 0.4				
					Peat. Sediment sample collected at 6-12". 0.6				
1					Sandy clay till. Fine sand. Sediment sample collected at 12-18". 1.6				
					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

 ND

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB16			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/29/97-10/29/97

WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.	SCREEN: TYPE	MAT.	LENGTH DIA.	SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GW SURFACE	DATE

REMARKS:

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat moss. Sediment sample collected at 0-6". 0.3				
					Reddish clay with fine sand. 0.5				
					Sandy clay. Sediment sample collected at 6-12". 0.9				
1					Silty clay lenses. Iron staining. Sediment sample collected at 12-18". 2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China
Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay
Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

18

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.: SB17			
PROJECT NO./NAME: 14-0802581-001-001/Syracuse China	LOCATION: Syracuse, NY		
DRILLING CONTRACTOR/DRILLER: McLaren/Hart/Adrian Bilger			
MCLAREN/HART GEOLOGIST/OFFICE: Adrian Bilger/Albany, NY			
DRILLING EQUIPMENT/METHOD: Macro Core/Hand Hammer	SIZE/TYPE OF BIT:	SAMPLING METHOD: Grab	START/FINISH DATE: 10/29/97-10/29/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.:	SCREEN: TYPE MAT. LENGTH DIA. SLOT SIZE	
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN / GW SURFACE / DATE
REMARKS:			

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Peat. 0.2				
					Clay laminae. Sediment sample collected at 0-6". Sediment sample collected at 6-12".				
1					Sediment sample collected at 12-18". 1.5				
					Dark peat. Sediment sample collected at 18-24". 2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

18

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	SB18
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	McLaren/Hart/Adrian Bilger
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	Macro Core/Hand Hammer
SIZE/TYPE OF BIT	
SAMPLING METHOD	Grab
START/FINISH DATE	10/29/97-10/29/97
WELL INSTALLED? YES ☐ NO ☒	CASING MAT./DIA.
SCREEN: TYPE	MAT. LENGTH DIA. SLOT SIZE
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN GW SURFACE DATE
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown Peat. 0.2				
					White clay. Sediment sample collected at 0-6". Sediment sample collected at 6-12". 0.7				
1					Sandy clay. Staining laminae. Iron nodules. Sediment sample collected at 12-18". 1.5				
					Black peat. Sediment sample collected at 18-24". 2.0				
2					End of Boring				

Clay | Clay with Sand | Clay with Peat | Peat | Broken China
Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay
Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	MW08
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	Parrott-Wolff/
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	/6" Hollow Stem Auger
SIZE/TYPE OF BIT	
SAMPLING METHOD	2" Split Spoon
START/FINISH DATE	10/31/97-10/31/97
WELL INSTALLED?	YES ☒ NO ☐
CASING MAT./DIA.	PVC/2"
SCREEN:	TYPE Slot MAT. PVC LENGTH 10' DIA. 2" SLOT SIZE 10
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
0					Brown peat, some brown silt, little fine sand, damp. 0.3				
1					Landfilled waste - broken china, white glazing clay.				
2									
3									
4					4.5				
5					Brown silty fine sand.				
6					Grading from 6' to 7'6".	Water level at 6'.			
7					7.5				
8					Brown silty fine sand, some grey clay lenses, wet.				
9									
10									

Clay; Clay with Sand; Clay with Peat; Peat; Broken China

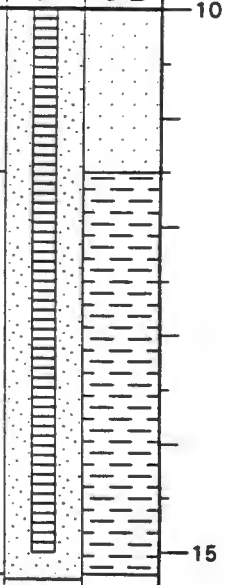
Sand; Sand with Silt; Sand with Clay; Silt with Sand; Silt with Clay

Silt with Gravel; Bentonite; Fine Sand; Fine Sand w/Slotted Screen; Fine Sand at Bottom

BORING/WELL NO.
MW08

LOG OF TEST BORING/ROCK CORE (continued)

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
11					11.5				
12					Grey clay.				
13									
14									
15					15.2				
					End of Boring @ 15.25'				



McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	MW09
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	Parrott-Wolff/
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	/6" Hollow Stem Auger
SIZE/TYPE OF BIT	
SAMPLING METHOD	2" Split Spoon
START/FINISH DATE	10/31/97-10/31/97
WELL INSTALLED?	YES ☒ NO ☐
CASING MAT./DIA.	PVC/2"
SCREEN:	TYPE Slot MAT. PVC LENGTH 10' DIA. 2" SLOT SIZE 10
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE TOP OF WELL CASING TOP & BOTTOM SCREEN / GW SURFACE DATE
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown loamy soil, damp. 0.2				
					China fill, silt, brick, damp.				
1					1.1				
					Black sand, some silt, damp.				
2					Brown fine sand, little silt, damp. Iron stained ribbons. Little fine gravel.				
3									
4									
5									
6									
7									
8									
9									

0 5 10

Clay | Clay with Sand | Clay with Peat | Peat | Broken China
Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay
Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

BORING/WELL NO.
MW09

LOG OF TEST BORING/ROCK CORE (continued)

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Fine sand, ribbons, moist.				
						Water level at 17.5'.			

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

BORING/WELL NO.
MW09

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	LOG OF TEST BORING/ROCK CORE (continued) DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					25.5				
					End of Boring @ 25.5'				

25

McLaren Hart

TEST BORING/WELL INSTALL LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	MW10
PROJECT NO./NAME	14-0802581-001-001/Syracuse China
LOCATION	Syracuse, NY
DRILLING CONTRACTOR/DRILLER	Parrott-Wolff/
MCLAREN/HART GEOLOGIST/OFFICE	Adrian Bilger/Albany, NY
DRILLING EQUIPMENT/METHOD	/6" Hollow Stem Auger
SIZE/TYPE OF BIT	
SAMPLING METHOD	2" Split Spoon
START/FINISH DATE	10/31/97-10/31/97
WELL INSTALLED?	YES ☒ NO ☐
CASING MAT./DIA.	PVC/2"
SCREEN:	TYPE Slot MAT. PVC LENGTH 8' DIA. 2" SLOT SIZE 10
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE / TOP OF WELL CASING / TOP & BOTTOM SCREEN / GW SURFACE / DATE
REMARKS:	

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	RQD (%)	LOG OF TEST BORING/ROCK CORE: DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Brown peat, moist. 0.3				
1					Landfilled waste - broken china, white clay. 1.5				
2					Brown/black sandy clay and silt, damp. Refractory brick chunk.				
3									
4									
5					Brown sandy clay, wet.	Water level at 5'.			
6									
7									
8									
9									
					10.0				

0 5 10

Clay | Clay with Sand | Clay with Peat | Peat | Broken China

Sand | Sand with Silt | Sand with Clay | Silt with Sand | Silt with Clay

Silt with Gravel | Bentonite | Fine Sand | Fine Sand w/Slotted Screen | Fine Sand at Bottom

McLaren Hart

BORING/WELL NO.
MW10

LOG OF TEST BORING/ROCK CORE (continued)

Depth (ft)	Sample No.	Recovery (ft)	Penetration Resistance Blows/6"	ROD (%)	DESCRIPTION	REMARKS	Core Time (min)	Well Const.	Graphic Litho Log
					Reddish brown fine sand, some silt, little fine gravel, damp.				
11									
12					12.5				
					End of Boring @ 12.5'				