

NEW YORK STATE SUPERFUND CONTRACT

Remedial Investigation Report

Volume II • Appendices A-G and J-M

United Plating Site
Remedial Investigation/Feasibility Study

Site No. 447018

Work Assignment No. D002676-10.2

DATE: April 1999



Prepared for:

**New York State
Department of
Environmental Conservation**

50 Wolf Road, Albany, New York 12233
John Cahill, Commissioner

Division of Environmental Remediation
Michael J. O'Toole, Jr., P.E., Director

By:

Lawler, Matusky & Skelly Engineers LLP

NEW YORK STATE SUPERFUND CONTRACT

REMEDIAL INVESTIGATION REPORT

VOLUME II - APPENDICES A-G AND J-M

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LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Environmental Science and Engineering Consultants
One Blue Hill Plaza
Pearl River, NY 10965

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
WIPE SAMPLE DATA SHEET

Date: 5.22.95
Job No. 650-092
Wipe Area: 100 cm²

Site: United Plating
Crew: ML, JG
Solvent/Wipe Material: DI water 3" x 3 (new pads)
(Johnson Johnson)

UPWP-1
TO
UPWP-15
SILVER
ROOMS

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
UPWP-01	1451	wood	Particle board bench top (3.5' off ground)
UPWP-02	1452	Metal	Metal pipe running ~ 1-1.5' above floor
UPWP-03	1455	Metal	MT VAT INSIDE 39' from NE corner
UPWP-04	1500	PVC Plastic	INSIDE Plastic SHEETING ON VATS SE CORNER PROTECTED FROM SEED ROOM
UPWP-05	1505	PVC	INSIDE 8.25 PVC Pipe ON floor SEED ROOM
UPWP-06	1507	Metal	VAT-016 INSIDE 11S 4E OF BL11 AT H ₂ O MARK
UPWP-07	1515	Painted wood	First column from N wall
UPWP-08	1520	Painted metal	ELECTRIC BOX ALONG N WALL 11' W BL 10
UPWP-09	1524	workbench counter Formica top	work bench TOP
UPWP-10	1526	Metal	VAT 17 OUTSIDE CORNER HEAT leg BEYOND #1
UPWP-11	1530	Metal	Bottom center MT VAT 6' W VAT 17 VAT 21
UPWP-12	1536	Painted wall	Yellow Painted Dry wall ABOVE WORKBENCH IN SILVER LAB
UPWP-13	1540	Painted metal	Cabinet w wall silver LAB and SILE ROOM TOP
UPWP-14	1547	Plastic	Brown LAB Hood ON TABLE IN center of SILVER LAB
UPWP-15	1545	Painted Dry wall	Yellow wall of silver LAB 19'S 8' W BL 10
UPWP-16	1553	Yellow Dry wall	Painted wall Between Circum 3 + SILVER ROOM
UPWP-17	1555	Wood	Brown Painted wood 1.5' from floor 36' W BL 12
UPWP-18	1558	Metal	stair girder 3.5 from floor 18' W BL 12
UPWP-19	1600	Metal	6.5 from ground Painted SHEET metal 6' N 4'E BL 12
UPWP-20	1605	Metal	INSIDE VAT 26 E wall CHROME ROOM
UPWP-21	1610	Metal	INSIDE VAT 29 DECOR Piece #2

R30-1
0145
012
MS/MSB
H10 BRK
015
019
013
BRK H10

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
WIPE SAMPLE DATA SHEET

Date: 5.22.95
Job No. 650-092
Wipe Area: 100 cm²

Site: UNITED PLATING
Crew: MIL JB
Solvent/Wipe Material: DI 3"x3" Gauze
(JTS)

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
UPWP-1	1615		Field Blank, PIPES (DI water pure, give pur, temp, & then placed in)
UPWP-20	1620	Metal	VAT 31 Small chrome room NEAR TOP white powder stain
UPWP-23	1622	Metal	VAT 28 OUTSIDE SE CORNER of Room N SIDE of VAT
UPWP-24	1625	Metal	VAT 52 INSIDE NEAR TOP Halfway down
UPWP-25	1631	Metal	metal beam saw wth one west painted S SIDE
UPWP-26	1640	Metal	VAT 41 - OUTSIDE NEAR TOP 20' E of S B/L
UPWP-27	1642	Metal	VAPOR DEGRASSOR NE CORNER of Room west
UPWP-28	1645	Metal	Control Panel on back corner painted metal MS/MSD #2
UPWP-29	1650	Metal	VAT 075 INSIDE Rusted ALONG E wall
UPWP-30	1654	Plastic	Surface of work bench Decon base #3
UPWP-31	1658	Brick	Painted white Red Rust stain 20' SE corner of Room
UPWP-32	1705	Metal	VAT 69 Bottom MAIN LINE CYANIDE TANK
UPWP-33	1707	Metal	VAT 67 MAIN LINE RINSE TANK Bottom
UPWP-34	1710	Metal	MAIN LINE PLATING ASSEMBLY Blue Painted
UPWP-35	1714	Brick	Red Acid Vat #52 6'54" E B/L 14 Bottom SW corner GREEN
UPWP-36	1718	Metal	VAT 40 Small very corroded TANK Decon #4
UPWP-37	1724	Metal	VAT 57 medium VA: yellow Bottom 24' N of B/L 14 Decon #5
UPWP-38	1728	Block	White Painted concrete Block 28' N of B/L 14 West wall
UPWP-39	1732	Sheet Rock	White Painted Sheet Rock 14' West wall
UPWP-40	1735	BRICK	White Painted Brick Small NEAR SURFACE COALS

Rami / Hill
0.011 / BK
0.026 / BK
0.019 / BK
0.009 / BK

MCA.1

APPENDIX A
SAMPLING LOGS

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
WIPE SAMPLE DATA SHEET

Date: 5.24.95
Job No. 650-092
Wipe Area: 100 ² CM

Site: United Planting RE/FS	
Crew: ML JB	
Solvent/Wipe Material: H ₂ O	Gauze

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
UPWP-41	1433	Brick	Painted white brick 4' off ground 16' S END Building
UPWP-42	1435	Musty metal coated	INSIDE S 1/2 WAY DOWN VAT #1
UPWP-43	1440	Painted Brick	Green painted brick under sign 3' off ground
UPWP-44	1443	Plastic	Plastic insulation on W wall of SOFT END 3' from ground
UPWP-45	1446	Plastic	VAT #93 Plastic lined with white powder light blue below piece #6
UPWP-46	1450	Plastic	VAT #101 long blue VAT on plastic 1/2 down plastic lined blue
UPWP-47	1452	Pvc	VAT 109 large plastic vat for waste water
UPWP-48	1459	wood	wood panel along N wall 4' off ground NEAR fire place MS/MSD
UPWP-49	1507	wood	Brown wood paneling near office entrance 2' off ground
UPWP-50	moved to main room as per NYSDER NOT sampled jet		
UPWP-51	1512	metal	VAT 004 NW CORNER INSIDE 2/3 up from bottom
UPWP-52	1516	metal	VAT #5 INSIDE liquid vat curbed 2/3 up from bot.
UPWP-53	1517	metal	VAT #11 OUTSIDE NEAR DOOR Full H ₂ O 20" surface
UPWP-54	1520	Brick	white painted brick 8' west of window on SW wall 4' from pt
UPWP-55	1525	Plastic	workbench near SW corner of room - FOLKIA type
UPWP-56	1528	Brick	white painted brick E wall 14' N wall 4.5' ground
UPWP-57	1529	Brick	white painted brick 40' N wall 4.5' from ground
UPWP-58	1531	BRICK	Painted wall S end of room green 3' from ground
UPWP-59	1533	BRICK	white painted 5' off ground west wall 4' from N wall
UPWP-60	1535	Brick	west wall 14' N wall 4' white painted
UPWP-61	1542	metal	2nd floor near circular stairs + elevator gray metal painted equipment ms/msd

waste water
COA-101A

office

Annod. ZING

Room Storage

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
WIPE SAMPLE DATA SHEET

Date: 5.24.95
Job No. 650-092
Wipe Area: 1000m ²

Site: United Plating RI/FS	
Crew: MC JG	
Solvent/Wipe Material: H ₂ O	PAUZE

	SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
	UPWP-62	1543	metal	Small metal DIPPING BASKET GREEN BIN #7
	UPWP-63	1552	metal	Round Rusty DIPPING BASKET on floor BIN #8
Sewage	UPWP-64	1554	Drywall	white painted Drywall 5' from ground N wall
	UPWP-65	1554	Drywall	white painted 3' from floor SW wall NEAR DOOR
Sprink + pipe	UPWP-66	1605	BRICK	white painted BRICK SWall, 10' W EWall 5' from ground
	UPWP-67	1603	Metal	large center motor IN ROOM 5' support rail
	UPWP-68	1610	metal	LARGE filter, ATT. HOT? NE corner of Room
Smelter	UPWP-69	1615	concrete	Smelter oven - Bottom
	UPWP-70	1620	BRICK	white painted BRICK N wall middle of room 35' off floor
	UPWP-71	1621	BRICK	white painted BRICK SW wall 5' off ground 7' from EWall
	UPWP-72	1622	BRICK	Red stained white paint on wall 10' east of Door
	UPWP-73	1625	wood	white painted wood Between 1st & 2nd DRUM STORAGE
windows storage	UPWP-74	1630	metal	INSIDE MT VAT NEAR SW CORNER Bottom SIDE
	UPWP-75	1637	Plastic/fiberglass	Small PLASTIC BIN INSIDE BOTTOM BIN #9
	UPWP-76	1634	metal	SPRT metal DIPPING TRAY Bottom INSIDE
	UPWP-77	1640	metal	MT VAT NEAR NE CORNER of Room INSIDE NEAR TOP
Brewery Room	UPWP-78	1645	metal	Sheetmetal ductwork on floor NEAR West wall - TOP
	UPWP-79	1647	metal	SIDE of long metal rack & shelves IN middle of Room
	UPWP-80	1649	wood	Blue painted wooden support Beam SE ONE

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
SWEEP SAMPLE DATA SHEET

Floor Sweeps

Date: 5.25.95
Job No. 650-592
Sweep Area: See Comments

Site: United Plating
Crew: MLJTB
Solvent/Wipe Material: _____

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
UPSP-1	0915	concrete	FLOOR NE CORNER Along E wall 12.5' S 1.2' x 2.4' AREA
UPSP-2	0928	concrete	Floor Between Vat 10 + 11 E wall 2' x 1.1'
UPSP-3	0940	concrete	Trough Below Plating line 10' E BL 11 .5' x 2' AREA
UPSP-4	0945	concrete	Floor Along South Wall 1.8' x 2.4' 7' East Wall
UPSP-5	0958	concrete	Block Sand material Below Silver Elev 1st Floor 1.8' x .8' AREA
UPSP-6	1007	concrete	NEAR BY GARAGE DOOR - Below Electric Wall Floor 2.5' x 2' AREA
UPSP-7	1015	metal	INSIDE LONG PLATING VAT 0.3' x 1.6' AREA
UPFB-04	1025		Field BLANK
UPSP-8	1035	concrete	FLOOR NEAR VAT 10 9.5' S'E BL 11 1.2' x 1.3'
UPSP-9	moved	No	SAMPLE (see below)
UPSP-10	1100	carpet	carpet floor main office 3x4 AREA
UPSP-11	1110	wood	WOOD FLOOR - 3rd floor landing Between office and Silver Room 6' x 4'
UPSP-12	1120	concrete	NW CORNER Along wall to office 2nd floor 6' West of wall 2.3' x 1.4'
UPSP-13	1130	concrete	VERMICULITE ON FLOOR NEAR VAT #34 1' x 1' AREA
UPSP-14	1140	concrete	3/5 + 3/4 3rd floor of BL 12 1.8' x 2'
UPSP-15	1150	plastic	Bottom of Vat 33 INSIDE 1' x 1.5' AREA dump with green
UPSP-16	1200	concrete	NEAR VAT 34 S side 2nd floor 1.6' x .8' AREA
UPSP-17	1345	metal	UNMARKED VAT west of V-42 INSIDE EYE 8' S BL 13 metallic Rusty 1' x 1'
UPSP-18	1350	concrete	FLOOR 28' E 15' BL 13 2.5' x 1.1'
UPSP-19	1358	concrete	FLOOR NE CORNER Along E wall 1.6' x 1.8'
UPSP-20	1405	concrete	FLOOR EAST WALL NEAR VAT 11 1.5' x 1.4'

Silver

MS MSD

of
C Panel

*

*

Office

Storage

Residue

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
SWEEP SAMPLE DATA SHEET

Floor Sweeps

Date: 6.26.95
Job No. 650-092
Sweep Area: see comments

Site: united platiny
Crew: ML JB
Solvent/Wipe Material: —

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
ups-35	0810	concrete	N wall sewing room 1.5x1.5
ups-36	0820	concrete	Floor 10' 4" of SWail in center of room 1.4x1.3
ups-37	0827	concrete	Back side material below large air cleaner 2' corners of room 1.8x1.8
ups-38	0835	concrete	Floor 4' x 1.8' area near N most large motor
ups-39	0855	concrete	Along southern wall floor smelter room 2.4x2.6 area
ups-40	0900	concrete	6' south of smelter on western wall 2x2
ups-41	0910	metal	green/blue crystal material from bottom of vat 0
ups-42	0915	concrete	on floor 10' west of large window opening 1.8x.6
ups-43	0925	concrete	on floor by large storage shelves FN Brewery room 1x1
ups-44	0932	concrete	on floor along western wall 2.5x2
ups-45	1020	concrete	on floor near vat 82 .6x.6 area
ups-46	1030	concrete	on floor chemical waste dump 23' S end building 1x.6
ups-47	1040	concrete	on floor chemical waste / Nitric Acid 50' from S end of building
ups-48	1050	metal	vat 098 green, bottom garments 1x2.5
ups-49	1105	concrete	Floor main line by vat 246 1.5x2
ups-50	1105	concrete	on floor by western most large poly table .6x1
ups-9	1115	concrete	Waste storage area Nitric Acid 18.5' NEAR FC1

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
 CHIP SAMPLE DATA SHEET

Floor Chips

Date: 5.25.95
 Job No. 650-092
 Chip Area: 1 ft²

Site: United Plating / WYSDCC Standby
 Crew: JG ML
 Solvent/Wipe Material: —

Silver Plating Room
 ↓
 Silver Lab
 ↓
 Chrome Room
 ↓
 Main Plating Room
 ↓
 Anodizing Room
 ↓
 Drum Storage Room

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
UPFC-01	0915	Concrete	near south end of vats in middle of room
UPFC-02	0950	Concrete	east of vats near center support column
UPFC-03	1010	Went/Contaminated? Concrete	in silver lab near SW corner of room
UPFB-03	1015	Field Blank	FB water poured over cleaned brush, drill bit + scraper onto foil lined dust pan into clean
UPFC-04	1100	Concrete	stained, cracked concrete near sump along west wall of building in chrome room
UPFC-05	1125	Concrete	cracked concrete/cobble mix next to floor drain near vat #033 + 034 (just north of them)
UPFC-06	1150	Concrete	yellow stained concrete next to west end of floor trough there is a PVC drain pipe leading into it from vat area
UPFC-07	1215	Concrete	Area around floor drain on west side of doorway to main plating room (near loading dock)
UPFC-08	1350	Concrete	footing of 2nd support beam east of inside loading dock
UPFC-09	1410	Concrete	on floor on east side of support column just south of main brick column there was brown-orange stain
UPFC-10	1435	Concrete	"scratched" out trough (very shallow in concrete leading to sump w/ no lead coming near south end of main line of vats)
UPFC-11	1500 1540	Concrete	etched out circle in floor (shallow) next to vat. Vats is along main line of vats... west of them near middle
UPFC-12	1540	Concrete*	Below vat #006 along west wall of room * material comes up in shavings + powder instead of powder like rest
UPFC-13	1600	Concrete*	Same characteristics as above. Location is just east of vat #003 (long yellow) in center area of room
UPFC-14	1640	Concrete	blue stained area near east wall - midway along building
UPFC-15	1700	Concrete	yellow stained area. There is a circle of stain the size of drum. Location is in SW corner area of room

ms/ms
 set of bottle
 here
 (water) 1
 (pass coat)

First area is swept clean
 Hammer drill then used to make a series of holes to produce enough material

LAWLER, MATUSKY & SKELLY ENGINEERS **LLP**
 CHIP SAMPLE DATA SHEET

Paint Chips

Date: 5/26/95
Job No. 650-092
Chip Area: ~ 1ft ²

Site: United Plating / NYSDEC standby
Crew: JG, MC
Solvent/Wipe Material: — —

SAMPLE ID No.	SAMPLE TIME	SURFACE MATERIAL	COMMENTS
UPFB-05	1140	Field Blank	FB water poured over scraper onto foil lined dust pan into sample jar (Pb)
UPPC-01	1142	BRICK	EASTERN wall white
UPPC-02	1145	wood	RED PAINT on all wood surfaces windows doors
UPPC-03	1155	STUCCO ON BRICK	RED PAINT ON WEST WALL covers N Half of Room
UPPC-04	1158	BRICK	SEWING Room west wall TAN PAINT
UPPC-05	1200	BRICK	wall leading into sewing Room white/eggshell paint
UPPC-06	1205	metal	Blue PAINT of a piece of GE Equipment
UPPC-07	1208	BRICK	white paint on wall of ANMEDICINE Room
UPPC-08	1210	BRICK	light green paint south wall chemical storage
UPPC-09	1212	BRICK	DARK GREEN PAINT Drum storage
UPPC-10	1219	BRICK	main plating, white, east wall
UPPC-11	1220	BRICK	main plating, white, east wall
UPPC-12	1222	metal	GREEN + BLUE PAINT VAT 7C
UPPC-13	1225	BRICK	south wall main plating white
UPPC-14	1226	BRICK	white/grey on west wall main
UPPC-15	1230	BRICK	white paint on west wall
UPPC-16	1235	metal	VAT 35 red paint
UPPC-17	1236	BRICK	Small chrome Room white
UPPC-18	1240	metal	VAT 12 BROWN Silver Room
UPPC-19	1245	BRICK	Yellow PAINT S WALL
UPPC-20	1250	wood	center BROWN column

ms/msd

Date: 5.31.95

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #

650-092

Crew: JG

FIELD DATA SHEET

Oper: Shallow Soils

Site: United Plating

SOIL & SEDIMENT SAMPLES

Therm. #

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments	
							Parameters	Bot. #s	Bott. Size	Parameters		Bot. #s
UPSS-01	0905	(0-3")	S/S Spoon & Bowl	Sandy silty topsoil trc grave some roots	Brn	None	TCL VOCs	01	4oz			location 80' east of east boundary fence in grassy area In line with north end of metal "porch" overhang on east side of building. Grassy area ~15' from walking path. In open lot
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals + CN	01	8oz			
UPSS-02	0940	(0-3")	S/S Spoon & Bowl	Silty topsoil w/ roots + veg. moist	Brn	None	TCL VOCs	01	4oz			located 80' east of east boundary fence in grassy area In line w/ southern side of multilevel portion of building Grassy area sparse phragmites in area. In open lot
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals + CN	01	8oz			
UPSS-09	1000	(0-3")	S/S Spoon & Bowl	fin-med sandy fill some roots	Brn Lt brn	None	TCL VOCs	01	4oz			location 14' south of south boundary fence near sand box This is 67' east of east boundary fence. Grassy area (11' west of sand box) *MS/MSD material included
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, Cyanide	01	8oz			
UPSS-18	1025	(0-3")	S/S Spoon & Bowl	fin sandy dirt/topsoil little silt some roots	Brn	None	TCL VOCs	01	4oz			In lower portion of playground area. In line w/ east boundary fence. 9' south of south boundary fence
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals + Cyanide	01	8oz			
UPSS-08	1110	(0-3")	S/S Spoon & Bowl	Sandy silty gravelly fill little brick & rock trc glass some roots	Brn	None	TCL VOCs	01	4oz			In open lot 30' east of east boundary fence ~60' from south boundary fence Grassy area near pile of trees + brush
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals + CN	01	8oz			
UPSS-07	1130	S/S Spoon & Bowl	0-3"	Silty sandy fill/topsoil w/ roots some cobbles trc brk pieces & glass	Brn	None	TCL VOCs	01	4oz			In open lot 30' east of east boundary fence ~130' north of south boundary fence Some phragmites in area
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			

Date: 5.31.95

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #

650-092

Crew: JG

FIELD DATA SHEET

Oper: Shallow Soils

Site: United Plating

SOIL & SEDIMENT SAMPLES

Therm. #

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments	
							Parameters	Bot. #s	Bott. Size	Parameters		Bot. #s
UP55-03	1155	0-3"	S/S Spoon & Bowl	Sandy gravelly topsoil/fill some silt & glass pieces & some roots	Brn	None	TCL VOCs	01	4oz			In open lot ~80' east of east boundary fence & north of south boundary fence Near entrance of walkway through open lot
UP55-06	1225	0-3"	S/S Spoon & Bowl	Silty sandy topsoil/fill trc glass pieces + 2 down silty clayey areal. little roots	Brn GrY	None	TCL VOCs	01	4oz			In open lot 30' east of east boundary fence & ~200' north of south boundary fence Some phragmites in area
UP55-05	1240	0-3"	S/S Spoon & Bowl	Silty sandy w/ some gravel fill/topsoil trc pieces of brick some roots	Brn	None	TCL VOCs	01	4oz			In open lot 30' east of east boundary fence & ~270' north of south boundary fence Grassy area
UP55-04	1300	0-3"	S/S Spoon & Bowl	Sandy gravelly fill/topsoil some silt trc brick pieces, some roots	Brn	None	TCL VOCs	01	4oz			In open lot 30' east of east boundary fence & ~350' from (north of) south boundary fence and ~70' from Seneca St.
UP55-14	1430	0-3"	S/S Spoon & Bowl	Silty fill w/ little clay & sand some big stones trc roots	Brn	None	TCL VOCs	01	4oz			Inside fence 15' west of east boundary fence, ~200' south from Seneca St.
UP55-13	1455	0-3"	S/S Spoon & Bowl	Silty sandy fill w/ some gravel little stone some roots rather moist	Brn	None	TCL VOCs	01	4oz			Inside fence 15' west of east boundary fence, ~160' south from Seneca St.

Date: 5.31.95
 Crew: JG
 Site: United Plating

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #
 FIELD DATA SHEET
 SOIL & SEDIMENT SAMPLES

650-092
 Oper: Shallow Soils
 Therm. #

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments	
							Parameters	Bot. #s	Bott. Size	Parameters		Bot. #s
UP55-12	1515	0-3" *	S/S Spoon + Bowl	Silty fill w/ some clay + sand little gravel + roots	Brn-Lt brn	None	TCL VOCs	01	4oz			* Removed ~ 2" of small gravel cover + then collected same from 0-3" below this located 15' west of east boundary fence + 120' south of Seneca St
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UP55-11	1540	0-3"	S/S Spoon + Bowl	Silty clayey dense little sand + gravel	Brn Lt brn	None	TCL VOCs	01	4oz			located ~ 15' west of east boundary fence and 80' south of Seneca St.
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UP55-10	1615	0-3"	S/S Spoon + Bowl	Sandy silty fill/top soil some roots + gravel	Brn	None	TCL VOCs	01	4oz			located ~ 7' west east boundary fence and 40' south of Seneca St. This was located this close to the fence because of the trailer location.
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UP55-15	1835	0-3" *	S/S Spoon + Bowl	Silty wet some sand + gravel roots	Brn	Swampy	TCL VOCs	01	4oz			Area between east boundary fence + Treatment building (1/2 way between area to river (wide)) there appears to be a layer of bricks + rocks on top I removed bricks + phragmites root mat + then sampled from 0-3" below this
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
											Location is ~ 170' from south boundary fence	

Date: 6.1.95

LAWLER, MATUSKY & SKELLY ENGINEERS LLP

Job # 650-092

Crew: JG

FIELD DATA SHEET

Oper: Shallow Soils

Site: United Plating

SOIL & SEDIMENT SAMPLES

Therm. #

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments	
							Parameters	Bot. #s	Bott. Size	Parameters		Bot. #s
UPSS-16	0710	0-3"	S/S Spoon + Bowl	Sandy, silty fill w/ some glass + brick pieces + gravel some roots - wet	Drk Brn	Swampy	TCL VOCs	01	4oz			Sample collected between east boundary fence + waste treatment building (~1/2 way between) Location is ~20' from south boundary fence (120' north of fence)
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-17	0735	0-3"	S/S Spoon + Bowl	Sandy silty fill - some glass - cobbles, gravel + wood pieces some roots - very moist	Drk Brn	Swampy	TCL VOCs	01	4oz			Sample collected between east boundary fence + Coca Cola building Location is ~70' from south boundary fence (90' north of fence) Sparse phragmites here
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-18	0800	0-3"	S/S Spoon + Bowl	Sandy top soil / fill some roots little silt gravel, glass + brick	Drk Brn	None	TCL VOCs	01	4oz			Sample collected between east boundary fence + Coca Cola building (between) Location is ~13' north of south boundary fence No phragmites here
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-24	0930	0-3"	S/S Spoon + Bowl	Sandy gravelly, cobbly fill some silt	Drk Brn GrY	None	TCL VOCs	01	4oz			Sample location 15' east of east wall of main building . 8' east of attached "shed" Just off concrete pad 23' north of south end of shed
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-23	1000	0-3"	S/S Spoon + Bowl	See Above	Brn GrY-Brn	None	TCL VOCs	01	4oz			Sample location 15' east of east wall of main building - 8' east of attached shed Location is ~27' north of UPSS-24
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-22	1025	0-3"	S/S Spoon + Bowl	See Above	"	None	TCL VOCs	01	4oz			Sample location ~15' east of east wall of main building (~8' east of attached overhang) Location ~30' north of UPSS-23 and ~5' south of north end of overhang
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			

this area

Date: 6.1.95
 Crew: JG
 Site: United Plating

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #
 FIELD DATA SHEET
 SOIL & SEDIMENT SAMPLES

Job # 650-092
 Oper: Shallow Soils
 Therm. #

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments	
							Parameters	Bot. #s	Bott. Size	Parameters		Bot. #s
UPSS-21	1100	0-3"	s/s Spoon & Bowl	Gravelly Cobblely Sandy fill little silt	Brn Gry-Brn	None	TCL VOCs	01	4oz			located ~15' east of east side of main building. This location is ~40' north of upss-22 and ~9' south of north end of main building. 34' south of north boundary fence
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-20	1145	0-3"	s/s Spoon & Bowl	Gravelly Sandy fill little silt trc brick pieces & glass	Drk Brn	None	TCL VOCs	01	4oz			located just north of north boundary fence (~4') between fence & walkway (6' from Seneca St.) Location is just off pole support for western most gate which is ~15' east of line running along east side of main building
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-27	1205	0-3"	s/s Spoon & Bowl	Silty Sandy Gravelly little roots	Brn Yellow	None	TCL VOCs	01	4oz			located 2' north of north boundary fence between fence & walk way between fence & Seneca St. 54' west of UPSS-20
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-32	1300	0-3"	s/s Spoon & Bowl	Sandy gravelly fill/topsoil some silt some roots trc brick pieces	Brn	None	TCL VOCs	01	4oz			located in cribbed in brick area on west side of building ~5' west of building ~7' from north end of of building <u>* no/most material collected here</u>
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-33 MS/MSD	1315	0-3"	s/s Spoon & Bowl	Sandy top soil/fill same silt little gravel some roots	Brn	None	TCL VOCs	01	4oz			located in cribbed area on west side of building 2' west of bay window of building and 48' south of north end of building (NW corner... not joys along north end)
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			
UPSS-34	1340	0-3"	s/s Spoon & Bowl	Gravelly Sandy fill little silt & cobbles	Brn	None	TCL VOCs	01	4oz			Broken up spot in asphalt area under "T" in Foster on sign on building. 21' west of building and 40' south of UPSS-33
							TCL SVOCs +	01	16oz			
							TCL Pest/PCBs	↓	↓			
							TAL Metals, CN	01	8oz			

Date: 6.02.95

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #

650-092

lot 2

Crew: JG

FIELD DATA SHEET

Oper: Shallow SoilsSite: Un.ted' Platng

SOIL & SEDIMENT SAMPLES

Therm. # —

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments
							Parameters	Bot. #s	Parameters	Bot. #s	
UPFB-06	0720	—	S/S Spoon + Bowl	—	—	—	VOCs TCL	02 40ml			FB water poured over field cleaned spoon + bowl into clean set of sample bottles
							SVOCs TCL	02 120ml			
							Pest/PCBs TCL	02 120ml			
							TAL Metals	01 120ml	Cyanide	01 120ml	
UP55-28	0850	0-3"	S/S Spoon + Bowl	Sandy Silty fill w/ gravel little brk + tile pieces some roots + cobbles	Brn	None	TCL VOCs	01			In grassy area 24' east of Forster Ave ~51' south of UP55-39 ~80' north of south boundary fence
							TCL SVOCs +	01			
							TCL Pest/PCBs	↓			
							TAL Metals, CN	01			
UP55-40	0915	0-3"	S/S Spoon + Bowl	Sandy Silty fill/topsoil w/ gravel + some cobbles + roots	Brn	None	TCL VOCs	01			In grassy area ~47' south of UP55-28 ~33' north of south boundary fence ~28' from Forster Ave Slight depression in area here
							TCL SVOCs +	01			
							TCL Pest/PCBs	↓			
							TAL Metals, CN	01			
UP55-30	0930	0-3"	S/S Spoon + Bowl	Sandy silty org. topsoil/fill little green some roots	Brn	None	TCL VOCs	01			In grassy area ~45' north of south boundary fence and ~52' east of Forster Ave
							TCL SVOCs +	01			
							TCL Pest/PCBs	↓			
							TAL Metals, CN	01			
UP55-29	0950	0-3"	S/S Spoon + Bowl	See Above	Brn	None	TCL VOCs	01			In grassy area ~62' south of south end of main building and ~48' west of west side of Coca Cola building
							TCL SVOCs +	01			
							TCL Pest/PCBs	↓			
							TAL Metals, CN	01			
UP55-25	1025	0-3"	S/S Spoon + Bowl	Sandy gravelly fill/topsoil some silt little cobbles tree brk pieces	Brn	None	TCL VOCs	01			In grassy area ~62' south of south end of main building and ~19' west of west side of Cola building
							TCL SVOCs +	01			
							TCL Pest/PCBs	↓			
							TAL Metals, CN	01			

Date: 6/14/95
 Crew: PY, ML
 Site: UP RE/FS

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #
 FIELD DATA SHEET
 SOIL & SEDIMENT SAMPLES

Job # 650-092
 Oper: _____
 Therm. # _____

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments
							Parameters	Bot. #s	Parameters	Bot. #s	
UPSD-01	6-14-95 1530	5.85 Bottom	ladle on pole	oil sludge	BLACK	oil	TAL metals CN ⁻ TCLP				large sump E side metal plate black oil sludge/ sheen
UPSD-02	6-14-95 1620	1.95 Bottom	ladle on pole	silt/ sand metallic	GRAY	concrete	TAL metals CN ⁻	1	MS/MSD	2	5 most of 2 sumps main line
UPSD-03	6-14-95 1640	.5 TO 420 21 Bottom	ladle on pole	metallic sludge	gray/ green	oil Paint/ Solvent	TAL metals CN ⁻	1			All most of 2 sumps mainline, under skylight receives H2O plastic PVC pipe exits to both East NE
UPSD-04	6-14-95 1655	DRY 12" across .7 TO SED .85 TO BOT	Spoon	metallic sand + silt	BROWN	none	TAL metals CN ⁻	1			grated floor drain near P- metal pipe exits to N-NW
UPSD-05	6-15-95 1030	DRY 4" cast pipe in floor	Spoon	Silty sand	BROWN	none	TAL metals CN	1			4" floor drain main room 10' south main column exits to west origin/use?
UPSD-06	6-15-95 1140	4" pipe in floor of sump	ladle on pole	Silty sand concrete	Brown red	None	TAL metals CU	1			2x3.4 floor of sump B of BAY door very little material main room

oil
sheen

N

Date: 6-15-95
 Crew: Py ML
 Site: UP RE/FS

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #
 FIELD DATA SHEET
 SOIL & SEDIMENT SAMPLES

650-092
 Oper: _____
 Therm. # _____

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments
							Parameters	Bot. #s	Parameters	Bot. #s	
UPSD-07	6-15-95 1115	4"-6"	Spoon	Silty Sandy sludge	Brown/ Red	None	TAL metals	1			Rectangular Floor Drain SW corner main Room - currently under 6" H ₂ O
							CN-				
UPSD-08	6-15-95 1230	1' Below water 0-4"	Ladle	Metal sludge	green/ yellow	oil	TAL metals				Large Sump/ West Area Chrome plating
							CN	1			
							TCLP	1			
UPSD-09	6-15-95 1300	0-4"	Spoon	Silty SAND	Brown ish green	None	TAL metals				Floor Drain chrome Room western center
							CN	1			
UPSD-10	6-15-95 1310	0-4"	Spoon	Silty sand	Brown	None	TAL metals				Floor Drain chrome Room near P-14
							CN	1			
UPSD-11	6-15-95 1312	0-4"	Spoon	Silty SAND	green/ yellow	None	TAL metals				Floor Drain chrome Room western - SE center Drain
							CN	1			
UPSD-12	6-15-95 1315	0-4"	Spoon	Silty SAND	Brown	None	TAL metals				Floor Drain chrome Room center Room by JAT 33
							CN	1			

Date: 6/14/95
 Crew: PY, MC
 Site: UP R/F/S

LAWLER, MATUSKY & SKELLY ENGINEERS LLP Job #

650-092

FIELD DATA SHEET

Oper:

Therm. #

SURFACE WATERS

Station #	Time	Sample Depth	Method	Texture	Color	Odor	SAMPLE BOTTLES				Comments
							Parameters	Bot. #s	Parameters	Bot. #s	
UP500-01	6.14.95 1430	DTW 3.57 TD ± 5.85	DIP Bucket	T° = 15.5 NTU = 5.16 C = 254 PH = 7.24	Slight Hemic	NONE	TAL metals				Large Sump E Side metal plate 420 Buys
							CN				
UP500-02	6.14.95 1605	DTW = .2 TD = 1.95	DIP	T° = 14.8 NTU 22 C = 1100 PH = 9.52	yellow	NONE	TAL metals				Sump near main line Solid Hatch cover Appears to be plastic Southern most of checked PH 9.24 on dup.
							CN				
UP500-03	6.15.95 11:05	DTW = 6' 50' PIPE TD = 5.2 6.4' PIPE	DIP BUCKET, LADLE	T° = 12.2° NTU = 2200 CON = 1358 PH = 6.63	BROWN	NONE	TAL METALS				2x 3.4' metal covered Sump by Bay Door Single 6" pipe exits origin/use? oil sheen water room
							CN				
UP500-04	6.15.95 11:45	DTW = 5.3 TD = 9'	DIP BUCKET LADLE	T° = 12.1 NTU = 52 CON = 284 PH = 6.37	LIGHT YELLOW	NONE	TAL METALS				2x 3.4' metal covered Sump in chrome Room - NO sediments Roof drainage? BRECK - could not see
							CN				
UP500-05	6.15.95 12:10	DTW = 4.5 TD = 5.51	SURFACE WATER DIRECTLY TO SAMPLE BOTTLE	T° = 11.8 NTU = 56 CON = 258 PH = 6.61	GREENISH - YELLOW	NONE	TAL METALS				Surface water in chrome Room Sump E 1' MS/MSD TAKEN
							CN				

APPENDIX B

PROBE/WELL CONSTRUCTION LOGS AND WATER LEVEL DATA

APPENDIX B-1

PROBE LOGS

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-1

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 850-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 8/13/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Front of building (see plan) Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 6

DEPTH (FT)	SAMPLER	BLOMS / Ø In.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
							and = 35-50%	f = fine		
							some = 20-35%	m = medium		
							little = 10-20%	c = coarse		
							trace = 0-10%			
0-0.4						Asphalt.				
0.4-4			4.0	2.0		Brown silt and fine sand, some clay, trace pebbles, cobbles and boulders. (Dry) (Weathered till)				
2.3				2.3						
2.3				2.3						
2.3				2.3						
3.8						Medium sand lens at 3.8 ft, slightly moist.				
4-6			1.5			Dark gray silt and fine sand, some clay, trace pebbles, cobbles and boulders. (Dry) (Basal till)				TAL Metals (soil) 2.5-3 ft. TCL VOA (soil) 3-3.5 ft.
6						END OF BORING - REFUSAL AT 6 FT				

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-2

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 850-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/4/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Front of building (see Plan) Depth to Water: 3
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 7

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PTD READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse		
0-0.5			4.0	10.0		0-0.5 Topsoil.				
0.5-4						0.5-4 Brown silt and fine sand, some clay, trace pebbles, cobbles and boulders. (Dry) (Weathered till)				
3						Fine and medium sand lens at 3 ft. (Perched water)				TCL VOA (soil) 3-3.5 ft.
4-7						4-7 Dark gray silt and fine sand, some clay, trace pebbles, cobbles and boulders. (Dry) (Basal till)				
7						END OF BORING - REFUSAL AT 7 FT				

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-3

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 050-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/1/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: North side of building (see plan) Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 5

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
			4.0	0.4			0-1 Top soil and grass, some gravel. (Fill)			
				0.1			1-4 Brown silt and fine sand, some clay, trace pebbles, cobbles and boulders. (Dry) (Weathered till)			
				0.4			4-5 Dark gray silt and fine sand, some clay, trace pebbles, cobbles and boulders at 5 ft. (Dry) (Basal till)			
			1.0				END OF BORING - REFUSAL AT 5 FT			Sample stuck in tube - could only observe tip and end of sample. Moved boring over 6 ft, could not advance past 5 ft.

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-4

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 5/31/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: North end of open lot, east of fence (see plan) Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 10

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PTD READINGS	FTD READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse		
0-1.2			4.0	0.2			0-1.2 Brown top soil and grass, some gravel. (Fill) (Dry)			
1.2-8			1.0				1.2-8 Tan-orange very fine sand and silt, trace very coarse sand, trace fine gravel. (Weathered till) (Dry)			
4-6							Occasional sand lens at 4 ft. and 6 ft.			
8-10			2.0				8-10 Dark gray silt and fine sand, some clay, trace pebbles, cobbles, boulders. (Dry) (Basal till)			
10							END OF BORING - REFUSAL AT 10 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-5

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/13/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Open lot (see plan) Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 7

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
0-2			4.0			Diagonal hatching	0-2 Brown top soil. (Dry)			
2-4	Macro			Bkgd		Diagonal hatching	2-4 Brown silt and fine sand, some clay, trace pebbles, cobbles, boulders. (Dry) (Weathered till)			
4-5			2.0	Bkgd		Diagonal hatching	4-5 Brown silt and fine sand, some clay, trace pebbles, cobbles, boulders. (Dry) (Weathered till)			
5-5.5				Bkgd		Diagonal hatching	5-5.5 Dark gray silt and fine sand, some clay, trace pebbles, cobbles, boulders. (Dry) (Basal till)			
5.5-6				Bkgd		Diagonal hatching	5.5-6 Brown glacial till consisting of silt and fine shale gravel.			
6-7			1.0			Diagonal hatching	6-7 Dark gray silt and fine sand, some clay, trace pebbles, cobbles, boulders. (Dry) (Basal till)			
7-7							END OF BORING - REFUSAL AT 7 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-6

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 5/31/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Open lot, east of fence (see plan) Depth to Water: 6.5
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 10

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PID READINGS	PID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse		
0-1			4.0				0-1 Brown topsoil, silt and sand, grass.			
1-1.8							1-1.8 Brown silt, trace ash, brick, glass. (Fill)			
1.8-2.8							1.8-2.8 Brown-yellow silt, very fine sand lens.			
2.8-4							2.8-4 Gray silt, some clay, trace peat. (Till?)			
4-5			4.0				4-5 Gray silt, some clay, trace peat. (Till?)			
5-8							5-8 Brown silt and very fine sand, trace clay. (Weathered till)			
8-9			1.5				8-9 Brown very fine sand, some silt. (Weathered till)			
9-9.2							9-9.2 Medium sand, some coarse sand. (Sand lens)			
9.2-10							9.2-10 Dark gray silt and fine sand, some clay, trace pebbles. (Basal till)			
10							END OF BORING - REFUSAL AT 10 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-7

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/1/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: (see plan) Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 4

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PTD READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
0-4.0	Macro		4.0	Bkgd		0-4.0 Appears to be gray silt and fine sand, some clay, trace pebbles, trace cobbles, trace boulders at 4 ft.	some = 20-35%	m = medium		Sample stuck in tube.
4							little = 10-20%	c = coarse		END OF BORING - REFUSAL AT 4 FT

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-9

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/1/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: East side of building Depth to Water: 4
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 4.5

DEPTH (FT)	SAMPLER	BLOWS / 8 IN.	RECOVERY (%)	PTD READINGS	FTD READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
							some = 20-35%	m = medium		
							little = 10-20%	c = coarse		
							trace = 0-10%			
0-0.8			3.5	1.0 2.4			0-0.8 Brown sand and silt. (Dry) (Fill)			
0.8-3.0							0.8-3.0 Brown very fine sand and silt, trace clay. (Weathered till)			
3-3.5				4.0			3-3.5 Dark gray silt and fine sand, some clay, trace pebbles, trace cobbles. (Dry) (Basal till)			Solvent odor at 2.8-3.0 ft.
3.5-4.5				10.4			3.5-4.5 Dark gray silt and fine sand, some clay, trace pebbles, trace cobbles. (Dry) (Basal till)			
4.5			1.0	Bkgd	2.1		END OF BORING - REFUSAL AT 4.5 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-10

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 850-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/9/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: East of building Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 8

DEPTH (FT)	SAMPLER	BLOKS / 6 in.	RECOVERY (%)	PTD READINGS	FTD READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
0-1			1.5			0-1 Topsoil, brown silt and sand. (Dry)	some = 20-35%	m = medium		
1-4			2.0			1-4 Brown medium sand and fine gravel. (Dry) (Fill)	little = 10-20%	c = coarse		TAL Metals 1-2 ft.
4-8			4.0			4-8 Dark gray silt, some clay, little fine sand, trace pebbles. (Wet) (Basal till)	trace = 0-10%			TCL VOA 3-4 ft. TAL Metals & TCL VOA 5-7 ft.
8						END OF BORING - REFUSAL AT 8 FT				

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-11

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 050-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 8/11/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Inside building 2 Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 8

DEPTH (FT)	SAMPLER	BLOMS / 6 in.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
			3.0				0-0.5 Concrete floor.			
2	Macro			Bkgd			0.5-4 Brown fine sand and silt, some clay. (Dry) (Fill)			
4	Macro		2.0	Bkgd			4-6 Brown fine sand and silt, some clay. (Dry) (Fill)			Perched water at 4.5 ft.
6	Lg Bore			Bkgd			4-6.4 Brown fine sand and silt, some clay. (Dry) (Fill)			Refusal with macro at 6 ft.
							6.4-7.6 Brown silt and fine gravel. (Weathered till) (Dry)			Drove large bore 6.0-8.0 ft.
							7.6-8 Gray silt and little fine sand, gravel. (Basal till) (Dry)			
8							END OF BORING - REFUSAL AT 8 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-12

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/9/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: East of building Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 6

DEPTH (FT)	SAMPLER	BLOWS / 8 in.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse		
0-2	Lg Bore		1.8	Bkgd			0-2	Brown sand and silt, trace brick. (Dry) (Fill)		Perched water at 3.6-3.8 ft. over clay lens
2-4	Lg Bore		2.0	0.1			2-4	Brown sand and silt, trace brick. (Dry) (Fill)		
4-4.8	Lg Bore		2.0	0.2			4-4.8	Brown sand and silt, trace brick. (Wet) (Fill)		
	Lg Bore							Brown silt and fine gravel, trace clay, trace medium-fine sand. (Weathered till) (Dry)		
6								END OF BORING - REFUSAL AT 6 FT		

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-13

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 850-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/9/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Inside building 1 Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 8

DEPTH (FT)	SAMPLER	BLONS / 6 in.	RECOVERY (%)	PTD READINGS	FTD READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
0-4			1.8	Bkgd		0-4 Sample stuck in tube. Appears to be sandy fill.	some = 20-35%	m = medium		Perched water at 4.0-4.5 ft.
4-4.5			2.0	Bkgd		4-4.5 Very fine sand. (Wet)	little = 10-20%	c = coarse		
4.5-5						4.5-5 Brown glacial till deposit consisting of silt and fine gravel. (Damp) (Weathered till)	trace = 0-10%			
5-6						5-6 Gray glacial till deposit consisting of silt and fine gravel. (Dry) (Basal till)				
6-8			1.4	Bkgd		6-8 Dark gray silt and fine sand, some clay, trace pebbles, trace cobbles. (Dry) (Basal till)				
8						END OF BORING - REFUSAL AT 8 FT				

Project Name: United Plating RI/FS

BORING I.D.: UPP-14

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/9/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: Inside building 1 Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 4

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PTD READINGS	FPD READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
			1.8	Bkgd			0-0.75 Concrete floor.			
							0.75-4.0 Broken stone, brick and concrete. (Fill)		Poor recovery. Redrove macro core.	
2	Macro									
4							END OF BORING - REFUSAL AT 4 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-15

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/9/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: West of building, north end. Depth to Water: 2.8
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 8

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
							some = 20-35%	m = medium		
							little = 10-20%	c = coarse		
							trace = 0-10%			
0-0.5			2.5	0.2			Brown topsoil, trace clay.			
0.5-4							Silt and fine sand, some brick fragments, trace clay.			
2	Macro			1.1						
4	Macro			0.7						
4-5.5			3.0	0.1			Gray silt and fine sand, some fine gravel, trace clay pipe fragments. (Till, F#?)			
5.5-7							Gray silt and fine sand, some fine gravel. (Till)			
7-8							Gray silt and fine sand, some fine gravel. (Till)			
8	Lg Bore		1.4	Bkgd			END OF BORING - REFUSAL AT 8 FT			
										TCL VOA 2.5-3.5 ft. Wet at 3.5 ft. Static rose to 2.8 ft.

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-17

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/7/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: West of building Depth to Water: 2.67
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 11

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PID READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
			4.0	Bkgd		0-0.5 Asphalt. 0.5-1 Brick and asphalt. (Fill) 1-2 Orange-brown clay and silt, trace sand, wood fragments. (Fill) 2-4 Silt and fine sand, trace fine gravel, trace ash. (Fill?)	some = 20-35%	m = medium		
2	Macro									
4	Macro		4.0	1.0		4-8 Orange silt, trace fine gravel. Light gray clay from 5.5-6.5 ft. (Till?)	little = 10-20%	c = coarse		Layer of black sparkly sand at 3.5 ft.
6	Macro									TCL VOA 6.5-7 ft.
8	Lg Bore		4.0	Bkgd		8-10 Dark gray silt and fine sand, trace fine gravel. (Basal till)	trace = 0-10%			
10	Lg Bore			Bkgd		10-11 Dark gray silt and fine sand, trace fine gravel. (Basal till)				TAL Metals 10 ft.
12						END OF BORING - REFUSAL AT 11 FT				

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-18

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 850-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/5/95
 NYSDEC Site I.D.: 447018 Surface Elevation: _____
 Boring Location: West of building, south side Depth to Water: 4
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 9.5

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PID READINGS	PID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
0-2			4.0				0-2 Black organic topsoil grading to brown fine sand, some silt, trace fine gravel.			
2-4							2-4 Brown fine sand, some silt, trace to little gravel.			
4-7			3.0				4-7 Brown fine sand, trace medium sand, trace to little coarse sand. (Weathered till)			
7-8			1.0				7-8 Brown weathered till grading to dark gray fine sand, trace coarse and medium sand. (Basal till)			
8-9.5			1.5				8-9.5 Dark gray silt and fine sand, some clay, trace pebbles, trace cobbles. (Dry) (Basal till)			
9.5							END OF BORING - REFUSAL AT 9.5 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-19

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/5/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: (see plan) Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 7

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PTD READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
							some = 20-35%	m = medium		
							little = 10-20%	c = coarse		
							trace = 0-10%			
2	Macro		4.0	Bkgd			0-4 Brown silt and fine sand, some clay, trace pebbles, trace cobbles, trace boulders at 4 ft. (Dry) (Weathered till)			
4	Macro		3.0				4-7 Dark gray silt and fine sand, some clay, trace pebbles, trace cobbles, trace boulders at 4 ft. (Dry) (Basal till)			
6							END OF BORING - REFUSAL AT 7 FT			
8										

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-20

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 850-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/8/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: West of building, south side Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 28

DEPTH (FT)	SAMPLER	BLOWS / 6 in.	RECOVERY (%)	PTD READINGS	FTD READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
2	Macro									
4	Macro			150			0-7 Medium brown sand and fine gravel, trace ash. (Fill)			TAL Metals 3.5-4 ft. TCL VOA 4-4.5 ft. Moisture at 10 ft.
6										
8	L Bore									
10	L Bore			22						
12	L Bore									
14	L Bore									
16	L Bore						7-26 Dark gray silt and fine sand, some clay, trace fine gravel. (Dry) (Basal till)			
18	L Bore									
20	L Bore									
22	L Bore									
24	L Bore						Shale flakes and chips at 28 ft. Possible refusal on bedrock.			
26										Sand lens at 26 ft.
							END OF BORING - REFUSAL AT 28 FT			

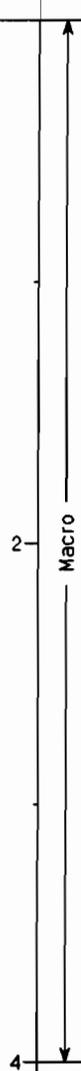
TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

BORING I.D.: UPP-20A

Site Location: Schenectady, NY Drilling Co.: LMS Engineers
 Job Number: 650-092 Drilling Method: Direct push soil probe
 Client: NYSDEC Date Begin/End: 6/13/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: West of building, south side Depth to Water: _____
 Geologist: Michael Lehtinen, Vincent Carbone, Perry Young Total Depth: 4

DEPTH (FT)	SAMPLER	BLOWS / 8 in.	RECOVERY (%)	PTD READINGS	FID READINGS	LITHOLOGY	GEOLOGIC DESCRIPTION		SAMPLES	REMARKS
							and = 35-50%	f = fine		
			2.5			0-0.5 Asphalt.	some = 20-35%	m = medium		No samples taken
						0.5-2 Coarse sand and fine gravel. (Fill)	little = 10-20%	c = coarse		
						2-4 Brown fine sand, silt and clay, little fine gravel. (Weathered till)	trace = 0-10%			
						END OF BORING - REFUSAL AT 4 FT				



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Survey: UNITED PLATING FACTORY

Pt	Northing	Easting	Elevation	Description	Status
1203	9701.1733	14725.4837	269.177	PZ-7	P
1204	9744.8885	14790.9506	268.244	PZ-13	P
1205	9748.0146	14802.3516	268.499	PZ-13A	P
1206	9795.6296	14838.3563	268.306	PZ-6	P
1207	9844.1005	14884.6415	268.507	PZ-9	P
1208	9896.0116	14946.5618	269.493	PZ-1	P
1209	9694.7381	15020.5368	277.109	PZ-8	P
1210	9816.9333	15004.8584	274.103	PZ-2	P
1211	9761.0806	14977.2801	273.291	PZ-10	P
1212	9700.6777	14922.9128	274.295	PZ-11	P

DRAFT

Groundwater Elevations

United Plating RI/FS
Elevation Table

piezometer probe		location		total depth	mid screen	TOC elevation	6/16/95 dtw	gw elev	6/26/95 dtw	gw elev	7/10/95 dtw	gw elev
PZ-1	p-1	9896.0116	14946.5618	5.56	4.31	269.4	5.45	263.95	4.54	264.86	3.94	265.46
PZ-2	p-10	9816.9333	15004.8584	5.49	4.24	275.1	3.51	271.59	3.6	271.5	3.73	271.37
PZ-3	p-13			6.42	5.17	273.32	2.38	270.94	2.64	270.68	2.54	270.78
PZ-4	p-12			5.97	4.72	273.24	2.67	270.57	3.04	270.2	3.27	269.97
PZ-5	p-11			6.65	5.4	273.73	4.27	269.46	4.29	269.44	4.76	268.97
PZ-6	p-16	9795.6296	14838.3563	6.88	5.63	268.31	3.66	264.65	4.7	263.61	5.38	262.93
PZ-7	p-19	9701.1733	14725.4837	7.39	6.14	269.18	6.22	262.96	5.79	263.39	5.98	263.20
PZ-8	p-5	9694.7381	15020.5368	7	5.75	277.11	2.47	274.64	4.14	272.97	4.5	272.61
PZ-9	p-15	9844.1005	14884.6415	5.58	4.33	268.51	3.87	264.64	4.9	263.61	dry	
PZ-10	p-2	9761.0806	14977.2801	5.2	3.95	273.29	2.2	271.09	2.64	270.65	3.68	269.61
PZ-11	p-21	9700.6777	14922.9128	6.65	5.4	274.29	3.01	271.28	2.97	271.32	3.7	270.59
PZ-12	p-14			5.97	4.72	273.62	4.6	269.02	dry		dry	
PZ-13	p-20	9744.8885	14790.9506	24	22.75	268.24	21.38	246.86	17.97	250.27	14.06	254.18
PZ-13A	p-20a	9748.0146	14802.3516	2.44	1.19	268.5	1.92	266.58	dry		dry	
MH-1	S. Main					273.1	0.2	272.9	0.2	272.9	0.2	272.90
MH-2	N. Main					273.01	0.5	272.51	0.5	272.51	0.58	272.43
MH-3	2x3.4 Main					273.44	6	267.44	nt		nt	
MH-4	2x3.4 Chrome					273.515	5.3	268.215	nt		5.43	268.09
Chrome sump						273.54	4.45	269.09	4.45	269.09	4.82	268.72
Outside sump						273.9	3.57	270.33	3.67	270.23	3.83	270.07

APPENDIX B-2

SOIL BORING/MONITORING WELL LOGS

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-1A

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 050-097 Drilling Method: 4.25" Hollow stem auger
 Client: NYSDEC Date Begin/End: 9/14/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 15

DEPTH (FT)	SPLIT-SPOON	BLOWS/ 6 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50%	f = fine	
						some = 20-35%	m = medium	
						little = 10-20%	c = coarse	
						trace = 0-10%		
0-2	SS-1	100/2"	NR	0	[Pattern]	NO RECOVERY - SPOON ON COBBLE		3.5' locking standpipe well cap
2-4	SS-2	25 27 100/4"	1.5	0	[Pattern]	0-1.5 Brown silt and fine sand, trace pebbles, trace very coarse sand. (Dry) (Weathered till)		grout bentonite pellets
4-6	SS-3	100/4"	0.2	0	[Pattern]	0-0.2 Gray silt and fine sand, trace very coarse sand, trace clay. (Dry) (Basal till)		2.0" sch 40 PVC
6-8	SS-4	54 61 70 100/4"	1.8	0	[Pattern]	0-1.8 Gray silt and fine sand, trace very coarse sand, trace clay. (Wet?) (Basal till)		
8-10	SS-5	65 100/4"	0.85	0	[Pattern]	0-0.85 Gray silt and fine sand, trace very coarse sand, trace clay. (Wet/damp) (Basal till)		Morie #1 sand
10-12	SS-6	100/4"	0.33	0	[Pattern]	0-0.33 Gray silt and fine sand, little very coarse sand, trace clay. (Moist) (Basal till)		10 slot sch 40 PVC screen
12-14	SS-7	44 100/4"	1.4	0	[Pattern]	0-0.3 Gray silt, little very fine sand. 0.3-1.4 Gray silt and fine sand, trace very coarse sand, trace clay. (Basal till)		
14-15						AUGERED TO 15 FT		6" endcap
15-16						END OF BORING 15 FT		

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-1B

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 850-097 Drilling Method: 4" Rollerbit
 Client: NYSDEC Date Begin/End: 9/18/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 23

DEPTH (FT)	SPLIT-SPOON	BLOMS/ 8 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION	WELL DIAGRAM
2							<p>3.37' locking standpipe</p> <p>grout</p> <p>2.0" sch 40 PVC</p> <p>bentonite pellets</p> <p>Morie #1 sand</p> <p>10 slot sch 40 PVC screen</p> <p>6" endcap</p>
4					DRILLED TO 10' WITH 6" HOLLOW STEM AUGER - USED AS TEMPORARY CASING		
6					4" ROLLERBIT USED FROM 10' TO END OF BORING		
8					NO SAMPLES REQUIRED FROM 0 TO 16'		
10					SEE DESCRIPTION OF UPMW-1A FOR LITHOLOGICAL DATA		
12							
14							
16	SS-1	81 100/4"	1.4	0	0-1.4 Gray silt, some fine sand, little clay, trace very coarse sand. (Basal till)		
18	SS-2	82 100/2"	1.0	0	0-1.0 Gray silt, some fine sand, little clay, trace very coarse sand, trace very coarse pebbles. (Basal till)		
20	SS-3	100/0"	0.3	0	0-0.3 Black shale rock fragments - boulder. Rollerbitted to 23'		
22							
24	SS-4	100/0"	0.0	0	Black shale fragments - Bedrock		
26					END OF BORING 23 FT		

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-1C

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 850-097 Drilling Method: 8" Rollerbit
 Client: NYSDEC Date Begin/End: 9/21/95
 NYSDEC Site I.D. #: 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (ft)	MONITOR / FT	RECOVERY (ft)	% RECOVERY (ft)	MCR	ROD	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
								and = 35-50%	f = fine	
2								DRILLED TO 10' WITH 6" HOLLOW STEM AUGER - USED AS TEMPORARY CASING	f = fine	
4						6" ROLLERBIT USED FROM 10' TO BEDROCK		m = medium		
6						NO SAMPLES REQUIRED FROM OVERBURDEN SEE UPMW-1A AND UPMW-1B FOR DESCRIPTION OF OVERBURDEN		c = coarse		
8						BEDROCK AT 22'				
10						4" Sch 80 PVC OUTER CASING SET AT 25' AND PRESSURE GROUTED TO SURFACE				
12						HQ CORE BARREL WAS USED TO COLLECT ROCK CORES				
14										
16										
18										

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-1C

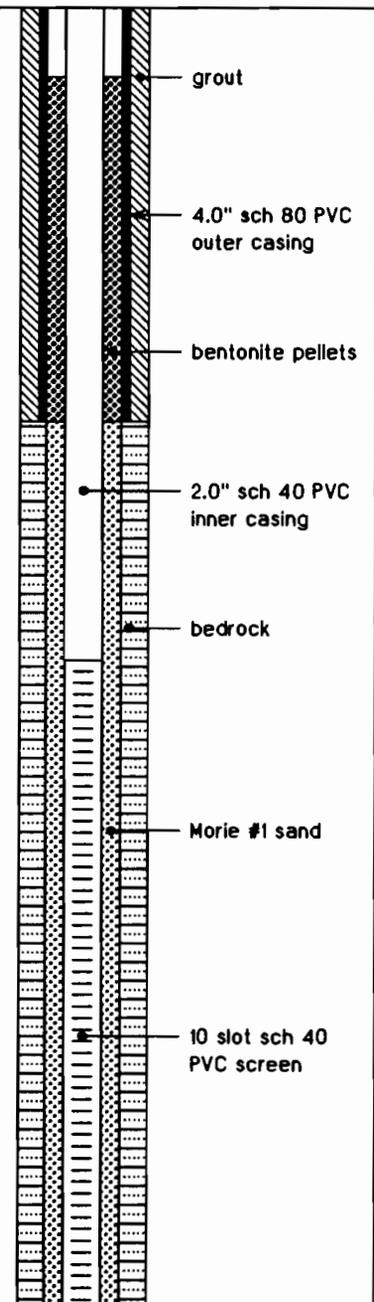
Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 6" Rollerbit
 Client: NYSDEC Date Begin/End: 9/21/95
 NYSDEC Site I.D. #: 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (IN)	MINUTES / FT	RECOVERY (IN)	% RECOVERY (IN)	NCR	ROD	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
								and = 35-50%	f = fine	
21										grout
23										4.0" sch 80 PVC outer casing
25										bentonite pellets
27										2.0" sch 40 PVC inner casing
29										bedrock
31										Morie #1 sand
33										10 slot sch 40 PVC screen
35										
37										

GEOLOGIC DESCRIPTION
 and = 35-50% f = fine
 some = 20-35% m = medium
 little = 10-20% c = coarse
 trace = 0-10%

25' - 35'
 Bedrock - Schenectady formation
Grit and sandstone, alternating with black and gray argillaceous shale. Layers are generally several inches to several feet thick. Lensing of sandstone layers is common, as are narrow (1 mm) vertical fractures in the grit and sandstone. Fractures are open unless otherwise stated.
Features of 25' - 35' run:
 Vertical fracture from 25.15' - 25.33'
 Vertical fracture from 26.65' - 27.72' (sandstone filled)
 Vertical fracture from 27.75' - 27.90' (sandstone filled)
 Vertical fracture from 29.10' - 29.41'
 Vertical fracture from 29.10' - 29.60'
 Vertical fracture from 34.00' - 34.18'
 Various former horizontal fractures appear to have been filled with very thin deposits of pyrite.

35' - 45'
 Bedrock - Schenectady formation



TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-1C

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-087 Drilling Method: 6" Rollerbit
 Client: NYSDEC Date Begin/End: 9/21/95
 NYSDEC Site I.D. #: 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (ft)	MINUTES / FT	RECOVERY (ft)	% RECOVERY (ft)	MCR	R O D	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
								and = 35-50%	f = fine	
40	10	7	10.1	100	9.27	Excellent		and = 20-35% <td>m = medium</td> <td rowspan="10"> </td>	m = medium	
42	5	5					<p><i>Grit and sandstone, alternating with black and gray argillaceous shale. Layers are generally several inches to several feet thick. Lensing of sandstone layers is common, as are narrow (1 mm) vertical fractures in the grit and sandstone. Fractures are open unless otherwise stated.</i></p> <p><i>Features of 35' - 45' run:</i> Horizontal fracture at 35.8' Vertical fracture from 36.75' - 37.05' Vertical fracture from 37.88' - 38.32' Vertical fracture from 41.07' - 41.45' Vertical fracture from 42.50' - 42.58' Vertical fracture from 43.80' - 44.17'</p>	c = coarse		
44	5	5								
46	6	6					45' - 55'			
48	7	7					Bedrock - Schenectady formation			
50	6	5	9.75	97.5	9.22	Excellent		<p><i>Grit and sandstone, alternating with black and gray argillaceous shale. Layers are generally several inches to several feet thick. Lensing of sandstone layers is common, as are narrow (1 mm) vertical fractures in the grit and sandstone. Fractures are open unless otherwise stated.</i></p> <p><i>Features of 45' - 55' run:</i> Vertical fracture from 46.70' - 48.90' Angled fracture from 45.15' - 45.25' (30' from vertical) Vertical fracture from 48.71' - 48.86' Vertical fracture from 49.22' - 49.72'</p>		
52	4	4					Below 50', bedrock is mostly grit and sandstone in one to two foot sections, separated by few sections of shale 0.1 - 0.2' thick.			
54	4	4								
56							END OF BORING 55 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-2A

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 4.25" Hollow stem auger
 Client: NYSDEC Date Begin/End: 9/14/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 15

DEPTH (FT)	SPLIT-SPOON	BLOWS/ 8 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0-10	SS-1	1	1.0	0	(Asphalt)	0-0.5 Asphalt. 0.5-1.5 Brown fine sand, silt and clay, trace pebbles. Some medium to coarse sand in first few inches. (Fill)	
10-16	SS-2	10	0.65	0	(Silt and sand)	0-0.65 Brown silt and fine sand, some clay. (Fill)	
16-20	SS-3	7	0.9	0	(Silt and sand)	0-0.9 Brown silt and fine sand, some clay, trace pebbles. Moisture at tip. (Fill)	
20-24	SS-4	4	1.4	0	(Silt and sand)	0-0.4 Brown silt and fine sand, some clay. Wood at 0.4'. End of fill. 0.4-1.4 Gray silt and fine sand, trace clay, trace pebbles. Tightly consolidated. (Basal till)	
24-31	SS-5	17	1.0	Dfl	(Silt and sand)	0-1.1 Dry gray silt and fine sand, trace clay, trace pebbles. Not as consolidated as material in 6-8' spoon. Shaly cleavage in horizontal plane. (Basal till)	
31-33	SS-6	100/4"	0.85	0	(Silt and sand)	0-0.65 Dry gray silt and fine sand, trace clay, trace pebbles. Shaly cleavage in horizontal plane. (Basal till)	
33-35	SS-7	74	1.4	0	(Silt and sand)	0-1.8 Dry gray silt and fine sand, trace clay, trace pebbles. Shaly cleavage in horizontal plane. (Basal till)	
35-40		55				AUGERED TO 15 FT	
40-45		100/4"				END OF BORING 15 FT	

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-2B

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 050-097 Drilling Method: 4" Rollerbit
 Client: NYSDEC Date Begin/End: 9/19/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 27

DEPTH (FT)	SPLIT-SPOON	BLOWS/ 6 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM	
						and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse	flush mounted curb box	locking well cap
2									
4						DRILLED TO 10' WITH 6" HOLLOW STEM AUGER - USED AS TEMPORARY CASING			
6						4" ROLLERBIT USED FROM 10' TO END OF BORING			
8						NO SAMPLES REQUIRED FROM 0 TO 19' SEE UPMW-2A FOR DESCRIPTION OF 0 TO 19'			
10									grout
12									
14									2.0" sch 40 PVC

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-2B

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 4" Rollerbit
 Client: NYSDEC Date Begin/End: 9/19/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 27

DEPTH (FT)	SPLIT-SPOON	BLOWS/ 6 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse	
17								<p>bentonite pellets</p> <p>Morie #1 sand</p> <p>10 slot sch 40 PVC screen</p> <p>6" endcap</p>
19	SS-1	60 100/3"	0.8	0	[Diagonal hatching with dots]	0-0.8 Gray silt, some clay, some fine sand, trace pebbles. Tightly consolidated. (Basal till)		
21	SS-2	66 100/4"	1.0	0	[Diagonal hatching with dots]	0-1.0 Gray silt, some clay, some fine sand, trace pebbles. Tightly consolidated. White pebbles at tip of spoon. (Basal till)		
23	SS-3	85 100/3"	1.1	1	[Diagonal hatching with dots]	0-1.1 Gray silt, some clay, some fine sand, little coarse sand, trace white pebbles in addition to the dark ones seen previously. Tightly consolidated. (Basal Till)		
25	SS-4	100/6"	0.8	Dfl	[Diagonal hatching with dots]	0-0.8 Gray silt, some clay, some fine sand, some very coarse sand (black, white, trace amounts of red), trace pebbles. Tightly consolidated. (Basal till) Split spoon bounced on subsurface at 25.5' - bedrock		
27	SS-5			0	[Horizontal hatching]	Shale bits from drilling into bedrock with rollerbit. END OF BORING 27 FT		
29								

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-2C

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 6" Rollerbit
 Client: NYSDEC Date Begin/End: 9/22/95
 NYSDEC Site I.D. #: 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (FT)	MINUTES / FT	RECOVERY (FT)	% RECOVERY (FT)	MCR	ROD	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
								and = 35-50%	f = fine	
2								some = 20-35%	m = medium	<p>flush mounted curb box</p> <p>locking well cap</p> <p>grout</p> <p>4.0" sch 80 PVC outer casing</p> <p>2.0" sch 40 PVC inner casing</p> <p>bentonite pellets</p>
4						DRILLED TO 10' WITH 6" HOLLOW STEM AUGER - USED AS TEMPORARY CASING		little = 10-20%	c = coarse	
6						6" ROLLERBIT USED FROM 10' TO BEDROCK		trace = 0-10%		
8						NO SAMPLES REQUIRED FROM OVERBURDEN SEE UPMW-1A AND UPMW-1B FOR DESCRIPTION OF OVERBURDEN				
10						BEDROCK AT 25.5'				
12						4" Sch 80 PVC OUTER CASING SET AT 28' AND PRESSURE GROUTED TO SURFACE				
14						HQ CORE BARREL WAS USED TO COLLECT ROCK CORES				
16										
18										

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-2C

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 6" Rollerbit
 Client: NYSDEC Date Begin/End: 9/22/95
 NYSDEC Site I.D. #: 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (ft)	MINUTES / FT	RECOVERY (ft)	% RECOVERY (ft)	MCR	RQD	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
								and = 35-50%	f = fine	
21								some = 20-35%	m = medium	
23							little = 10-20%	c = coarse		
25							trace = 0-10%			
27										
28 - 35'	7		7.2	100	6.78	Excellent	Bedrock - Schenectady formation			
	7						<i>Grit and sandstone, alternating with black and gray argillaceous shale. Layers are generally several inches to several feet thick. Lensing of sandstone layers is common, as are narrow (1 mm) vertical fractures in the grit and sandstone. Fractures are open unless otherwise stated.</i>			
	5						<i>Features of 28' - 35' run:</i>			
	5						<i>Vertical fracture from 31.40' - 31.76'</i>			
	5									
	6									
35	6		10.15	100	9.44	Excellent	35' - 45'			
	6						Bedrock - Schenectady formation			
	6									
37	7									

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-3A

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 4.25" Hollow stem auger
 Client: NYSDEC Date Begin/End: 9/15/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 15

DEPTH (FT)	SPLIT-SPOON	BLOWS / 8 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50%	f = fine	
0-0.5		43	1.75	0	Asphalt.	some = 20-35%	m = medium	
0.5-1.75		60			Brown fine sand and silt, some clay, trace pebbles. Tightly consolidated, dry. (Weathered till)	little = 10-20%	c = coarse	
1.75-2	SS-1	77				trace = 0-10%		
2-4	SS-2	100/4"	1.1	13	Brown silt and fine sand, little to some clay, trace pebbles. Loosely consolidated, shaly texture in horizontal plane, dry. (Weathered till)			
4-6	SS-3	100/4"	0.9	6	Brown silt and fine sand, little to some clay, trace pebbles. Loosely consolidated, shaly texture in horizontal plane, dry. (Weathered till)			
6-8	SS-4	69	1.2	6	Gray silt and fine sand, little to some clay, trace pebbles. Loosely consolidated, shaly texture in horizontal plane, dry. (Basal till)			
8-10	SS-5	71	1.2	9	Dark gray silt and fine sand, some clay, trace pebbles. Consolidated, dry. (Basal till)			
10-12	SS-6	39	1.0	5.5	Dark gray silt and fine sand, some clay, trace pebbles. Consolidated, dry. (Basal till)			
12-14	SS-7	46	1.4	0	Dark gray silt and fine sand, trace clay, trace pebbles. Consolidated, dry. (Basal till)			
14-15					AUGERED TO 15 FT			
15-16					END OF BORING 15 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-3B

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 4" Rollerbit
 Client: NYSDEC Date Begin/End: 9/20/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 27

DEPTH (FT)	SPLIT-SPOON	BLOMS/ 6 INCHES	RECOVERY (%)	PID (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse	
2								flush mounted curb box
4						DRILLED TO 10' WITH 6" HOLLOW STEM AUGER - USED AS TEMPORARY CASING		locking well cap
6						4" ROLLERBIT USED FROM 10' TO END OF BORING		grout
8						NO SAMPLES REQUIRED FROM 0 TO 19' SEE UPMW-3A FOR DESCRIPTION OF 0 TO 19'		
10								2.0" sch 40 PVC
12								
14								

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-3B

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 4" Rollerbit
 Client: NYSDEC Date Begin/End: 9/20/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 27

DEPTH (FT)	SPLIT-SPOON	BLOWS/ 6 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50%	f = fine	
17								
19	SS-1	55 100/6"	.92	0	[Diagonal Hatching]	0-0.8 Gray silt, some clay, some fine sand, trace pebbles. Tightly consolidated. (Basal till)		bentonite pellets
21	SS-2	62 62 97 100/4"	N/R	0	[Diagonal Hatching]	0-1.0 Gray silt, some clay, some fine sand, trace pebbles. Tightly consolidated. White pebbles at tip of spoon. (Basal till)		Morie #1 sand
23	SS-3	32 62 68 94	2.0	0	[Diagonal Hatching]	0-1.1 Gray silt, some clay, some fine sand, little coarse sand, trace white pebbles in addition to the dark ones seen previously. Tightly consolidated. (Basal Till)		10 slot sch 40 PVC screen
25	SS-4	100/3"	0.2	0	[Diagonal Hatching]	0-0.8 Gray silt, some clay, some fine sand, some very coarse sand (black, white, trace amounts of red), trace pebbles. Tightly consolidated. (Basal till) Split spoon bounced on subsurface at 25.5' - bedrock		6" endcap
27	SS-5	100/0"	N/R	0	[Dotted Pattern]	Shale bits from drilling into bedrock with rollerbit. END OF BORING 27 FT		
29								

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring ID.: UPMW-3C

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 6" Rollerbit
 Client: NYSDEC Date Begin/End: 9/22/95
 NYSDEC Site I.D. # 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (FT)	MINUTES / FT	RECOVERY (H)	% RECOVERY (H)	MCR	RQD	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM	
								and = 35-50% some = 20-35% little = 10-20% trace = 0-10%	f = fine m = medium c = coarse		
2								DRILLED TO 10' WITH 6" HOLLOW STEM AUGER - USED AS TEMPORARY CASING		flush mounted curb box	
4								6" ROLLERBIT USED FROM 10' TO BEDROCK		locking well cap	
6								NO SAMPLES REQUIRED FROM OVERBURDEN SEE UPMW-1A AND UPMW-1B FOR DESCRIPTION OF OVERBURDEN		grout	
8								BEDROCK AT 25.5'		4.0" sch 80 PVC outer casing	
10								4" Sch 80 PVC OUTER CASING SET AT 28' AND PRESSURE GROUTED TO SURFACE		2.0" sch 40 PVC inner casing	
12								HQ CORE BARREL WAS USED TO COLLECT ROCK CORES			
14											
16											
18											bentonite pellets

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-3C

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 6" Rollerbit
 Client: NYSDEC Date Begin/End: 9/22/95
 NYSDEC Site I.D. #: 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 55

DEPTH (FT)	RUN LENGTH (ft)	MINUTES / FT	RECOVERY (ft)	% RECOVERY (ft)	MCR	R O D	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
								and = 35-50%	f = fine	
21										
23										
25										
27										
28							28' - 35'			
29	7						Bedrock - Schenectady formation			
31	7						<i>Grit and sandstone, alternating with black and gray argillaceous shale. Layers are generally several inches to several feet thick. Lensing of sandstone layers is common, as are narrow (1 mm) vertical fractures in the grit and sandstone. Fractures are open unless otherwise stated.</i>			
33	6						<i>Features of 28' - 35' run:</i>			
35	6						Vertical fracture from 29.10' - 29.35'			
37	7						Vertical fracture from 29.40' - 29.86'			
	7						Vertical fracture from 32.80' - 32.80'			
	6						Vertical fracture from 33.80' - 34.22'			
	7						35' - 45'			
	7						Bedrock - Schenectady formation			
	7									
	6									

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-4

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 8" Solid bit
 Client: NYSDEC Date Begin/End: 9/28/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 15

DEPTH (FT)	SPLIT-SPOON	BLDG/ 8 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50%	f = fine	
0-1.0					Concrete	some = 20-35%	m = medium	
0-1.1	SS-1	2	1.1	6	Brown to dark gray/black fine to medium sand and clay, Small amounts of plastic and fibrous material (wood, cardboard) at 0.8. (Fill)	little = 10-20%	c = coarse	
0-0.75	SS-2	24	0.75	2	Brown/gray silt and fine sand, little to some clay, trace pebbles. Very difficult augering from 4 to 5'. (fill)	trace = 0-10%		
0-0.3	SS-3	100/2"	0.3	5	Brown clay, silt and fine sand, trace pebbles. (Fill)			
8-9					REFUSAL AT 8' - CORED NEW HOLE 5' SOUTH. NO SAMPLE TAKEN FROM 7 TO 9' DUE TO HEIGHT CONSTRAINTS INSIDE BUILDING - AUGERED TO 9'.			
0-0.7	SS-4	46	0.7	0	Gray and brown clay and fine sand, trace pebbles. Black, fibrous material (tarpaper) at 0.4. Soil was heated considerably from difficult augering. (Fill)			
9-11					NO SAMPLE TAKEN FROM 9 TO 11' DUE TO HEIGHT CONSTRAINTS INSIDE BUILDING - AUGERED TO 13'.			
12-13	SS-5	50/0"	1.0	0	Split spoon encountered refusal immediately, what was recovered was hole collapse from approximately 12 to 13' - clayey soil with black, fibrous material (tarpaper). (Fill)			
0-0.3	SS-6	54	2.0	0	Brown clayey fine sand, probably from hole collapse.			
0.3-2		102			Dark gray silt and fine sand, some clay, trace pebbles. (Basal till) Last foot was very dry. Moisture seems to be perched on top of till.			
18		38			END OF BORING 15 FT			

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-5

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 050-097 Drilling Method: 8" Solid bit
 Client: NYSDEC Date Begin/End: 9/28/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 15

DEPTH (FT)	SPLIT-SPOON	BLOWS/ 6 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0-1					[Concrete pattern]	0-1 Concrete	
0-0.7	SS-1	2	0.9	6	[Concrete chips and sand pattern]	0-0.7 Concrete chips, pebbles and sand. 0.7-0.9 Brown sand, some clay. Dry. (Fill)	
0-1.8	SS-2	25	2.0	2	[Brown/gray silt and clay pattern]	0-1.8 Brown/gray silt and clay, trace fine sand, trace pebbles. trace pebbles. Very difficult augering from 4 to 5'. Dry. (Weathered till)	
0-0.4	SS-3	15	0.4	5	[Brown medium sand pattern]	0-0.4 Brown medium sand, some silt, trace clay - hole collapse material. Soil in cutting shoe is brown silt and fine sand, some clay, trace pebbles. Slightly moist. (Weathered till)	
NO SAMPLE TAKEN FROM 7 TO 8' DUE TO HEIGHT CONSTRAINTS INSIDE BUILDING - AUGERED TO 9'.							
0-0.65	SS-4	50	0.85	0	[Brown silt and fine sand pattern]	0-0.65 Brown silt and fine sand, some clay, trace pebbles. Dry, then moist. (Weathered till)	
NO SAMPLE TAKEN FROM 11 TO 13' DUE TO HEIGHT CONSTRAINTS INSIDE BUILDING - AUGERED TO 13'.							
0-2.0	SS-5	85	2.0	0	[Gray silt and fine sand pattern]	0-2.0 Gray silt and fine sand, some clay, trace pebbles. Dry. (Basal till)	
END OF BORING 15 FT							

TEST BORING/MONITORING WELL CONSTRUCTION LOG

Project Name: United Plating RI/FS

Boring I.D.: UPMW-8

Site Location: Schenectady, NY Drilling Co.: ADT Albany
 Job Number: 650-097 Drilling Method: 8" Solid bit
 Client: NYSDEC Date Begin/End: 9/29/95
 NYSDEC Site I.D. 447018 Surface Elevation: _____
 Boring Location: See plan Depth to Water: _____
 Geologist: Michael Lehtinen, Perry Young Total Depth: 15

DEPTH (FT)	SPLT-SPOON	BLOWS/ 8 INCHES	RECOVERY (%)	PTD (MAX)	LITHOLOGY	GEOLOGIC DESCRIPTION		WELL DIAGRAM
						and = 35-50%	f = fine	
0-1					Concrete			
1-2	SS-1	2	0.7	Dfl	0-0.3 Gray sand, some clay, trace fine gravel. Moist. (Fill)	some = 20-35%	m = medium	
2-3		2			0.3-0.7 Brown sand, trace pebbles. Dry. (Fill)	little = 10-20%	c = coarse	
3-4	SS-2	2	1.3	Dfl	0-0.2 Black sand, trace pebbles. Moist. (Fill)	trace = 0-10%		
4-5		2			0.2-1.3 Brown/gray marbled silt and clay, some fine sand, trace pebbles. Moist. (Weathered till)			
5-6	SS-3	1	0.6		0-0.8 Brown/light gray fine to medium sand and clay, trace coarse sand. Coarse sand content increases at tip of spoon. Moist. (Weathered till)			
6-7		28						
7-9		100/3"			NO SAMPLE TAKEN FROM 7 TO 9' DUE TO HEIGHT CONSTRAINTS INSIDE BUILDING - AUGERED TO 9'.			
9-10	SS-4	25	1.1	0	0-1.1 Gray silt and fine sand, some clay, trace pebbles. Moist. (Basal till)			
10-11		75						
11-13					NO SAMPLE TAKEN FROM 11 TO 13' DUE TO HEIGHT CONSTRAINTS INSIDE BUILDING - AUGERED TO 14'.			
13-14	SS-5	25	1.4	0	0-0.2 Brown/gray medium sand and clay which may be hole collapse. Wet.			
14-15		52			0.2-1.4 Gray silt and fine sand, some clay, trace pebbles. Moist/ damp. Water flowed from top of spoon. (Basal till)			
15-16		100/5"			END OF BORING 14 FT			

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET 1 of 1

DATA BY: MDL/ESH	PROJECT No.: 650-098
PROJECT NAME: United Plating	BORING No.: UPMW-7A
CLIENT: NYSDEC	START DATE: 11/12/97
DRILLER: American Auger	FINISH DATE: 11/12/97
BORING LOCATION: Carrig St	TOTAL DEPTH: 14.58'
MONITORING INSTRUMENT(S):	DEPTH TO WATER:

WEIGHT: 140 lb FALL: 30 in. GROUND SURFACE ELEVATION: HOLE DIAMETER:

SAMPLE DEPTH	0" to 6"	6" to 12"	12" to 18"	18" to 24"	RETAINED SAMPLE	RECOVERY (%)	SAMPLE No.	INSTRUMENT READING	DEPTH (ft)	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIALS	
											f - fine	and - 35-50%
									1		Used 4" spin casing to 15" installed 2" pvc well.	
									2		See log for UPMW-7B for 0-15"	
									3			
									4			
									5			
									6			
									7			
									8			
									9			
									10			
									11			
									12			
									13			
									14			
									15			

SUBSURFACE EXPLORATION - TEST BORING LOG

Boring No. UPMW-7B
Project No. 650-098

Project Name United Plating

Date 11/11/97 11/12/97
start finish

Client NYSDEC

Boring Location Carrie St.

Driller American Auger

Total Depth 24.5'

Monitoring Instrument(s) _____

Depth to Water _____

SAMPLE HAMMER

Hole Diameter _____

Weight 140 lb

Ground Surface Elevation _____

Fall 30 in.

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL		Remarks
	0' to 6"	6' to 12"	12' to 18"	18' to 24"							f - fine	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
0	2				.6				moist	top soil	0.0 - 0.6 brown fine sand + silt trace clay trace gravel organics ~ roots		
		3									0.0 - 0.6 brown fine sand + silt, trace clay, trace gravel. organics some mottling		
2			6								0.6 - 1.0 f. sand + silt (lt. brown) trace c. sand, trace clay trace gravel. some mottling		
				5					deep		1.0 - 1.2 brown f-m sand + silt trace clay trace gravel		
2	4				1.2						0.0 - 0.6 brown f sand + silt. trace clay trace gravel		
				5							0.6 - 1.8 brown f-m sand some silt tr. clay tr. gravel @ 1.7 lens of mottled siltier soil, otherwise, sandy.		
			7								0.0 - 1.2 f.m.c sand + silt tr. clay tr. gravel (brown)		
4				10									
4	9				1.8				wet				
				10									
6				13									
6	12				1.2				wet				
				17									
				13									
8					65								

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET 1 of 1

DATA BY: E. Hollister
PROJECT NAME: United Plating
CLIENT: NYSDDEC
DRILLER: American Auger
DATE START: 11/11/97
FINISH: 11/14/97
BORING LOCATION: Carris St.
MONITORING INSTRUMENT(S):
PROJECT NO.: 650 098
BORING NO.: UPMW-7A
TOTAL DEPTH: 54.71
DEPTH TO WATER:

SAMPLE HAMMER WEIGHT: 140 lb **FALL:** 30 in.
GROUND SURFACE ELEVATION:
HOLE DIAMETER:

DEPTH	BLOWS ON SAMPLER				RETIRED SAMPLE	RECOVERY (%)	SAMPLE NO.	INSTRUMENT READING	MOISTURE CONTENT	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIAL	REMARKS
	0-10 ft	10-20 ft	20-30 ft	30-40 ft								
	1.5	3	1.0								Used 4" spin casing to 28' install 3" PVC 5' into backrock see log for UPMW-7B for 0-24	
28.5	1.5	3	1.0									
31.5	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
34.5	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
39.75	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
45.5	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
	1.5	3	1.0									
50.5	1.5	3	1.0									
	1.5	3	1.0									

57
 54
 55

Data by M. Lehtinen

Sheet 1 of 2

SUBSURFACE EXPLORATION - TEST BORING LOG

Boring No. UPMW-8A
Project No. 650-098

Project Name UNITED PLATING RE II

Date 11.04.97 11.6-97
start finish

Client NYSDEC

Boring Location CITY GARAGE

Driller AMERICAN AUGER

Total Depth 14.00' + .98' RISER (added)

Monitoring Instrument(s) HNU

Depth to Water _____

SAMPLE HAMMER

Hole Diameter _____

Weight 140 lb

Ground Surface Elevation _____

Fall 30 in.

ORIG. 8A. (revised notes only)

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL		Remarks
	0' to 6"	6' to 12"	12' to 18"	18' to 24"							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
1	2					.8		-		DAMP	0-.2 Black silt (Fill) Some ASH		
		3											
3			3								.2-.8 BROWN silt, vF sand (Fill)	Fill 0-2.5	
				7									
3	12					1.7		-		moist	0-.8 BROWN silt and sand Some vF sand (weathered Till)	weathered Till 2.5'-7'	
		18											
5			52								.8-1.7 BROWN silt + sand Trace gravel (Till)	Basal Till 7'-	
				47									
5	6					1.4		-		DRY	0-1.4 BROWN silt + sand Trace gravel (weathered till)	7'- Stream 9'	
		34											
7			52										
				74									
7	12										0-.8 GRAY silt + vF sand (Basal Till) TR CLAY		
		26				.8		-		DRY			
9		34											
				31									

Boring No. UPNW-8A
 Project No. 650-093

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL		Remarks	
	0' to 6'	6' to 12'	12' to 18'	18' to 24'							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%		
9	12					1.5				Damp			GRAY silt + VF SAND TR CLAY TR VC SAND (Basal Till)	
		18												
			23											
11				20						Damp			GRAY silt same CLAY TR VC SAND (Basal Till)	
	12					1.4								
		9												
13			12							Boulder			No Recovery Boulder Twisted off lead Auger @ 15' 1000	
				8										
13														
15														

Data by ZBL/EH

Sheet 1 of 2

SUBSURFACE EXPLORATION - TEST BORING LOG

Boring No. UPMW-88
Project No. 650-098

Project Name UP RT II

Date ¹⁰⁴⁰ 11-04-97 11-5-97
start finish

Client NYSDEC

Boring Location City Garage

Driller American Auger

Total Depth 22.36 + .98' rise

Monitoring Instrument(s) _____

Depth to Water _____

SAMPLE HAMMER

Hole Diameter _____

Weight 140 lb

Ground Surface Elevation _____

Fall 30 in.

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL	Remarks
	0' to 6'	6' to 12'	12' to 18'	18' to 24'								
13	30					.8						
		100%										
15												
15	14					1.3						
		21										
			24									
17				34								

Augered to 13'
see log for
UPMW-84
for 0-13'
Boulder @ 10'

0-.8 gray silt & vf sand
trace clay trace gravel
(Basal till)

VERY DIFFICULT DRILLING
ON SANDSTONE BOULDERS

0-1.3 gray cat sand and silt
trace mf
little clay little gravel

dry Basal till
dry Basal till

SUBSURFACE EXPLORATION - TEST BORING LOG										SHEET 1 of 2			
DATE BY: M D L S EXH							PROJECT NO.: 650-098						
PROJECT NAME: <u>United Planting UP RF #</u>							BORING NO.: UPMW-8C						
CLIENT: NYSDEC													
DRILLER: American Aigen							DATE START: 11-5-97		FINISH: 11-19-97				
BORING LOCATION: City GARAGE							TOTAL DEPTH: 55.46						
MONITORING INSTRUMENT(S):							DEPTH TO WATER:						
SAMPLE HAMMER			WGHT: 140 lb		FALL: 30 in.		GROUND SURFACE ELEVATION:			HOLE DIAMETER			
DEPTH	BLOWS ON SAMPLER				RETAINED SAMPLE	RECOVERY (IN)	SAMPLE No.	INSTRUMENT READING	MOISTURE CONTENT	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIAL		REMARKS
	0' to 6"	6' to 12"	12' to 18"	18' to 24"							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
28-30	28	2	5:33	2.0									
	↓												
30-35	30	5	1:07	4.7									
			1:47										
			1:39										
			1:34										
35-40	35	5	1:53	5.0									
			1:18										
			2:00										
			1:28										
	↓		1:50										
	40												

USED 4" SPIN CASING TO 28.0' INSTALL 3" PVC 5' INTO BEDROCK See log For UPMW-8B, 8A FOR 0-23

WINDY

Boring No. UPMW 8C
 Project No. 650098

1.5 - Blow length
min - min/foot
Recovery - Recovery
0% Recovery - % Recovery
M.C.R. - M.C.R.
Recovery - Recovery

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL	Remarks
	0 to 6"	6" to 12"	12" to 18"	18" to 24"								
40	5	41										
		126										
		132										
		156										
		200										
45	5	102	5.3									
		119										
		125										
		137										
		111										
50	5	110	5.0									
		120										
		123										
		158										
		218										
55												

Box 1
 46-45
 45-50
 50-55
 Box 2

CLASSIFICATION OF MATERIAL
 f - fine
 m - medium
 c - coarse
 and - 35-50%
 some - 20-35%
 little - 10-20%
 trace - 0-10%

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET 1 of 1

DATA BY: *MSL/MSL*

PROJECT NO.: *50-078*

PROJECT NAME: *Water Planting*

BORING NO.: *JPAW-9B*

CLIENT: *NYS DEC*

DRILLER: *American Auger*

DATE START: *11/18/97*

FINISH: *11/18/97*

BORING LOCATION: *Street Foster St*

TOTAL DEPTH: *16.35'*

MONITORING INSTRUMENT(S): *NYSDEC HW*

DEPTH TO WATER: *1.0'*

SAMPLE HAMMER: WEIGHT: *140* lb FALL: *30* in.

GROUND SURFACE ELEVATION:

HOLE DIAMETER:

DEPTH	BLOWS ON SAMPLER				RECOVERED SAMPLE	RECOVERY (%)	SAMPLE NO.	INSTRUMENT READING	MOISTURE CONTENT	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIAL		REMARKS
	0" to 6"	6" to 12"	12" to 18"	18" to 24"							f - fine	and - 35-50%	
0	30					0.2		BKG					BKG = 1.4 units
		14											
			12										
2				11									
	33					1.0		BKG					
		24											
			34										
4				46									
4	37					1.5		BKG					Sample taken 4-6
		50											
			75										
6													MS/MSD 6-8
6	73					1.1							
		76											
			100										
8													
8	64												
		89											
			100										
10													
14	20												
		70				1.9		BKG					
			75										
16			40										

3" split spoon
for MS/MSD

clay
weathered
hill
Dogs

moist

moist

0-0.2 black top - fill
-1.2 gray/brown f. sand, gravel, concrete - fill
0-3.6 brown f. sand + silt + clay H. gravel fill
0.6-1.0 brown f. sand + silt + clay H. gravel (weathered hill)
0-0.5 brown f. sand + silt H. clay H. gravel (weathered hill)
0.5-1.5 gray f. sand + silt + clay H. gravel (basal hill)
Drive through sandstone - gray cobble approx 2"
brown f. sand + silt + gravel H. clay
0.7-0.35 sandy layer:
Piece of red sandstone
SKIP 10-14
0-1.9 Gray FSAND + S.H. little gravel TR CLAY (Basal Till)

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET 1 of 2

DATA BY: EKH / MDL

PROJECT No: 050-098

PROJECT NAME: VPR I #

BORING No: VPMW-9c

CLIENT: NYSD&C

DRILLER: American Auger

DATE START: 11/17/97 FINISH: 11/18/97

BORING LOCATION: Street

TOTAL DEPTH: 22.87

MONITORING INSTRUMENT(S): NYSD&C H11

DEPTH TO WATER:

SAMPLE HAMMER WEIGHT: 140 lb FALL: 30 in.

GROUND SURFACE ELEVATION:

HOLE DIAMETER

DEPTH	BLOWS ON SAMPLER				RETAINED SAMPLE	RECOVERY (IN)	SAMPLE No.	INSTRUMENT READING	MOISTURE CONTENT	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIAL			REMARKS
	0" to 6"	6" to 12"	12" to 18"	18" to 24"							f - fine	m - medium	c - coarse	
														4" spin casing to 8' See log 9B for 0-8'
8	34	46	87			15		626						0-2 Gray + brown mottled f sand w/ silt. Tr. clay to gravel
10			78											2-1.5 Gray f. sand w/ silt Tr. clay w/ gravel
10	48	64				.9		076						0-0.9 Same as above
12			100/3											
16	15	22/4				.9		066						0-0.7 Same as above
18						.7								
18	28	100/0				1.2		066						0-1.2 Same as above
20														

SUBSURFACE EXPLORATION - TEST BORING LOG

Boring No. UPMW 10B
Project No. 650 098

Project Name UP R1 II

Date 11/6/97 11-7-97
start finish

Client NYSDEC

Boring Location sib

Driller American Auger

Total Depth 27.86'

Monitoring Instrument(s) _____

Depth to Water _____

SAMPLE HAMMER

Hole Diameter _____

Weight 140 lb

Ground Surface Elevation _____

Fall 30 in.

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL		Remarks
	0' to 6"	6' to 12"	12' to 18"	18' to 24"							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
0	5					0.3					gray fine sand & gravel (fill)		Bkg = 2.1-2.2 UNITS
		5									0-.2 brown w/ to c sand little gravel organics		
2			4										
2	6					1.3					0-.3 gray med-c sand trace fine sand, gravel		
		12									.3-.7 c. sand + gravel		
4			42								.7-1.3 brown w/gray stripes w/ sand + silt trace gravel trace c sand & clay		
4	22					1.3							
		71											
6			100/3								0-1.3 brown silt, w/ sand trace clay little gravel (w.t.)	lots of shale fragments	
6	16					0.6							
		64											
8			100/2								0-.6 BROWN silt w/ sand trace clay trace gravel (weathered Till)	rock in tip-shale	
8	15					1.4					0-.3 BROWN weathered Till same as ABOVE	* Analytical Sample	
		18											
10			36								.2-1.4 GRAY w/ sand and silt TR clay TR gravel (Basal Till)		
			24										

Boring No. UPMU 106
Project No. 650-098

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL	Remarks
	0' to 6'	6' to 12'	12' to 18'	18' to 24'								
10	26					1.4	BK6	Dry			0-1.4 GRAY VF sand + silt TR clay	
		23										
			33									
12				37							TR gravel oxide layer (mm @ .5	
12	22					2	BK6	Dry			0-2 gray VF sand + silt	sub rounded shale
		18										
			28									
14				33							TR clay TR gravel to little	
14	6					1.7	BK6	Dry			0-1.7 gray VF sand + silt	Gravel mostly shale.
		14										ONE piece rose ptg.
			39									
16				29							to little	
16	14					1.8	BK6				0-1.8 same as above	
		29									little gravel	(BK6 = 1.5 units)
			49									
18				48								
18	19					.8	BK6	moist Damp			0-.8 gray vf sand + silt	
		37									trace clay little gravel/sand	
			32									
20				40								
20	20					1.8	BK6	moist Damp			0-1.8 same as above	
		14										
			22									
22				50								
22						1.8	BK6	Damp			0-1.8 same as above	
											(one piece of metamorphic) ~ 1/2"	Gravel getting coarser
24				33								

SUBSURFACE EXPLORATION - TEST BORING LOG										SHEET / of /			
DATA BY: <i>E. Hollister</i>							PROJECT No: <i>650-098</i>						
PROJECT NAME: <i>United Plating</i>							BORING No: <i>UPMW-10C</i>						
CLIENT: <i>NYSDEC</i>													
DRILLER: <i>American Auger</i>						DATE START: <i>11-07-97</i>			FINISH: <i>11-13-97</i>				
BORING LOCATION: <i>S.H.</i>									TOTAL DEPTH: <i>54.55'</i>				
MONITORING INSTRUMENT(S):									DEPTH TO WATER:				
SAMPLE HAMMER WEIGHT: <i>lb</i>				FALL: <i>in.</i>		GROUND SURFACE ELEVATION:			HOLE DIAMETER:				
DEPTH	BLOWS ON SAMPLER				RECORDED SAMPLE	RECOVERY (%)	SAMPLE No.	INSTRUMENT READING	MOISTURE CONTENT	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIAL		REMARKS
	<i>30 sec</i>	<i>15 sec</i>	<i>10 sec</i>	<i>5 sec</i>							<i>f - fine</i>	<i>and - 35-50%</i>	
	<i>32</i>	<i>2</i>	<i>2.1</i>	<i>1.5</i>	<i>MC R</i>	<i>RQD %</i>					<i>f - fine</i>	<i>and - 35-50%</i>	<i>Used 4" spin casing to 31.5'</i> <i>Install 3" PVC 5' into bedrock</i> <i>see log for UPMW 10 B for 0-28'</i> <i>top 1' maximum</i> <i>cut - into bedrock</i> <i>up.</i> <i>core block -</i> <i>couldn't get</i> <i>lines</i> <i>consider</i> <i>no lines</i>
	<i>35</i>	<i>5</i>	<i>5</i>	<i>2.2</i>							<i>m - medium</i>	<i>some - 20-35%</i>	
	<i>40</i>	<i>5</i>	<i>1:00</i>	<i>4.9</i>	<i>4.0</i>						<i>c - coarse</i>	<i>little - 10-20%</i>	
			<i>1:47</i>									<i>trace - 0-10%</i>	
			<i>1:25</i>										
			<i>1:42</i>										
			<i>1:55</i>										
	<i>45</i>		<i>1:25</i>										
			<i>1:51</i>										
			<i>1:36</i>										
			<i>2:06</i>										
			<i>2:02</i>										
	<i>90</i>		<i>1:44</i>										
			<i>1:58</i>										
			<i>1:34</i>										
			<i>1:45</i>										
			<i>1:10</i>										

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET 1 of 2

DATA BY: EPL/MDL/CM	PROJECT No.: 650-098
PROJECT NAME: Junked Plating	BORING No.: JPMW 11B
CLIENT: NYSDEC	START DATE: 11/19/97
DRILLER: American Driller	FINISH DATE: 11-19-97
BORING LOCATION: Shoed	TOTAL DEPTH: 19.88
MONITORING INSTRUMENT(S):	DEPTH TO WATER:
WEIGHT: 140 lb	FALL: 30 in.
SAMPLE HAMMER	GROUND SURFACE ELEVATION:
	HOLE DIAMETER:

SAMPLE DEPTH	WEIGHT:				RECOVERED SAMPLE	RECOVERY (%)	SAMPLE No.	INSTRUMENT READING	NOR. S.W. 22 DEPTH (ft)	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIALS	
	0" to 6"	6" to 12"	12" to 18"	18" to 24"							f - fine	and - 35-50%
											m - medium some - 20-35%	
											c - coarse little - 10-20%	
											trace - 0-10%	
2	50				1.2				1			
		65							2			
			100	0					3	(chunks pink sandstone in it) 0-2 greenish brown f-sand-silt to clay to gravel (fill) 0.2-1.2		
4									4	more fine sand-silt to clay to gravel (weathered fill)		
4	15				1.4				5	0-1.5 same as above - 1.5 - 2.5 gravel, broken shale layers - 2.5 - 1.4 brown f-sand-silt to clay		
		12							6	4-1.1 ^{HR} gravel (weathered fill)		
6				60					7			
6	5				1.1				8	0-0.3 gravel, broken shale		
		33							9	0.3-1.1 grey sand f and silt trace clay trace gravel (basal fill)		
			5						10			
8				75					11	0-0.1 pink sandstone chunk		
		54							12	0-1.85 grey f-sand-silt to gravel to clay (basal fill)		
			63						13			
10				78					14	0-0.6 medium shale + sandstone pieces		
10	33				1.0				15	0.6-1.0 grey fine sand-silt to clay to gravel (basal fill)		
		55							16			
			50						17			
12				100					18	0-1.1 grey f-sand-silt to clay to gravel (basal fill)		
12	20				1.1				19			
		51							20			
			43						21			
14				35					22			

Boring No. D.P.W. 1113
 Project No. _____

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL		Remarks
	0' to 6"	6' to 12"	12' to 18"	18' to 24"							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
14	15					11				Dry Bent Fill			
		31									0-1.1 Same as above		
			25										
16				25						Dry			
16	20					13					0-1.3 Same as above		
		26											
			26										
18				56									
18	24					12							
		36											
			25										
20				22									

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET 1 of 3

DATA BY: EKH	PROJECT No.: 650-098
PROJECT NAME: UP RI II	BORING No.: URMW-12C
CLIENT: NYSDEC	START DATE: 11/10/97 1000
DRILLER: American Auger	FINISH DATE: 11-14-97
BORING LOCATION: Bike Path	TOTAL DEPTH: 54.19
MONITORING INSTRUMENT(S):	DEPTH TO WATER:

WEIGHT: SAMPLE HAMMER 140 lb	FALL: 30 in.	GROUND SURFACE ELEVATION:	HOLE DIAMETER:
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SAMPLE DEPTH	WEIGHT:				RECOVERED SAMPLE	RECOVERY (%)	SAMPLE No.	INSTRUMENT READING	DEPTH (ft)	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIALS
	0" to 6"	6" to 12"	12" to 18"	18" to 24"							
0	7				1.3				Moist	greenish brown vf silt + sand trace gravel trace clay. Petroleum odor. trace coarse sand trace wood!	
1		18		9							
2				7							
2	4				1.25					strong petroleum odor 0-.5 brown vf sand + silt	
3		4								trace clay trace gravel moist .5-.8 wet	
4			6							fine sand + silt greenish brown trace clay trace gravel	
4	19				1.9					.8-1.25 mottled green + brown gray vf sand + silt trace clay/gravel	
5		28									
6			48							0-.15 moist g/ba f sand silt to gravel black	
6	54				1.0					gravelly layer strong pet odor .15-.7 g/ba	
7		100/5								fine sand + silt to clay to gravel wet .7-1.3	
8										dry greenish vf f sand + silt 1.1-1.6 gravel 1.3-1.9 brown	
8										fine sand + silt 1.1-1.6 gravel 1.1 clay	
8										wet brown f, m, c sand + silt 1.1 clay	
8										little gravel	
9											
10	2	4			1.3					moist ~ 40' away from Foster towards Esis	
11		3									
12	4		4							discarded - looking for groundwater	
13	4	8									
14		9								NO RECOVERY	
15			10								
16	6			9							

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery (feet)	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL		Remarks
	0' to 6"	6' to 12"	12' to 18"	18' to 24"							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
6	4					1.3			moist		0-.35 gray f.sand + silt h. clay h. gravel	# sample taken @ 1515' 11/16	
		6											
			18						wet		.35-1.2 greenish brown + gray mottled f. sand + silt h. clay h. gravel		
8				29					dry	weathered hill	1.2-1.3 brown f. sand + silt h. clay h. gravel		
8	13					2.0			moist		0-.3 gray f. sand + silt h. clay h. gravel. Petroleum odor (21.5 units on HNU, Bkg - 1.5)		
		30											
			35										
10				32							.3-2.0 brown grading to dark brown fmc sand + silt, little gravel h. clay.		
10	7					1.25					0-.45 brown gravelly (stuff from inside)		
		37											
			33						dry	braced hill	.45-1.25 gray f. silt f. sand + silt h. clay h. gravel. hard to get through		
12				25									
12	48					.8					0-.6 gray fine sand + silt h. clay little gravel h. coarse sand		
		65											
			38										
14				33							.6-.8 gray fine sand + silt, h. m-c sand h. silt h. gravel		
14	38												
		46											
			100/0										
16													
16	12					.9					0-.9 gray v.f. f. sand + silt h. clay h. gravel		
		44											
			100/0										
18													
18													
20													

Boring No. UPMW-12C
 Project No. 650098

Depth	BLOWS ON SAMPLER				Retained Sample	Recovery feet	Sample No.	Instrument Reading	Moisture Content	Stratigraphic Column	CLASSIFICATION OF MATERIAL	Remarks	
	0 to 6"	6 to 12"	12 to 18"	18 to 24"									
25	4	20	35								Vertical Gx 27.5 28.5		
↓		1:21											
↓		1:35											
↓		1:38											
29	5	49	15										
↓		1:47											
↓		1:54											
↓		2:00											
↓		1:35											
34	5	14	7										
↓		1:49											
↓		1:17											
↓		1:38											
↓		2:00											
39	5	15	5.9										
↓		1:35											
↓		1:30											
↓		2:2											
↓		1:50											
44	5	15	5.2										
↓		2:28											
↓		1:54											
↓		1:35											
↓		2:09											
49	5	15	5.7										
↓		1:21											
↓		59											
↓		51											
↓		117											
54	5	45											
↓													
55													

Box 1

LMS**Bedrock Boring Log**

Boring No.: UPMW-12C

Sheet 3 of 3

Project Name: United Plating

Project No.: 650-098

Client: NYSDEC

Date: Start 11/10/97

Driller: American Auger

Finish 11/14/97

Drilling Method: 4" Spin Casing

Total Depth: 55'

Boring Location: Bike Path

Depth To Water: 0.94'

Coordinates:

Surf. Elevation:

Logged By: Edith Hollister

Hole Diameter: 4"

Monitoring Instrument(s): H-Nu

Depth (ft)	Run Length (ft)	Min./Ft.	Recovery (ft)	% Recovery	MCR	RCD%	Classification Of Material		Remarks
							f - fine m - medium c - coarse	and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	
									Bedrock - Schenectady Formation
									Grit and sandstone, alternating with black and grey argillaceous shale. Layers are generally several inches to several feet thick. Lensing of sandstone layers is common, as are narrow (1mm) vertical fractures in the grit and sandstone. Fractures are open unless otherwise stated.
25-29	4	2:01	3.60	90	2.5	63			<u>Features of 25'-29' run:</u> Vertical fracture @ 26.35-26.95 Vertical fracture @ 27.4-28.5 Horizontal fractures at shale lenses
		1:24							
		1:35							
		1:38							
29-34	5	0:49	5.10	102	5.1	102			<u>Features of 29'-34' run:</u> Vertical fracture @ 29-29.85 Vertical fracture @ 30.75-30.92 Vertical fracture @ 32.6-33 Horizontal fractures at shale lenses
		1:47							
		0:54							
		2:00							
		1:35							
34-39	5	1:47	4.92	98	4.5	90			<u>Features of 34'-39' run:</u> Horizontal fractures at shale lenses
		1:49							
		1:17							
		1:33							
		2:00							
39-44	5	1:15	4.77	95	4.77	95			<u>Features of 39'-44' run:</u> none
		1:25							
		1:30							
		2:12							
		1:50							
44-49.5	5.5	1:52	5.20	95	5.2	95			<u>Features of 44'-49.5' run:</u> Vertical fracture @ 46.45-46.6 Horizontal fractures at shale lenses
		2:28							
		1:54							
		1:35							
		2:09							
49.5-55	5.5	1:51	5.20	95	5	91			<u>Features of 49.5'-55' run:</u> Vertical fracture @ 50.5-51.7 Horizontal fractures at shale lenses
		1:21							
		0:59							
		0:51							
		1:17							
		0:45							

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1508
PEARL RIVER, NEW YORK 10965

JOB NO. _____

SUBJECT UPMW - 12C Box 1 Total length of pieces
25'-44' > 4"

Depth	run length	recovery	% recovery	MCE	RD %	Comment
25-29	4'	3.60	90%	2.50	63%	

Comments

horiz. fr @ .25 in shale.
 horiz. fr @ .55 sh/ss mix. lots of calcite
 horiz. fr @ 1.3 ss/sh meet
 vert. fr from 1.35 - 1.95 lots of calcite
 shale to horiz. fr @ 1.7 where becomes ss
 horiz. fr @ 2.4 ss/sh meet
 vert. fr from 2.4 - 3.5 lots of calcite, some pyrite
 horiz. fr @ 1.5

29-34	5'	5.10	102%	5.10	102%	mostly s/ss layering w/ 2 1/2 runs of ss
-------	----	------	------	------	------	--

Comments

vert. fr 0-.85
 vert. fr 1.75-1.92
 vert. fr 3.6-4.0
 fissile areas: 1.25-1.27;
 1.60-1.95; 2.65-2.82,

many fissile shale areas throughout whole 5' section.
 most look like they broke when pulled out of core like

horiz. fr @ 3.6
 horiz. fr @ 4.0

34-39	5'	4.92	98%	4.50	90%	
-------	----	------	-----	------	-----	--

horiz. fr @ .15
 horiz. fr @ .5
 horiz. fr @ .4
 horiz. fr @ 3.94
 @ 3.96

many fissile shale layers to 1.85 sandstone for rest of run except for shale bands at: 2.0; 2.3; 2.95 + 3.95

39-44	5'	4.77	95%	4.77	2-3%	
-------	----	------	-----	------	------	--

sandstone from 0-3.46
 fissile shale from 3.46-4.4
 ss 4.4-4.73
 fissile sh. 4.73-4.77

beautiful 3" run of ss (very boring - no obvious cross bedding, etc. very homogeneous, well sorted)

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

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SHEET NO. _____ OF _____

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ONE BLUE HILL PLAZA
POST OFFICE BOX 1508
PEARL RIVER, NEW YORK 10885

JOB NO. _____

SUBJECT UPM W-12C Box 2
44-55'

Depth	Run Length	Recovery	% Recovery	M.C.R.	ROD %	Comments
44-49.5	5.5	5.2	95%	5.2	95%	

horiz. fr. @ 2.45
vert. fr. from 2.45-2.6
horiz. fr. @ 4.2

most of run very fissile shale

49.5-55	5.5	5.2	95%	5.0	91%	some shale sections fissile
---------	-----	-----	-----	-----	-----	-----------------------------

Long fr @ .75 (Possibly coal?)
vert. fr. from 1.0-2.2 very clean in ss. ^{section} has pyrite

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10985

JOB NO. _____

SUBJECT UPMW-8C Box 1
28-45'

Depth	Runlength	Recovery	% Recovery	MCP	RQD%	Comments
28-30	2	1.97	99%	1.97	99%	Top .07' lt. gray - overburden / plastic / conglomerate. m. of some soil
horiz. fr @ .74 where ss changes to sh.						
30-35	5	4.65	93%			

possible closed vert. fr 0.7 - 1.0
 horiz. fr @ 1.22
 1.40
 1.47
 1.65
 2.40
 3.07
 3.33
 3.98

very fissile areas: .95 - 1.75, 1.95 - 2.23, 2.63 - 2.95

Gray clay seams from 4.10 - 4.12, 4.22 - 4.23, 4.30 - 4.36, 4.45 - 4.49
 clay on end. Clay seams in dk. gray shale (somewhat fissile)

35-40	5	5.0	100%	4.90	98%	
horiz fr @ .41 + .45 lots of broken, fissile shale in interval horiz fr @ .68 + .72 " " closed vert. fr in ss. from .83 - 1.70 horiz. fr @ 3.35 very fissile shale from 4.03 - 4.56						

40-45	5	5.15	103%	4.95	99%	
horiz. fr @ .44 horiz. fr @ .65 most of run very fissile dk gray/black shale						

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1508
PEARL RIVER, NEW YORK 10985

JOB NO. _____

SUBJECT UPMW-8C Box 2
45-55

Depth	Run length	Recovery	% Recovery	MCR	RQD %	Comments
45-50	5	5.2	104%	5.2	104%	
horiz. fr @ 2.6' whole run ss. except for fissile shale 2.58-2.6						
50-55	5	5.2	104%	5.2	104%	
vert. fr. from 4.30-4.75						
top 1.9' homogeneous ss. rest of run dk gray fissile + black very fissile shale						

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1508
PEARL RIVER, NEW YORK 10985

JOB NO. _____

SUBJECT UPM W - 10 C Box 1
32'-50'

Depth	Run Length	Recovery	% Recovery	MCR	(-D.D.P.)	Comments
33-35	2'	2.16	105%	1.90	95%	32-33 all or some of 20' or more of
40' fr	0-.25					fissile shale .35-.37, .50-.52, 1.05-1.12, 1.44-1.60, 1.93-2.10
vert fr @	.20					
vert fr @	1.4-					
horiz fr @	2.04					

35-40	5'	5.0	100%	4.11	82%	
-------	----	-----	------	------	-----	--

horiz. fr @	.25	1.51-1.75	dk gray fissile shale
	.62	2.29-2.55	"
	.75	4.0-5.0	"
	1.51		
	3.25		
	3.30		
	3.95		
	4.05-4.07	broken up w/ clay, fissile shale	
	4.35-4.37	"	
	4.67		
	2.29		
	2.53		

40-45	5'	4.95	99%	4.41	82%	
-------	----	------	-----	------	-----	--

horiz. fr @	.12	somewhat fissile shale, broken up	fissile shale 2.35-2.40 3.60-3.84
	.30		
	.35		
	.40		
vert. fr.	.70-1.70		
vert. fr	3.76-4.53		
horiz. fr @	4.80		

45-50	5	4.90	98%			
-------	---	------	-----	--	--	--

horiz fr @	.41	(fissile shale)	ss from 0-4 and 1.3-2.4
	1.09		all elec interbedded sh + ss
vert. fr	2.47-2.91		
poss. vert fr	2.91-3.13 or 3.23		
horiz fr @	3.23		

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

JOB NO. _____

SUBJECT UPMw - 10c Box 2
50' - 55'

Depth	lg. grain	recovery	% Rec.	MCR	RAD %	comment
50-55'	5'	4.90	98%	4.75	95%	

horiz. fx @ 1.0 - pyrite
 @ 1.61
 @ 1.70
 @ 1.76
 vert fx 3.21 - 4.90 calcite, pyrite
 horiz. fx @ 3.60 (filled in w/ calcite)
 very fissile shale 1.83 - 1.87, 1.32 - 1.55

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____ SHEET NO. _____ OF _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

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ONE BLUE HILL PLAZA
POST OFFICE BOX 1508
PEARL RIVER, NEW YORK 10965

JOB NO. _____

SUBJECT WPM 1-75 B-21
28-25'

Depth	runlength	recovery	Porosity (%)	MGR	Porosity (%)	Comments
28-29.5	1.5	1.0	67%	2.7	47%	possibly 28.5-29.5'
horiz fr @ .25 horiz fr @ .55		all fissile to near bottom of interval				
29.5-34.5	5	4.85	97%	4.85	97%	
horiz fr @ .57 horiz fr @ 3.48 horiz fr @ 3.85 post vert fr 4.1-4.32		ss .15-1.2, 1.7-2.05, 2.22-3.5 all clay fissile + very fissile shale, some fine interbedding ss/ss				
34.5-37.5	5.25	5.13	98%	4.95	94%	
horiz fr @ .08 @ .33 @ .31 @ 1.0		vert fr 1.42-1.57 (ss) horiz fr @ 2.1 @ 2.7 @ 3.44		horiz fr @ 2.9 loss of clay fr @ 3.9-3.95 clay/horiz fr 4.41-4.43 vert fr 4.54-4.72 (ss)		
very fissile shale @ .93-1.1, 1.8-1.95, 2.1-2.4, 2.6-2.9, 3.01-3.3, 3.3-3.5, 3.85-4.58, 4.89-5.13						
37.5-45	5.25	5.13	98%			
horiz fr @ 0.0 @ .22 @ .43 @ 1.53		horiz fr @ 3.0 horiz fr @ 5.13 (horiz)		horiz fr @ 1.52-1.7 (ss, calc n) vert fr @ 1.62-1.94 vert fr @ 4.55-5.13 (ss)		
very fissile shale @ .55-1.62, 1.27-1.45, 2.04-1.94, 2.98-3.89, 4.22-4.56						

LAWLER, MATUSKY & SKELLY ENGINEERS

BY _____ DATE _____

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

JOB NO. _____

SUBJECT 1) PM10-7C R2V2
LC-55'

Depth	runlength	recovery	% recovery	MC R	GC%	Comment
45-50	5	5	100%	0.72	98%	

to 2.00
 @ 1.00
 @ 1.50
 @ 3.37
 @ 5.00
 @ 7.50
 @ 10.00

val for 1.00 - 1.75
 val for 2.00 - 5.0
 2.00 val for 3.37 5.00 7.50 and 10.00
 lots of culture equipment
 to 3.30 - 5.00, 7.50 - 10.00

50-55	5	5.03	100%	1.88	98%	
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concentration val for 0 - 1.72
 concentration 1.00
 val for 1.00 - 1.75
 to 1.00
 @ 1.00
 @ 1.50
 @ 3.37

val for 1.00
 1.00 - 1.75
 1.00 - 1.75
 1.00 - 1.75
 1.00 - 1.75

RAVERSE PC Date:12-19-1995 Time:10:10 File:G:\PLATING\WELLS.WKS

Survey: UP-1

MONITORING WELL LOCATIONS

Pt	Northing	Easting	Elevation	Description
1213	9760.8965	15018.3067	273.543	UPMW-1C@OG
1214	9760.8009	15018.2185	277.175	UPMW-1C@RPC
1215	9760.6355	15018.3545	276.827	UPMW-1C@IPM
1216	9754.4920	15020.4671	273.539	UPMW-1A@OG
1217	9754.4039	15020.4562	277.023	UPMW-1A@RPC
1218	9754.3262	15020.5023	276.813	UPMW-1A@IPM
1219	9759.9153	15025.9202	273.530	UPMW-1B@OG
1220	9759.8289	15025.7873	276.929	UPMW-1B@RPC
1221	9759.7009	15025.8418	276.732	UPMW-1B@IPM
1222	9721.3700	14908.5890	273.192	UPMW-4@OG
1223	9721.5334	14908.5623	273.629	UPMW-4@RPC
1224	9722.0287	14908.4159	273.336	UPMW-4@IPM
1225	9804.4736	14898.4940	273.376	UPMW-5@OG
1226	9804.5519	14898.6247	273.878	UPMW-5@RPC
1227	9804.9567	14898.9227	273.602	UPMW-5@IPM
1228	9852.7711	14985.0778	273.444	UPMW-6@OG
1229	9852.6885	14985.2540	273.446	UPMW-6@RPC
1230	9852.1468	14985.5430	272.921	UPMW-6@IPM
1231	9889.5040	14937.8005	269.290	UPMW-2A@OG
1232	9889.3237	14937.9996	269.322	UPMW-2A@RPC
1233	9889.2155	14938.4243	269.002	UPMW-2A@IPM
1234	9884.5730	14932.2700	269.159	UPMW-2B@OG
1235	9884.3104	14932.3427	269.176	UPMW-2B@RPC
1236	9884.0796	14932.6842	268.787	UPMW-2B@IPM
1237	9879.4256	14927.5615	269.185	UPMW-2C@OG
1238	9879.2311	14927.6819	269.186	UPMW-2C@RPC
1239	9879.0515	14927.9284	268.748	UPMW-2C@IPM
1240	9834.3033	14868.2127	268.023	UPMW-3A@OG
1241	9834.0961	14868.3693	268.045	UPMW-3A@RPC
1242	9833.9322	14868.6416	267.568	UPMW-3A@IPM
1243	9828.1244	14862.6646	268.043	UPMW-3B@OG
1244	9827.9739	14862.8051	268.068	UPMW-3B@RPC
1245	9827.7959	14863.1092	267.795	UPMW-3B@IPM
1246	9822.5973	14855.4377	267.817	UPMW-3C@OG
1247	9822.4736	14855.5659	267.854	UPMW-3C@RPC
1248	9822.2002	14855.9513	267.497	UPMW-3C@IPM

United Plating Factory, Monitoring Wells Located 12/29/97

o	Northing	Easting	Elevation	Description
250	9968.8810	14899.2088	265.584	UPMW-8B
251	9966.0943	14896.5161	265.581	UPMW-8C
252	9960.5894	14890.0271	265.467	UPMW-8A
253	9849.1044	14831.1624	266.273	UPMW-9C
254	9843.3125	14826.0479	266.213	UPMW-9B
255	9838.7141	14820.9778	266.159	UPMW-9A
256	9754.9733	14734.0211	265.465	UPMW-11B
257	9751.0473	14729.4806	265.388	UPMW-11A
258	9727.6616	14802.2319	269.271	UPMW-10B
259	9734.9140	14802.9215	269.064	UPMW-10C
260	9509.1343	14938.9062	279.999	UPMW-7A
261	9515.3284	14945.4883	279.962	UPMW-7B
262	9522.2035	14950.5133	279.975	UPMW-7C
263	10104.3789	14657.2761	252.667	UPMW-12C

United Plating RI/FS
Equilibrium Groundwater Elevations

Location	Northing	Easting	total depth	r/d screen	Reference Elevation (TOC)	8/16/95		8/26/95		7/10/95		8/22/95		10/6/95		10/18/95		12/95		1/96	
						SWL	GW ELEV	SWL	GW ELEV	SWL	GW ELEV	SWL	GW ELEV	SWL	GW ELEV						
Wells																					
UPMW-1A	9754.3282	15020.5023	17.99	12.99	276.81	*	*	*	*	*	*	*	*	3.45	273.36	3.71	273.10	3.20	273.81	3.21	273.80
UPMW-1B	9759.7009	15025.8418	24.88	22.38	276.73	*	*	*	*	*	*	*	*	4.89	271.84	3.19	273.54	2.80	273.83	2.91	273.82
UPMW-1C	9780.8395	15018.3545	66.72	41.99	278.83	*	*	*	*	*	*	*	*	54.50	222.33	51.74	225.09	40.01	236.82	48.13	227.70
UPMW-2A	9889.2155	14938.4243	14.39	9.39	289.00	*	*	*	*	*	*	*	*	0.78	288.22	NM	-	4.83	284.17	10.45	288.55
UPMW-2B	9864.0798	14932.8842	28.08	23.58	288.78	*	*	*	*	*	*	*	*	8.82	282.17	5.18	283.83	5.78	283.04	6.50	282.29
UPMW-2C	9879.0515	14927.9284	54.82	41.31	288.75	*	*	*	*	*	*	*	*	8.57	282.18	5.14	283.81	5.71	283.04	6.43	282.32
UPMW-3A	9833.8322	14888.8418	14.27	9.27	287.57	*	*	*	*	*	*	*	*	11.75	265.82	3.34	284.23	3.39	284.18	12.88	284.71
UPMW-3B	9827.7959	14863.1092	25.84	23.34	287.80	*	*	*	*	*	*	*	*	5.84	281.98	4.20	283.60	4.40	283.40	5.45	282.35
UPMW-3C	9822.2002	14855.9513	53.09	40.54	287.50	*	*	*	*	*	*	*	*	11.23	258.27	9.88	257.82	8.86	258.85	10.01	257.49
UPMW-4	9722.0287	14908.4159	12.89	7.89	273.34	*	*	*	*	*	*	*	*	9.45	283.89	9.21	284.13	7.93	285.41	10.81	282.53
UPMW-5	9804.9587	14888.8227	12.80	7.80	273.80	*	*	*	*	*	*	*	*	8.80	284.80	3.81	289.89	4.48	289.12	5.81	287.79
UPMW-8	9852.1488	14985.5430	13.11	8.11	272.90	*	*	*	*	*	*	*	*	2.28	270.82	3.39	289.51	3.97	288.93	NM	-
Piezometers																					
UPFZ-1	9898.0116	14948.5818	5.88	4.31	289.49	5.45	284.04	4.54	284.95	3.84	285.55	3.10	286.39	2.92	288.67	2.30	287.19	#	#	3.08	288.40
UPFZ-2	9816.9333	15004.8564	5.49	4.24	274.10	3.51	270.59	3.80	270.50	3.73	270.37	4.12	288.98	Destroyed	-	Destroyed	-	#	#	Destroyed	-
UPFZ-3			8.42	5.17	273.32	2.38	270.84	2.84	270.88	2.54	270.78	2.42	270.90	1.57	271.75	1.92	271.40	#	#	4.53	288.78
UPFZ-4			5.97	4.72	273.42	2.87	270.75	3.04	270.38	3.27	270.15	3.00	270.42	1.85	271.57	2.25	271.17	#	#	5.15	288.27
UPFZ-5			6.85	5.40	273.74	4.27	289.47	4.29	289.45	4.78	288.98	5.85	288.09	8.12	287.82	4.47	289.27	#	#	4.05	289.88
UPFZ-6	9795.8298	14838.3583	8.88	5.83	288.31	3.88	284.85	4.70	283.81	5.38	282.93	4.85	283.38	0.10	288.21	4.90	283.41	#	#	#	#
UPFZ-7	9701.1733	14725.4837	7.39	6.14	288.18	6.22	282.88	5.79	283.39	5.88	283.20	7.08	282.10	DRY	-	6.88	282.22	#	#	#	#
UPFZ-8	9894.7381	15020.5388	7.00	5.75	277.11	2.47	274.84	4.14	272.97	4.50	272.81	5.17	271.94	2.51	274.60	1.43	275.88	#	#	#	#
UPFZ-9	9844.1005	14884.8415	5.58	4.33	288.51	3.87	284.84	4.90	283.81	DRY	-	5.10	283.41	0.28	288.25	5.13	283.38	#	#	#	#
UPFZ-10	9781.0808	14977.2801	5.20	3.95	273.29	2.20	271.09	2.84	270.85	3.88	288.81	3.22	270.07	1.43	271.88	1.77	271.52	#	#	1.83	271.88
UPFZ-11	9700.8777	14822.9128	8.85	5.40	274.30	3.01	271.29	2.87	271.33	3.70	270.80	3.88	270.84	3.00	271.30	1.24	273.06	#	#	#	#
UPFZ-12			5.97	4.72	273.82	4.80	289.02	4.88	288.94	DRY	-	DRY	-	2.93	270.89	4.07	289.55	#	#	DRY	-
UPFZ-13	9744.8885	14790.8508	24.00	22.75	288.24	21.38	248.86	17.97	250.27	14.06	254.18	7.29	280.85	4.58	283.68	4.18	284.08	#	#	#	#
UPFZ-13A	9748.0148	14802.3518	2.44	1.19	288.50	1.92	288.58	DRY	-	DRY	-	DRY	-	FLOWING	-	0.15	288.35	#	#	288.24	288.24
MH - 1	Main plating room - south end		1.95		273.10	0.20	272.90	0.20	272.90	0.20	272.90	0.81	272.28	0.10	273.00	0.17	272.93	#	#	#	#
MH - 2	Main plating room - north end		2.10		273.01	0.50	272.51	0.50	272.51	0.58	272.43	0.45	272.58	-0.45	273.48	0.35	272.88	#	#	#	#
MH - 3	Main plating room - 2x3.4' cover		8.40		273.44	8.00	287.44							NM	-	0.17	273.27	#	#	#	#
MH - 4	Chrome room - 2x3.4' cover		9.00		273.52	5.30	288.22			5.43	288.09	5.43	288.09	4.29	289.23	5.03	288.49	#	#	#	#
Chrome sump			5.51		273.54	4.45	288.09	4.88	288.88	4.82	286.72	4.85	288.88	2.80	270.84	3.95	289.59	#	#	#	#
Outside sump			5.85		273.90	3.57	270.33	3.87	270.23	3.83	270.07	4.25	289.85	2.27	271.83	#	#	#	#	#	#

* RI monitoring wells installed 10/95
 NM No measurement was taken
 # Locations were covered with snow and/or frozen

GROUNDWATER ELEVATIONS¹ (Page 1 of 2)

United Plating Site

LOCATION	NORTHING	EASTING	TOTAL DEPTH	MID-SCREEN	REFERENCE ELEVATION (FOC) ²	SWL: 11/13, 11/20, 11/24-11/26/97		SWL: 11/26/97		SWL: 12/8th & 9th/1997		SWL BEFORE PURGING WEEKS OF 12/16/97		SWL: 12/17/97		SWL: 12/18/97		
						GROUNDWATER ELEVATION ²	GROUNDWATER ELEVATION ²											
WELLS:																		
UPMW-1A	9754.3262	15020.5023	17.91	12.99	276.61					3.56	273.05	3.56	273.05					
UPMW-1B	9759.7009	15025.8418	24.89	22.38	276.73					2.28	274.45	2.78	273.95					
UPMW-1C	9760.6355	15018.3545	56.24	41.99	276.83					8.35	268.48	8.35	268.48	52.68	224.15			
UPMW-2A	9889.2155	14938.4243	14.25	9.39	269.00					3.90	265.10	4.02	264.98					
UPMW-2B	9884.0796	14932.6842	26.13	23.58	268.79					5.52	263.27	5.52	263.27					
UPMW-2C	9879.0515	14927.9284	54.71	41.31	268.75					5.62	263.13	5.91	262.84	6.50	262.25			
UPMW-3A	9833.9322	14868.6416	14.42	9.27	267.57					3.35	264.22	3.35	264.22					
UPMW-3B	9827.7959	14863.1092	25.90	22.34	267.80					4.37	263.43	4.37	263.43					
UPMW-3C	9822.2002	14855.9513	52.96	40.54	267.50					9.53	257.97	9.53	257.97	9.45	258.05			
UPMW-4	9722.0287	14908.4159	12.81	7.89	273.34					4.11	269.23	4.11	269.23	11.26	262.08			
UPMW-5	9804.9567	14898.9227	12.59	7.60	273.60					3.16	270.44	3.82	269.78	5.48	268.12			
UPMW-6	9852.1468	14985.5430	13.01	8.11	272.90					3.62	269.28	3.73	269.17	3.79	269.11			
UPMW-7A	9509.1343	14938.9062	14.58	9.58	279.79	3.97	275.82	3.80	275.99	3.92	275.87	4.22	275.57					
UPMW-7B	9515.3284	14945.4883	24.54	19.54	279.72	3.64	276.08	3.65	276.07	3.43	276.29	3.60	276.12					
UPMW-7C	9522.2035	14950.5133	54.71	Bedrock	279.75	1.00	278.75	7.09	272.66	0.93	278.82	1.32	278.43					
UPMW-8A	9960.5894	14890.0271	14.98	9.98	265.12	9.81	255.31	12.38	252.74	10.42	254.70	10.42	254.70					
UPMW-8B	9968.8810	14899.2088	23.34	20.84	265.22	5.6	260.60	6.10	259.12	9.05	256.17	9.05	256.17					
UPMW-8C	9966.0943	14896.5161	55.46	Bedrock	265.22	2.62	262.60	2.39	262.83	1.80	263.42	2.65	262.57	3.04	262.18			
UPMW-9A	9838.7141	14820.9778	9.84	5.84	265.97	9.79	256.18	3.28	262.69	5.53	260.44	5.53	260.44					
UPMW-9B	9843.3125	14826.0479	16.35	13.85	265.93	13.61	252.32	15.74	250.19	15.41	250.52	15.41	250.52					
UPMW-9C	9849.1044	14831.1624	22.87	20.37	266.01	2.62	263.39	9.18	256.83	3.11	262.90	3.11	262.90					
UPMW-10B	9727.6616	14802.2319	27.86	25.36	268.90	7.15	261.75	4.54	264.36	4.25	264.65	4.49	264.41					
UPMW-10C	9734.9140	14802.9215	54.55	Bedrock	268.75	7.83	260.92	6.56	262.19	5.26	263.49	5.64	263.11	7.04	261.71			
UPMW-11A	9751.0473	14729.4806	13.86	8.86	265.10	*	*	4.18	260.92	3.73	261.37	3.73	261.37					
UPMW-11B	9754.9733	14734.0211	19.88	17.38	265.02	*	*	17.75	247.27	18.48	246.54	18.48	246.54					
UPMW-12C	10104.3789	14657.2761	54.19	Bedrock	252.45	0.99	251.46	0.99	251.46	0.94	251.51	0.94	251.51					

- * - Not measured.
- 1 - All measurements in feet.
- 2 - Elevations in MSL.

GROUNDWATER ELEVATIONS¹ (Page 2 of 2)

United Plating Site

LOCATION	NORTHING	EASTING	TOTAL DEPTH	MID-SCREEN	REFERENCE ELEVATION (TOC) ²	SWL: 11/13, 11/20, 11/24-11/26/97		SWL: 11/26/97		SWL: 12/09&90/1997		SWL BEFORE PURGING WEEKS OF		SWL: 12/17/97		SWL: 12/18/97	
						GROUNDWATER ELEVATION ²											
PIEZOMETERS:																	
UPPZ-1	9896.0116	14946.5618	5.56	4.31	269.49									2.60	266.89		
UPPZ-2	9816.9333	15004.8584	5.49	4.24	274.10									2.92	271.18		
UPPZ-3	*	*	6.42	5.17	273.32									2.29	271.03		
UPPZ-4	*	*	5.97	4.72	273.42									2.87	270.55		
UPPZ-5	*	*	6.65	5.40	273.74									3.99	269.75		
UPPZ-6	9795.6296	14838.3563	6.88	5.63	268.31									4.72	263.59		
UPPZ-7	9701.1733	14725.4837	7.39	6.14	269.16									*	*		
UPPZ-8	9694.7381	15020.5368	7.00	5.75	277.11									0.76	276.35		
UPPZ-9	9844.1005	14884.6415	5.58	4.33	268.51									5.32	263.19		
UPPZ-10	9761.0808	14977.2801	5.20	3.95	273.29									*	*		
UPPZ-11	9700.6777	14922.9128	6.65	5.40	274.30									0.76	273.54		
UPPZ-12	*	*	5.97	4.72	273.62									4.52	269.10		
UPPZ-13	9744.8885	14790.9506	24.00	22.75	268.24									0.18	268.06		
UPPZ-13A	9748.0146	14802.3516	2.44	1.19	268.50									0.36	268.14		

- * - Not measured.
- 1 - All measurements in feet.
- 2 - Elevations in MSL.

Well No. UPMW 7A
 Project No. 650098

Project Name United Plating

Client NYSDEC

Location Carrie St

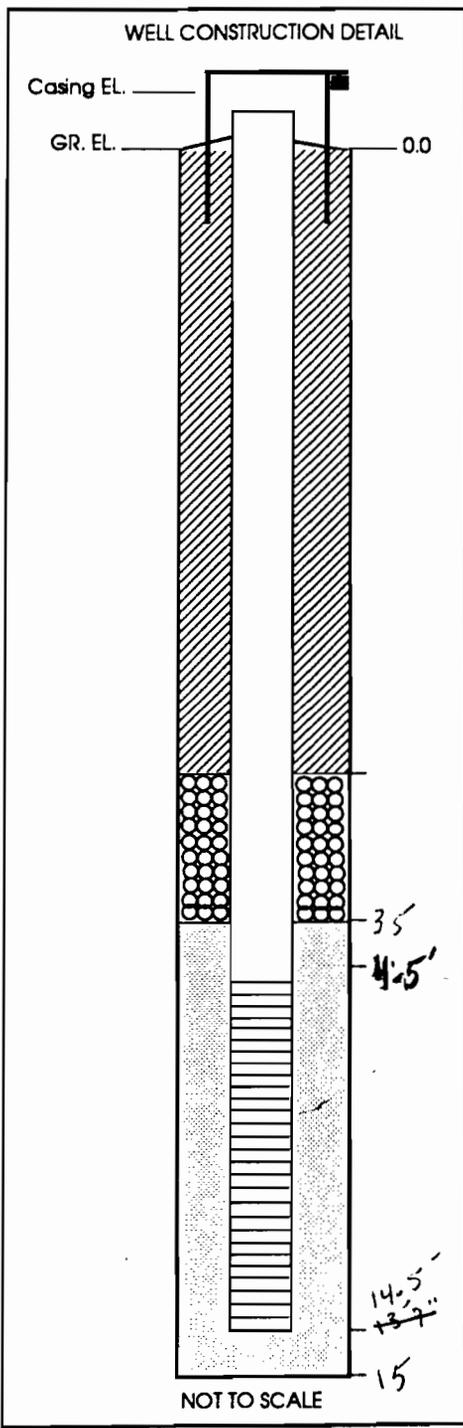
Date Drilled 11/12/97

Date Developed 11-25-97

Developing Method whale pump

Well Construction Completed 11/12/97

MONITORING WELL COMPLETION LOG



Inspector EKH
 Drilling Contractor American Auger

Type of Well 2" PVC Overburden

Static Water Level _____ Date _____

Measuring Point (M.P.) TOC

Total Depth of Well 14.58

Total Depth of boring 15

Drilling Method
 Type spin Diameter 4"
 Casing 4" spin casing

Sampling Method
 Type None required Diameter _____
 Weight _____ Fall _____
 Interval _____

Riser Pipe Left in Place
 Material PVC Diameter 2"
 Length 10' Joint Type Flush

Screen
 Material PVC Diameter 2"
 Slot Size 10 slot Length 10'
 Stratigraphic Unit Screened Overburden

Filter Pack
 Sand Gravel _____ Natural _____
 Grade 20 Mesh
 Amount 2 bags - 100# Interval 3.5 - 14.5

Seal(s)
 Type Seal-It-Plug Interval _____
 Type _____ Interval _____
 Type _____ Interval _____

Locking Casing No Yes Key No.: _____

Notes:

Well No. UP MW 7B

Project No. LSO 098

Project Name United Planting

Client NYSD&C

MONITORING WELL COMPLETION LOG

Location Carroll St

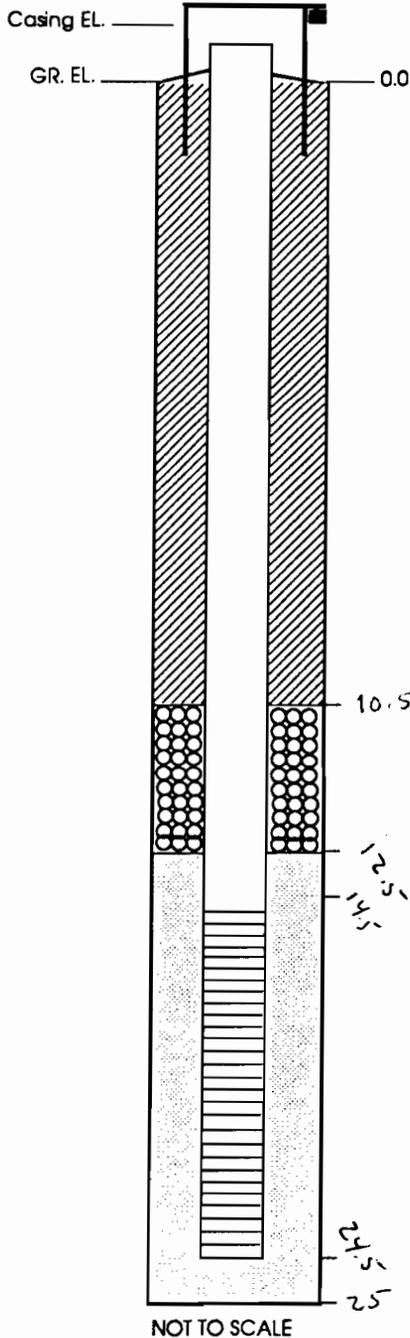
Date Drilled started 11/11/97 finished 11/12/97

Date Developed 11-25-97

Developing Method Whale pump

Well Construction Completed 11/12/97

WELL CONSTRUCTION DETAIL



Inspector EKH
Drilling Contractor American Drift

Type of Well Bedrock Interface 2" PVC
Static Water Level _____ Date _____
Measuring Point (M.P.) TOC
Total Depth of Well 24.54
Total Depth of boring 25'

Drilling Method
Type Spin Diameter 4"
Casing _____

Sampling Method
Type Split Screen Diameter 2"
Weight 140 lb Fall 30"
Interval Continuous

Riser Pipe Left in Place PVC
Material PVC Diameter 2"
Length 15 Joint Type Flush

Screen
Material PVC Diameter 2"
Slot Size 10 slot Length 10'
Stratigraphic Unit Screened bedrock interface

Filter Pack
Sand X Gravel _____ Natural _____
Grade #10 Mesh
Amount 2 - 100' bags Interval 24.5 - 10.5

Seal(s)
Type Bent-Hole Plug Interval _____
Type _____ Interval _____
Type _____ Interval _____

Locking Casing No Yes Key No.: _____
Notes:

Well No. UPNW-7C

Project No. 650-048

Project Name Un. Fed. Pk. Hwy

Client NYSDEC

MONITORING WELL COMPLETION LOG

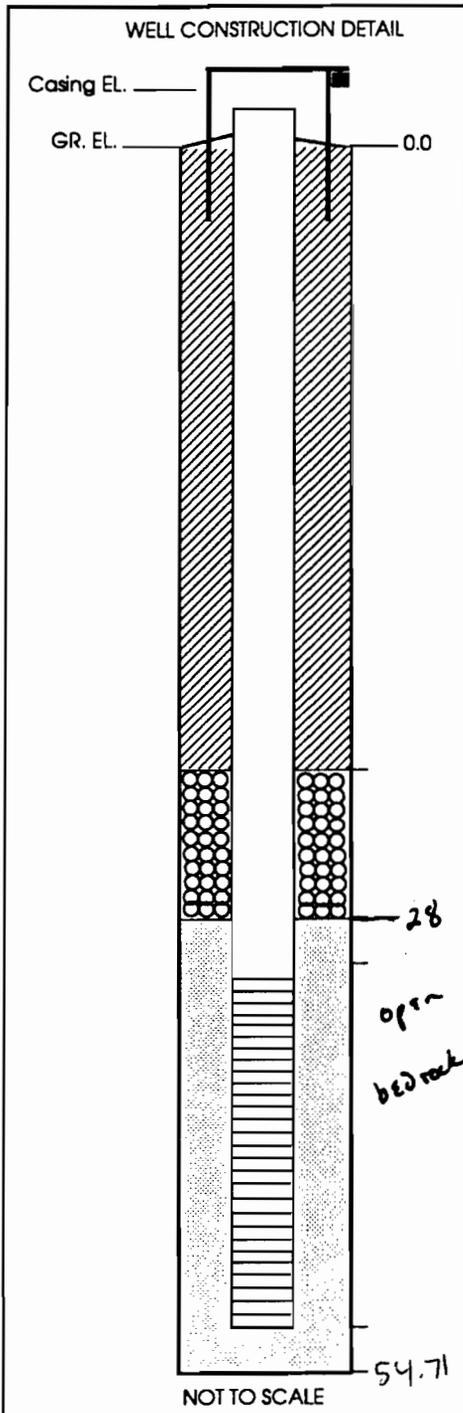
Location Cassie St

Date Drilled casing - 11/10 core - 11/14

Date Developed 11-25-97

Developing Method whale + dedicated teflon bailer

Well Construction Completed 11/14/97



Inspector EKH

Drilling Contractor American Auger

Type of Well Bedrock

Static Water Level _____ Date _____

Measuring Point (M.P.) Top

Total Depth of Well 55' 54.71

Total Depth of boring 55'

Drilling Method _____

Type 4" spin / NA core Diameter _____

Casing 3" PVC to 28'

Sampling Method _____

Type none required Diameter _____

Weight _____ Fall _____

Interval See log JCMW-7B

Riser Pipe Left in Place _____

Material none Diameter _____

Length _____ Joint Type _____

Screen _____

Material open hole Diameter _____

Slot Size _____ Length _____

Stratigraphic Unit Screened _____

Filter Pack _____

Sand none Gravel _____ Natural _____

Grade _____

Amount _____ Interval _____

Seal(s) _____

Type _____ Interval _____

Type _____ Interval _____

Type _____ Interval _____

Locking Casing No Yes Key No.: _____

Notes: _____

Well No. UPMWR/A
 Project No. 650 298

Project Name UP RI #

Client NYS DEC

MONITORING WELL COMPLETION LOG

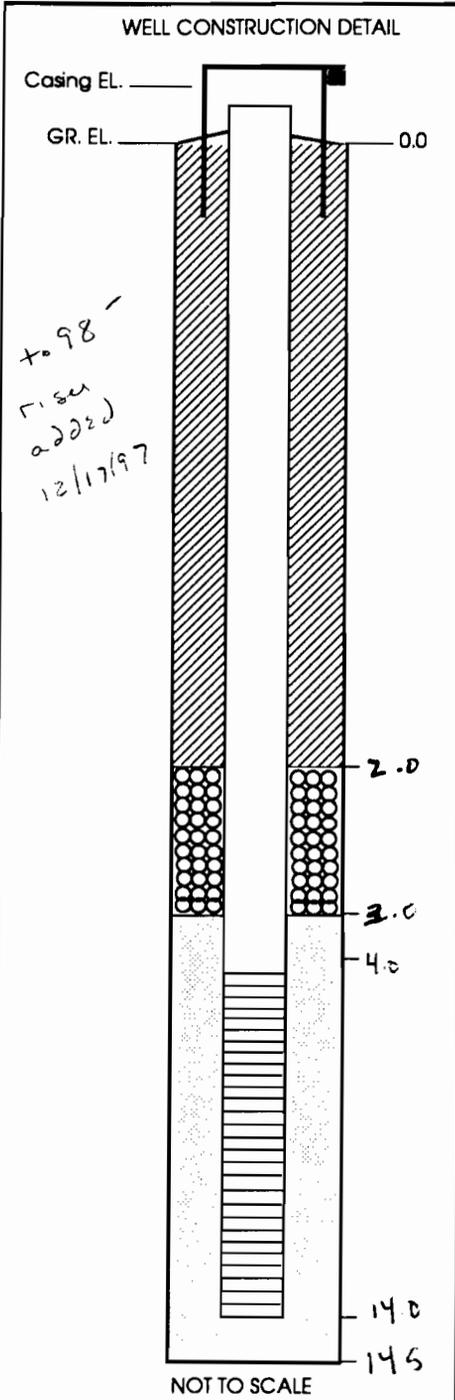
Location Savage

Date Drilled 11/6/97

Date Developed 11-24-97-11-26-97

Developing Method whale & dedicated teflon bailer

Well Construction Completed 11/6/97



Inspector EKH
 Drilling Contractor American Auger

Type of Well 2" PVC overburden
 Static Water Level _____ Date _____
 Measuring Point (M.P.) TOC
 Total Depth of Well 13.96 1400
 Total Depth of boring 14.5

Drilling Method
 Type HSA Diameter 4 3/4" ID
 Casing _____

Sampling Method
 Type splitspoon Diameter 2"
 Weight 140 Fall 30
 Interval continuous

Riser Pipe Left in Place
 Material PVC Diameter 2"
 Length 4.5 Joint Type Flush

Screen
 Material PVC Diameter 2"
 Slot Size 10 s10 Length 10'
 Stratigraphic Unit Screened overburden

Filter Pack
 Sand Gravel _____ Natural _____
 Grade # 20 MOME
 Amount 3-2 100# bags Interval 14-3

Seal(s)
 Type Benitec Plastic Plug Interval 3-2 1/2 bag
 Type _____ Interval _____
 Type _____ Interval _____

Locking Casing No Yes Key No.: _____
 Notes:

Well No. UPW-98

Project No. 650-099

Project Name UP RI IF

Client NYSDRC

MONITORING WELL COMPLETION LOG

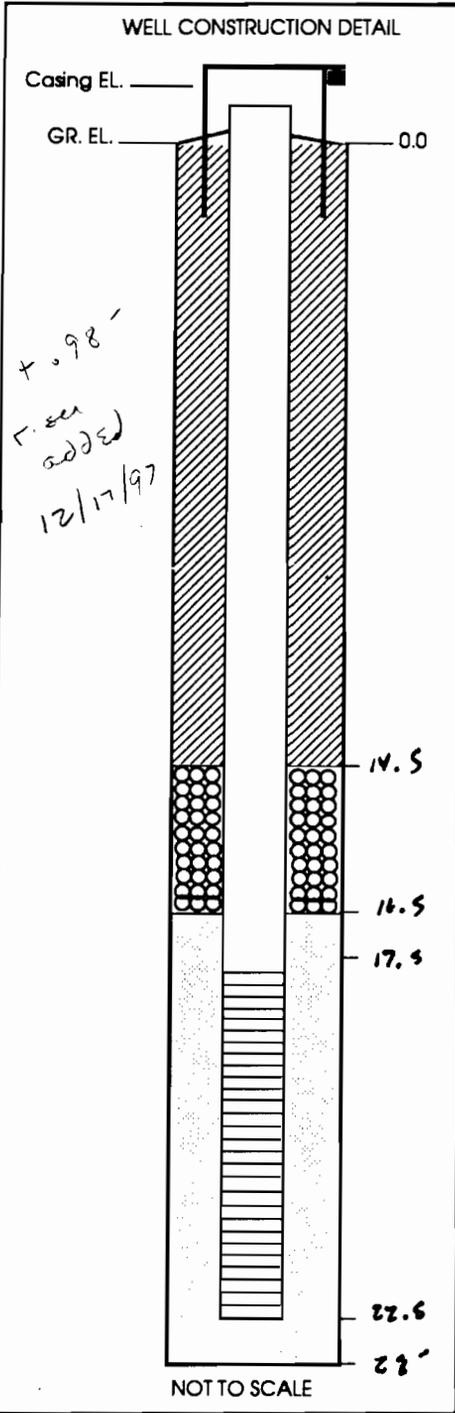
Location Garage

Date Drilled 11.04.97

Date Developed 11.24.97

Developing Method Whale & Dedicated to flow bailer

Well Construction Completed 11.05.97



Inspector MDL/EKH

Drilling Contractor American Auger

Type of Well 2" PVC Bedrock interface

Static Water Level _____ Date _____

Measuring Point (M.P.) TOC

Total Depth of Well 22.36

Total Depth of boring 23

Drilling Method HSA

Type _____ Diameter 4 1/2" ID

Casing _____

Sampling Method _____

Type SPLIT SPOON Diameter 2"

Weight 140 Fall 30"

Interval CONTINUOUS

Riser Pipe Left in Place _____

Material PVC Diameter 2"

Length 20' Joint Type FLUSH

Screen _____

Material PVC Diameter 2"

Slot Size 10 SLOT Length 5'

Stratigraphic Unit Screened Bedrock interface

Filter Pack _____

Sand X Gravel _____ Natural _____

Grade HO MORTAR

Amount 2 100# BAGS Interval 22.5 - 16.5

Seal(s) Bentonite grout

Type _____ Interval 1/2 BAG 10 gallons

Type _____ Interval _____

Type _____ Interval _____

Locking Casing No Yes Key No.: _____

Notes: _____

Well No. UPMW-8C

Project No. 056-098

Project Name UNITED PLATING

Client HYSOEL

MONITORING WELL COMPLETION LOG

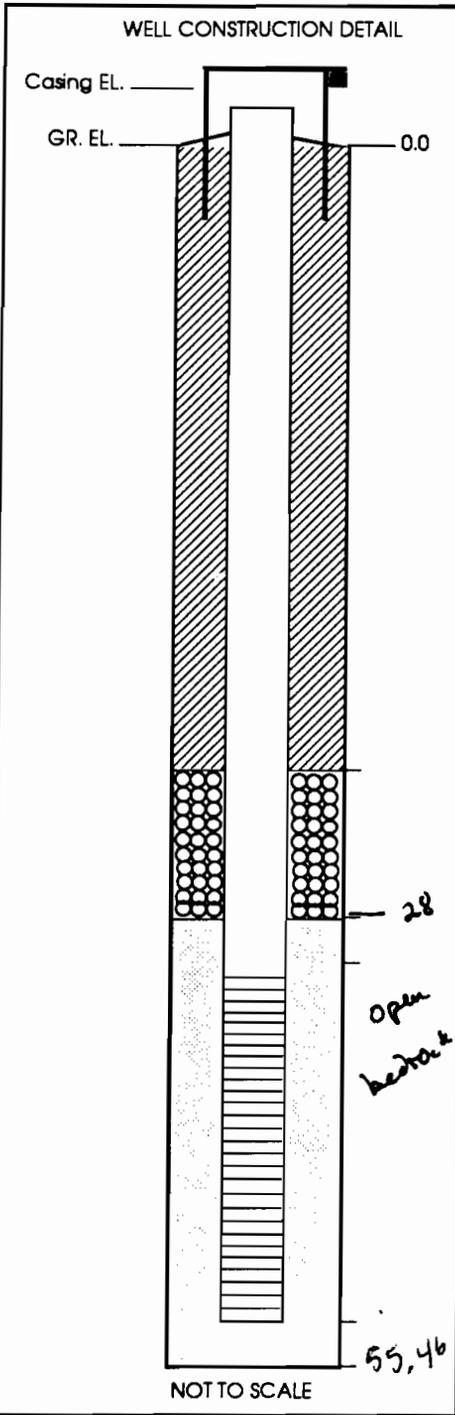
Location city

Date Drilled CASING 11-05-97, CORE 11/19/97

Date Developed 11-29-97 - 11-26-97

Developing Method Whale +
dedicated teflon
bailler

Well Construction Completed 11/19/97



Inspector MDL/EKH
Drilling Contractor AMERICAN AUGER

Type of Well Redrock
Static Water Level _____ Date _____
Measuring Point (M.P.) TOC
Total Depth of Well 55.46
Total Depth of boring 55

Drilling Method
Type spin casing Diameter 4"
Casing 3" PVC 28'

Sampling Method
Type NONE Required Diameter _____
Weight _____ Fall _____
Interval see log UPMW-8B, 8A

Riser Pipe Left in Place
Material NONE Diameter _____
Length _____ Joint Type _____

Screen
Material OPEN Hole Diameter _____
Slot Size _____ Length _____
Stratigraphic Unit Screened _____

Filter Pack
Sand NONE Gravel _____ Natural _____
Grade _____
Amount _____ Interval _____

Seal(s)
Type _____ Interval _____
Type _____ Interval _____
Type _____ Interval _____

Locking Casing No Yes Key No.: _____
Notes:

Well No. UPMLW-9A

Project No. 650-028

Project Name Unleashed Platens

Client NYS/DEC

MONITORING WELL COMPLETION LOG

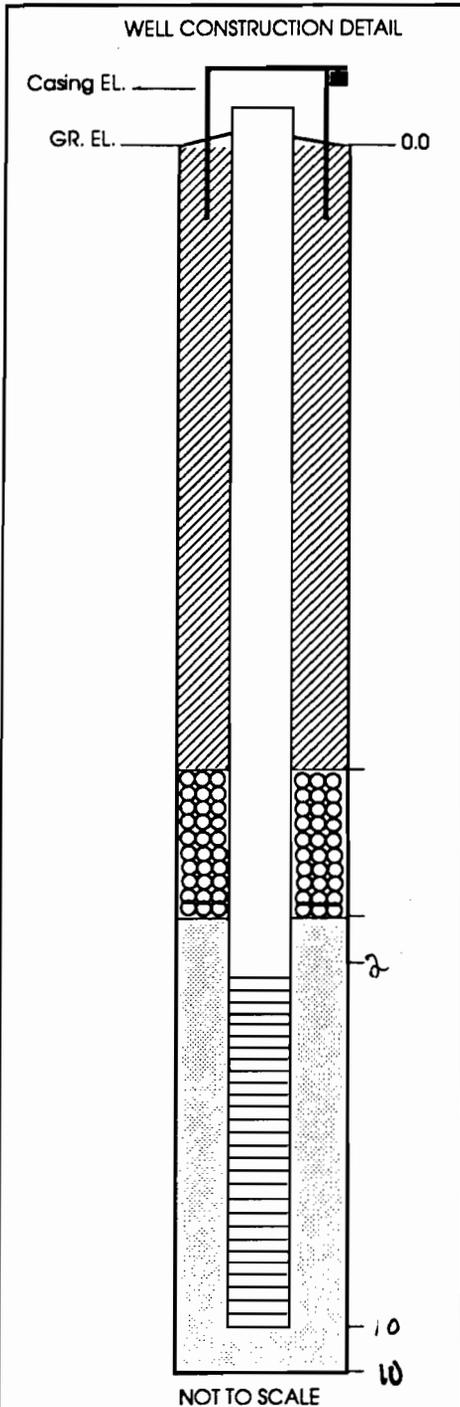
Location Foster Ave

Date Drilled 11/18/97

Date Developed 11-19-97 & 11-20-97 & 11-29-97

Developing Method dedicated to flow bailer

Well Construction Completed 11/18/97



Inspector MDL EH CM
Drilling Contractor American Auger

Type of Well Overburden
Static Water Level _____ Date _____
Measuring Point (M.P.) JOC
Total Depth of Well 9.87
Total Depth of boring 10'

Drilling Method
Type HSA Diameter 4 1/4'
Casing none

Sampling Method
Type None Diameter _____
Weight _____ Fall _____
Interval _____

Riser Pipe Left in Place
Material PVC Schalle 40 Diameter 2"
Length 2' Joint Type Threaded / Flush

Screen
Material PVC Schalle 40 Diameter 2"
Slot Size 10 Length 8'
Stratigraphic Unit Screened Basal fill

Filter Pack
Sand X Gravel _____ Natural _____
Grade 0 coarse
Amount 2.5 bags Interval 10' - 2'

Seal(s)
Type Hole Plug (Bentonite) Interval _____
Type Cement Interval _____
Type _____ Interval _____

Locking Casing No Yes Key No.: _____
Notes:

Well No. 656 UP MW-9B
 Project No. 656-18

Project Name Unibed Platiny

Client MYSDEC

MONITORING WELL COMPLETION LOG

Location Foster Ave

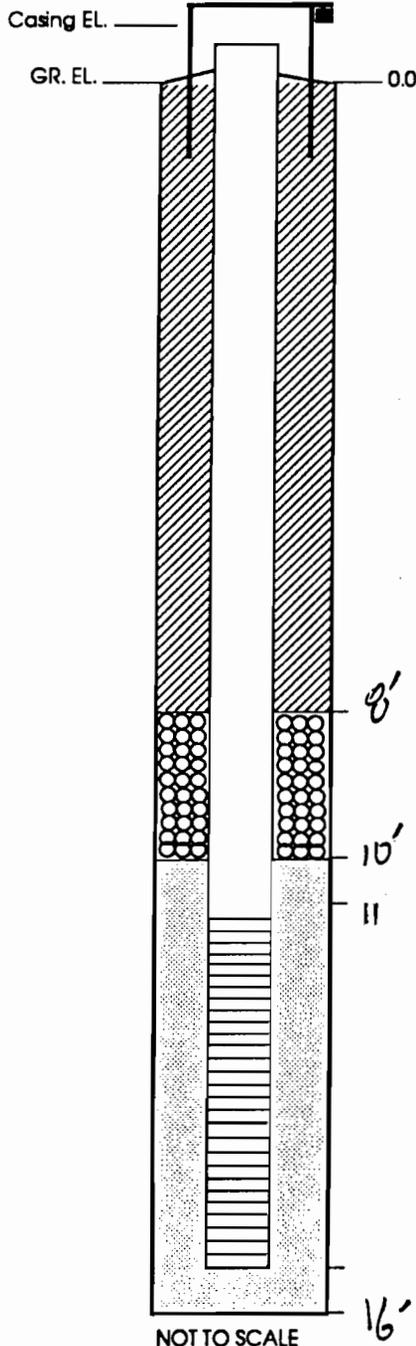
Date Drilled 11-18-97

Date Developed 11-19-97 & 11-20-97 & 11-24-97

Developing Method dedicated to flow boiler

Well Construction Completed 1/18/97

WELL CONSTRUCTION DETAIL



Inspector MDL, EH, CM
 Drilling Contractor American Auger

Type of Well 2" PVC overbore MW

Static Water Level _____ Date _____

Measuring Point (M.P.) TOC

Total Depth of Well 16.35

Total Depth of boring 16'

Drilling Method
 Type 4.75 HSA Diameter 4.75" ID
 Casing None

Sampling Method
 Type Split Spoon Diameter 2" + 3"
 Weight 140 Fall 30"
 Interval Every 2' from 8' on except 10-11'

Riser Pipe Left in Place
 Material PVC sch 40 Diameter 2"
 Length 11' Joint Type Flush Threaded

Screen
 Material Sch 40 PVC Diameter 2"
 Slot Size 10 slot Length 5'
 Stratigraphic Unit Screened Basalt

Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #0 Material Monic
 Amount 1 Bag Interval 16' - 10'

Seal(s)
 Type Hole Plug (Gambite) Interval 10' - 8' Bgs
 Type Cement/Bentonite Interval _____
 Type Cement/Concrete Interval _____

Locking Casing No Yes Key No.: _____

Notes:

Well No. 24mw-9C

Project No. usc-018

Project Name water plotting

Client NYSDEC

MONITORING WELL COMPLETION LOG

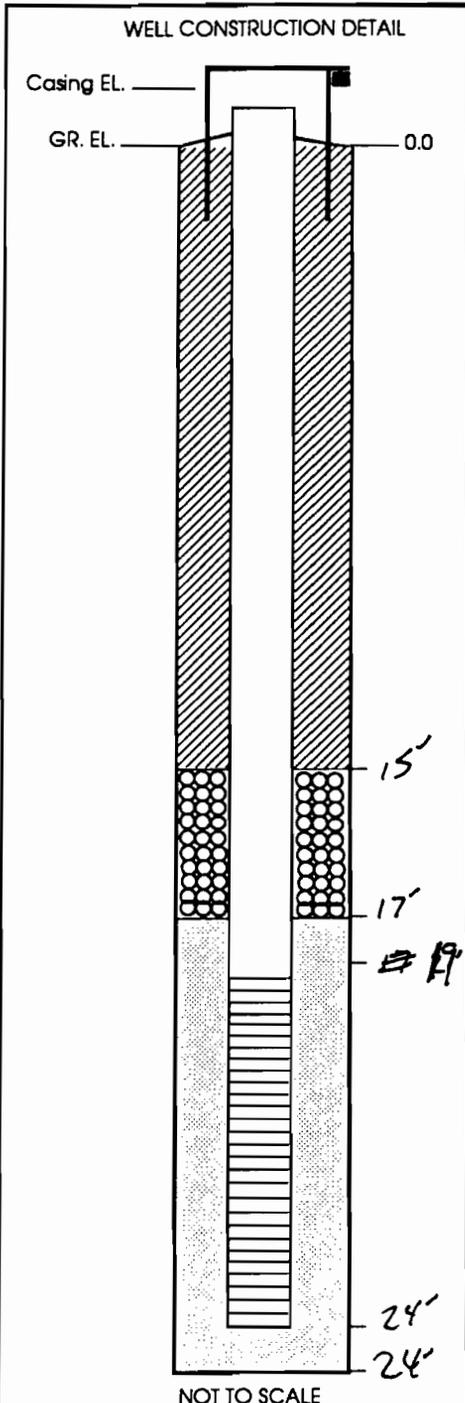
Location Foster Ave

Date Drilled 11-17-97

Date Developed 11-19-97/11-20-97/11-24-97

Developing Method dedicated teflon bailer

Well Construction Completed 11-18-97



Inspector MDL, EH
Drilling Contractor American Auger

Type of Well 2" overburden MW

Static Water Level _____ Date _____

Measuring Point (M.P.) TOC

Total Depth of Well 22.87

Total Depth of boring 24'

Drilling Method _____

Type 44 SPIN CASTING Diameter 4"

Casing Temporary Te 10"

Sampling Method _____

Type 2" S.S. Diameter 2"

Weight 140 Fall 50'

Interval every 2' from 10' Bgs

Riser Pipe Left in Place _____

Material PVC Diameter 2

Length 20' Joint Type Flush

Screen _____

Material PVC Diameter 2"

Slot Size 16 Length 5'

Stratigraphic Unit Screened Top of bedrock

Filter Pack _____

Sand 3 Gravel _____ Natural _____

Grade #0 MORTAR

Amount 1 BAG Interval 24'-17'

Seal(s) Bentonite grout Interval 17'-15' 2.5 buckets

Type grout/cement Interval _____

Type _____ Interval _____

Locking Casing No Yes Key No.: _____

Notes: _____

Well No. UPMW-105
Project No. 650-098

Project Name UP RI #

Client MSDEC

MONITORING WELL COMPLETION LOG

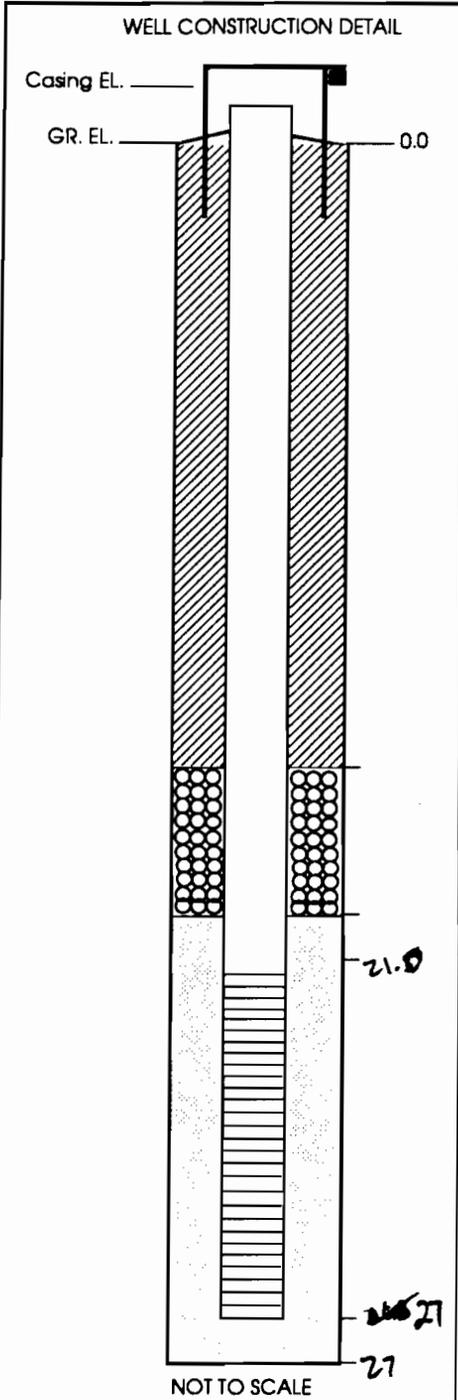
Location Site

Date Drilled 11/6/97

Date Developed 11-13-97 11-20-97 11-25-97

Developing Method dedicated teflon bailer

Well Construction Completed 1/1/97



Inspector MDL/SEH
Drilling Contractor American Auger

Type of Well 2" PVC 3 rock interface
Static Water Level _____ Date _____
Measuring Point (M.P.) TOC
Total Depth of Well 31.49 27.86
Total Depth of boring 27

Drilling Method
Type HSA Diameter _____
Casing _____

Sampling Method
Type split spoon Diameter 2"
Weight 140 Fall 30"
Interval continuous

Riser Pipe Left in Place
Material PVC Diameter 2"
Length 22" Joint Type Flush

Screen
Material PVC Diameter 2"
Slot Size #10 Length 5"
Stratigraphic Unit Screened Bedrock 1 unit face

Filter Pack
Sand Gravel _____ Natural _____
Grade #0 Marine
Amount 2.5 100 bags Interval 26.5 to 27-21

Seal(s)
Type benzoin hole plug Interval 1 bag
Type _____ Interval _____
Type _____ Interval _____

Locking Casing No Yes Key No.: _____

Notes:

Well No. UPMW-10C
Project No. 650-088

Project Name United Plating

Client NYSDEC

MONITORING WELL COMPLETION LOG

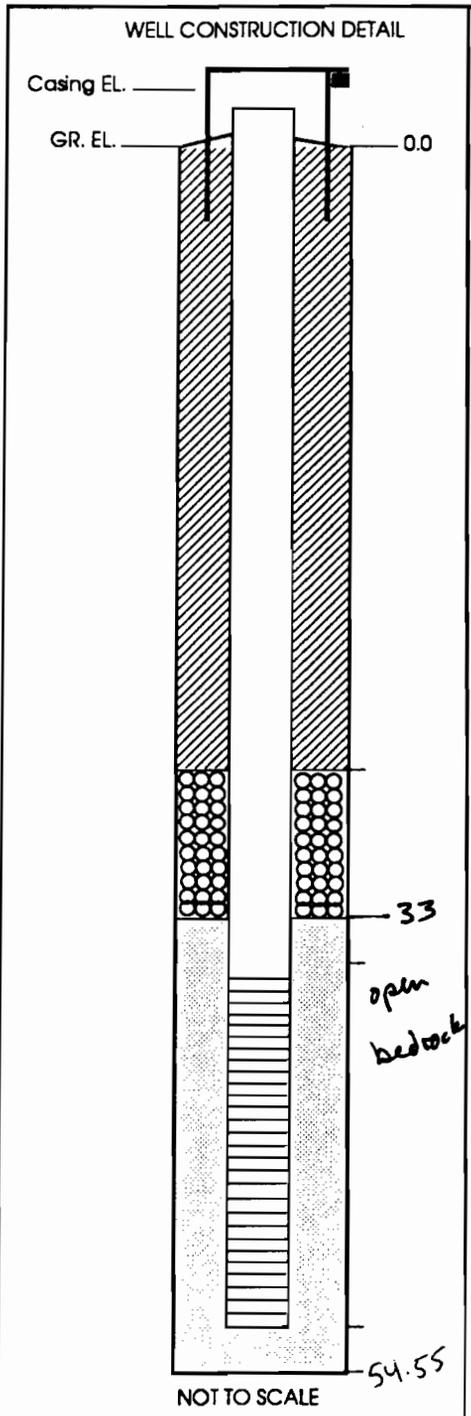
Location site

Date Drilled casing-11/7 core-11/13

Date Developed 11-20-97 & 11-25-97

Developing Method dedicated test flow boiler

Well Construction Completed 11-13-97



Inspector MDL/EKH
Drilling Contractor American Auger

Type of Well Bedrock
Static Water Level _____ Date _____
Measuring Point (M.P.) TOC
Total Depth of Well 56.70 54.55
Total Depth of boring 55

Drilling Method
Type 4" spin casing Diameter 4"
Casing 3" PVC to 33'

Sampling Method
Type none required Diameter _____
Weight _____ Fall _____
Interval see log UPMW-10B

Riser Pipe Left in Place
Material none Diameter _____
Length _____ Joint Type _____

Screen
Material open hole Diameter _____
Slot Size _____ Length _____
Stratigraphic Unit Screened _____

Filter Pack
Sand none Gravel _____ Natural _____
Grade _____
Amount _____ Interval _____

Seal(s)
Type _____ Interval _____
Type _____ Interval _____
Type _____ Interval _____

Locking Casing No Yes Key No.: _____
Notes:

Well No. U?MW 11A
 Project No. 650098

Project Name United Picking

Client NYSDEC

Location Foster

Date Drilled 11/19/97

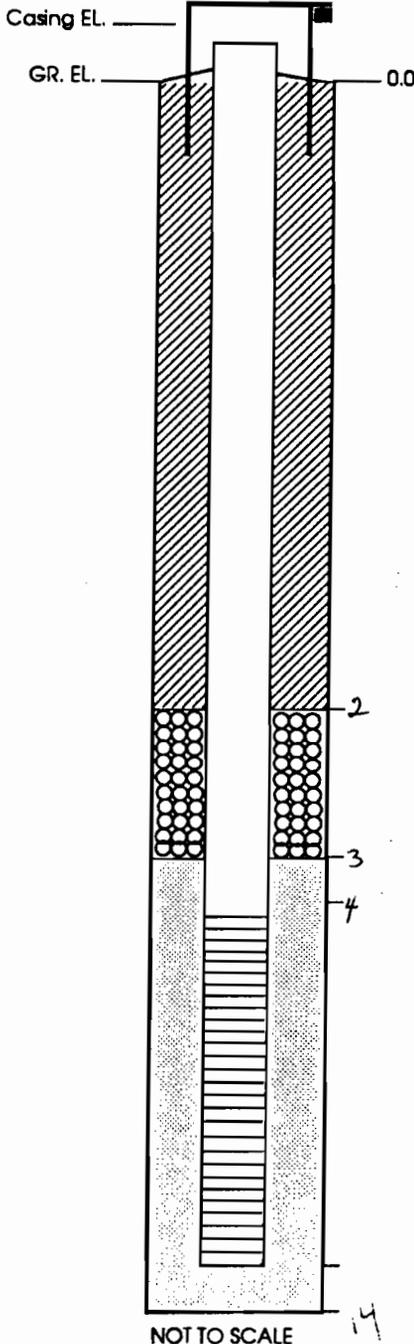
Date Developed 11-20-97 & 11-25-97 & 11-26-97

Developing Method dedicated to flow bailer

Well Construction Completed 11-19-97

MONITORING WELL COMPLETION LOG

WELL CONSTRUCTION DETAIL



Inspector MDL/EKH/CSM
 Drilling Contractor American Auger

Type of Well 2" PVC Overburden
 Static Water Level _____ Date _____
 Measuring Point (M.P.) TOC
 Total Depth of Well 13.96
 Total Depth of boring 14

Drilling Method
 Type spin Diameter 4"
 Casing _____

Sampling Method
 Type splitspoon Diameter 2"
 Weight 140 Fall 30
 Interval 1-3

Riser Pipe Left in Place
 Material 40 sch PVC Diameter 2"
 Length 5' Joint Type _____

Screen
 Material PVC Diameter 2"
 Slot Size 10 Length 10' 14-4
 Stratigraphic Unit Screened Basal Till

Filter Pack
 Sand _____ Gravel _____ Natural _____
 Grade _____
 Amount _____ Interval _____

Seal(s)
 Type Band Hole Plug Interval _____
 Type Cement Interval _____
 Type _____ Interval _____

Locking Casing No Yes Key No.: _____

Notes:

Well No. 72NW 11B
 Project No. 650098

Project Name United Pkwy

Client NYSDEC

MONITORING WELL COMPLETION LOG

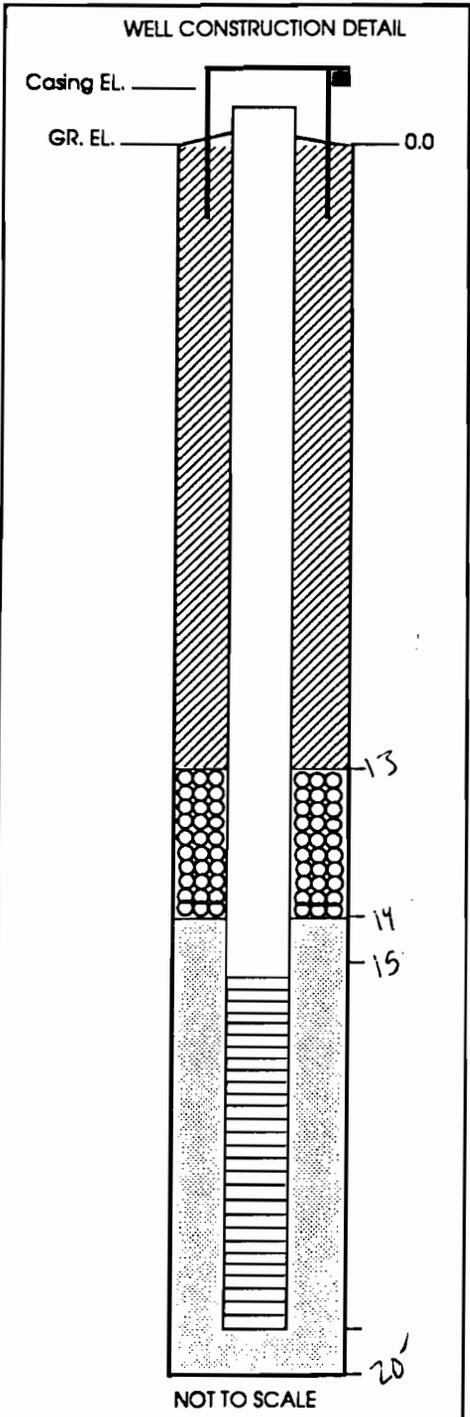
Location Foster Ave

Date Drilled 11/19/97

Date Developed 11-20-97 & 11-25-97 & 11-26-97

Developing Method dedicated teflon bailer

Well Construction Completed 11-19-97



Inspector MDL/EHL/CM
 Drilling Contractor American Auger

Type of Well 2" PVC casing/borehole MW
 Static Water Level _____ Date _____
 Measuring Point (M.P.) TOC
 Total Depth of Well 19.88
 Total Depth of boring 20'

Drilling Method
 Type 4.25 HSA Diameter 4.25" ID
 Casing None

Sampling Method
 Type Spl. Spoon Diameter 2"
 Weight 140 # Fall 30"
 Interval Every 2' from 2-20

Riser Pipe Left in Place
 Material PVC Sch 40 Diameter 2"
 Length 15' Joint Type Flush

Screen
 Material Sch 40 PVC Diameter 2"
 Slot Size 10 slot Length 5'
 Stratigraphic Unit Screened bedrock

Filter Pack
 Sand 5 Gravel _____ Natural _____
 Grade #20 No. 20
 Amount 2 Bags Interval 20-14

Seal(s)
 Type Mud Plug (Bentonite) Interval 14-13
 Type Concrete/Bentonite Interval _____
 Type Concrete/Concrete Interval _____

Locking Casing No Yes Key No.: _____
 Notes:

Well No. UPMw-12C

Project No. 650-098

Project Name United Plating

Client NYSDEC

MONITORING WELL COMPLETION LOG

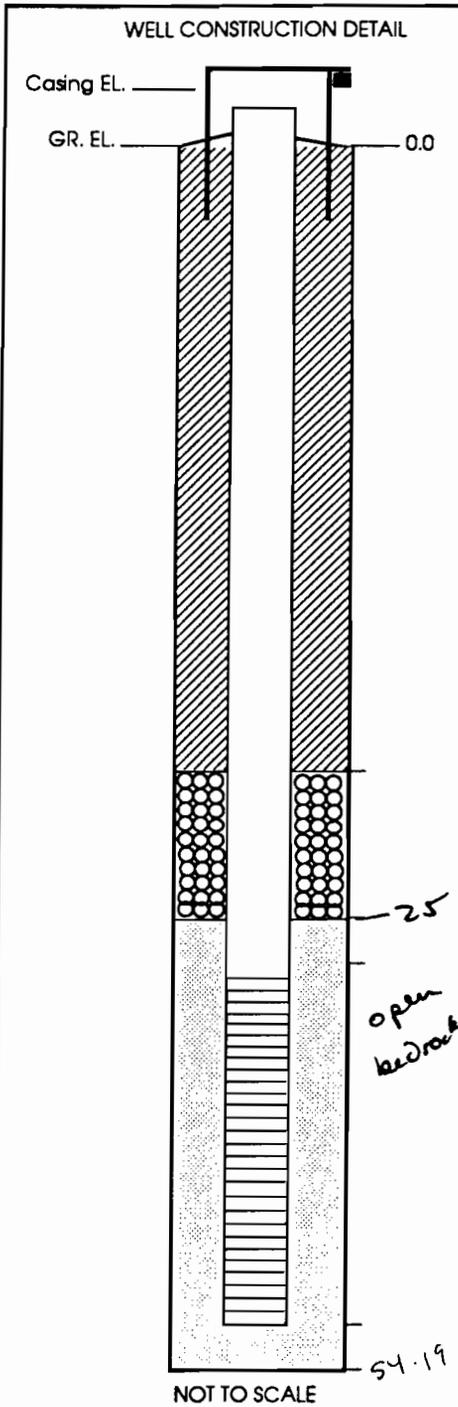
Location Bike Path

Date Drilled Casing - 11/10/97 COSE - 11-14-97

Date Developed 11-26-97

Developing Method Ground Gas pump

Well Construction Completed 11-14-97



Inspector EKH
Drilling Contractor American Auger

Type of Well Bedrock
Static Water Level _____ Date _____
Measuring Point (M.P.) TOC
Total Depth of Well 54.19
Total Depth of boring 55

Drilling Method
Type 4" spin Diameter _____
Casing 3" PVC

Sampling Method
Type split spoon Diameter 2"
Weight 140 lb Fall 30'
Interval continuous

Riser Pipe Left in Place
Material steel Diameter _____
Length _____ Joint Type _____

Screen
Material open hole Diameter _____
Slot Size _____ Length _____
Stratigraphic Unit Screened _____

Filter Pack
Sand none Gravel _____ Natural _____
Grade _____
Amount _____ Interval _____

Seal(s)
Type _____ Interval _____
Type _____ Interval _____
Type _____ Interval _____

Locking Casing No Yes Key No.: _____
Notes:

APPENDIX C
GEOTECHNICAL TESTING REPORT

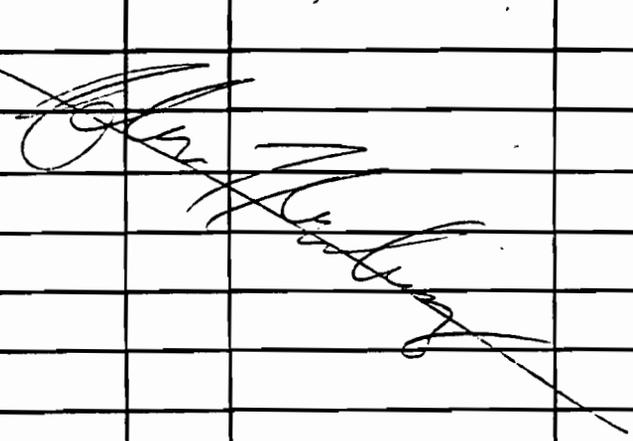
Maxim Technologies
 5 Knabner Rd.
 Ballston Spa, NY 12020
 (518) 899-7491

40011107

LAWLER, MATUSKY & SKELLY ENGINEERS
CHAIN OF CUSTODY RECORD

Project No. <u>650-097</u>	Project: <u>UP RI/FS</u>	Collection Site: <u>United Pt. Inc</u>
LMS Facility:	Field Personnel: <u>PT/SG</u>	

SAMPLE TYPE (Circle):
 Drinking Water Treatment Facility Stream/Pond Soil Monitoring Wells Coliform (T) Bottom Sediment Coliform (F) Industrial Waste Other _____ River/Ocean

SAMPLE ID NUMBER	DATE	TIME	SAMPLE SITE	PARAMETERS	SAMPLE PREP	
					PRESERVATIVE	FILTER (Y/N)
<u>01</u> UPMW1A	<u>9-14-95</u>	<u>-</u>	<u>6-8', 8-10'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
<u>02</u> UPMW1B	<u>9-18-95</u>	<u>-</u>	<u>16-18', 18-20'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
<u>03</u> UPMW2A	<u>9-14-95</u>	<u>-</u>	<u>10-12', 12-14'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
<u>04</u> UPMW2B	<u>9-19-95</u>	<u>-</u>	<u>22-25', 25-27'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
<u>05</u> UPMW3A	<u>9-15-95</u>	<u>-</u>	<u>6-8', 8-10'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
<u>06</u> UPMW3B	<u>9-19-95</u>	<u>-</u>	<u>19-21', 23-25'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
<u>07</u> UPMW-5	<u>9-29-95</u>	<u>-</u>	<u>5-7', 9-11'</u>	<u>TOC pH Grain Size</u>	<u>None</u>	<u>N/A</u>
					LAWLER, MATUSKY & SKELLY ENGINEERS	

Relinquished By: <u>[Signature]</u>	Date/Time: <u>1-15-96/1000</u>	No. Bottles:	Received By: <u>[Signature]</u>
Relinquished By: <u>[Signature]</u>	Date/Time: <u>1-17-96 to 1000</u>		Received By:
Messenger:	Shipped To:	Received at Lab By: <u>[Signature]</u>	Date/Time: <u>1-17-96</u>

Remarks: Fed-Ex Airbill # : 4829464522
LMS contact : Maria Heinicz

CTM Analytical Laboratories, Ltd.

15 Century Hill Drive
P.O. Box 727
Latham, NY 12110
518-786-7100
FAX 518-786-7139



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LAWLER, MATUSKY & SKELLY
ENGINEERS

FEB 01 1996

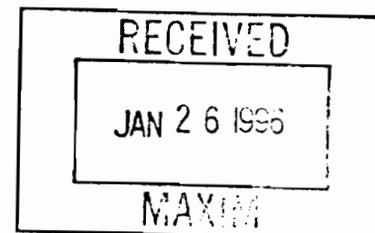
Laboratory Analysis Report
Prepared for: EMPIRE SOILS ***
Project Number: 96.06024
Task Number: 960117G
25 JAN 1996

IMPORTANT - PLEASE NOTE

1. All results are calculated on a dry weight basis unless otherwise specified.
2. PQL = Practical Quantitation Limit.
3. A result with a "D" means that the result was "Detected" below the Practical Quantitation Limit (PQL), but above the Method Detection Limit (MDL).
4. ND = Not Detected at or above the PQL.
5. NTP = Non-target peaks (1-5 peaks).
MNTP = Many non-target peaks (5+ peaks).
6. pH results not performed in the field should be considered estimated since the holding time is 15 minutes from the sampling time.
7. If the samples are collected independently of our laboratory, CTM is not responsible for the possible contamination during the sampling procedure.
8. Methylene chloride and acetone are common laboratory artifacts for volatile organic analysis. Bis-(2-ethyl-hexyl) phthalate and di-n-butylphthalate are common laboratory artifacts for GC/MS semivolatiles analysis. Other compounds may also appear as laboratory artifacts for the organic analyses. The above compounds will be flagged as suspected laboratory artifacts if the detected value is less than five (5) times of the PQL in the sample. Acetone will be flagged as a suspected laboratory artifact only up to two and a half (2.5) times of the PQL.
9. If air samples are collected independently of our laboratory, CTM is not responsible for inadequate sample volume for air analysis.

AUTHORIZED FOR RELEASE:

Christopher Hess



DATE: 1/25/96

CERTIFICATIONS:

NYS E.L.A.P. ID NO: 10358

MA: NY052

CT: PH-0551

NJ: 73581

PA: 68-402

To: Maxim Technologies
 5 Knabner Rd
 Gullston Sp., NY 12020
 (518) 299-7491

LAWLER, MATUSKY & SKELLY ENGINEERS
 CHAIN OF CUSTODY RECORD

Project No. 650-097	Project: UP RI/FS	Collection Site: United Phosine
LMS Facility:	Field Personnel: PY/SG	

SAMPLE TYPE (Circle):

Drinking Water Treatment Facility

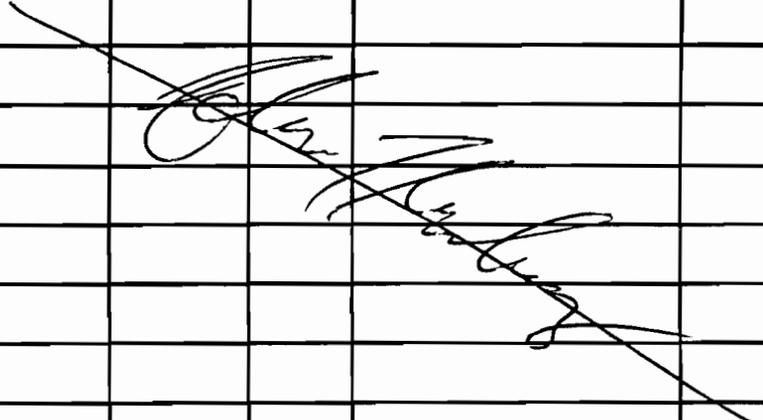
Stream/Pond Soil

Monitoring Wells Coliform (T)

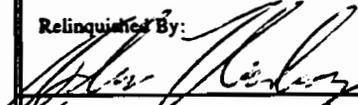
Bottom Sediment Coliform (F)

Industrial Waste Other

River/Ocean

SAMPLE ID NUMBER	DATE	TIME	SAMPLE SITE	PARAMETERS	SAMPLE PREP	
					PRESERVATIVE	FILTER (Y/N)
✓ UPMW1A	9-14-95	—	6-8', 8-10'	TOC, pH, Grain Size	None	N/A
✓ UPMW1B	9-18-95	—	16-18', 18-20'	TOC, pH, Grain Size	None	N/A
✓ UPMW2A	9-14-95	—	10-12', 12-14'	TOC, pH, Grain Size	None	N/A
✓ UPMW2B	9-19-95	—	23-25', 25-27'	TOC, pH, Grain Size	None	N/A
✓ UPMW3A	9-15-95	—	6-8', 8-10'	TOC, pH, Grain Size	None	N/A
✓ UPMW3B	9-19-95 ²⁰	—	19-21', 23-25'	TOC, pH, Grain Size	None	N/A
✓ UPMW5	9-29-95	—	5-7', 9-11'	TOC, pH, Grain Size	None	N/A
						

LAWLER, MATUSKY & SKELLY ENGINEERS
 SEP 1 1996

Relinquished By: 	Date/Time: 1-15-96/1000	No. Bottles:	Received By: Maxim Lab 1-17-96 10:30am Will Stahl
Relinquished By: (part. a1) Will Stahl	Date/Time: 1-17-96 to CTM/...	Received at Lab By: 	Received By:
Messenger:	Shipped To:	Received at Lab By: 	Date/Time: BOS 1-17-96

Remarks: Fed-Ex Airbill #: 4829464522
 LMS contact: Maria Heincz

CTM Analytical Laboratories, Ltd.

15 Century Hill Drive
P.O. Box 727
Latham, NY 12110
518-786-7100
FAX 518-786-7139



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EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

CTM Task #: 960117G

Attention: MR. WILL STANTON

Purchase Order Number:
Date Sampled: 09/14/95 Time: 00:00
Sampled By : N/A
Sample Id: UPMW1A
Location : UNITED PLATING, 6'-8',8'-10'

CTM Sample No: 960117G 01
Date Received: 01/17/96
Collection Method: GRAB
Matrix: SOIL

Parameters and Standard Methodology Used

PH FOR SOLIDS MEASURED IN H2O SW-846 9045A
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020

Results	PQL	Unit	Analyst Referenc
7.9		SU@22oc	PL 1/23/96
1	0.1	%	PL 1/22/96

LAWLER, MATUSKY & SKELLY
ENGINEERS

FEB 01 1996

REMARKS:

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Latham, NY 12110
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EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

CTM Task #: 960117G

Attention: MR. WILL STANTON

Purchase Order Number:
Date Sampled: 09/18/95 Time: 00:00
Sampled By : N/A
Sample Id: UPMW18
Location : UNITED PLATING ,16'-18',18-20'

CTM Sample No: 960117G 02
Date Received: 01/17/96
Collection Method: GRAB
Matrix: SOIL

Parameters and Standard Methodology Used

PH FOR SOLIDS MEASURED IN H2O SW-846 9045A
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020

Results	PQL	Unit	Analyst Reference
8.0		SU@22oc	PL 1/23/96
0.1	0.1	%	PL 1/22/96

REMARKS:

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Latham, NY 12110
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EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

Attention: MR. WILL STANTON

CTM Task #: 960117G

Purchase Order Number:
Date Sampled: 09/14/95 Time: 00:00
Sampled By : N/A
Sample Id: UPMW2A
Location : UNITED PLATING ,10'-12',12-14'

CTM Sample No: 960117G 03
Date Received: 01/17/96
Collection Method: GRAB
Matrix: SOIL

Parameters and Standard Methodology Used

PH FOR SOLIDS MEASURED IN H2O SW-846 9045A
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020

<u>Results</u>	<u>PQL</u>	<u>Unit</u>	<u>Analyst Reference</u>
7.8		SUA210C	PL 1/23/96
0.8	0.1	%	PL 1/22/96

REMARKS:

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P.O. Box 727
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FAX 518-786-7139



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EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

CTM Task #: 960117G

Attention: MR. WILL STANTON

CTM Sample No: 960117G 04

Purchase Order Number:
Date Sampled: 09/19/95 Time: 00:00

Date Received: 01/17/96

Sampled By : N/A

Collection Method: GRAB

Sample Id: UPMW2B

Matrix: SOIL

Location : UNITED PLATING ,23'-25',25-27'

Parameters and Standard Methodology Used

Results	PQL	Unit	Analyst Refere
8.0		SU@220C	PL 1/23/96
0.5	0.1	%	PL 1/22/96

PH FOR SOLIDS MEASURED IN H2O SW-846 9045A
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020

REMARKS:

CTM Analytical Laboratories, Ltd.

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P.O. Box 727
Latham, NY 12110
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GC
ICAP
Sampling Services

EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

CTM Task #: 960117G

Attention: MR. WILL STANTON

Purchase Order Number:
Date Sampled: 09/15/95 Time: 00:00
Sampled By : N/A
Sample Id: UPMW3A
Location : UNITED PLATING ,6'-8',8'-10'

CTM Sample No: 960117G 05
Date Received: 01/17/96
Collection Method: GRAB
Matrix: SOIL

Parameters and Standard Methodology Used

	<u>Results</u>	<u>PQL</u>	<u>Unit</u>	<u>Analyst Reference</u>
PH FOR SOLIDS MEASURED IN H2O SW-846 9045A	7.8		SU@22oC	PL 1/23/96
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020	2.0	0.1	%	PL 1/22/96

REMARKS:

CTM Analytical Laboratories, Ltd.

15 Century Hill Drive
P.O. Box 727
Latham, NY 12110
518-786-7100
FAX 518-786-7139



GC/MS
GC
ICAP
Sampling Services

EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

CTM Task #: 960117G

Attention: MR. WILL STANTON

Purchase Order Number:
Date Sampled: 09/20/95 Time: 00:00
Sampled By : N/A
Sample Id: UPMW3B
Location : UNITED PLATING ,19'-21',23-25'

CTM Sample No: 960117G 06
Date Received: 01/17/96
Collection Method: GRAB
Matrix: SOIL

Parameters and Standard Methodology Used

PH FOR SOLIDS MEASURED IN H2O SW-846 9045A
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020

Results	PQL	Unit	Analyst Referer
7.9		SU@22oC	PL 1/23/96
0.3	0.1	%	PL 1/22/96

REMARKS:

CTM Analytical Laboratories, Ltd.

15 Century Hill Drive
P.O. Box 727
Latham, NY 12110
518-786-7100
FAX 518-786-7139



GC/MS
GC
ICAP
Sampling Services

EMPIRE SOILS ***
P.O. BOX 2199
BALLSTON SPA NY 12020

CTM PROJECT #: 96.06024

CTM Task #: 960117G

Attention: MR. WILL STANTON

Purchase Order Number:
Date Sampled: 09/29/95 Time: 00:00
Sampled By : N/A
Sample Id: UPMW-5
Location : UNITED PLATING ,5'-7',9'-11'

CTM Sample No: 960117G 07
Date Received: 01/17/96
Collection Method: GRAB
Matrix: SOIL

Parameters and Standard Methodology Used

PH FOR SOLIDS MEASURED IN H2O SW-846 9045A
ORGANIC MATTER IN SOIL LAMOTTE METHOD 5020

<u>Results</u>	<u>PQL</u>	<u>Unit</u>	<u>Analyst Reference</u>
8.6		SU@22oc	PL 1/23/96
0.3	0.1	%	PL 1/22/96

LAWLER, MATUSKY & SKELLY
ENGINEERS

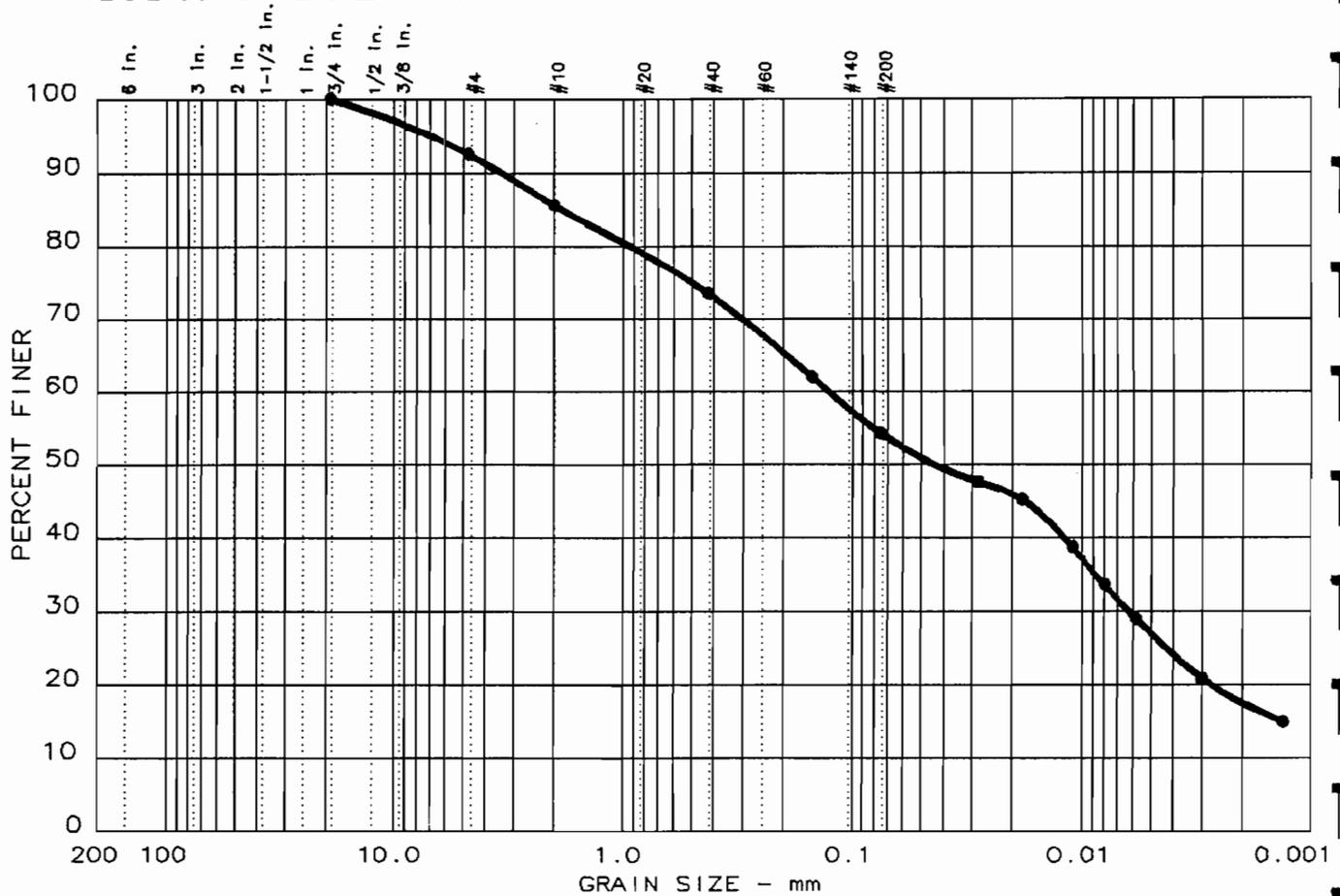
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REMARKS:

END OF REPORT

LEGEND: MG/KG=PPM, MCG/KG=PPB, MG/L=PPM, MCG/L=PPB, MCG/G=PPM

GRAIN SIZE DISTRIBUTION TEST REPORT



No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
22	860.0	1.04	1.05	-1.19
23	920.0	0.980	0.974	0.610
24	1400.0	0.630	0.563	10.59

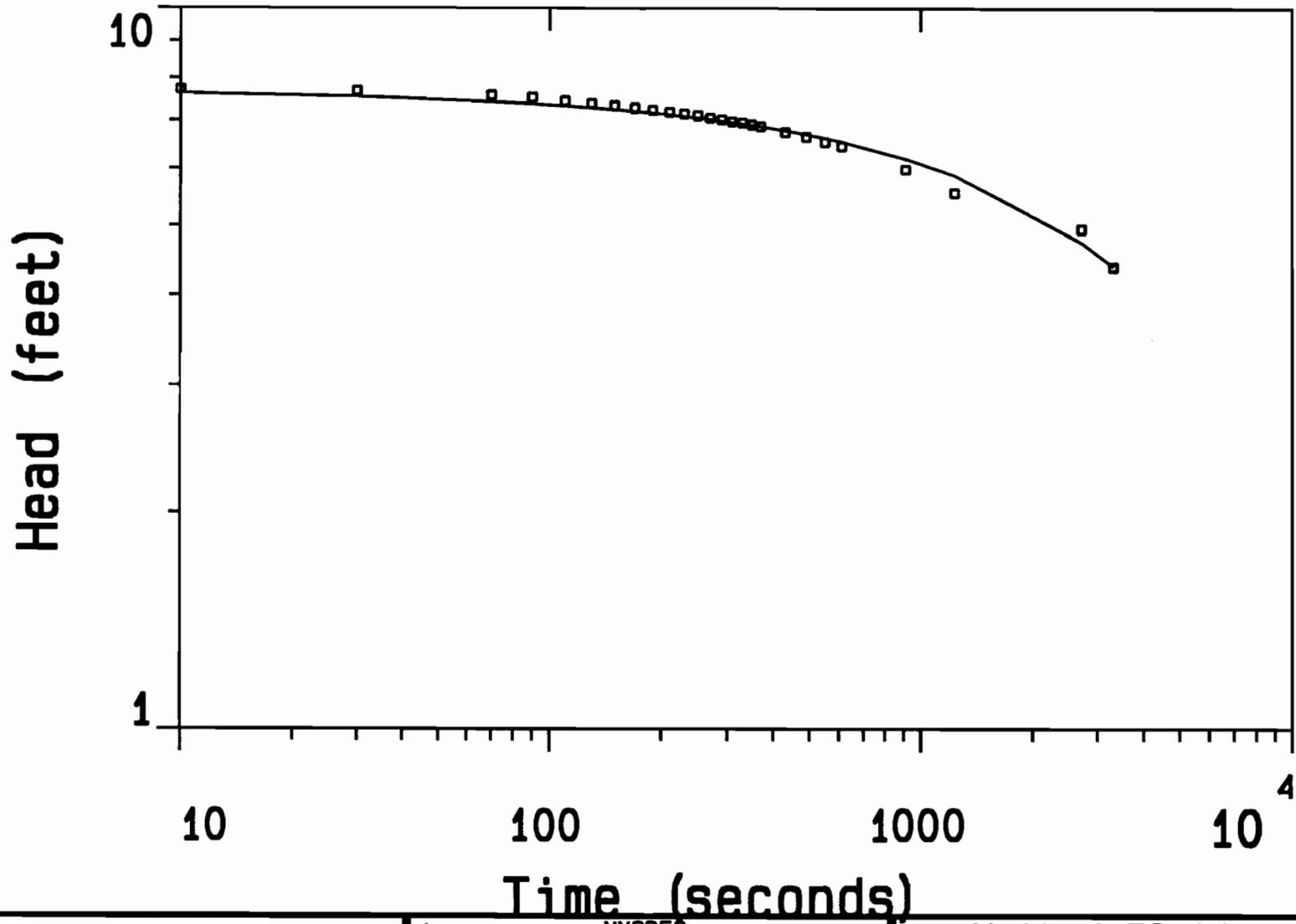
PARAMETER RESOLUTION MATRIX:
"*" INDICATES FIXED PARAMETER

S	0.98	
T	0.00	1.00
	S	T

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LMS Engineers

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MODEL TYPE: COOPER et al. TRANSMISSIVITY: .01034 sq. m/day STORATIVITY: .003238 INITIAL HEAD: 7.71 ft		for: NYSDEC by: LMS Engineers WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 43.57 SCREEN: top: 28.00 base: 53.09 DIAMETER: casing: .1660 intake: .3160 DEPTH: Water Table: 9.520 TD: 53.09	United Plating Well: UPMW-3C Schenectady, NY Schenectady, NY
Data Set: UPMW3C01	Date: 1-5-95		

DATA SET: UPMW3C01

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-3C
COUNTY: Schenectady, NY	WELL DEPTH: 53.09 ft
PROJECT: United Plating	WATER TABLE: 9.520 ft
AQUIFER: Endless	THICKNESS: 43.57 ft
INTAKE RADIUS: 0.158 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 28.000 ft	SCREEN BASE: 53.09 ft
INITIAL HEAD: 7.710 ft	TRANS. RATIO: 1.0000

FITTING ERROR: 1.855 PERCENT

MODEL PARAMETERS:

STORAGE COEFF.: .00323 FREE

TRANSMISSIVITY: .0103 square m/day FREE

MODEL TYPE: CONFINED AQUIFER (Cooper et al.)

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	10.00	7.71	7.61	1.22
2	30.00	7.67	7.53	1.79
3	70.00	7.57	7.41	2.06
4	90.00	7.52	7.36	2.07
5	110.0	7.43	7.31	1.50
6	130.0	7.37	7.27	1.28
7	150.0	7.32	7.23	1.17
8	170.0	7.27	7.19	1.04
9	190.0	7.23	7.15	1.02
10	210.0	7.18	7.11	0.843
11	230.0	7.14	7.08	0.786
12	250.0	7.10	7.04	0.713
13	270.0	7.05	7.01	0.486
14	290.0	7.01	6.98	0.385
15	310.0	6.97	6.95	0.272
16	330.0	6.94	6.91	0.292
17	350.0	6.90	6.88	0.157
18	370.0	6.86	6.85	0.0120
19	430.0	6.74	6.77	-0.479
20	490.0	6.64	6.68	-0.744
21	550.0	6.53	6.61	-1.22

*

LMS Engineers

*

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
22	610.0	6.44	6.53	-1.45
23	910.0	5.98	6.18	-3.47
24	1230.0	5.55	5.86	-5.71
25	2720.0	4.94	4.73	4.08
26	3320.0	4.38	4.38	-0.171

PARAMETER RESOLUTION MATRIX:

"*" INDICATES FIXED PARAMETER

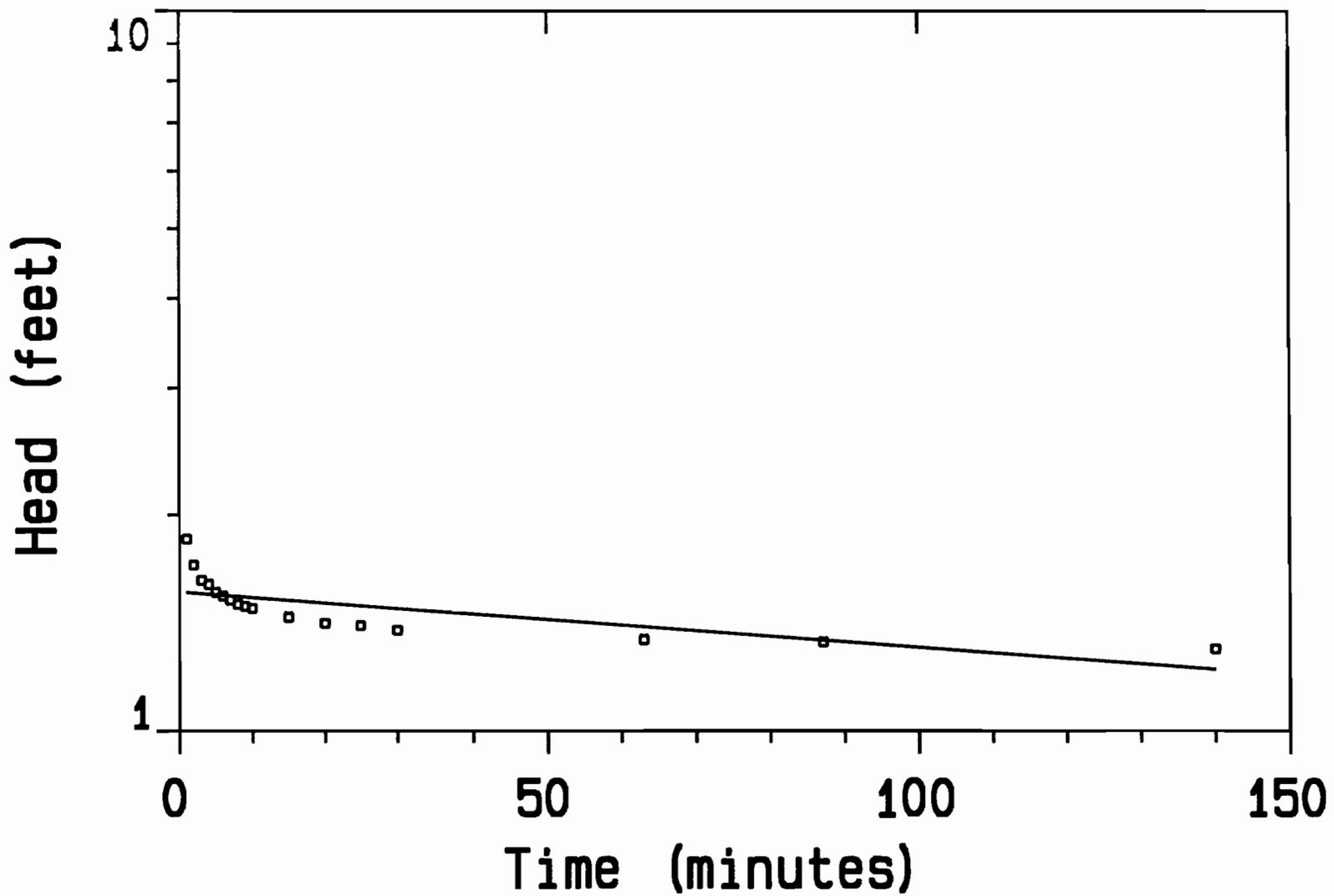
S 1.00
T 0.00 1.00

S T

*

LMS Engineers

*



MODEL TYPE: BOUWER and RICE CONDUCTIVITY: .0008888 m/day TRANSMISSIVITY: .001037 sq. m/day INITIAL HEAD: 1.85 ft		for: NYSDEC by: LMS Engineers	United Plating Well: UPMW-2A Schenectady, NY Schenectady, NY
Data Set: UPMW2A02	Date: 1-5-95	WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 3.830 SCREEN: top: 4.390 base: 14.39 DIAMETER: casing: .1660 intake: .6360 DEPTH: Water Table: 10.56 TD: 14.39	

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 2

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

Sample Data

Location of Sample: UPMW1A, 9-14-95, 6-8' 8-10'
 Sample Description: Gray cmf Sand, some silt, some clay, trace mf gravel
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Descriptions by Client
 Fig. No.: UPMW1A

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
0.75 inches	19.05	100.0
# 4	4.750	92.5
# 10	2.000	85.6
# 40	0.425	73.5
# 100	0.150	61.9
# 200	0.075	54.2

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 85.6
 Weight of hydrometer sample: 70.74
 Calculated biased weight= 82.64
 Automatic temperature correction
 Composite correction at 20 deg C = -1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	21.0	41.8	40.2	0.0131	42.3	9.4	0.0283	47.6
5.0	21.0	39.8	38.2	0.0131	40.3	9.7	0.0182	45.2
15.0	21.2	34.3	32.7	0.0131	34.8	10.6	0.0110	38.7
30.0	21.2	30.0	28.4	0.0131	30.5	11.3	0.0080	33.6
60.0	21.5	26.0	24.5	0.0130	26.5	11.9	0.0058	29.0
240.0	22.1	19.0	17.6	0.0129	19.5	13.1	0.0030	20.9

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1380.0	20.5	14.3	12.6	0.0132	14.8	13.9	0.0013	14.9

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

% + 3 in. = 0.0 % GRAVEL = 7.5 % SAND = 38.3

% SILT = 27.2 % CLAY = 27.0

D85= 1.84 D60= 0.127 D50= 0.044

D30= 0.0062 D15= 0.00133

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 3

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

Sample Data

Location of Sample: UPMW1B, 9-18-95, 16-18' 18-20'
 Sample Description: Gray cmf Sand, some (-) clay, some (-) silt, some (-) mf gravel
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Descriptions by Client
 Fig. No.: UPMW1B

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
1 inches	25.40	100.0
0.75 inches	19.05	91.5
# 4	4.750	80.0
# 10	2.000	72.4
# 40	0.425	60.5
# 100	0.150	50.0
# 200	0.075	43.2

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 72.4
 Weight of hydrometer sample: 68.3
 Calculated biased weight= 94.34
 Automatic temperature correction
 Composite correction at 20 deg C = -1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	21.4	39.5	38.0	0.0130	40.0	9.7	0.0287	39.4
5.0	21.4	36.3	34.8	0.0130	36.8	10.3	0.0187	36.1
15.0	21.5	31.3	29.8	0.0130	31.8	11.1	0.0112	30.9
30.0	21.5	27.3	25.8	0.0130	27.8	11.7	0.0081	26.7
60.0	21.6	24.0	22.5	0.0130	24.5	12.3	0.0059	23.3

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
240.0	22.0	18.0	16.6	0.0129	18.5	13.3	0.0030	17.2
1380.0	20.5	13.5	11.8	0.0132	14.0	14.0	0.0013	12.2

 Fractional Components

Gravel/Sand based on #4 sieve
 Sand/Fines based on #200 sieve
 % + 3 in. = 0.0 % GRAVEL = 20.0 % SAND = 36.8
 % SILT = 21.4 % CLAY = 21.8

D85= 13.34 D60= 0.398 D50= 0.150
 D30= 0.0104 D15= 0.00219

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GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 4

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

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Sample Data

Location of Sample: UPMW2A, 9-14-95, 10-12' 12-14'
 Sample Description: Gray cmf Sand, some clay, some silt, little mf gravel
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Descriptions by Client
 Fig. No.: UPMW2A

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
1 inches	25.40	100.0
0.75 inches	19.05	96.2
# 4	4.750	86.8
# 10	2.000	80.9
# 40	0.425	69.5
# 100	0.150	58.6
# 200	0.075	51.2

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 80.9
 Weight of hydrometer sample: 63.32
 Calculated biased weight= 78.27
 Automatic temperature correction
 Composite correction at 20 deg C =-1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	21.5	37.8	36.3	0.0130	38.3	10.0	0.0291	45.4
5.0	21.5	34.0	32.5	0.0130	34.5	10.6	0.0190	40.6
15.0	21.5	30.5	29.0	0.0130	31.0	11.2	0.0112	36.2
30.0	21.8	27.8	26.4	0.0130	28.3	11.7	0.0081	33.0
60.0	22.0	24.5	23.1	0.0129	25.0	12.2	0.0058	28.9

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
300.0	22.0	18.0	16.6	0.0129	18.5	13.3	0.0027	20.8
1380.0	21.5	14.0	12.5	0.0130	14.5	13.9	0.0013	15.6

 Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

% + 3 in. = 0.0 % GRAVEL = 13.2 % SAND = 35.6

% SILT = 24.2 % CLAY = 27.0

D85= 3.55 D60= 0.168 D50= 0.062

D30= 0.0063

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 5

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

Sample Data

Location of Sample: UPMW2B, 9-19-95, 23-25' 25-27'
 Sample Description: Gray cmf Sand, some clay, some (-) silt, little mf gravel
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Descriptions by Client
 Fig. No.: UPMW2B

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
0.75 inches	19.05	100.0
# 4	4.750	83.9
# 10	2.000	75.5
# 40	0.425	64.2
# 100	0.150	53.8
# 200	0.075	46.9

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 75.5
 Weight of hydrometer sample: 71.29
 Calculated biased weight= 94.42
 Automatic temperature correction
 Composite correction at 20 deg C =-1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	21.8	40.5	39.1	0.0130	41.0	9.6	0.0283	40.5
5.0	21.8	37.3	35.9	0.0130	37.8	10.1	0.0184	37.2
15.0	21.8	33.3	31.9	0.0130	33.8	10.8	0.0110	33.0
30.0	21.8	30.3	28.9	0.0130	30.8	11.2	0.0079	29.9
60.0	22.0	27.0	25.6	0.0129	27.5	11.8	0.0057	26.5
300.0	22.0	19.8	18.4	0.0129	20.3	13.0	0.0027	19.1

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1380.0	21.5	16.5	15.0	0.0130	17.0	13.5	0.0013	15.5

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

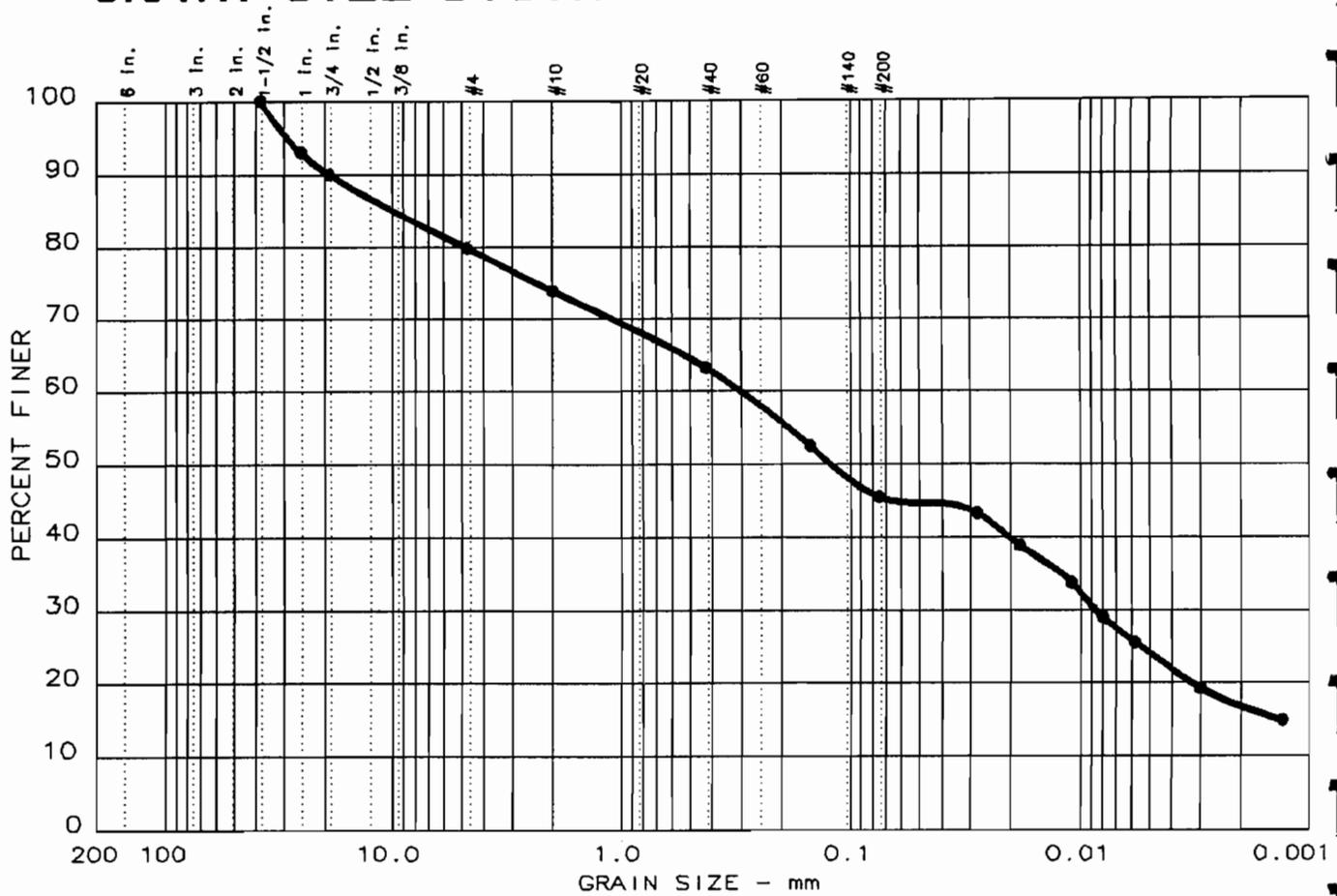
% + 3 in. = 0.0 % GRAVEL = 16.1 % SAND = 37.0

% SILT = 21.8 % CLAY = 25.1

D85= 5.25 D60= 0.266 D50= 0.105

D30= 0.0079

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 6

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

Sample Data

Location of Sample: UPMW3A, 9-15-95, 6-8' 8-10'
 Sample Description: Gray cmf Sand, some clay, some (-) silt, some (-) mf gravel
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Description by Client
 Fig. No.: UPMW3A

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
1.5 inches	38.10	100.0
1 inches	25.40	93.0
0.75 inches	19.05	90.0
# 4	4.750	79.8
# 10	2.000	73.8
# 40	0.425	63.1
# 100	0.150	52.4
# 200	0.075	45.5

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 73.8
 Weight of hydrometer sample: 66.17
 Calculated biased weight= 89.66
 Automatic temperature correction
 Composite correction at 20 deg C =-1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	22.1	41.0	39.6	0.0129	41.5	9.5	0.0281	43.2
5.0	22.1	37.0	35.6	0.0129	37.5	10.1	0.0184	38.9
15.0	22.1	32.3	30.9	0.0129	32.8	10.9	0.0110	33.8
30.0	22.1	28.0	26.6	0.0129	28.5	11.6	0.0080	29.1

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
60.0	22.1	24.8	23.4	0.0129	25.3	12.1	0.0058	25.6
240.0	22.1	19.0	17.6	0.0129	19.5	13.1	0.0030	19.2
1380.0	20.5	15.3	13.6	0.0132	15.8	13.7	0.0013	14.8

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

% + 3 in. = 0.0 % GRAVEL = 20.2 % SAND = 34.3

% SILT = 21.4 % CLAY = 24.1

D85= 10.00 D60= 0.299 D50= 0.122

D30= 0.0085 D15= 0.00133

=====

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 7

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

=====

Sample Data

Location of Sample: UPMW3B, 9-19-95, 19-21' 23-25'
 Sample Description: Gray Clay, some (+) cmf sand, little mf gravel, little silt
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Description by Client
 Fig. No.: UPMW3B

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
0.75 inches	19.05	100.0
# 4	4.750	82.5
# 10	2.000	73.8
# 40	0.425	62.0
# 100	0.150	55.7
# 200	0.075	50.8

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 73.8
 Weight of hydrometer sample: 61.19
 Calculated biased weight= 82.91
 Automatic temperature correction
 Composite correction at 20 deg C =-1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	22.0	39.5	38.1	0.0129	40.0	9.7	0.0285	45.0
5.0	22.0	37.5	36.1	0.0129	38.0	10.1	0.0183	42.6
15.0	22.0	35.3	33.9	0.0129	35.8	10.4	0.0108	40.0
30.0	22.0	33.5	32.1	0.0129	34.0	10.7	0.0077	37.9
60.0	22.0	31.3	29.9	0.0129	31.8	11.1	0.0056	35.3
300.0	22.0	25.5	24.1	0.0129	26.0	12.0	0.0026	28.4

Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1380.0	21.5	21.8	20.3	0.0130	22.3	12.6	0.0012	23.9

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

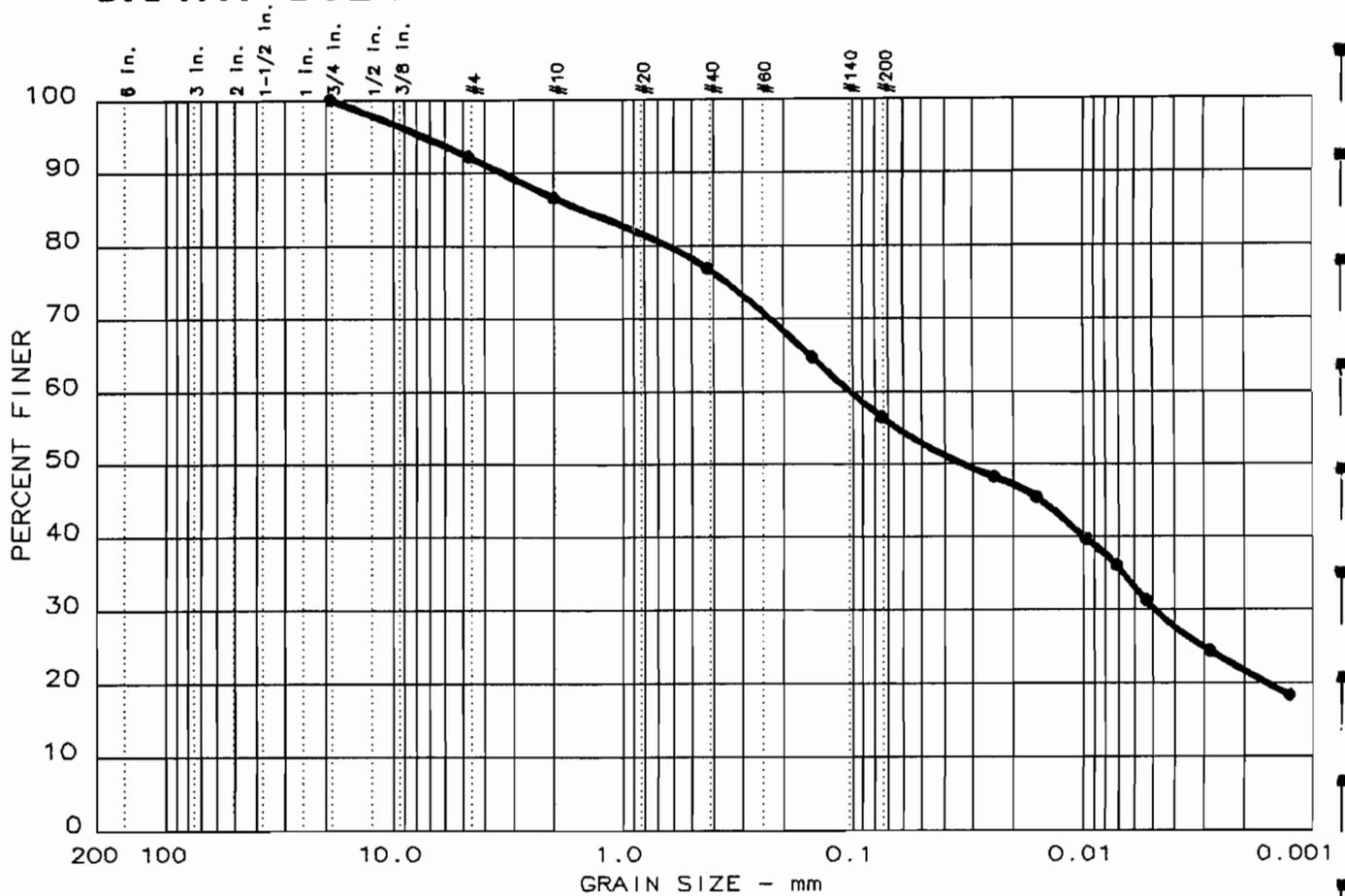
% + 3 in. = 0.0 % GRAVEL = 17.5 % SAND = 31.7

% SILT = 16.4 % CLAY = 34.4

D85= 5.89 D60= 0.299 D50= 0.066

D30= 0.0031

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 8	0.0	7.8	35.7	26.2	30.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
●		1.53	0.102	0.0335	0.0048				

MATERIAL DESCRIPTION	USCS	AASHTO
● Gray cmf Sand, some (+) clay, some (-) silt, trace mf gravel		

<p>Project No.: AT-96-010 Project: United Plating (LMS No. 650-097) ● Location: UPMW-5, 9-29-95, 5-7' 9-11'</p> <p>Date: January 24, 1996</p>	<p>Remarks: Sampled by Client Rec'd by Maxim 1-17-96 Sample Description by Client</p> <p>Figure No. UPMW-5</p>
GRAIN SIZE DISTRIBUTION TEST REPORT MAXIM TECHNOLOGIES	

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 8

Date: January 24, 1996
 Project No.: AT-96-010
 Project: United Plating (LMS Mo. 650-097)

Sample Data

Location of Sample: UPMW-5, 9-29-95, 5-7' 9-11'
 Sample Description: Gray cmf Sand, some (+) clay, some (-) silt, trace mf gravel
 USCS Class: Liquid limit:
 AASHTO Class: Plasticity index:

Notes

Remarks: Sampled by Client Rec'd by Maxim 1-17-96
 Sample Description by Client
 Fig. No.: UPMW-5

Mechanical Analysis Data

Sieve	Size, mm	Percent finer
0.75 inches	19.05	100.0
# 4	4.750	92.2
# 10	2.000	86.5
# 40	0.425	76.8
# 100	0.150	64.7
# 200	0.075	56.5

Hydrometer Analysis Data

Separation sieve is number 10
 Percent -# 10 based on complete sample= 86.5
 Weight of hydrometer sample: 93.52
 Calculated biased weight= 108.12
 Automatic temperature correction
 Composite correction at 20 deg C = -1.8

Meniscus correction only= 0.5
 Specific gravity of solids= 2.75
 Specific gravity correction factor= 0.978
 Hydrometer type: 152H Effective depth $L = 16.294964 - 0.164 \times R_m$

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	23.0	54.3	53.2	0.0128	54.8	7.3	0.0244	48.1
5.0	23.0	51.3	50.2	0.0128	51.8	7.8	0.0160	45.4
15.0	23.0	45.0	43.9	0.0128	45.5	8.8	0.0098	39.7
30.0	23.0	41.0	39.9	0.0128	41.5	9.5	0.0072	36.1
60.0	22.6	35.8	34.6	0.0128	36.3	10.3	0.0053	31.3
240.0	22.1	28.3	26.9	0.0129	28.8	11.6	0.0028	24.4

Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1380.0	20.3	22.0	20.2	0.0132	22.5	12.6	0.0013	18.3

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

% + 3 in. = 0.0 % GRAVEL = 7.8 % SAND = 35.7

% SILT = 26.2 % CLAY = 30.3

D85= 1.53 D60= 0.102 D50= 0.033

D30= 0.0048

APPENDIX D
WELL DEVELOPMENT LOGS

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

4
10/20/95

DATE 9-20-95

WELL No. 4PMW-1A

CREW ML PY

pH No. 112

JOB No. 650-092

THERMOMETER No. 7706

SITE NAME UNITED PLATING

SCT No. _____

DEVEL. METHOD SS BAILER

TURBIDITY No. _____

DTW

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
	0.25	7.1	15.8	-	> 200
	0.5	7.3	15.4	-	> 400
	0.75 0.75 / DRY	7.4	15.3	-	> 400
9:45	0	7.10	16.5	1864	200+
11:00	5 gallons	7.22	16.2	1037	200+
11:15	DRY 10 gallons				200+
	10 gallons well		now makes .25-.5 gpm		
9:29 14:30	↓	7.71	14.7	1790	200+++ 15.1
10-2 10:30	0 - INITIAL	6.3	15.8 15.8	1316	> 200
	5	7.23	12.4	1764 1764	> 200
	10 / DRY	7.46	16.6	1493	> 200
2.3 11:15 11:15	5		16.1 16.1	1563	7200
				1563	7200
10-4 11:45	5	7.0	16.6	1589	> 200
	5	7.3	16.2	1527	> 200
10-5 09:40	5	6.9	15.4	1603	175

DEPTH to WATER: 13.91 DEPTH of WELL: 17.94 TIME: 9:50

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 9.20.95

WELL No. UPMW-1B

CREW ML PY

PH No. ~~112~~

JOB No. 650-092

THERMOMETER No. 7706

SITE NAME UNITED PLATING

SCT No. —

DEVEL. METHOD PUMP & SURGE

TURBIDITY No. —

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
7:30	3 / DRY	7.3	15.2	NT	> 200
7:45	.5 gpm / DRY	7.4	15.1	NT	200 +
	.5 gpm / DRY	7.5	14.9	NT	> 200
	.5 gpm / DRY	7.6	15.9	NT	> 200
	.5 gpm / DRY	7.6	16.8	NT	> 200
13:10	.5 gpm / DRY	7.8	15.6	NT	200
18:15	0.5 G / DRY			NT	> 200
11:15	0		14.4	591	200+
11:30	.5 gpm	8.08	14.9	585	200+
12:20	5 gallons	7.20	15.7	1050	150
11:30	0 - INITIAL	—	18.3	692	70
12:00	5	—	15.8	852	169
12:40	10	—	16.1	842	> 200
14:20	13	—	16.3	848	> 200
11:45	5 gallons		13.1	859	200 +
13:30	5 GAL	7.6	14.4	863	39

DTW
↑
CONT SURGE
↓
528
19.6
15.3
↓
26.05

DEPTH to WATER: 6.14 DEPTH of WELL: 24.76 + .14 TIME: 0730

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 9.28.95

WELL No. UPMW-2A

CREW ML, PY

pH No. _____

JOB No. 650-092

THERMOMETER No. _____

SITE NAME United Platiny

SCT No. _____

DEVEL. METHOD Bail/Surge

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
9.29.95	Suspect	screen is clogged	BASED ON DTW of		
		3.1 Feet in UPPZ-01 (same elevation)			
		Poured DI to open screen			
10.2.95	DRY	Bailed DI	From well		
10.3.95	DRY				
10.4.95		Poured	POTABLE water and surged with 2+		
		Block	twice. Bailed DRY		
10.5.95	2	Bailed 2 gallons	MAY HAVE BEEN		200+
		H2O	IN SANDPACK - DRY		

DTW =
DRY =

10.91

DEPTH to WATER: DRY DEPTH of WELL: _____ TIME: _____

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 9.28.95

WELL No. UP MW - 2B

CREW ML, PY

pH No. _____

JOB No. 650-092

THERMOMETER No. _____

SITE NAME UNITED Pkting

SCT No. _____

DEVEL. METHOD Bail/Surge

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1500	10	8.50	12.9	1097	200++
	Bailed	Dry	very Silty - check	pk correct	
10.2	OVER LAST FEW DAYS, WELL HAS BEEN PURGED.				ABOUT 20 GAL.
1530	0 - INIT.	METER DOWN	16.5	847	>200
	5	↓	13.4	856	163
	10	↓	14.6	869	>200
0830	5 GALLONS		11.3	878	200++
	10 GAL.		11.5	872	163
	15		11.4	882	357
	20		11.4	881	
15:40	30		13.5	852	>200
0930	5 GALLONS	6.6	14.8	767	200+
	15 gal Dry	7.0	14.3	792	200+
1300	20	8.2	14.0	834	>200
1400	25	8.3	15.1	803	>200
1500	30	7.8	13.7	853	>200

DTW 24.45

20.3

SAMPLE IS VERY TURBID METER OFF

DEPTH to WATER: 6.10

DEPTH of WELL: 25.91

TIME: 1410 9.28.95

DEPTH to WATER: _____

DEPTH of WELL: _____

TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 7-28-95

WELL No. UPMW-2C

CREW ML, PY

pH No. _____

JOB No. 650-092

THERMOMETER No. _____

SITE NAME UNITED PLATING

SCT No. _____

DEVEL. METHOD BAIL/SURGE

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1420	10	11.46	14.8	598	200+
Pumped dry installed well					
Pumped dry several times with Grundfos 245 gallons					
10.3 0910	20		12.3	709	200+
	25		15.5	741	
15:45	40/dry		13.8	789	~100
Pumped dry @ 17:00 10/3 - 47 GAL TOTAL TODAY					
0920	5 gal	8.5	14.9	762	200+
0940	15 gal	7.5	12.7	860	200+
11:15	20 40	7.9	15.6	822	>200
1500	17	8	16.8	798	88
13	2.5	7.7	12.5	766	41.9

DTW

DEPTH to WATER: 7.65

DEPTH of WELL: _____

TIME: 1420 PUC then cut off

DEPTH to WATER: _____

DEPTH of WELL: _____

TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 9.28.95

WELL No. upmw-3A

CREW ML, PY

pH No. _____

JOB No. 650-092

THERMOMETER No. _____

SITE NAME UNITED Platng

SCT No. _____

DEVEL. METHOD Bail/surge

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
9.29.95	DRY	suspect	screen is clogged with silt		
		based	on OTW of 4.22 in pz-09		
		poured	DI to open screen		
10.2.95	DRY		Bailed DI from well	DIY	
10.3.95	DRY	#			
10.4.95		poured	potable water and surged with		
		2" block	twice. Bailed DRY		
10.5.95	1.5		Bailed 1.5 gallons may have been		
			H2O in sandpack - DRY		

OTW
 DRY
 DRY
 11.10

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 9.28.95

WELL No. UPMW-3B

CREW ML, PY

pH No. _____

JOB No. 650-092

THERMOMETER No. _____

SITE NAME United Platina

SCT No. _____

DEVEL. METHOD Bail/Surge

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1610	10 GAL.	8.21	12.3	969	200++
	Bailed 20-25 gallons very silty - seems to				
	Recover OK				
0830	5 GAL		11.4	869	200++
0905	5 GAL		11.3	884	200++
12:15	5 GAL	7.7	14.8	903	2200
13:00	10 GAL	7.6	15.5	890	2200
0805	5 GALLONS	6.8	12.7	884	60
0850	5 GALLONS	7.6	12.0	883	118
0910	5 GALLONS	7.2	11.8	883	108
0930	5 GALLONS	7.3	11.8	877	173
10:00	5 GALLONS (DRY)	7.7	12.4	875	>200
1320	2.5 GALLONS	7.6	12.5	879	113

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 9.28.95

WELL No. UPMW-3C

CREW M, P, Y

pH No. _____

JOB No. 650-092

THERMOMETER No. _____

SITE NAME UNITED RELIANT

SCT No. _____

DEVEL. METHOD Pump/Surge

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1535	6	10.95	12.9	1069	200+
1635	20	8.4	13.0	954	200+
10.4 1215	7	10.3	16.8	1009	>200
1400	12	10.4	16.7	991	>200
1500	17	8.0	16.8	798	88 <small>VERY CLEAR</small>
10.5	5 gallons	7.7	13.0	928	200+
10:15	5	6.8	13.4	975	200+
1465	2 gallons	9.8	12.5	940	200+
1550	1 gallon	9.7	12.6	960	200+

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 10-2-95

WELL No. UPM-4

CREW M. PY ADT

pH No. _____

JOB No. 600-092

THERMOMETER No. _____

SITE NAME United Platting

SCT No. _____

DEVEL. METHOD Bail / surge

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
10-2-95	DRY				
10-3-95	DRY	Poured 20 gallons potable water AND surged with 4" block twice let water stand in well overnight Surged. H2O dropped from 2.33 to 2.8. Bailed to DRY			200+
10-4-95	DRY	Does NOT appear to be making H2O			
10-5-95		SWL: 9.47 maybe water from SANDPACK			

DEPTH to WATER: DRY DEPTH of WELL: 12.65 + .14 TIME: 0745 10-2-95

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 10/4/95

WELL No. UPMW-5

CREW ML PY

pH No. CP 301

JOB No. 650-092

THERMOMETER No. TLC 11

SITE NAME UNITED PLATING

SCT No. TLC 11

DEVEL. METHOD BAILER

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1105		7.9	16.0	1750	>200
		8.1	15.7	1885	>200
1200	1 GALLON	7.8	13.7	2240	104
			Slow to Recover		
1235	1 GALLON	7.7	13.5	2350	200+
			DRY		
1415	1 GALLON	7.7	13.5	2400	>200
1545	2 GALLONS	7.4	13.9	2220	200+

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 10/4/95

WELL No. UPMW-6

CREW ML P9

pH No. CP 301

JOB No. 650-092

THERMOMETER No. TLC 11

SITE NAME UNITED PLATING

SCT No. TLC 11

DEVEL. METHOD _____

TURBIDITY No. DRT-15C #19834
NYSDEC

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1110	~10	9.6	14.5	1159	7200
10-3	Bailed DRY	Several times			>200
10-4	surged with 4"	Block then	Bailed DRY		200++
10-5 0900	5 gallons	8.3	12.6	1258	200+
0920	2.5 gallons	9.0	12.5	1263	200+ DRY
1155	2.5 gallons	8.8	12.5	1259	200+ DRY
1315	2.5 gallons	7.8	13.1	1249	174
1415		8.6	13.2	1259	>200
1515		8.7	13.4	1252	152

DEPTH to WATER: 3.94

DEPTH of WELL: _____

TIME: 10-2-95 1205

DEPTH to WATER: _____

DEPTH of WELL: _____

TIME: _____

COMMENTS: WATER is very green
slowly Recovers

Date: 11/25/97	LAWLER, MATUSKY & SKELLY ENGINEERS WELL DEVELOPMENT LOG WELL No. UPMW-7A	pH Meter: CP4
Crew: CM/EH/TH		Cond. Meter: DEC560
Job No: 650-098		Therm: DEC560
Site: United Pleting		Turb. Meter: DEC DET 15C SP 1983F

Whale Pump all

TIME	SWL	GAL. PURGED	pH	TEMP. (°C)	SP. COND. (µmhos/cm)	TURB. (NTUs)	COMMENTS
11:25	3.97	0	7.8	10.4	1800	>200	brown, v/sand, with clay
11:31		10	7.8	11.4	1972	>200	getting grayer
11:38		15	7.8	10.7	1648	>200	dry (comes back quickly)
							break
14:04		10	7.7	10.4	1527	>200	still using whale pump
14:22		20	8.1	9.5	1580	>200	still brown
14:41		30	8.0	10.4	1438	>200	
15:13		40	7.7	10.4	1393	>200	cleaning up a little
15:32		50	7.8	10.4	1601	95	much clearer
15:50		60	7.6	10.2	1662	66	
							break
16:40		10	8.3	11.2	1391	>200	whale pump
17:02		20	7.7	10.1	1526	159	
17:20		30	7.8	10.7	1371	>200	
17:47		40	7.9	10.7	1478	108	
							break
11/26 13:04		5	7.2	11.2	1606	123	whale pump
13:13		15	7.1	11.9	1431	96	
13:31		25	7.1	11.6	1400	32	
13:52		35	7.1	11.2	1529	46	
14:12		42.5	7.2	11.8	1451	65	↓

Depth of ^{Water} Well: Start: _____ End: _____

Depth of Well 14.17

Drilled 1/2 hour to get rid of drilling fluid 11/21

Date: 11/25/97	LAWLER, MATUSKY & SKELLY ENGINEERS WELL DEVELOPMENT LOG WELL No. UPMW 7B	pH Meter: CP4
Crew: CM/EH/TH		Cond. Meter: DEC560
Job No: 650-098		Therm: DEC560
Site: United Plating		Turb. Meter: DEC DAT 15C # 19834

whale pump all

TIME	SWL	GAL. PURGED	pH	TEMP. (°C)	SP. COND. (µmhos/cm)	TURB. (NTUs)	COMMENTS
1044	3.64	0	9.6	10.8	885	>200	using whale pump
1049		5	9.3	11.5	876	>200	
1052		10	9.3	11.6	816	>200	strong sulphur odor
1059		20	9.6	10.9	904	>200	↓
1109		30	9.5	10.4	932	>200	
1120		40	9.2	10.3	954	>200	
							took a break
1145		5	8.4	11.0	1120	>200	
1152		15*	9.4	10.4	953	>200	strong sulphur odor
1203		25	9.3	10.1	980	>200	
1214		35	8.3	11.1	1104	>200	
							took a break - 1st recover
16:09		10	8.2	11.6	1118	>200	whale pump
16:16		20	9.0	12.0	980	>200	
16:25		30	8.5	11.2	1053	>200	
							break
18:00		10	7.9	10.9	1156	>200	whale pump
18:11		20	8.4	11	1028	>200	
18:21		30	8.3	10.9	1008	>200	
18:32		40	8.3	10.9	1024	>200	

40

75

105

Depth of ^{water} Well: Start: _____ End: _____

Well _____

bailed to remove drilling fluid 11/21/97

Date: 11/24/97	LAWLER, MATUSKY & SKELLY ENGINEERS WELL DEVELOPMENT LOG WELL No. <u>UPMw-8C</u>	pH Meter: CP4
Crew: CM/ed		Cond. Meter: DEC 560
Job No: 650-098		Therm: DEC 560
Site: United Plating		Turb. Meter: DEC DRT-150 5/19834

whale @ approx 20'

TIME	SWL	GAL. PURGED	pH	TEMP. (°C)	SP. COND. (µmhos/cm)	TURB. (NTUs)	COMMENTS
1734	2.62	0	9.6	10.7	751	>200	from bottom
1745		5	8.9	12.8	770	>200	using whale pump
1750		10	9.0	11.9	795	>200	
1755	16.12	13	9.8	12.5	816	>200	pump ran out of water
1901		18	9.2	12.0	795		
1904		23	9.1	12.0	815		
11/25							
0805		5	8.1	12.0	815	>200	
0809		10	7.9	12.8	825	>200	
0812		15	8.0	12.85	832	>200	
0819		19	8.0	12.2	827	>200	
0844		24	8.3	12.1	824	>200	
0950		28	8.0	12.0	819	>200	
11/26							
0850	239						
0912		7	7.5	15.8	848	>200	whale pump (10 gal) ^{total}
0944		15	7.5	11.6	883	>200	hand bailed
1000		18	7.6	12.2	809	>200	

Depth of Well: ^{to water} Start: 2.62 End: _____ whale pump ≈ 1 gal/min

Well SS.46

bailed 1/2 hour to remove drilling fluid

8C

LAWLER, MATUSKY & SKELLY ENGINEERS

WELL DEVELOPMENT LOG

DATE 11/25

WELL No. UFMW 10C

CREW EH/CM/TH

pH No. _____

JOB No. 650-098

THERMOMETER No. TCC #11

SITE NAME Un. Fed. Planting

SCT No. TCC #11

DEVEL. METHOD Teflon Bailer

TURBIDITY No. _____

TIME	GALLONS BAILED	pH	Temperature (°C)	SPECIFIC CONDUCTANCE (µmhos/cm)	TURBIDITY (NTU'S)
1540	0	-	9.4	927	>200
1635	10		9.5	942	>200
1725	15		8.8	942	>200
1810	22.5		8.6	962	>200 almost dry

odor of sulphur
bailing down

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

DEPTH to WATER: _____ DEPTH of WELL: _____ TIME: _____

COMMENTS: _____

APPENDIX E

GROUNDWATER SAMPLING SHEETS

WELL SAMPLING LOG

METERS USED

Date: 10/16/95
 Crew: ML P4
 Job No: 650-097
 Project: UNITED PLATING
 Project Site: SCHENECTADY, NY

Temp: TLC #11 YSI
 pH: 301 (CP PEN)
 Cond: TLC #11 YSI
 Turb: HYDPEC DRT 15C
#19831

Well ID No: UAMW-1A
 Well Condition: Good
 Well Depth/Diameter: 15' 1/2" 17.85
 Well Casing Type: PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: 3.50 0434
 Reference Pt: Top PVC
 Depth to Water (DTW): 3.71 0859
 Water Column; Ht/Vol: 14.14 / 13.15
 Purge Est: 39.45 gallons

DTW Before Sampling: 3.96'
 Sample Date/Time(s): 10/17/95 1850
 Sampling Method: Tellur Bottom
 Sampling Depth(s): M12 water
 DTW After Sampling: 8.96'
 Sampling Observations: Clear to cloudy
 Chain-of-Custody No(s): Slight silt seen on last 80' bar
 Analytical Lab(s): E3I

Purge Date/Time(s): 10-16-95 11:16:40
 Purge Method: 30% CENT. PU MP
 Depth(s): 2' off Bottom
 Rates (gpm): .5 gpm
 Purged Volume: 5 GAL / TRY
 DTW After Purging:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>13.6</u>	<u>7.7</u>	<u>1705</u>	<u>18.7</u>
End	<u>13.8</u>	<u>7.5</u>	<u>1700</u>	<u>200+</u>

Metals - 22

Yield Rate: 1-M-H
 Purge Observations:

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flit. (Y/N)
TCL Voc		<u>40</u>	
Semis		<u>40</u>	
metals/CN		<u>HNA3</u>	<u>Y + N</u>
RB/pest		<u>40</u>	

PURGE CHEMISTRIES

VOL	TEMP. (°C)	pH	SP. COND.	TURB.
<u>4 gal</u>	<u>-</u>	<u>8.1</u>	<u>-</u>	<u>200+</u>
<u>5</u>	<u>14.0</u>	<u>7.4</u>	<u>1586</u>	<u>200+</u>

Comments: Initially clear
Brown silty
Purged to DRY 10/16/95

Air Temp: 50°
 Weather Conditions: windy

Crew Chief Signature: M. Jeltz

Date: 10/23/95

WELL SAMPLING LOG

Date: 10.16.95
 Crew: ML PY
 Job No: 650-097
 Project: UNITED PLATING
 Project Site: Schenectady NY

METERS USED
 Temp: TCC #11 YSE
 pH: 201 (CPEN)
 Cond: TCC #11 (YSI)
 Turb: NYS DEC ORT ISC
#19834

Well ID. No: UPMW-1B
 Well Condition: GOOD
 Well Depth/Diameter: 24.74
 Well Casing Type: PVC
 Screened Interval: Lower 5 feet
 Casing Ht/Lock No: 337/0434
 Reference Pt: Top of PVC
 Depth to Water (DTW): 3.19 0900
 Water Column; Ht/Vol: 21.55
 Purge Est:

DTW Before Sampling: 3:50'
 Sample Date/Time(s): 10/17/95 1800
 Sampling Method: Tech Bailer
 Sampling Depth(s): 102 water
 DTW After Sampling: 11:20'
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): E3T

Purge Date/Time(s): 10.16.95 46:30
 Purge Method: CONT. PUMP/BAILER
 Depth(s):
 Rates (gpm): .25 gpm
 Purged Volume: 24/DRY
 DTW After Purging: 24.7

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	13.2	8.0	889	35.7
End	13.1	8.0	895	70.1
METALS - TURB.				53.2

Yield Rate: (L)M-H
 Purge Observations:

SAMPLE ANALYSES

Parameters	Irv. No.	Pres. Meth.	Filt. (Y/N)
TCL VOC		40	
Semis		40	
metals		HNO3	Y+N
CN ⁻		NaOH	N
PCB/pest		40	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
7	12.1	8.0	857	200+
9	11.9	8.0	918	200+
24	12.0	8.1	875	200+

Comments: Por

Air Temp: 50°
 Weather Conditions: WINDY

Crew Chief Signature: [Signature] Date: 10/23/95

WELL SAMPLING LOG

METERS USED

Date: 10.16.95
 Crew: ML, PY
 Job No: 650-07
 Project: United Plating
 Project Site: Secometady NY

Temp: TLC #11 YSE
 pH: 301 CP PEN
 Cond: TLC #11 YSE
 Turb: NYSDEC DRT 15L
#19834

Well ID No: UDMW-1C
 Well Condition: good
 Well Depth/Diameter: 55.72 / 2"
 Well Casing Type: PVC
 Screened Interval:
 Casing Ht/Lock No: 3.60 / 0434
 Reference Pt: TOL
 Depth to Water (DTW): 51.74
 Water Column; Ht/Vol: 3.98 / 649A
 Purge Est: 1.9 gallons
 Purge Date/Time(s): 10.16.95 1030
 Purge Method: Bailer
 Depth(s):
 Rates (gpm): .1 gpm
 Purged Volume: 1.5 gallons
 DTW After Purging: DRY

DTW Before Sampling: 51.74'
 Sample Date/Time(s): 10.18.95 15:15
 Sampling Method: BAILER
 Sampling Depth(s): —
 DTW After Sampling: DRY
 Sampling Observations: CLEAR → CLOUDY
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>LACKS</u>			
End	<u>Volume</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	

Yield Rate: DM-H
 Purge Observations: initially clear
 then gray silty

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>1</u>	<u>10.7</u>	<u>12.2</u>	<u>3300</u>	<u>200+</u>

Comments:

ONLY COLLECTED VOA,
 WILL TRY REST ON 10.19.
 10.19.95 - NO WATER IN WELL.
 Air Temp: 51
 Weather Conditions: windy
 cloudy
 cool

Crew Chief Signature: M. Belter Date: 10/23/95

WELL SAMPLING LOG

Date: 10-16-95
 Crew: PY-ML
 Job No: 652-097
 Project: LIMITED PLATING
 Project Site: 44 HENRY ST NY

METERS USED
 Temp: TLC #11 YSE
 pH: 301 CP REN
 Cond: TLC #11 YSE
 Turb: NYSDEC DRT 15C
#19834

Well ID No: UPMW-2A
 Well Condition: GOOD
 Well Depth/Diameter: 14.5' 2"
 Well Casing Type: 2" SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: Flush 10434
 Reference Pt: TOC
 Depth to Water (DTW):
 Water Column; Ht/Vol:
 Purge Est:

10-17-95 NOT
 DTW Before Sampling: 8.93 10.58 RECORDED
 Sample Date/Time(s): 10.18.95 11:30
 Sampling Method: Dedicated Teflon Bailer
 Sampling Depth(s): MID COLUMN
 DTW After Sampling: DRY
 Sampling Observations: CLEAR, TURNING
 Chain-of-Custody No(s): VERY TURBID RAPID
 Analytical Lab(s): E3T

Purge Date/Time(s): 10-16-95
 Purge Method: BAILER
 Depth(s): entire H2O column
 Rates (gpm):
 Purged Volume: 6 GAL
 DTW After Purging: DRY

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	12.9	8.1	1415	5.9
End	13.1	8.5	1423	200+

Yield Rate: DM-H
 Purge Observations:

METALS TURB - 200+
 SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
TAI metals		HNO3	Y/N
CN ⁻		NADH	N
TU VOC's		4°	
Post/PCB's		4°	
VOC's		4°	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
1 GAL	13.0	7.6	1212	200+
5 GAL	13.2	7.5	1438	200+

Comments:

10-18-95
 11:30
 COLLECTED ALL BUT P/PCB,
 WILL TRY LATER
 Air Temp:
 Weather Conditions:

Crew Chief Signature: Muh Selter Date: 10/23/95

WELL SAMPLING LOG

METERS USED

Date: 10-16-95
 Crew: ML, PY
 Job No: 650-097
 Project: UNITED PLATING REITS
 Project Site: Schenectady NY

Temp: TLC #11 YSE
 pH: 301 CP Pen
 Cond: TLC #11 YSE
 Turb: NYSDEL DRT ISC #19834

Well ID No: UPMW-2B
 Well Condition: GOOD
 Well Depth/Diameter: 2" / 25.94
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 5'
 Casing Ht/Lock No: Flush 10434
 Reference Pt: TCL
 Depth to Water (DTW): 5.16
 Water Column; Ht/Vol: 20.28 3.32
 Purge Est: 10 gallons
 Purge Date/Time(s): 10-16-95 12:50
 Purge Method: BAILER
 Depth(s): Entire H2O column
 Rates (gpm): .25
 Purged Volume: 13 GAL / DRY
 DTW After Purging: 25.9
 Yield Rate: L/M-H
 Purge Observations: Bailed DRY initially clear

DTW Before Sampling: 5.97
 Sample Date/Time(s): 10.17.95 1430
 Sampling Method: Radiated Teflon Bailer
 Sampling Depth(s): mid-column
 DTW After Sampling:
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	13.6	8.5	795	35
End	12.4	8.4	826	27

metals 37.8

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Fltr. (Y/N)
TAI metals		HNO3	Y/N
CU		NaOH	N
SVOC'S		40	
VOC		↓	
Pest/PLB			

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
1 GAL	10.6	8.2	838	200+
5	10.4	9.3	788	200+
10	11.0	9.0	806	200+
13	10.2	8.9	817	200+

Comments:

Air Temp: 50
 Weather Conditions: WINDY

Crew Chief Signature: *M. Seltzer*

Date: 10/23/95

WELL SAMPLING LOG

Date: 10.16.95
 Crew: PYMLC
 Job No: 650-097
 Project: UNITED PLATING/NYSDEC
 Project Site: SCHENECTADY, NY

METERS USED
 Temp: TLC #11 YSI
 pH: 301 CP PEN
 Cond: TLC #11 YSI
 Turb: NYSDEC DRT 15C
#19834

Well ID No: UPMW-2C
 Well Condition: GOOD
 Well Depth/Diameter: 55' 8 1/2"
 Well Casing Type: PVC
 Screened Interval: Bottom 25 (open Hole)
 Casing Ht/Lock No: Flush 0434
 Reference Pt: Top PVC
 Depth to Water (DTW): 5.14
 Water Column; Ht/Vol: 50.44 8.07
 Purge Est: 24 GALLONS

DTW Before Sampling: 5.93
 Sample Date/Time(s): 10.17.95 1500
 Sampling Method: Dedicated To Flow Bailer
 Sampling Depth(s): mid depth
 DTW After Sampling: 8.28
 Sampling Observations: CLEAR H₂O
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I

Purge Date/Time(s): 10.16.95 14:00
 Purge Method: CENT. PUMP/BAILER
 Depth(s): Top down
 Rates (gpm): .5 gpm
 Purged Volume: 33 GALLONS
 DTW After Purging: ±25
 Yield Rate: 100%
 Purge Observations: CLOUDY → CLEAR

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	11.2	9.5	764	32.1
End	11.6	9.6	734	43.7
METALS TURB				44.9

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOL		40	
TA/metals		HNO3	Y/N
CN		NAOH	
SVOC		40	
Post/PCB		40	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
1	11.6	10.4	702	44
7	11.0	11.5	940	200+
15	10.2	7.8	836	82
23	10.7	8.3	839	27
33	10.5	8.3	845	21

Comments:
 Could not bail DAY with
 bailer. Groundfoc Pump
 NOT WORKING

Air Temp: 50°
 Weather Conditions: WINDY

Crew Chief Signature: [Signature] Date: 10/17/95

* MS/MSD TAKEN

METERS USED

Date: _____
Crew: _____
Job No: _____
Project: _____
Project Site: _____

Temp: _____
pH: _____
Cond: _____
Turb: _____

Well ID No: UPMW-2D

Well Condition:

Well Depth/Diameter: BLIND

Well Casing Type: DUPLICATE

Screened Interval: OF

Casing Ht/Lock No: UPMW-2C

Reference Pt:

Depth to Water (DTW): 10-17-95

Water Column; Ht/Vol: 15:20

Purge Est:

Purge Date/Time(s):

Purge Method:

Depth(s):

Rates (gpm):

Purged Volume:

DTW After Purging:

Yield Rate: L-M-H

Purge Observations:

DTW Before Sampling:

Sample Date/Time(s):

Sampling Method:

Sampling Depth(s):

DTW After Sampling:

Sampling Observations:

Chain-of-Custody No(s):

Analytical Lab(s):

SAMPLE CHEMISTRIES

Temp.	pH	Sp.	Cond.	Turb.
(C)				

Start _____

End _____

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
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PURGE CHEMISTRIES

VOL.	TEMP. (C)	pH	SP. COND.	TURB.
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Comments:

Air Temp:
Weather Conditions:

Crew Chief Signature: _____

Date: _____

WELL SAMPLING LOG

Date: 10.16.95
 Crew: ML PY JL
 Job No: 650-097
 Project: UP RE/FS
 Project Site: Schenectady NY

METERS USED
 Temp: TLC #11 YSI
 pH: 301 CP PEN
 Cond: RC #11 YSI
 Turb: HYSEK DET ISC
#19834

Well ID No: Upmw-3A
 Well Condition: excellent
 Well Depth/Diameter: 14.41 / 2"
 Well Casing Type: sch 40 PUC
 Screened Interval: Bottom 10
 Casing Ht/Lock No: Flush / 0434
 Reference Pt: TOC
 Depth to Water (DTW): 3.34'
 Water Column; Ht/Vol: 11.07 1.79A1
 Purge Est: 5.3

DTW Before Sampling: 11.72 Not 90%
10.17.95 waiting
 Sample Date/Time(s): 10.18.95 11:45
 Sampling Method: BAILER
 Sampling Depth(s): MID COLUMN
 DTW After Sampling: 13.29'
 Sampling Observations: CLEAR, TURNING CLOUDY RAPIDLY
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I

Purge Date/Time(s): 10.16.95 1228
 Purge Method: Dedicated Bailer
 Depth(s): entire column
 Rates (gpm): .25 gpm
 Purged Volume: 4 9A1
 DTW After Purging: 14.4

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>14.0</u>	<u>7.9</u>	<u>2590</u>	<u>5.3</u>
End	<u>13.5</u>	<u>8.0</u>	<u>2430</u>	<u>200+</u>
<u>METALS TURB.</u>				<u>200+</u>

Yield Rate: LM-H
 Purge Observations: gray silty initially clear

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flit. (Y/N)
<u>LOC</u>		<u>40</u>	
<u>TAL metals</u>		<u>HNO3</u>	<u>Y/N</u>
<u>CN</u>		<u>NaOH</u>	<u>N</u>
<u>SVOC</u>		<u>4</u>	
<u>Pest/POBS</u>		<u>4</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>1 9A1</u>	<u>13.6</u>	<u>7.3</u>	<u>2350</u>	<u>200+</u>
<u>3 9A1</u>	<u>13.1</u>	<u>7.3</u>	<u>2370</u>	<u>200+</u>
<u>4 9A1</u>				<u>DRY</u>

Comments:

Air Temp: 50°
 Weather Conditions: clear

Crew Chief Signature: M. J. [Signature] Date: 10/23/95

WELL SAMPLING LOG

METERS USED

Date: 10.16.95
 Crew: ML, PY, JL
 Job No: 650-097
 Project: UP RZ/F.S.
 Project Site: Schenectady NY

Temp: TLC #11 YSI
 pH: 301 Copen
 Cond: TLC #1 YSI
 Turb: NYSDEL DRT 5C
#19834

Well ID No: upmw-3B
 Well Condition: Good
 Well Depth/Diameter: 2" 15.70
 Well Casing Type: PVC
 Screened Interval: Bottom 10
 Casing Ht/Lock No: Flush 10434
 Reference Pt: TOC
 Depth to Water (DTW): 4.20 10.10.95
 Water Column; Ht/Vol: 21.5 3.44
 Purge Est: 10.4 gallons
 Purge Date/Time(s): 1255 10.16.95
 Purge Method: dedicated Bailers
 Depth(s): cutting H2O column
 Rates (gpm): .25
 Purged Volume: 6 gallons
 DTW After Purging: DRY
 Yield Rate: DM-H
 Purge Observations:

^{10.17.95}
¹¹²⁸
 DTW Before Sampling: 4.97
 Sample Date/Time(s): 10.17.95 1130
 Sampling Method: Bailer dedicated disposable
 Sampling Depth(s): 15.36 mid-Depth
 DTW After Sampling: 6.93
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	11.3	7.2	897	200+
End	13	7.8	887	100

metals Turb. 36

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
TAI metals		HNO3	Y+N
CN ⁻		NaOH	
VOC		4P	
SVOCs			
Rest/pCB			

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
19A1	12.8	8	884	59
39A1	11.1	7.1	893	200+
69A1	10.5	7.3	893	200+

Comments:

Air Temp: 50°
 Weather Conditions: SUNNY

Crew Chief Signature: _____

Michael Schmitt

Date: 10/23/95

WELL SAMPLING LOG

Date: 10-16-95
 Crew: ML, PY, JC
 Job No: 650-097
 Project: UP RE/FS
 Project Site: Schenectady NY

METERS USED
 Temp: TLC #1 YSC
 pH: 301 CP Pen
 Cond: TLC #1 YSC
 Turb: NYSDEC PRT ISC
19834

Well ID No: UPAW-3C
 Well Condition: GOOD
 Well Depth/Diameter: 5295' / 2"
 Well Casing Type: PVC
 Screened Interval: Bottom 25'
 Casing Ht/Lock No: Flush 10434
 Reference Pt: TOL
 Depth to Water (DTW): 9.68
 Water Column; Ht/Vol: 43.27 6.92
 Purge Est: 20.76

^{10/17/95}
¹¹²⁹
 DTW Before Sampling: 10.89
 Sample Date/Time(s): 10-17-95 1200
 Sampling Method: Dedicated Disposable Bailer
 Sampling Depth(s): ±30'
 DTW After Sampling: 22.10
 Sampling Observations: very silty
 Chain-of-Custody No(s):
 Analytical Lab(s): E3±

Purge Date/Time(s): 10-16-95
 Purge Method: BAILER
 Depth(s): ENTIRE H2O COLUMN
 Rates (gpm): .25 gpm
 Purged Volume: 15 GALLONS
 DTW After Purging: DRY 52.9

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	10.5	9.9	922	200+
End	11.6	10	922	200+
metals Turb				200+

Yield Rate: DM-H
 Purge Observations:

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOC'S		40	
SVOC'S			
PE/PCBS			
TAI metals		H2O3	Y+N
CN-		NAOH	N

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
3 GAL	11.1	11.2	1155	200+
7.5	11.3	10.0	934	200+
15	9.9	9.6	924	200+

Comments:

Air Temp: 60°
 Weather Conditions: clear / windy

Crew Chief Signature: [Signature] Date: 10/23/95

WELL SAMPLING LOG

METERS USED

Date: 10.16.95
 Crew: ML, PY
 Job No: 650-097
 Project: UNITED PLATING
 Project Site: Schenectady NY

Temp: TTC #11
 pH: 301 CP PEN
 Cond: TTC #11 YSI
 Turb: NYSDEL DET ISL
#19834

Well ID No: UPMW-4
 Well Condition: Excellent
 Well Depth/Diameter: 12.75 / 4"
 Well Casing Type: PVC 4"
 Screened Interval: Bottom Ten
 Casing Ht/Lock No: .44 0434
 Reference Pt: Top PVC
 Depth to Water (DTW): .921
 Water Column; Ht/Vol: 3.54
 Purge Est:

DTW Before Sampling: 12.09'
 Sample Date/Time(s): 10.18.95 14:30
 Sampling Method: BAILER
 Sampling Depth(s): —
 DTW After Sampling: DTY
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): E3T

Purge Date/Time(s): 10.16.95 1605
 Purge Method: Bailer
 Depth(s): TOP → Bottom
 Rates (gpm): .25 gpm
 Purged Volume: 5 GALLONS
 DTW After Purging: DRY

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>13.8</u>	<u>8.1</u>	<u>922</u>	<u>200+</u>
End				

Yield Rate: DM-H
 Purge Observations:

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flt. (Y/N)
VOC'S		<u>40</u>	
SVOC'S		↓	
Pest/PCB'S		<u>HNO3</u>	<u>Y+N</u>
TAI metals		<u>HNOH</u>	<u>N</u>
CN -			

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>3</u>	<u>12.5</u>	<u>7.8</u>	<u>753</u>	<u>200+</u>
<u>4</u>	<u>11.6</u>	<u>7.3</u>	<u>574</u>	<u>200+</u>

ONLY ENOUGH FOR VOA,
 WILL TRY FOR REST 10.19.95

Comments:

Air Temp: 50°
 Weather Conditions: WINDY

Crew Chief Signature:  Date: 10/23/95

WELL SAMPLING LOG

METERS USED

Date: 10-16-95
 Crew: PYRZL
 Job No: 666-097
 Project: UNION FEDERAL PLANTING / NYSDEC
 Project Site: SCHENECTADY, NY

Temp: TLC # 11 (YSI)
 pH: 301 (CIPRO)
 Cond: TLC # 11 (YSI)
 Turb: # 19834 (NYSDEC DPT 15C)

Well ID No: UPAW-5
 Well Condition: GOOD
 Well Depth/Diameter: 12.94' 4"
 Well Casing Type: 4" SCH 40 PVC
 Screened Interval: BOTTOM 10'
 Casing Ht/Lock No: 0.48 10434
 Reference Pt: TOP OF CASING
 Depth to Water (DTW):
 Water Column; Ht/Vol:
 Purge Est: 20 GAL

DTW Before Sampling: 6.61'
 Sample Date/Time(s): 10/16/95 0950
 Sampling Method: BAUER
 Sampling Depth(s): MID COLUMN
 DTW After Sampling: 8.45'
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I

Purge Date/Time(s): 10-16-95 10:50
 Purge Method: BAUER
 Depth(s): TOP -> BOTTOM
 Rates (gpm): 0.25
 Purged Volume: 7/DRY
 DTW After Purging: DRY

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	12.3	8.2	2540	6.9
End	12.4	8.2	2500	30.4
METALS TURB -				18.1

Yield Rate: Q-M-H
 Purge Observations:

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
TCL VOC'S		4°C	
SUOC'S			
PEST/PCB'S			
TAL METALS		HNO ₃	Y + N
CN ⁻		NaOH	N

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
1 min	12.0	8.7	2220	63
5	12.2	7.8	2370	200+
7	12.0		2420	200+

Comments: SLIGHT GREEN COLOR, CHANGING TO BROWN/SILT

Air Temp: 50°
 Weather Conditions: clear

Crew Chief Signature: [Signature] Date: 10/23/95

WELL SAMPLING LOG

Date: 10.16.95
 Crew: ML, PY
 Job No: 650-097
 Project: UNITED PLATING
 Project Site: Schenectady NY

METERS USED
 Temp: TLC #11
 pH: 301 CP PEN
 Cond: TLC #11 YSE
 Turb: NYSDEL DRT 15C
#19834

Well ID No: upmw-6
 Well Condition: excellent
 Well Depth/Diameter: 13.11 / 4"
 Well Casing Type: PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No:
 Reference Pt: TOL
 Depth to Water (DTW): 3.39
 Water Column; Ht/Vol: 9.72 / 6.31 gal
 Purge Est: 18.85

DTW Before Sampling: 3.52
 Sample Date/Time(s): 10.18.95 0845X
 Sampling Method: BAILER
 Sampling Depth(s): MID COLUMN
 DTW After Sampling: 5.46'
 Sampling Observations: GREEN TRANSP.
 Chain-of-Custody No(s):
 Analytical Lab(s): E3I, SOMERVILLE MA

Purge Date/Time(s): 10.16.95 1050
 Purge Method: Bailer
 Depth(s): TOP -> BOTTOM
 Rates (gpm): .25
 Purged Volume: 10 gallons
 DTW After Purging: DRY 13'

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>10.6</u>	<u>8.2</u>	<u>1388</u>	<u>18.1</u>
End	<u>11.4</u>	<u>8.8</u>	<u>1343</u>	<u>63.4</u>
METALS TURB.				<u>41.5</u>

Yield Rate: DM-H
 Purge Observations: green Discolored H2O

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Fltr. (Y/N)
TAL METALS		<u>ANO3</u>	<u>Y</u>
TAL METALS		<u>HNO3</u>	<u>N</u>
TCL SVOC		<u>40</u>	<u>N</u>
TCL PEST/PCB		<u>↓</u>	<u>N</u>
CN ⁻		<u>NaOH</u>	<u>N</u>
TCL VOA		<u>40</u>	<u>N</u>

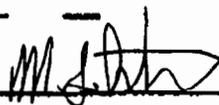
PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>1 gal</u>	<u>11.9</u>	<u>7.7</u>	<u>1354</u>	<u>65.0</u>
<u>5 gal</u>	<u>11.2</u>	<u>7.3</u>	<u>1313</u>	<u>260+</u>
<u>9 gal</u>	<u>10.6</u>	<u>8.3</u>	<u>1220</u>	<u>200+</u>

Comments: very green water

Air Temp: 50
 Weather Conditions: CLEAR

Crew Chief Signature: _____



Date: _____

20.18.95

WELL SAMPLING LOG

METERS USED

Date: 12-19-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RI/FS
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRT-15C Monitor (NYSDEC)

Well ID No: UPMW-1A
 Well Condition: EXC
 Well Depth/Diameter: 17.99' / 2"
 Well Casing Type: 6CH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: 3.50'
 Reference Pt: TCX
 Depth to Water (DTW): Frozen @ 3.2'
 Water Column; Ht/Vol: 15' / 2.2
 Purge Est: 6.6 gal
 Purge Date/Time(s): 12-20-95 / 1520
 Purge Method: PVC Bailer
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 7 / dry
 DTW After Purging: Dry

DTW Before Sampling: 3.41'
 Sample Date/Time(s): 12-21-95 / 1100
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Top - mid column
 DTW After Sampling: 8.48'
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): VOC - Aquatex
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	4.1	METER	1626	~100
End	5.7	DOWN	1613	100-250

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
TCL VOA		4° C	
TAL Metals		HNO ₃	N
CN ⁻		NaOH	
PCBs		4° C	

Yield Rate: L-M-H
 Purge Observations: Well frozen at 3.2'
Knocked loose w/ 5'
section of 1 1/4" PVC

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
5	10.2	METER DOWN	1541	250-500

Comments:

Air Temp: 20
 Weather Conditions: Snow

Crew Chief Signature: _____

Date: 12-21-95

WELL SAMPLING LOG

Date: 12-19-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating AI/ES
 Project Site: Schenectady, NY

METERS USED

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRT-15C Monitor (WYSDEC)

Well ID No: UPMW-1B
 Well Condition: EXC
 Well Depth/Diameter: 24.82/2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10"
 Casing Ht/Lock No: 3.37"
 Reference Pt: TOC
 Depth to Water (DTW): Frozen @ 2.8"
 Water Column; Ht/Vol: 22' / 3.75 gal.
 Purge Est: 12 gal.
 Purge Date/Time(s): 12-20-95 / 1530
 Purge Method: PVC Bailer
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 12.5 / dry
 DTW After Purging: Dry

DTW Before Sampling: 3.01"
 Sample Date/Time(s): 12.21-95 / 1040
 Sampling Method: Teflon bailer
 Sampling Depth(s): Top-mid column
 DTW After Sampling: 8.35"
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): VOC's - Aquatex
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>2.5</u>	<u>METER</u>	<u>955</u>	<u>~50</u>
End	<u>6.4</u>	<u>DOWN</u>	<u>943</u>	<u>50-100</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CU²⁺</u>		<u>NaOH</u>	
<u>PCB's</u>		<u>4°C</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>5</u>	<u>11.2</u>	<u>METER</u>	<u>946</u>	<u>400-600</u>
<u>10</u>	<u>11.7</u>	<u>DOWN</u>	<u>929</u>	<u>> 500</u>

1610 12.5

Comments:

Air Temp: 20
 Weather Conditions: Snow

Crew Chief Signature: 

Date: 12-21-95

WELL SAMPLING LOG

METERS USED

Date: 12-18-95
 Crew: Perry Young / John Thornburg
 Job No: 650-097
 Project: United Plating RE/FS
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DAT-15C monitor (NYSDEC)

Well ID No: UPMW-2A
 Well Condition: EXC
 Well Depth/Diameter: 14.39' / 2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 4.83'
 Water Column; Ht/Vol: 9.5' / 1.6 gal
 Purge Est: 5 gal.
 Purge Date/Time(s): 12-18-95 / 1730
 Purge Method: PVC boiler
 Depth(s): All
 Rates (gpm): 0.5 gpm
 Purged Volume: 5 gal.
 DTW After Purging: Dry

DTW Before Sampling: 11.24'
 Sample Date/Time(s): 12-21-95 / 1215
 Sampling Method: Teflon boiler
 Sampling Depth(s): Total column
 DTW After Sampling: Dry
 Sampling Observations: _____
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatex
 others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough GW for</u>			
End	<u>samples and Chems</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
TCL VOC		<u>4°C</u>	
TAL Metals		<u>HNO₃</u>	<u>N</u>
		<u>NaOH</u>	
PCB		<u>4°C</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
0	<u>5.8</u>	<u>METER</u>	<u>1266</u>	<u>350</u>
5	<u>7.8</u>	<u>DOWN</u>	<u>1406</u>	<u>550</u>

1740

Comments:

Air Temp: 25°
 Weather Conditions: Cloudy

Crew Chief Signature: _____

Perry Young

Date: 12-21-95

WELL SAMPLING LOG

METERS USED

Date: 12-18-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RE/ES
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRT-15C Meter (NYSDEC)

Well ID No: UPMW-2B
 Well Condition: EXC
 Well Depth/Diameter: 26.08 / 2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 5'
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 5.75'
 Water Column; Ht/Vol: 21' / 3.66
 Purge Est: 11 gal
 Purge Date/Time(s): 12-18-95 / 1645
 Purge Method: PVC Bailer
 Depth(s): _____
 Rates (gpm): 0.5 gpm
 Purged Volume: 12 gal
 DTW After Purging: 24.46'

DTW Before Sampling: 7.55
 Sample Date/Time(s): 12-19-95 / 1600
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Top-Mid Column
 DTW After Sampling: 8.25
 Sampling Observations: _____
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatex
Others ESI

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>9.2</u>	<u>METER</u>	<u>843</u>	<u>~50</u>
End	<u>9.9</u>	<u>DOWN</u>	<u>846</u>	<u>50-100</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CU⁻</u>		<u>NaOH</u>	
<u>PCB</u>		<u>4°C</u>	

Yield Rate: L-M-H
 Purge Observations: Green Tint
Almost Dry

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>6.8</u>	<u>METER</u>	<u>751</u>	<u>175</u>
<u>5</u>	<u>10.4</u>	<u>DOWN</u>	<u>860</u>	<u>150</u>
<u>10</u>	<u>9.9</u>	<u>↓</u>	<u>858</u>	<u>500</u>
<u>1720 12</u>	<u>10.2</u>	<u>↓</u>	<u>853</u>	<u>200</u>

Comments:

Air Temp: 25°
 Weather Conditions: Cloudy

Crew Chief Signature: _____

P. Young

Date: 12-21-95

WELL SAMPLING LOG

METERS USED

Date: 12-18-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RE/ES
 Project Site: Schenectady, NY

Temp: DEC 350 Y6I
 pH: _____
 Cond: DEC 350 Y6I
 Turb: ORT-15C monitor (NYSDDEC)

Well ID No: UPMW-2C
 Well Condition: EXC
 Well Depth/Diameter: 54.62' / 2"
 Well Casing Type: SCH 20 PVC Inner
 Screened Interval: Bottom 27" Bedrock
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 5.71
 Water Column; Ht/Vol: 49' / 8.33 gal
 Purge Est: 25 gal
 Purge Date/Time(s): 12-18-95 / 16:40
 Purge Method: Grundfos sub. pump
 Depth(s): 45-50'
 Rates (gpm): 1 gpm
 Purged Volume: 25 gallons
 DTW After Purging: 19.16

DTW Before Sampling: 6.25'
 Sample Date/Time(s): 12-19-95 / 1500
 Sampling Method: Teflon Butler
 Sampling Depth(s): Top-mid Column
 DTW After Sampling: 9.82'
 Sampling Observations: No green tint
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatex
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>4.8</u>	<u>METER</u>	<u>687</u>	<u>~100-200</u>
End	<u>9.3</u>	<u>DOWN</u>	<u>685</u>	<u>~100-200</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	
<u>PCB¹⁵</u>		<u>4°C</u>	

Yield Rate: L-M-H
 Purge Observations: Green tint. cleared (mostly)

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>5</u>	<u>7.6</u>	<u>METER</u>	<u>1587</u>	<u>150</u>
<u>10</u>	<u>8.2</u>	<u>DOWN</u>	<u>650</u>	<u>100</u>
<u>15</u>	<u>8.9</u>		<u>742</u>	<u>75</u>
<u>20</u>	<u>10.7</u>		<u>832</u>	<u>25</u>
<u>25</u>	<u>10.2</u>		<u>839</u>	<u>15</u>

1750

Comments:

Collected MS/MSD

Air Temp: 25°
 Weather Conditions: Cloudy

Crew Chief Signature:  Date: 12-19-95

WELL SAMPLING LOG

METERS USED

Date: 12-19-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RE/FS
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRE-15C Monitor (NYSDEC)

Well ID No: UPMW-3B
 Well Condition: EXC
 Well Depth/Diameter: 25.24"/2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 5'
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 4.40'
 Water Column; Ht/Vol: 22' / 3.25 gal
 Purge Est: 10 gal
 Purge Date/Time(s): 12-19-95 / 1030
 Purge Method: PVC Bailer
 Depth(s): Total Column
 Rates (gpm): 0.5 gpm
 Purged Volume: 15
 DTW After Purging: Almost Dry;
About 3'
 Yield Rate: L-M-H
 Purge Observations: _____

DTW Before Sampling: 4.80
 Sample Date/Time(s): 12-20-95 / 1420
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Top-mid Column
 DTW After Sampling: 9.31
 Sampling Observations: _____
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatex
Others - ESI

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>6.5</u>	<u>METER</u>	<u>854</u>	<u>~25</u>
End	<u>8.5</u>	<u>DOWN</u>	<u>871</u>	<u>~25</u>

SAMPLE ANALYSES

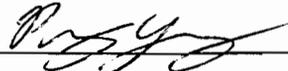
Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	
<u>PCB</u>		<u>4°C</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>9.1</u>	<u>METER</u>	<u>884</u>	<u>~75</u>
<u>5</u>	<u>10.2</u>	<u>DOWN</u>	<u>864</u>	<u>~75</u>
<u>10</u>	<u>10.5</u>	<u>↓</u>	<u>852</u>	<u>~200</u>
<u>12.5</u>	<u>11.1</u>	<u>↓</u>	<u>860</u>	

Comments: _____

Air Temp: 20°
 Weather Conditions: Snow

Crew Chief Signature: 

Date: 12-20-95

WELL SAMPLING LOG

METERS USED

Date: 12-19-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RI/FS
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRT-15C monitor (NYS DEC)

Well ID No: UPMW-3C
 Well Condition: EXC
 Well Depth/Diameter: 53.00' / 2"
 Well Casing Type: SCH 20 PVC / SCH 40 Inm-
 Screened Interval: 28-53' Bedrock
 Casing Ht/Lock No:
 Reference Pt: TOC
 Depth to Water (DTW): 8.25'
 Water Column; Ht/Vol: 45' / 7.7 gal
 Purge Est: 24 gal
 Purge Date/Time(s): 12-19-95 / 1000
 Purge Method: Grundfos Sub. Pump / PVC Bailor
 Depth(s): Total Column
 Rates (gpm): 0.25 - 0.5 gpm
 Purged Volume: 21 / dry
 DTW After Purging: Dry

DTW Before Sampling: 11.89'
 Sample Date/Time(s): 12-20-95 / 1345
 Sampling Method: Teflon Bailor
 Sampling Depth(s): Top Mid Column
 DTW After Sampling: 18.19
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): VOC - Aquattec
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>9.7</u>	<u>METER</u>	<u>892</u>	<u>150-250</u>
End	<u>9.8</u>	<u>DOWN</u>	<u>895</u>	<u>100-250</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
		<u>NaOH</u>	
<u>PCB</u>		<u>4°C</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>8.3</u>	<u>METER</u>	<u>895</u>	<u>250</u>
<u>5</u>	<u>11.5</u>	<u>DOWN</u>	<u>854</u>	<u>250-500</u>
<u>10</u>	<u>10.6</u>		<u>851</u>	<u>250-500</u>
<u>15</u>	<u>9.5</u>		<u>939</u>	<u>250-500</u>
<u>20</u>	<u>9.0</u>		<u>923</u>	<u>250-500</u>
<u>21</u>	<u>9.3</u>		<u>901</u>	<u>250-500</u>
<u>25</u>	<u>10.3</u>		<u>899</u>	<u>250-500</u>

Comments:

Air Temp: 20°
 Weather Conditions: SNOW

Crew Chief Signature: P. Young

Date: 12.20.95

WELL SAMPLING LOG

METERS USED

Date: 12-18-95
 Crew: P. Young / J Thornburg
 Job No: 650-097
 Project: United Plating RI/ES
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRT-15C monitor (NYSDEC)

Well ID No: UPMW-4 Wastewater Bldg.
 Well Condition: EXC
 Well Depth/Diameter: 12.29 / 4"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10"
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 7.93'
 Water Column; Ht/Vol: 5' / 3.3 gal
 Purge Est: 10 gal.
 Purge Date/Time(s): 12-18-95 / 1430
 Purge Method: PVC Bailer
 Depth(s): _____
 Rates (gpm): 0.5 gpm
 Purged Volume: 5 gal
 DTW After Purging: Dry
 Yield Rate: (L-M-H)
 Purge Observations: _____

DTW Before Sampling: 11.28
 Sample Date/Time(s): 12-21-95 / 1120
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Top-Mid Column
 DTW After Sampling: Dry
 Sampling Observations: Briefly enough for all samples
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatec
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough GW for</u>			
End	<u>samples and chems</u>			

SAMPLE ANALYSES

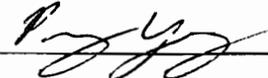
Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	
<u>PCB^s</u>		<u>4°C</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>7.8</u>	<u>METER</u>	<u>1837</u>	<u>775</u>
<u>5</u>	<u>7.9</u>	<u>DOWN</u>	<u>1259</u>	<u>250</u>

Comments: _____

Air Temp: 20
 Weather Conditions: Snow

Crew Chief Signature: 

Date: 12-21-95

WELL SAMPLING LOG

METERS USED

Date: 12-18-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RI/ES
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: _____
 Cond: DEC 350 YSI
 Turb: DRT-15C monitor (W.S.DEC)

Well ID No: UPMW-5
 Well Condition: EXC
 Well Depth/Diameter: 12.6' / 4"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 4.48'
 Water Column; Ht/Vol: ~8' / 53 gal.
 Purge Est: 16 gal
 Purge Date/Time(s): 12-18-95 / 1245
 Purge Method: PVC Bailer
 Depth(s): Total Column
 Rates (gpm): 0.25 gpm
 Purged Volume: 8 / Dry 1305 12-18-95
 DTW After Purging: 12 / Dry 1900 12-19-95

DTW Before Sampling: 7.52'
 Sample Date/Time(s): 12-21-95 / 1230
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Top-Mid Column
 DTW After Sampling: 8.80
 Sampling Observations: Green Tint
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatex
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>7.4</u>	<u>METER</u>	<u>2450</u>	<u><100</u>
End	<u>8.2</u>	<u>DOWN</u>	<u>2450</u>	<u>100-250</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	
<u>PCB₃</u>		<u>4°C</u>	

Yield Rate: L-M-H
 Purge Observations: _____

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>7.3</u>	<u>8.5</u>	<u>2160</u>	<u>100</u>
<u>5</u>	<u>7.1</u>	<u>8.6</u>	<u>2120</u>	<u>100</u>

Comments: _____

Air Temp: 20
 Weather Conditions: Windy

Crew Chief Signature:  Date: 12.20.95

WELL SAMPLING LOG

METERS USED

Date: 12-18-95
 Crew: P. Young / J. Thornburg
 Job No: 650-097
 Project: United Plating RI/ES
 Project Site: Schenectady, NY

Temp: DEC 350 KSI
 pH: _____
 Cond: DEC 350 KSI
 Turb: DRT-15C Monitor (NKSORC)

Well ID No: UPMW-6 by boiler room
 Well Condition: EXC
 Well Depth/Diameter: 13.11" / 4"
 Well Casing Type: 5CH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: _____
 Reference Pt: TOC
 Depth to Water (DTW): 3.97
 Water Column; Ht/Vol: ~9' / 6 gal
 Purge Est: 18 gal
 Purge Date/Time(s): 12-18-95 / 1315
 Purge Method: PVC Bailer
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 10 gal / dry 12-12-95 / 1345
 DTW After Purging: 19 / dry 12-17-95 / 1908

DTW Before Sampling: 4.01
 Sample Date/Time(s): 12-20-95 / 0950
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Top-Mid Column
 DTW After Sampling: 5.87'
 Sampling Observations: Green Tint
 Chain-of-Custody No(s): _____
 Analytical Lab(s): VOC - Aquatec
Others - E3I

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>5.2</u>	<u>METAL</u>	<u>1099</u>	<u>100-250</u>
End	<u>7.0</u>	<u>DOWN</u>	<u>1134</u>	<u>100-150</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>TCL VOC</u>		<u>4°C</u>	
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>C.N⁻</u>		<u>NaOH</u>	
<u>PCB's</u>		<u>4°C</u>	

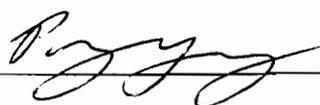
Yield Rate: L-M-H
 Purge Observations: Green Tint

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>5</u>	<u>2.2</u>	<u>642</u>	<u>120</u>
<u>5</u>	<u>55</u>	<u>2.8</u>	<u>623</u>	<u>200</u>
<u>10</u>	<u>59</u>	<u>-</u>	<u>625</u>	<u>>1000</u>
<u>15</u>	<u>7.0</u>		<u>1222</u>	<u>>500</u>
<u>19</u>				

Comments:

Air Temp: 20
 Weather Conditions: Snow

Crew Chief Signature:  Date: 12-20-95

WELL SAMPLING LOG

METERS USED

Date: 12-20-95
 Crew: P. Kenny / J. Thornburg
 Job No: 650-097
 Project: United Planting RI/FS
 Project Site: Schenectady, NY

Temp: _____
 pH: _____
 Cond: _____
 Turb: _____

Well ID No: UPMW-6A
 Well Condition: Blind Duplicate
 Well Depth/Diameter: of UPMW-6
 Well Casing Type: _____
 Screened Interval: 1015
 Casing Ht/Lock No: _____
 Reference Pt: _____
 Depth to Water (DTW): _____
 Water Column; Ht/Vol: _____
 Purge Est: _____
 Purge Date/Time(s): _____
 Purge Method: _____
 Depth(s): _____
 Rates (gpm): _____
 Purged Volume: _____
 DTW After Purging: _____
 Yield Rate: L-M-H
 Purge Observations: _____

DTW Before Sampling: _____
 Sample Date/Time(s): 12-20-95 1015
 Sampling Method: _____
 Sampling Depth(s): _____
 DTW After Sampling: _____
 Sampling Observations: _____
 Chain-of-Custody No(s): _____
 Analytical Lab(s): _____

SAMPLE CHEMISTRIES

	Temp.	Sp.		
	(°C)	pH	Cond.	Turb.
Start	_____	_____	_____	_____
End	_____	_____	_____	_____

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
TCL VOC		4°C	
TAL Metals		HNO ₃	N
LN ⁻		NaOH	
PCBs		4°C	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
_____	_____	_____	_____	_____

Comments:

Air Temp: _____
 Weather Conditions: _____

Crew Chief Signature: _____

Date: 12-20-95

WELL SAMPLING LOG

METERS USED

Date: 1-17-96
 Crew: JT/JG
 Job No: 100-
 Project: United Plating
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: # 301
 Cond: DEC 350 YSI
 Turb: NYS DEC DRT-15C

Well ID No: UPMW-1B
 Well Condition: EXC
 Well Depth/Diameter: 24.22 / 2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: 3.37'
 Reference Pt: TOC
 Depth to Water (DTW): 2.91'
 Water Column; Ht/Vol: 21.97 / 3.7
 Purge Est: 11.2
 Purge Date/Time(s): 1-17-96 / 0857
 Purge Method: PVC Bailor
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 15 gal.
 DTW After Purging: Dry

DTW Before Sampling: 2.72
 Sample Date/Time(s): 1-18-96 / 0855
 Sampling Method: Teflon Bailor
 Sampling Depth(s): Top - mid column
 DTW After Sampling: N/A
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): Aquatec - VOC's

SAMPLE CHEMISTRIES

Temp.	pH	Sp.	Turb.
(°C)		Cond.	
Start			
End	<u>4.2</u>	<u>7.4</u>	<u>1.080 17</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flit. (Y/N)
<u>VOC</u>		<u>None</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>2.1</u>	<u>7.9</u>	<u>1.105</u>	<u>45</u>
<u>5</u>	<u>9.5</u>	<u>7.8</u>	<u>1.118</u>	<u>>200</u>
<u>10</u>	<u>9.9</u>	<u>7.8</u>	<u>1.018</u>	<u>>200</u>
<u>15</u>	<u>10.1</u>	<u>7.8</u>	<u>1.026</u>	<u>>200</u>

Comments:

Air Temp: 45°
 Weather Conditions: P. Cloudy

Crew Chief Signature: [Signature]

Date: 1-18-96

WELL SAMPLING LOG

METERS USED

Date: 1-16-96
 Crew: JT / JG
 Job No: 100-
 Project: United Plating
 Project Site: Schenectady, NY

Temp: DEC 350 YSI
 pH: #301
 Cond: DEC 350 YSI
 Turb: NYSDDEC DRT-15C

Well ID No: UPMW-1C
 Well Condition: EXC
 Well Depth/Diameter: 55.72 / 2"
 Well Casing Type: SCH 80 / SCH 40 inner
 Screened Interval: 25-55.72 bedrock
 Casing Ht/Lock No: 3.60
 Reference Pt: TOC
 Depth to Water (DTW): 49.13
 Water Column; Ht/Vol: 6.59 / 1.1 gal
 Purge Est: 3.4 gal
 Purge Date/Time(s): 1-16-96 / 0855
 Purge Method: PVC Dailer
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 1.5 gal
 DTW After Purging: Dry
 Yield Rate: L-M-H
 Purge Observations:

DTW Before Sampling: 54.43
 Sample Date/Time(s): 1-18-96 / 0925
 Sampling Method: Teflon Bailer
 Sampling Depth(s): All
 DTW After Sampling: DRY
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): Aquatic - VOC's
E3I - PCB

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough water for</u>			
End	<u>sample chemistries</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
<u>VOC's</u>		<u>None</u>	
<u>PCB</u>		<u>None</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>9.0</u>	<u>11.0</u>	<u>1.426</u>	<u>5</u>

Comments: Only one bottle collected for PCB's.

Air Temp: 45°
 Weather Conditions: P. Cloudy.

Crew Chief Signature: [Signature] Date: 1-18-96

WELL SAMPLING LOG

METERS USED

Date: 1-16-95
 Crew: JT / JG
 Job No: 100-
 Project: United Plating
 Project Site: Schenectady, NY

Temp: DEC 350 YSE
 pH: #301
 Cond: DEC 350 YSE
 Turb: NYSDDEC DRT 15C

Well ID No: UPMW-2A
 Well Condition: EXC
 Well Depth/Diameter: 14.39' / 2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No:
 Reference Pt: TOC
 Depth to Water (DTW): 10.45
 Water Column; Ht/Vol: 3.94 / 0.67
 Purge Est: 2.0 gal

DTW Before Sampling: 13.82
 Sample Date/Time(s): 1-18-96 / 1005
 Sampling Method: Teflon Bailers
 Sampling Depth(s): All
 DTW After Sampling: NR
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): Aquatic - VOC

Purge Date/Time(s): 1-16-96 / 0910 + 1-17 / 1052
 Purge Method: PVC Bailers
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 2 gal + 1/2 gal
 DTW After Purging: Dry

SAMPLE CHEMISTRIES

Temp. (°C)	pH	Sp. Cond.	Turb.	Start	
				End	
				8.6	7.2 / 1.240 / 125

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filt. (Y/N)
VOC		None	

Yield Rate: L-M-H
 Purge Observations:

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
0	8.6	7.5	1.858	4.8

Comments:

Air Temp: 45°
 Weather Conditions: P. Cloudy

Crew Chief Signature: [Signature]

Date: 1-18-96

WELL SAMPLING LOG

Date: 1-16-96
 Crew: JT / JG
 Job No: 100-
 Project: United Plating
 Project Site: Schenectady, NY

METERS USED
 Temp: DEC 350 YSI
 pH: #301
 Cond: DEC 350 YSI
 Turb: MY30EC DRT 15C

Well ID No: UPMW-39
 Well Condition: EXC
 Well Depth/Diameter: 14.41' / 2"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No: 100
 Reference Pt: TOC

DTW Before Sampling: 13.57
 Sample Date/Time(s): 1-18-96 / 1025
 Sampling Method: Teflon Bailor
 Sampling Depth(s): All
 DTW After Sampling: Dry
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): Ag. Intec - VOC's

Depth to Water (DTW): 10.81
 Water Column; Ht/Vol: 3.6 / 0.61
 Purge Est: 1.8 gal.

SAMPLE CHEMISTRIES

Purge Date/Time(s): 1-16-96 / 0950 1-17 / 1131
 Purge Method: PVC Bailor

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start				
End	<u>8.1</u>	<u>7.0</u>	<u>1.59</u>	<u>105</u>

Depth(s): All
 Rates (gpm): 0.25
 Purged Volume: 1 gal + 1/2 gal
 DTW After Purging: Dry

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flit. (Y/N)

Yield Rate: L-M-H
 Purge Observations:

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>8.4</u>	<u>7.6</u>	<u>2.64</u>	<u>>200</u>

Comments:

Air Temp: 45°
 Weather Conditions: P. Cloudy

Crew Chief Signature: [Signature]

Date: 1-18-96

WELL SAMPLING LOG

METERS USED

Date: 1-16-96
 Crew: JT / JG
 Job No: 100-
 Project: United Plating
 Project Site: Schenectady, NY

Temp: DEC 350 YSE
 pH: # 301
 Cond: DEC 350 YSE
 Turb: NYSDDEC DRT 15C

Well ID No: UPMW-4
 Well Condition: EXC
 Well Depth/Diameter: 12.89" / 4"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No:
 Reference Pt: TOC
 Depth to Water (DTW): 10.81
 Water Column; Ht/Vol: 2.02 / 0.35
 Purge Est: 1 gal

DTW Before Sampling: 12.35
 Sample Date/Time(s): 1-18-96 / 0945
 Sampling Method: Teflon Bailor
 Sampling Depth(s): All
 DTW After Sampling: Dry
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): Ag Intec - VOC's

Purge Date/Time(s): 1-16-95 / 0805 1-17/1000
 Purge Method: PVC Bailor
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 2 gal + 4 gal
 DTW After Purging: Dry

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start				
End	<u>7.5</u>	<u>7.7</u>	<u>1.299</u>	<u>72w</u>

Yield Rate: L-M-H
 Purge Observations:

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flit. (Y/N)
<u>VOC's</u>		<u>None</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>5.6</u>	<u>7.2</u>	<u>2.16</u>	<u>2.7</u>

Comments:

Air Temp: 45°
 Weather Conditions: P. Cloudy

Crew Chief Signature: _____



Date: 1-18-96

WELL SAMPLING LOG

METERS USED

Date: 1-16-96
 Crew: JT / JG
 Job No: 100-
 Project: United Plating
 Project Site: Schenectady NY

Temp: DEC 350 YSE
 pH: # 301
 Cond: DE 350 YSE
 Turb: NYSDEC DRT 15C

Well ID No: UPMW-5
 Well Condition: EXC
 Well Depth/Diameter: 12.6' / 4"
 Well Casing Type: SCH 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht/Lock No:
 Reference Pt: TOC
 Depth to Water (DTW): 5.81'
 Water Column; Ht/Vol: 6.79 / 4.4
 Purge Est: 13.2 gal
 Purge Date/Time(s): 1-16-96 / 1030 1-17 / 1036
 Purge Method: PVC Bailer
 Depth(s): All
 Rates (gpm): 0.25 gpm
 Purged Volume: 7 gal + 3.25 gal.
 DTW After Purging: DRY
 Yield Rate: L-M-H
 Purge Observations:

DTW Before Sampling: 10.29'
 Sample Date/Time(s): 1-18-96 / 0815
 Sampling Method: Teflon Bailer
 Sampling Depth(s): All
 DTW After Sampling: Dry
 Sampling Observations:
 Chain-of-Custody No(s):
 Analytical Lab(s): Aquatica VOC's

SAMPLE CHEMISTRIES

Temp.	pH	Sp. Cond.	Turb.
Start			
End	<u>6.7</u>	<u>7.9</u>	<u>2.76</u> <u>12</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Flit. (Y/N)
<u>VOC</u>		<u>None</u>	

PURGE CHEMISTRIES

VOL.	TEMP. (°C)	pH	SP. COND.	TURB.
<u>0</u>	<u>7.1</u>	<u>7.7</u>	<u>4.54</u>	<u>12</u>
<u>5</u>	<u>7.3</u>	<u>7.2</u>	<u>4.64</u>	<u>150</u>

Comments: Field Blank on bailer prior to sampling.

Air Temp: 45°
 Weather Conditions: P. Cloudy

Crew Chief Signature: [Signature]

Date: 1-18-96

LMS Well Sampling Log

Date: 12/11/97
Crew: EH/JC
Job No: 650-098
Project: United Plating
Project Site: Schenectady N.Y.

Well ID No.: UPMW-1A
Well Condition: Very good
Well Depth/Diameter: 17.91 / 2"
Well Casing Type: PVC sch. 40
Screened Interval: Bottom 10'
Casing Ht./Lock No.: 3.50 / 3252
Reference Pt.: TOC
Depth to Water (DTW): 3.56
Water Column Ht./Vol.: 14.35 / 11.18
Purge Est.: 33.5
Purge Method(s): Teflon Bailor
Purge Date/Time(s): 12/11/97 0930-1000

Depth(s): Entire col.
Rates (gpm): .17
Purged Volume: 5 gal
DTW After Purging: Dry
Yield Rate: (L) - M - H
Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	4.1	-	1496	4.58
5	8.7	-	1460	>200

Comments: pH pen not working
- Dry after 5 gal.

METERS USED

Temp.: DEC-560
pH: 301
Cond.: DEC-560
Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 3.59
Sample Date/Time: 12/12/97 1400
Sampling Method: Teflon Bailor
Sampling Depth(s): TOW
DTW After Sampling: 8.86
Chain-of-Custody No.(s):
Analytical Lab(s): ITS
Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	7.5	-	1518	11.23
End	6.9	-	1529	>200

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		< 40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		< 40C	N

Air Temp: 20's
Weather Conditions: Overcast

Crew Chief Signature Edith Holbata Date: 12/12/97

LMS Well Sampling Log

Date: 12/11/97
 Crew: EH/JC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-1B
 Well Condition: Very good
 Well Depth/Diameter: 24.89 / 2"
 Well Casing Type: PVC sch. 40
 Screened Interval: Bottom 10'
 Casing Ht./Lock No.: 3.37 / 3252
 Reference Pt.: TOL
 Depth to Water (DTW): 2.78
 Water Column Ht./Vol.: 27.61 / 4.39
 Purge Est.: 13
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/11/97 1100-1200

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 15 gal
 DTW After Purging: 20.57
 Yield Rate: L - (M) - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	3.8	-	797	15.35
2.5	7.1	-	836	173
5	10.3	-	953	7200
7.5	10.6	-	961	7200
10	10.7	-	943	7200
12.5	10.7	-	948	7200
15	10.5	-	962	7200

Comments:

- Ice on H₂O surface
- pH pen not working

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 3.54
 Sample Date/Time: 12/11/97 1830
 Sampling Method: Teflon Bailor
 Sampling Depth(s): TOU
 DTW After Sampling: 7.39
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	4.6	-	961	47.3
End	8.5	-	945	53.2

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		< 40C	N
TAL Metals		HWO ₃	N
CN ⁻		NaOH	N
LL PCB's		< 40C	N

Air Temp: 20's

Weather Conditions: Overcast

Crew Chief Signature

Edith Holcomb

Date: 12-11-97

LMS Well Sampling Log

Date: 12/11/97
 Crew: EH/JC/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-1C
 Well Condition: Very good
 Well Depth/Diameter: 56.24 / 2"
 Well Casing Type: PVC sch. 40
 Screened Interval: 25'-55
 Casing Ht./Lock No.: 3.60 / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 8.35
 Water Column Ht./Vol.: 47.89 / 17.9
 Purge Est.: 54
 Purge Method(s): Teflon Bailer
 Purge Date/Time(s): 12/11/97 0930-1030

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 10 gal
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	8.4	-	1648	175.7
5	8.8	-	1534	>200
10	8.0	-	1702	>200

Comments:
 - Well never recovered
 - Not enough water for parameters
 - Only 1 jar for LL PCB's was sent

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 52.35
 Sample Date/Time: 12/18/97 1100
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOW
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations: Muddy bottom

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough water to chem.</u>			
End	<u>and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<u><40C</u>	<u>N</u>
TAL Metals		<u>HNO3</u>	<u>N</u>
CN ⁻		<u>NaOH</u>	<u>N</u>
LL PCBs		<u><40C</u>	<u>N</u>

Crew Chief Signature _____

Date: 12.12.97

LMS

Well Sampling Log

Date: 12/10/97
 Crew: EH/SC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-2A
 Well Condition: Very good
 Well Depth/Diameter: 14.25 / 2"
 Well Casing Type: PVC 2" sch. 40
 Screened Interval: 14.5' - 4.5'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 4.02
 Water Column Ht./Vol.: 10.23 / 8.90
 Purge Est.: 27
 Purge Method(s): Teflon Bailer
 Purge Date/Time(s): 12/10/97 0945 - 1030

Depth(s): Entire col
 Rates (gpm): .17
 Purged Volume: 5.5
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	7.5	-	1105	11
5	8.2	-	1234	7200

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 11.4
 Sample Date/Time: 12/12/97 1100
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOW
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not Enough volume to do</u>			
End	<u>chemistry and samples</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<u>< 40C</u>	<u>N</u>
TAL Metals		<u>HNO₃</u>	<u>N</u>
CN ⁻		<u>NaOH</u>	<u>N</u>
LL PCB's		<u>< 40C</u>	<u>N (1L)</u>

Comments:

- pH pen not working
- dry after 5.5 gal
- when sampling a new bailer was used and prior to sampling a field blank was done

Air Temp: 20's

Weather Conditions: Overcast

Crew Chief Signature _____

Date: 12-12-97

LMS Well Sampling Log

Date: 12/10/97
 Crew: EH/JC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-2B
 Well Condition: Very good
 Well Depth/Diameter: 26.13 / 2"
 Well Casing Type: PVC 2" sch. 40
 Screened Interval: Bottom 5'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 5.52
 Water Column Ht./Vol.: 20.61 / 4.12
 Purge Est.: 12.5
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/10/97 1020-1145

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 12.5
 DTW After Purging: 12.2
 Yield Rate: L - (M) - H
 Purge Observations:
when at bottom the water is
tan, heavier and it stays together

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	8.0	-	640	4.89
2	10.1	-	643	51.8
4	9.5	-	775	86.5
6	9.6	-	856	50.8
8	10.1	-	868	30.9
10	10.4	-	869	20.3
12	10.0	-	871	28.2

Comments:
-pH pen not working

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 6.51
 Sample Date/Time: 12/10/97 1600
 Sampling Method: Teflon Bailor
 Sampling Depth(s): TOW
 DTW After Sampling: 10.10
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>6.9</u>	<u>-</u>	<u>876</u>	<u>48.0</u>
End	<u>8.7</u>	<u>-</u>	<u>875</u>	<u>26.8</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOCs</u>		<u>< 40C</u>	<u>N</u>
<u>TAL Metals</u>		<u>HNO3</u>	<u>N</u>
<u>CN-</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCBs</u>		<u>< 40C</u>	<u>N</u>

Air Temp: 20s
 Weather Conditions: Overcast

Crew Chief Signature _____ Date: 12-10-97

LMS Well Sampling Log

Date: 12/15/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-2C
 Well Condition: Very good
 Well Depth/Diameter: 54.71 / 2"
 Well Casing Type: PVC 2" sch.40
 Screened Interval: Bedrock bottom 27'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 5.91
 Water Column Ht./Vol.: 48.80 / 1960
 Purge Est.: 56
 Purge Method(s): Whale pump
 Purge Date/Time(s): 12/15/97 1500-1800
 12/16/97
 Depth(s): Entire col.
 Rates (gpm): .5
 Purged Volume: 55
 DTW After Purging: 28.82
 Yield Rate: L - (M) - H
 Purge Observations:
Water started yellowish to
greenish to clear

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	9.7	8.5	2970	72
10	9.8	9.0	981	118
20	10.4	7.9	833	13.8
30	9.6	7.5	829	10.9
35	8.8	9.5	786	81.8
45	10.7	8.1	824	16
55	9.5	7.5	847	16

Comments:
 - Stopped at 18:00 @ 35 gal 12/15/97
 - Field Blank was taken
 - Blind Dup. taken (UPMW-2D)

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 6.50
 Sample Date/Time: 12/17/97 1145
 Sampling Method: Teflon Barler
 Sampling Depth(s): TOC
 DTW After Sampling: 14.23
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	9.7	8.3	804	15.3
End	10.7	8.3	794	57

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		< 40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		< 40C	N

Air Temp: 20's
 Weather Conditions: partly cloudy

Crew Chief Signature _____ Date: 12-16-98

LMS Well Sampling Log

Date: 12/10/97
 Crew: EH/SC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-3A
 Well Condition: Very good
 Well Depth/Diameter: 14.42/2"
 Well Casing Type: PVC 2" sch. 40
 Screened Interval: Bottom 10'
 Casing Ht./Lock No.: Flush mt. 3252
 Reference Pt.: 76C
 Depth to Water (DTW): 3.35
 Water Column Ht./Vol.: 11.07/9.58
 Purge Est.: 29
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/10/97 1245-

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 6 gal
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	7.2	-	247	5.3
5	8.7	-	243	>200

Comments:
- pH pen was not working

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 3.35
 Sample Date/Time: 12/12/97 1145
 Sampling Method: Teflon Bailor
 Sampling Depth(s): ETOW
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): DT5
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>not enough volume to do</u>			
End	<u>chemistry and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<u><40C</u>	<u>N</u>
TAL Metals		<u>HNO₃</u>	<u>N</u>
CN ⁻		<u>NaOH</u>	<u>N</u>
LL PCB's		<u><40C</u>	<u>N (1L)</u>

Air Temp: 20's
 Weather Conditions: Overcast

Crew Cheif Signature _____ Date: 12-12-97

LMS Well Sampling Log

Date: 12/10/97
 Crew: EH/JC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-3B
 Well Condition: Very good
 Well Depth/Diameter: 25.90 / 2"
 Well Casing Type: PVC 2" sch 40
 Screened Interval: Bottom 5'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 4.37
 Water Column Ht./Vol.: 21.53 / 4.33
 Purge Est.: 13
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/10/97 1330

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 15
 DTW After Purging: 11.18
 Yield Rate: L - (M) - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	7.7	-	868	20.1
3	10.1	-	865	22.9
6	10.0	-	873	77.8
9	9.7	-	873	83.8
12	8.6	-	873	92.8
15	10.0	-	865	84.9

Comments:

- pH pen was not working

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 5.63
 Sample Date/Time: 12/10/97 1630
 Sampling Method: Teflon Bailor
 Sampling Depth(s): TOW
 DTW After Sampling: 7.69
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	6.4	-	897	32.1
End	7.6	-	897	37.6

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOC's		< 40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCB's		< 40C	N

Air Temp: 20's

Weather Conditions: Overcast

Crew Cheif Signature _____

Date: 12-10-97

LMS

Well Sampling Log

Date: 12/15/97
 Crew: EH/LM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-3C
 Well Condition: Very good
 Well Depth/Diameter: 52.96 / 2"
 Well Casing Type: PVC sch 40
 Screened Interval: Bedrock 53'-28'
 Casing Ht./Lock No.: Flush mt. 13252
 Reference Pt.: TOC
 Depth to Water (DTW): 9.53
 Water Column Ht./Vol.: 43.43 / 17.72
 Purge Est.: 53
 Purge Method(s): whale pump
 Purge Date/Time(s): 12/15/97 1435-

Depth(s): Entire col.
 Rates (gpm): .5
 Purged Volume: 14 gal
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	10.4	8.9	884	158
10	9.7	8.7	897	>200

Comments:

- Dry at 14 gal
- whale pump is very slow at such a great depth
- MS/MSD was taken here

Crew Chief Signature _____

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-1SC S/N 19834

DTW Before Sampling: 9.45
 Sample Date/Time: 12/17/97 1400
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOW
 DTW After Sampling: 26.35
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	10.7	9.6	648	>200
End	10.6	9.1	813	>200

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

Air Temp: 20's

Weather Conditions: partly cloudy

Date: 12.16.97

LMS

Well Sampling Log

Date: 12/15/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-4
 Well Condition: Very good
 Well Depth/Diameter: 12.81 / 3"
 Well Casing Type: PVC sch 40
 Screened Interval: Bottom 10'
 Casing Ht./Lock No.: 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 4.11
 Water Column Ht./Vol.: 8.70 / 10.35
 Purge Est.: 31
 Purge Method(s): Teflon Bailer
 Purge Date/Time(s): 12/15/97 1215-1230

Depth(s): Entire col.
 Rates (gpm): .25
 Purged Volume: 7.5
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	5.9	7.4	2450	7200
5	6.2	7.4	2450	7200

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 11.18
 Sample Date/Time: 12/18/97 1130
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOW
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough volume to do</u>			
End	<u>chemistry and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<u>< 40C</u>	<u>N</u>
TAL Metals		<u>HNO₃</u>	<u>N</u>
CN ⁻		<u>NaOH</u>	<u>N</u>
LL PCBs		<u>< 40C</u>	<u>N</u>

Comments:

Air Temp: 20[°]s
 Weather Conditions: partly cloudy

Crew Chief Signature _____

Date: 12-16-97

LMS Well Sampling Log

Date: 12/15/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-5
 Well Condition: Very good
 Well Depth/Diameter: 12.59 / 3"
 Well Casing Type: Sch 40 PVC
 Screened Interval: Bottom 10'
 Casing Ht./Lock No.: 13252
 Reference Pt.: TOC
 Depth to Water (DTW): 3.82
 Water Column Ht./Vol.: 8.77 / 10.44
 Purge Est.: 31
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/15/97 1200-1240

Depth(s): Entire col.
 Rates (gpm): .25
 Purged Volume: 10
 DTW After Purging: Dry
 Yield Rate: (D) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	6.9	7.4	2040	29.2
5	7.2	7.6	2070	7200
10	7.1	7.5	2110	7200

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 4.95
 Sample Date/Time: 12/18/97 1145
 Sampling Method: Teflon Bailor
 Sampling Depth(s): Tow
 DTW After Sampling: 6.14
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations: water has greenish tint

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	8.8	7.4	2050	16
End	7.9	7.4	2080	54

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOC's		< 40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCB's		< 40C	N

Comments:

Air Temp: 20's
 Weather Conditions: partly cloudy

Crew Chief Signature _____ Date: 12-16-97

LMS Well Sampling Log

Date: 12/15/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-6
 Well Condition: Very good
 Well Depth/Diameter: 13.01 / 3"
 Well Casing Type: PVC sch 40
 Screened Interval: Bottom 10'
 Casing Ht./Lock No.: 13252
 Reference Pt.: TOC
 Depth to Water (DTW): 3.73
 Water Column Ht./Vol.: 9.28 / 11.04
 Purge Est.: 33
 Purge Method(s): Teflon Bailer
 Purge Date/Time(s): 12/15/97 1150-1210

Depth(s): Entire col.
 Rates (gpm): 0.25
 Purged Volume: 8
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	6.2	7.9	811	>200
5	6.6	8.4	806	>200

Comments:

- Dry at 8 gal

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 3.79
 Sample Date/Time: 12/17/97 1000
 Sampling Method: Teflon Bailer
 Sampling Depth(s): 10W
 DTW After Sampling: 5.61
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	6.3	7.9	691	50
End	6.7	8.3	712	88

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOC's		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCB's		<40C	N

Air Temp: 20's

Weather Conditions: partly cloudy

Crew Chief Signature _____

Date: 12.16.97

LMS Well Sampling Log

Date: 12/16/97
Crew: EH/CM
Job No: 650-098
Project: United Plating
Project Site: Schenectady N.Y.

Well ID No.: UPMW-7A
Well Condition: New
Well Depth/Diameter: 14.54 / 2"
Well Casing Type: sch 40 PVC
Screened Interval: 4.5 - 14.5
Casing Ht./Lock No.: Flush mt. / 3252
Reference Pt.: TOC
Depth to Water (DTW): 4.22
Water Column Ht./Vol.: 10.36 / 9
Purge Est.: 27
Purge Method(s): Whale pump
Purge Date/Time(s): 12/16/97 1440-1610

Depth(s): Entire col.
Rates (gpm): 4
Purged Volume: 30
DTW After Purging: 6.91
Yield Rate: L - (M) - H
Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	10.5	7.7	1201	
7.5	11.5	7.7	976	
15	10.3	7.5	1302	
22.5	11.2	7.5	1226	
30	10.7	7.6	1212	

Comments:

METERS USED

Temp.: DEC-560
pH: 301
Cond.: DEC-560
Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 4.96
Sample Date/Time: 12/16/97 1710
Sampling Method: Teflon Bawler
Sampling Depth(s): TOC
DTW After Sampling: 5.42
Chain-of-Custody No.(s):
Analytical Lab(s): ITS
Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>8.7</u>	<u>7.4</u>	<u>1390</u>	<u>54</u>
End	<u>8.5</u>	<u>7.6</u>	<u>1392</u>	<u>157</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOCs</u>		<u>< 40C</u>	<u>N</u>
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCBs</u>		<u>< 40C</u>	<u>N</u>

Air Temp:
Weather Conditions:

Crew Chief Signature _____

Date: 12-16-97

LMS

Well Sampling Log

Date: 12/16/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

Well ID No.: UPMW-7B
 Well Condition: New
 Well Depth/Diameter: 24.54 / 2"
 Well Casing Type: PVC sch. 40
 Screened Interval: 14.5 - 24.5
 Casing Ht./Lock No.: Flush mt. 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 3.60
 Water Column Ht./Vol.: 20.94 / 12
 Purge Est.: 36
 Purge Method(s): Whale pump
 Purge Date/Time(s): 12/16/97 1430-1535

DTW Before Sampling: 7.42
 Sample Date/Time: 12/16/97 1640
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOC
 DTW After Sampling: 6.82
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

Depth(s): Entire col.
 Rates (gpm): 3
 Purged Volume: 36
 DTW After Purging: 12.11
 Yield Rate: L - M - (H)
 Purge Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	10.3	8.4	1035	7200
End	11.0	8.4	1041	7200

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	11.6	8.1	929	7200
5	11.6	8.0	890	7200
10	11.9	8.0	868	7200
15	11.9	8.3	862	7200
20	12.0	8.2	854	7200
25	12.0	8.3	868	7200
30	12.1	8.3	906	7200

Temp pH Sp. Cond Turb
 35 11.9 8.5 934 7200

Comments:

Air Temp: 30^{°S}
 Weather Conditions: SUNNY

Crew Chief Signature _____

Date: 12.16.97

LMS Well Sampling Log

Date: 12/16/97
Crew: EH/CM
Job No: 650-098
Project: United Plating
Project Site: Schenectady N.Y.

Well ID No.: UPMW-7C
Well Condition: New
Well Depth/Diameter: 54.71 / 3"
Well Casing Type: PVC 3" sch. 40
Screened Interval: open bedrock
Casing Ht./Lock No.: Flush mt. / 3252
Reference Pt.: TOC
Depth to Water (DTW): 1.32
Water Column Ht./Vol.: 53.34 / 19.6
Purge Est.: 59
Purge Method(s): Whale pump
Purge Date/Time(s): 12/16/97 1420-1540

Depth(s): Entire col.
Rates (gpm): 3
Purged Volume: 19
DTW After Purging: Dry
Yield Rate: (L) - M - H
Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	10.7	8.1	10.78	>200
10	-	-	-	-

Comments:
- Parameters were not taken at 10 gal
- Dry at 19 gal

METERS USED

Temp.: DEC-560
pH: 301
Cond.: DEC-560
Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 1.64
Sample Date/Time: 12/18/97 0840
Sampling Method: Teflon Bailor
Sampling Depth(s): 70W
DTW After Sampling: 5.82
Chain-of-Custody No.(s):
Analytical Lab(s): ITS
Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	7.9	9.0	1050	107
End	8.5	8.6	1060	98.9

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

Crew Chief Signature _____

Date: 12.16.97

LMS Well Sampling Log

Date: 12/9/97
 Crew: EH/SL
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: LPMW-8A
 Well Condition: New
 Well Depth/Diameter: 14.00 / 2" #
 Well Casing Type: PVC
 Screened Interval: Bottom 10'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOL
 Depth to Water (DTW): 9.44 #
 Water Column Ht./Vol.: 4.56 / 3.97
 Purge Est.: 12
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/9/97 0900

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 2.5
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	12.2	-	4470	>200
2	11.5	-	4310	>200

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 12.34 #
 Sample Date/Time: 12/11/97 1400
 Sampling Method: Teflon Bailor
 Sampling Depth(s): 10W
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough volume to get</u>			
End	<u>chemistry and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

only enough water to get
.5L CN⁻
.5L Metals
1.25L PCBs
3 VOCs

Comments:
 - pH pen was not working
 - dry at 2.5 gal
 - after sampling .98' of pvc pipe was add to make well more assessable

Air Temp: 25
 Weather Conditions: Overcast
 # add .98' rise
 added 12-17-97

Crew Cheif Signature _____ Date: 12.9.97

LMS Well Sampling Log

Date: 12/9/97
Crew: EH/JC
Job No: 650-098
Project: United Plating
Project Site: Schenectady N.Y.

Well ID No.: UPMW-8B
Well Condition: New
Well Depth/Diameter: 22.36/2" *
Well Casing Type: PVC sch 40
Screened Interval: Bottom 5'
Casing Ht./Lock No.: Flush Mt. /3252
Reference Pt.: TOC
Depth to Water (DTW): 8.07 *
Water Column Ht./Vol.: 14.24/6.56
Purge Est.: 20
Purge Method(s): Teflon Bailor
Purge Date/Time(s): 12/9/97 0920-1000

Depth(s): Entire col.
Rates (gpm): .17
Purged Volume: 6
DTW After Purging: Dry
Yield Rate: (L) - M - H
Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	12.7	-	1720	>200
3	11.8	-	1795	>200
6	10.8	-	1864	>200

Comments:

- ptt pen was not working
- after sampling .98' of PVC pipe was added to make well more accessible

METERS USED

Temp.: DEC-560
pH: 301
Cond.: DEC-560
Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 8.39
Sample Date/Time: 12/11/97 0815
Sampling Method: Teflon Bailor
Sampling Depth(s): TOW
DTW After Sampling: 14.59 *
Chain-of-Custody No.(s):
Analytical Lab(s): ITS
Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	11.4	-	1347	19.8
End	12.8	-	1353	102.2

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

Air Temp: 25

Weather Conditions: Overcast

* add .92' or so
added 12-17-97

Crew Chief Signature _____

Date: 12.11.97

LMS

Well Sampling Log

Date: 12/16/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-8C
 Well Condition: New
 Well Depth/Diameter: 55.46/3"
 Well Casing Type: PVC 3" sch 40
 Screened Interval: Bedrock
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 2.65
 Water Column Ht./Vol.: ~52/19
 Purge Est.: 57
 Purge Method(s): 2" Grundfos
 Purge Date/Time(s): 12/16/97 0810-1040

Depth(s): Entire col.
 Rates (gpm): 4
 Purged Volume: 60
 DTW After Purging: 6.82
 Yield Rate: L - (M) - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	11.0	7.4	827	28 78.4
10	12.5	7.5	825	>200
20	12.3	7.5	823	>200
30	11.9	7.5	822	58
40	11.3	7.8	818	>200
50	12.1	7.6	823	>200
60	8.7	7.6	838	66

Comments:

Measurement of DTW after purging was delayed due to pulling up of grundfos and setting whale pump on another well allowing high recovery

Crew Chief Signature _____

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 2.74
 Sample Date/Time: 12/16/97 1000
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOW
 DTW After Sampling: 5.53
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	9.3	7.3	825	15.6
End	10.0	7.4	831	15.2

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

Air Temp: Teens

Weather Conditions: Sunny

Date: 12-16-97

LMS Well Sampling Log

Date: 12/9/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-9A
 Well Condition: New
 Well Depth/Diameter: 9.84/2"
 Well Casing Type: PVC sch 40
 Screened Interval: Bottom 8'
 Casing Ht./Lock No.: Flush mt. /3252
 Reference Pt.: TOC
 Depth to Water (DTW): 5.53
 Water Column Ht./Vol.: 4.32 / 3.76
 Purge Est.: 11
 Purge Method(s): Teflon Bailer
 Purge Date/Time(s): 12/9/97 1315-

Depth(s): Entire col
 Rates (gpm): .17
 Purged Volume: 3
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	10.3	-	5470	7.5
2.5	10.9	-	5760	22.1

Comments:

- pH pen was not working

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 6.11
 Sample Date/Time: 12/12/97 1000
 Sampling Method: Teflon Bailer
 Sampling Depth(s): Tow
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough water for</u>			
End	<u>chemistry and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOCs</u>		<u><40C</u>	<u>N</u>
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCBs</u>		<u><40C</u>	<u>N</u>

low volume not enough water

Air Temp: 20's

Weather Conditions: Overcast

Crew Chief Signature _____

Date: 12-12-97

LMS Well Sampling Log

Date: 12/10/97
Crew: EH/JC
Job No: 650-098
Project: United Plating
Project Site: Schenectady N.Y.

Well ID No.: UPMW-9B
Well Condition: New
Well Depth/Diameter: 16.35 / 2"
Well Casing Type: PVC 2" sch 40
Screened Interval: Bottom 5'
Casing Ht./Lock No.: Flush mt. / 3252
Reference Pt.: TOC
Depth to Water (DTW): 15.41
Water Column Ht./Vol.: .91 / .79
Purge Est.: 2.5
Purge Method(s): Teflon Bailer
Purge Date/Time(s): 12/10/97 1500 - 1510

Depth(s): Entire col.
Rates (gpm): .17
Purged Volume: ~.5
DTW After Purging: Dry
Yield Rate: (L) - M - H
Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
------	------------	----	-----------	-------

Not enough volume

METERS USED

Temp.: DEC-560
pH: 301
Cond.: DEC-560
Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 15.77
Sample Date/Time: 12/12/97 0930
Sampling Method: Teflon Bailer
Sampling Depth(s): TOW
DTW After Sampling: Dry
Chain-of-Custody No.(s):
Analytical Lab(s): ETS
Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough water to do</u>			
End	<u>chemistry and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOCs</u>		<u>< 40C</u>	<u>N</u>
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCBs</u>		<u>< 40C</u>	<u>N</u>

not enough water

Comments:

- can't get ~~any~~ much water

Air Temp: 20's

Weather Conditions: Overcast

Crew Chief Signature _____

Date: 12-21-97

LMS Well Sampling Log

Date: 12/9/97
 Crew: EH/JC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-9C
 Well Condition: New
 Well Depth/Diameter: 22.87 / 2"
 Well Casing Type: PVC 2" sch 40
 Screened Interval: Bottom 5'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: T6C
 Depth to Water (DTW): 3.11
 Water Column Ht./Vol.: 19.76 / 8.17
 Purge Est.: 25
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/9/97 1030-

Depth(s): Entire col.
 Rates (gpm): .17
 Purged Volume: 25
 DTW After Purging: ~22 est. not measured
 Yield Rate: L - (M) - H
 Purge Observations: cleared up nicely

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	12.2	-	878	>200
5	12.5	-	864	>200
10	12.3	-	871	>200
15	12.1	-	873	>200
20	12.5	-	860	>200
25	12.7	-	863	>200

Comments:

- pH pen not working
 - MS/MSD taken 1415

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 3.95
 Sample Date/Time: 12/9/97 1350
 Sampling Method: Teflon Bailor
 Sampling Depth(s): 70W
 DTW After Sampling: 9.41
 Chain-of-Custody No.(s):
 Analytical Lab(s): ZTS
 Sampling Observations: got cleaner

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>10.3</u>	<u>-</u>	<u>868</u>	<u>122.3</u>
End	<u>11.6</u>	<u>-</u>	<u>877</u>	<u>44.3</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOC's</u>		<u>< 40C</u>	<u>N</u>
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCB's</u>		<u>< 40C</u>	<u>N</u>

Air Temp: 20.5

Weather Conditions: overcast

Crew Chief Signature _____

Date: 12.9.97

LMS

Well Sampling Log

Date: 12/11/97
 Crew: EH/SL
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UP MW-10B
 Well Condition: New
 Well Depth/Diameter: 27.86 / 2"
 Well Casing Type: PVC 2" sch 40
 Screened Interval: Bottom 5'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 4.49
 Water Column Ht./Vol.: 23.37 / 8.05
 Purge Est.: 24
 Purge Method(s): Whale pump
 Purge Date/Time(s): 12/11/97 1600-

Depth(s): Entire col.
 Rates (gpm): 1
 Purged Volume: 25
 DTW After Purging: 19.19
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	10.1	-	919	95.9
5	10.8	-	900	35.8
10	11.0	-	898	7200
15	10.2	-	964	7200
20	10.0	-	898	7200
25	8.3	-	907	7200

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-1SC S/N 19834

DTW Before Sampling: - missed DTW @ 0800 10.35 (approx 6")
 Sample Date/Time: 12/12/97 1300
 Sampling Method: Teflon Bailer
 Sampling Depth(s): TOW
 DTW After Sampling: 8.27
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	_____			
End	<u>10.6</u>	<u>-</u>	<u>886</u>	<u>43.5</u>

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOC's</u>		<u>< 40C</u>	<u>N</u>
<u>TAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>CN⁻</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCB's</u>		<u>< 40C</u>	<u>N</u>

Comments:

- pH pen didn't work
- well cap came off with a lot of vapor pressure behind it.
- Missed DTW before sampling DTW @ 0800 10.35, however water had come up a few feet
- water in box (well) comes up quickly around PVC... keep an eye on it.

Air Temp: 20's

Weather Conditions: Overcast

Crew Chief Signature _____

Date: 12-12-97

LMS Well Sampling Log

Date: 12/11/97
 Crew: EH/JC/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-10C
 Well Condition: New
 Well Depth/Diameter: 54.55/3"
 Well Casing Type: PVC sch 40
 Screened Interval: Bedrock
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TC

Depth to Water (DTW): 5.64
 Water Column Ht./Vol.: 48.91/17.95
 Purge Est.: 54

Purge Method(s): Whale pump / Teflon Bailor
 Purge Date/Time(s): 12/11/97 1630 -

12/12/97 0730 -
12/15/97 1545 -
12/16/97
 Depth(s): Entire col.
 Rates (gpm): .25-3

Purged Volume: 50
 DTW After Purging: ~~37.10~~ 37.90
 Yield Rate: (L)-(M)-H
 Purge Observations:

PURGE CHEMISTRIES

	Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
2/11	0	9.9	-	956	27.9
	10	9.5	-	923	117.5
12/12	20	10.3	-	906	7200
	20	10.0	7.7	908	148.7
12/15	30	10.5	8.0	901	7200

Comments:

- Water upto and over pvc in well
- Rises quickly... keep an eye on it or it will go in well.
- Blind Dup (~~100~~ UPMW-10D)

Crew Chief Signature _____

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 7.04
 Sample Date/Time: 12/17/97 1535
 Sampling Method: Teflon Bailor
 Sampling Depth(s): TCW
 DTW After Sampling: 13.48
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	8.6	8.1	896	95
End	8.6	8.2	900	120

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCB's		<40C	N

	Temp	pH	Sp Cond	Turb
35	9.9	8.2	898	55.8
45	11.1	8.0	904	122

+ 5 gal total of 50 gal

Air Temp: 20.5

Weather Conditions: Over cast

Date: 12-12-97

LMS Well Sampling Log

Date: 12/9/97
Crew: EH/SL
Job No: 650-098
Project: United Plating
Project Site: Schenectady N.Y.

Well ID No.: UPMW-11A
Well Condition: New
Well Depth/Diameter: 13.86/2"
Well Casing Type: PVC sch 40
Screened Interval: Bottom 10'
Casing Ht./Lock No.: Flush mt. (3252)
Reference Pt.: TOC
Depth to Water (DTW): 3.73
Water Column Ht./Vol.: 10.13 / 8.81
Purge Est.: 26.5
Purge Method(s): Teflon Bailor
Purge Date/Time(s): 12/9/97 1800-

Depth(s): Entire col.
Rates (gpm): .17
Purged Volume: 11
DTW After Purging: Dry
Yield Rate: (L) - M - H
Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	9.2	-	3410	>200
5	11.4	-	4930	>200
10	10.4	-	4350	>200

Comments:

- pH pen was not working

METERS USED

Temp.: DEL-560
pH: 301
Cond.: DEL-560
Turb.: DEL DRT-15C S/N 19834

DTW Before Sampling: 4.00
Sample Date/Time: 12/10/97 0900
Sampling Method: Teflon Bailor
Sampling Depth(s): TOW
DTW After Sampling: 5.24
Chain-of-Custody No.(s):
Analytical Lab(s): ITS
Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	9.3	-	2200	79.6
End	10.1	-	2360	>200

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		<40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		<40C	N

Air Temp: 20's

Weather Conditions: Overcast

Crew Chief Signature _____

Date: 12-10-97

LMS

Well Sampling Log

Date: 12/10/97
 Crew: EH/SC
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-118
 Well Condition: New
 Well Depth/Diameter: 19.88/2"
 Well Casing Type: PVC sch 40
 Screened Interval: Bottom 5'
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: TOC
 Depth to Water (DTW): 19.45
 Water Column Ht./Vol.: 1.40/1.22
 Purge Est.: 4
 Purge Method(s): Teflon Bailor
 Purge Date/Time(s): 12/10/97 1345-1400

Depth(s): Entire col.
 Rates (gpm): very slow
 Purged Volume: ~2
 DTW After Purging: Dry
 Yield Rate: D - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
Not enough volume				

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 19.45
 Sample Date/Time: 12/12/97 0900
 Sampling Method: Teflon Bailor
 Sampling Depth(s): Entire col.
 DTW After Sampling: Dry
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	<u>Not enough water for</u>			
End	<u>chemistry and sample</u>			

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
<u>LL VOCs</u>		<u><40C</u>	<u>N</u>
<u>FAL Metals</u>		<u>HNO₃</u>	<u>N</u>
<u>AN-</u>		<u>NaOH</u>	<u>N</u>
<u>LL PCBs</u>		<u><40C</u>	<u>N</u>

only enough water for VOCs

Comments:

Air Temp: 20's
 Weather Conditions: overcast

Crew Chief Signature _____ Date: 12-12-97

LMS Well Sampling Log

Date: 12/16/97
 Crew: EH/CM
 Job No: 650-098
 Project: United Plating
 Project Site: Schenectady N.Y.

Well ID No.: UPMW-12C
 Well Condition: New
 Well Depth/Diameter: 54.19 / 3"
 Well Casing Type: PVC sch 40
 Screened Interval: Bedrock
 Casing Ht./Lock No.: Flush mt. / 3252
 Reference Pt.: 70C
 Depth to Water (DTW): .94
 Water Column Ht./Vol.: 53.1 / 19.49
 Purge Est.: 58
 Purge Method(s): Whale pump
 Purge Date/Time(s): 12/16/97 1100-

Depth(s): Entire col.
 Rates (gpm): .5
 Purged Volume: 25
 DTW After Purging: Dry
 Yield Rate: (L) - M - H
 Purge Observations:

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	10.1	7.6	899	199.8
10	11.2	7.9	871	162.5
20	12.0	8.0	888	2200

METERS USED

Temp.: DEC-560
 pH: 301
 Cond.: DEC-560
 Turb.: DEC DRT-15C S/N 19834

DTW Before Sampling: 1.28
 Sample Date/Time: 12/18/97 0920
 Sampling Method: Teflon Bailor
 Sampling Depth(s): TOW
 DTW After Sampling: 5.64
 Chain-of-Custody No.(s):
 Analytical Lab(s): ITS
 Sampling Observations:

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	7.0	8.4	871	195
End	7.5	8.2	873	198

SAMPLE ANALYSES

Parameters	Inv. No.	Pres. Meth.	Filter
LL VOCs		< 40C	N
TAL Metals		HNO ₃	N
CN ⁻		NaOH	N
LL PCBs		< 40C	N

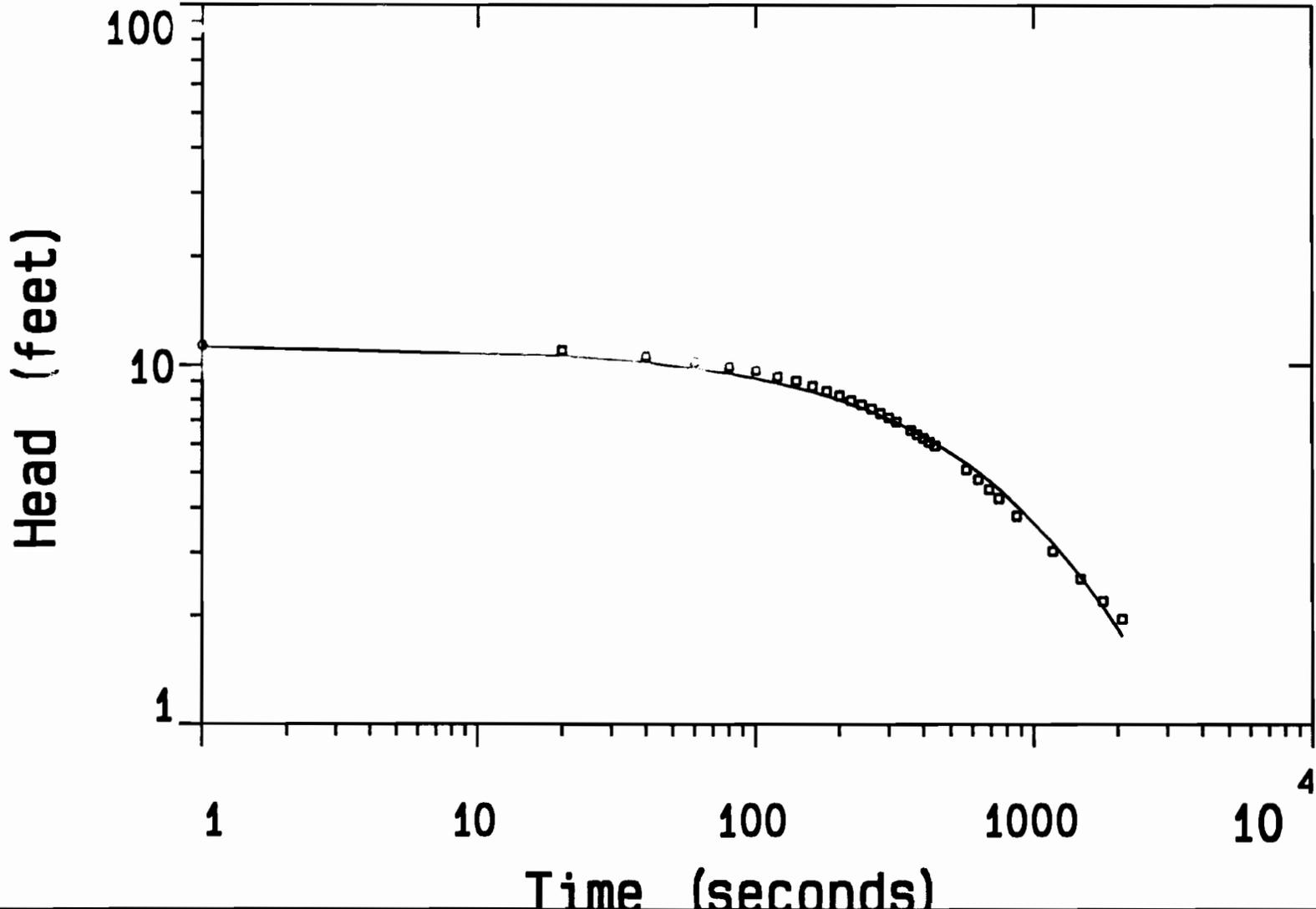
Comments:

Air Temp: Trens
 Weather Conditions: Sunny

Crew Chief Signature _____

Date: 12-16-97

APPENDIX F
SLUG TEST DATA



MODEL TYPE: COOPER et al. TRANSMISSIVITY: .09240 sq. m/day STORATIVITY: .0006801 INITIAL HEAD: 11.3 ft		for: NYSDEC by: LMS Engineers WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 22.10 SCREEN: top: 19.88 base: 24.88 DIAMETER: casing: .1660 intake: .6460 DEPTH: Water Table: 2.780 TD: 24.88	United Plating Well: UPMW-1B Schenectady, NY Schenectady, NY
Data Set: UPMW1B01	Date: 1-5-95		

DATA SET: UPMW1B01

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-1B
COUNTY: Schenectady, NY	WELL DEPTH: 24.88 ft
PROJECT: United Plating	WATER TABLE: 2.780 ft
AQUIFER: Endless	THICKNESS: 22.10 ft
INTAKE RADIUS: 0.323 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 19.880 ft	SCREEN BASE: 24.88 ft
INITIAL HEAD: 11.310 ft	TRANS. RATIO: 1.0000

FITTING ERROR: 4.094 PERCENT

MODEL PARAMETERS:

STORAGE COEFF.: .000680 FREE

TRANSMISSIVITY: .0924 square m/day FREE

MODEL TYPE: CONFINED AQUIFER (Cooper et al.)

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	11.31	11.18	1.08
2	20.00	10.93	10.56	3.38
3	40.00	10.56	10.13	4.03
4	60.00	10.19	9.77	4.07
5	80.00	9.90	9.45	4.47
6	100.0	9.66	9.16	5.09
7	120.0	9.29	8.90	4.19
8	140.0	9.05	8.65	4.41
9	160.0	8.74	8.41	3.70
10	180.0	8.46	8.19	3.12
11	200.0	8.23	7.98	2.97
12	220.0	7.98	7.78	2.43
13	240.0	7.76	7.59	2.11
14	260.0	7.55	7.41	1.79
15	280.0	7.34	7.24	1.35
16	300.0	7.13	7.07	0.792
17	320.0	6.94	6.91	0.385
18	360.0	6.58	6.61	-0.471
19	380.0	6.42	6.46	-0.750
20	400.0	6.26	6.33	-1.12
21	420.0	6.10	6.19	-1.58

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No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
22	440.0	5.95	6.06	-1.98
23	570.0	5.11	5.32	-4.20
24	630.0	4.79	5.02	-4.97
25	690.0	4.50	4.75	-5.68
26	750.0	4.25	4.50	-5.99
27	870.0	3.80	4.05	-6.81
28	1170.0	3.03	3.19	-5.36
29	1470.0	2.54	2.57	-1.28
30	1770.0	2.20	2.11	3.96
31	2070.0	1.96	1.76	10.06

PARAMETER RESOLUTION MATRIX:
"*" INDICATES FIXED PARAMETER

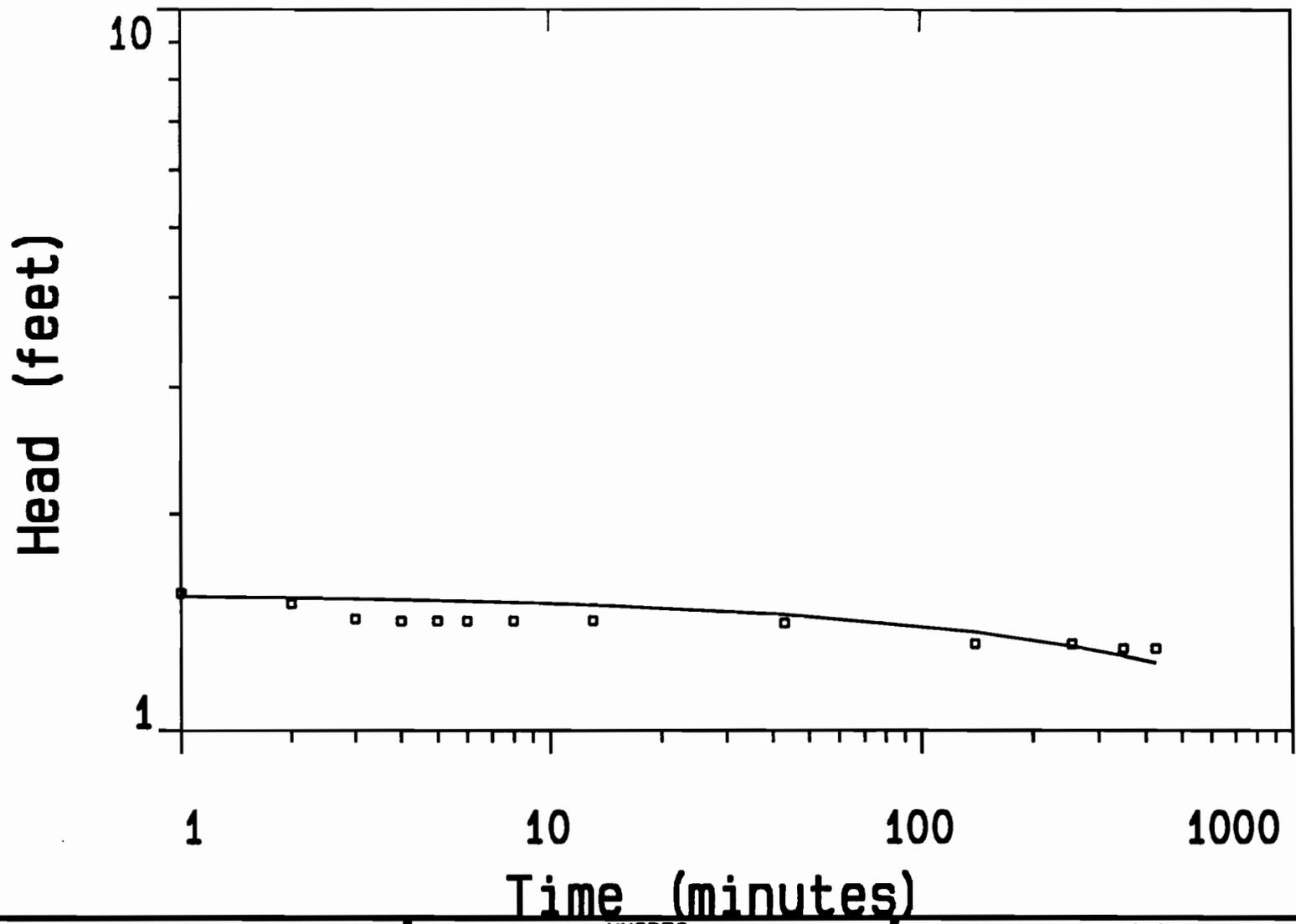
S 0.99
T 0.00 1.00

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LMS Engineers

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<p>MODEL TYPE: COOPER et al. TRANSMISSIVITY: .0000678 sq. m/day STORATIVITY: .07303 INITIAL HEAD: 1.55 ft</p>	<p>for: NYSDEC by: LMS Engineers WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 4.600 SCREEN: top: 25.00 base: 55.72 DIAMETER: casing: .1660 intake: .3160 DEPTH: Water Table: 51.12 TD: 55.72</p>	<p>United Plating Well: UPMW-1C Schenectady, NY Schenectady, NY</p>
<p>Data Set: UPMW1C01</p>	<p>Date: 1-5-95</p>	

DATA SET: UPMW1C01

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-1C
COUNTY: Schenectady, NY	WELL DEPTH: 55.72 ft
PROJECT: United Plating	WATER TABLE: 51.120 ft
AQUIFER: Endless	THICKNESS: 4.60 ft
INTAKE RADIUS: 0.158 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 25.000 ft	SCREEN BASE: 55.72 ft
INITIAL HEAD: 1.550 ft	TRANS. RATIO: 1.0000

FITTING ERROR: 4.763 PERCENT

MODEL PARAMETERS:

STORAGE COEFF.:	.0730	FREE
TRANSMISSIVITY:	6.78E-5 square m/day	FREE

MODEL TYPE: CONFINED AQUIFER (Cooper et al.)

No.	TIME (mins)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	1.55	1.53	0.996
2	2.00	1.50	1.52	-1.87
3	3.00	1.43	1.52	-6.52
4	4.00	1.42	1.51	-6.98
5	5.00	1.42	1.51	-6.72
6	6.00	1.42	1.51	-6.49
7	8.00	1.42	1.50	-6.08
8	13.00	1.42	1.49	-5.24
9	43.00	1.41	1.44	-2.78
10	140.0	1.32	1.36	-3.77
11	255.0	1.32	1.30	0.846
12	349.0	1.30	1.26	2.33
13	426.0	1.30	1.24	4.48

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PARAMETER RESOLUTION MATRIX:
"*" INDICATES FIXED PARAMETER

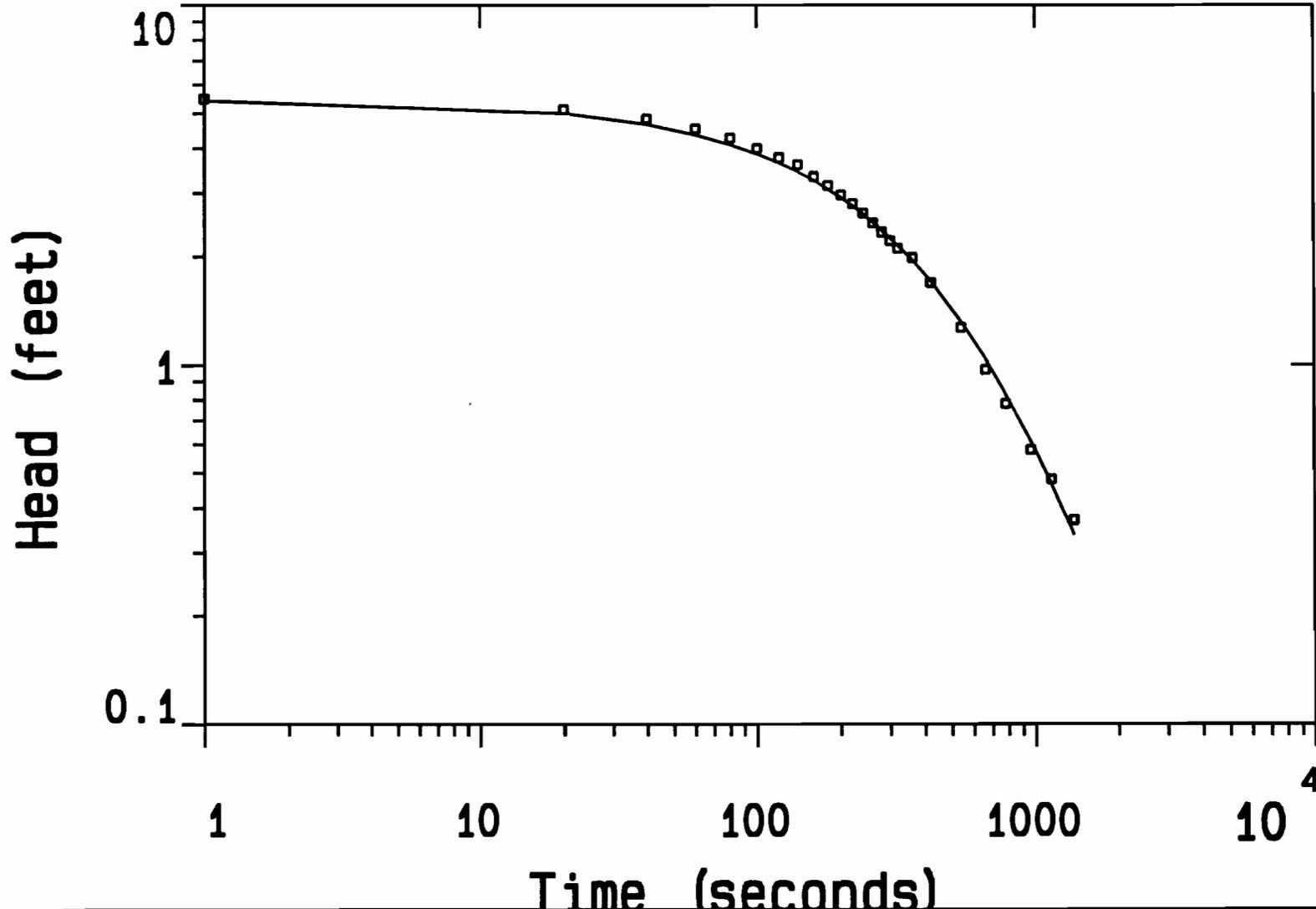
S	0.20	
T	0.24	0.30

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LMS Engineers

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MODEL TYPE: COOPER et al. TRANSMISSIVITY: .3700 sq. m/day STORATIVITY: .0000252 INITIAL HEAD: 5.49 ft		for: NYSDEC by: LMS Engineers WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 20.00 SCREEN: top: 21.08 base: 26.08 DIAMETER: casing: .1660 intake: .6460 DEPTH: Water Table: 6.080 TD: 26.08	United Plating Well: UPMW-2B Schenectady, NY Schenectady, NY
Data Set: UPMW2801	Date: 1-5-95		

DATA SET: UPMW2B01

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-2B
COUNTY: Schenectady, NY	WELL DEPTH: 26.08 ft
PROJECT: United Plating	WATER TABLE: 6.080 ft
AQUIFER: Endless	THICKNESS: 20.00 ft
INTAKE RADIUS: 0.323 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 21.080 ft	SCREEN BASE: 26.08 ft
INITIAL HEAD: 5.490 ft	TRANS. RATIO: 1.0000

FITTING ERROR: 3.810 PERCENT

MODEL PARAMETERS:

STORAGE COEFF.: 2.52E-5 FREE

TRANSMISSIVITY: .370 square m/day FREE

MODEL TYPE: CONFINED AQUIFER (Cooper et al.)

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	5.49	5.43	1.04
2	20.00	5.13	5.00	2.46
3	40.00	4.83	4.66	3.34
4	60.00	4.54	4.35	3.98
5	80.00	4.27	4.09	4.15
6	100.0	4.00	3.85	3.53
7	120.0	3.77	3.64	3.39
8	140.0	3.60	3.44	4.43
9	160.0	3.34	3.25	2.62
10	180.0	3.15	3.07	2.29
11	200.0	2.97	2.91	1.84
12	220.0	2.80	2.76	1.28
13	240.0	2.64	2.62	0.633
14	260.0	2.48	2.49	-0.490
15	280.0	2.34	2.36	-1.27
16	300.0	2.22	2.25	-1.61
17	320.0	2.11	2.14	-1.85
18	360.0	1.99	1.95	1.70
19	420.0	1.69	1.70	-1.01
20	540.0	1.27	1.31	-3.80
21	660.0	0.970	1.03	-6.89

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LMS Engineers

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No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
22	780.0	0.780	0.827	-6.11
23	960.0	0.580	0.610	-5.25
24	1140.0	0.480	0.463	3.35
25	1380.0	0.370	0.336	9.02

PARAMETER RESOLUTION MATRIX:

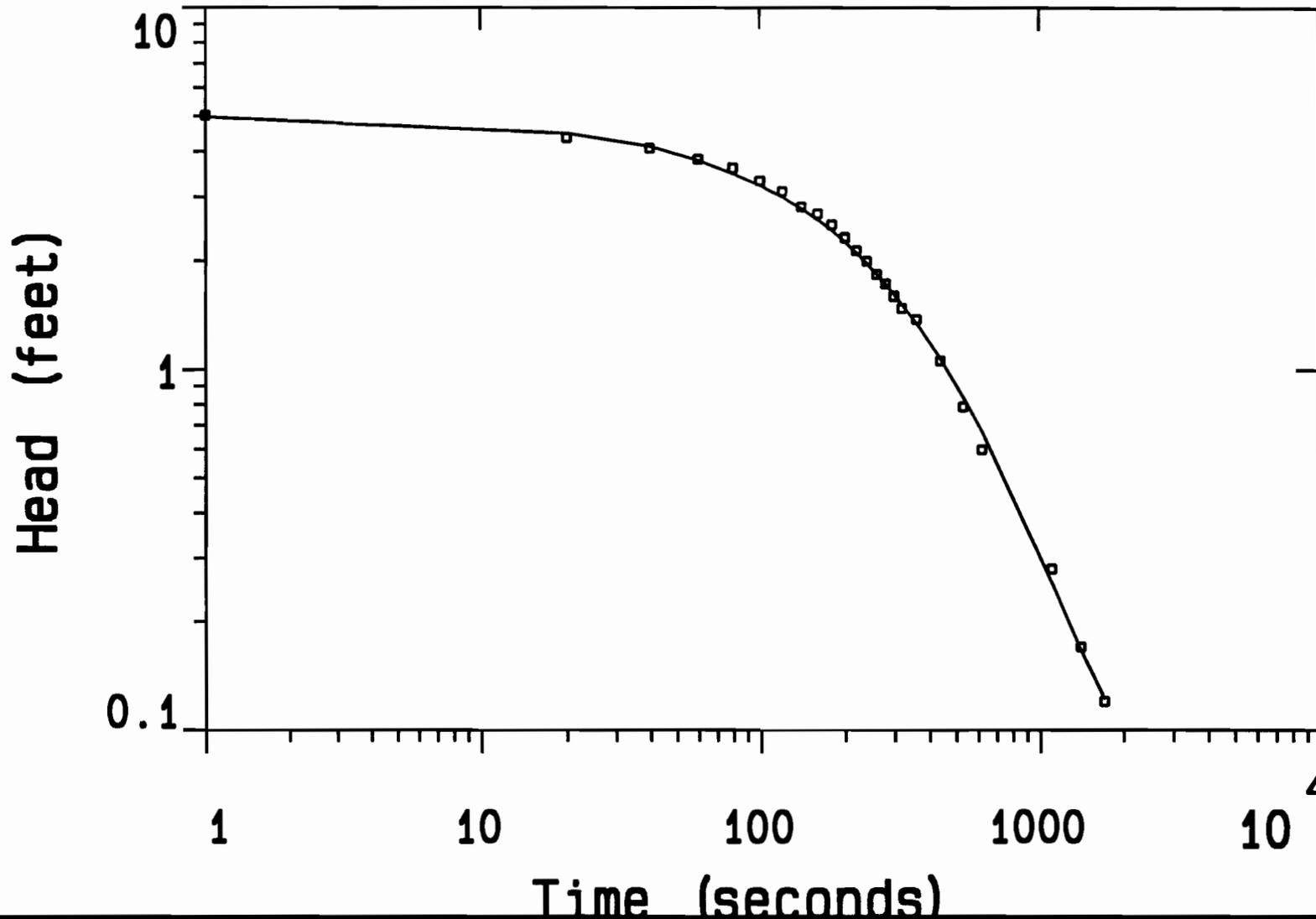
"*" INDICATES FIXED PARAMETER

S	0.97	
T	0.00	1.00
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LMS Engineers

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MODEL TYPE: COOPER et al.		for: NYSDEC	United Plating
TRANSMISSIVITY: .5578 sq. m/day		by: LMS Engineers	
STORATIVITY: .0000364		WELL DATA: Units: ft	Well: UPMW-2C Schenectady, NY Schenectady, NY
INITIAL HEAD: 5.03 ft		AQUIFER: Endless	
Data Set: UPMW2C01		THICKNESS: 48.86	
Date: 1-5-95		SCREEN: top: 28.00 base: 54.62	
		DIAMETER: casing: .1660 intake: .3160	
		DEPTH: Water Table: 5.760 TD: 54.62	

DATA SET: UPMW2C01

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-2C
COUNTY: Schenectady, NY	WELL DEPTH: 54.62 ft
PROJECT: United Plating	WATER TABLE: 5.760 ft
AQUIFER: Endless	THICKNESS: 48.86 ft
INTAKE RADIUS: 0.158 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 28.000 ft	SCREEN BASE: 54.62 ft
INITIAL HEAD: 5.030 ft	TRANS. RATIO: 1.0000

FITTING ERROR: 3.885 PERCENT

MODEL PARAMETERS:

STORAGE COEFF.: 3.64E-5 FREE

TRANSMISSIVITY: .558 square m/day FREE

MODEL TYPE: CONFINED AQUIFER (Cooper et al.)

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	5.03	4.98	0.961
2	20.00	4.38	4.49	-2.63
3	40.00	4.09	4.14	-1.26
4	60.00	3.81	3.78	0.638
5	80.00	3.61	3.48	3.56
6	100.0	3.32	3.22	2.74
7	120.0	3.11	3.00	3.44
8	140.0	2.82	2.79	0.869
9	160.0	2.70	2.60	3.55
10	180.0	2.52	2.42	3.70
11	200.0	2.32	2.26	2.49
12	220.0	2.14	2.11	1.38
13	240.0	2.00	1.97	1.46
14	260.0	1.84	1.84	-0.143
15	280.0	1.73	1.72	0.259
16	300.0	1.60	1.61	-1.14
17	320.0	1.48	1.52	-2.72
18	360.0	1.38	1.34	2.32
19	440.0	1.06	1.07	-1.23
20	530.0	0.790	0.842	-6.61
21	620.0	0.600	0.672	-12.10

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No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
22	1100.0	0.280	0.256	8.25
23	1400.0	0.170	0.166	1.81
24	1700.0	0.120	0.121	-1.54

PARAMETER RESOLUTION MATRIX:

"*" INDICATES FIXED PARAMETER

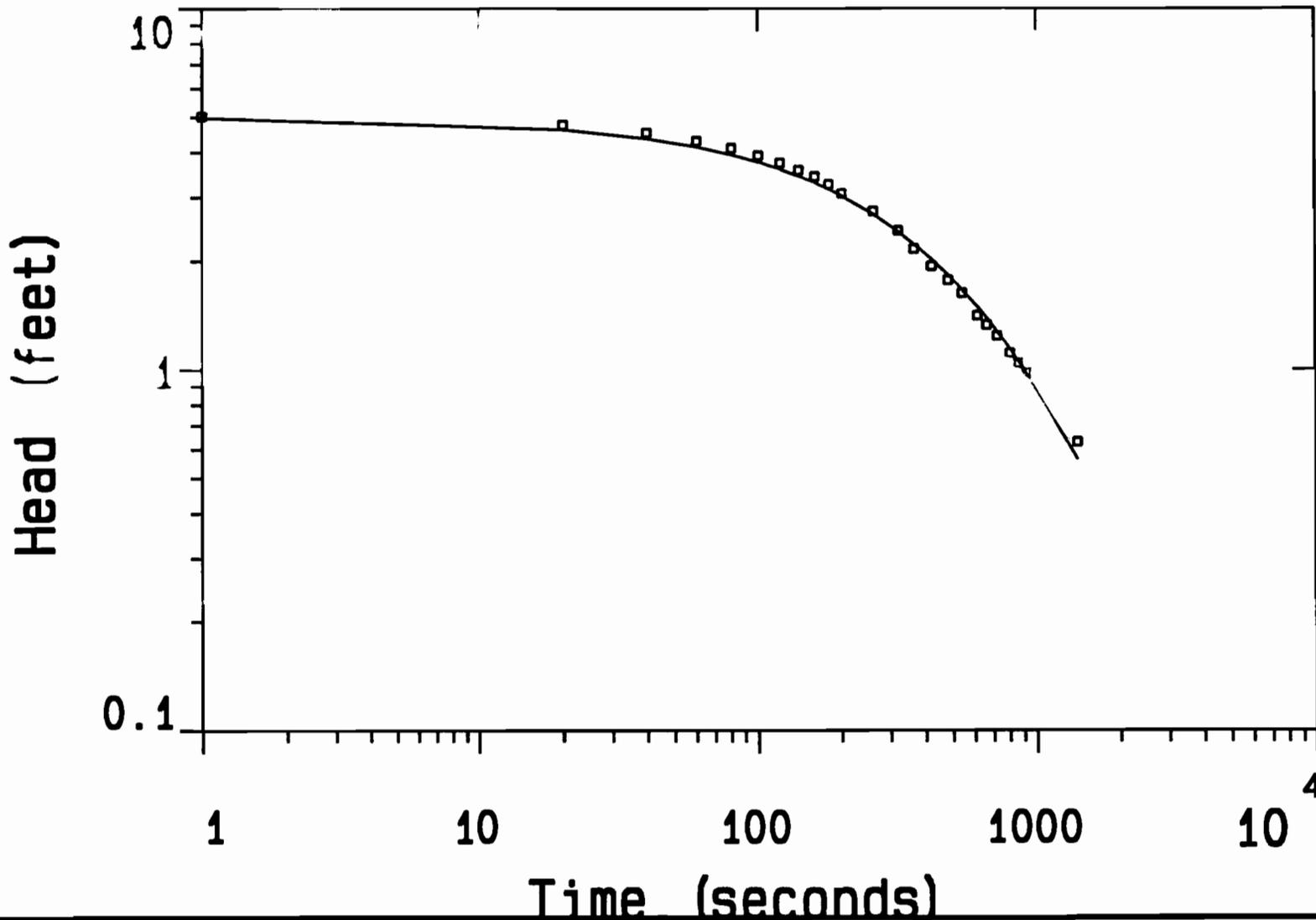
S	0.98	
T	0.00	1.00

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LMS Engineers

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MODEL TYPE: COOPER et al.		for: NYSDEC	United Plating
TRANSMISSIVITY: .2092 sq. m/day		by: LMS Engineers	
STORATIVITY: .0001716		WELL DATA: Units: ft	Well: UPMW-3B Schenectady, NY Schenectady, NY
INITIAL HEAD: 5.04 ft		AQUIFER: Endless	
Data Set: UPMW3801		THICKNESS: 20.85	
Date: 1-5-95		SCREEN: top: 20.84 base: 25.84	
		DIAMETER: casing: .1660 intake: .6460	
		DEPTH: Water Table: 4.990 TD: 25.84	

DATA SET: UPMW3B01

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-3B
COUNTY: Schenectady, NY	WELL DEPTH: 25.84 ft
PROJECT: United Plating	WATER TABLE: 4.990 ft
AQUIFER: Endless	THICKNESS: 20.85 ft
INTAKE RADIUS: 0.323 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 20.840 ft	SCREEN BASE: 25.84 ft
INITIAL HEAD: 5.040 ft	TRANS. RATIO: 1.0000

FITTING ERROR: 4.067 PERCENT

MODEL PARAMETERS:

STORAGE COEFF.: .000171 FREE

TRANSMISSIVITY: .209 square m/day FREE

MODEL TYPE: CONFINED AQUIFER (Cooper et al.)

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	5.04	4.98	1.08
2	20.00	4.77	4.63	2.90
3	40.00	4.54	4.36	3.78
4	60.00	4.30	4.14	3.71
5	80.00	4.11	3.93	4.14
6	100.0	3.92	3.75	4.11
7	120.0	3.74	3.59	3.96
8	140.0	3.57	3.43	3.73
9	160.0	3.43	3.29	4.01
10	180.0	3.26	3.15	3.15
11	200.0	3.08	3.03	1.60
12	260.0	2.75	2.69	2.02
13	320.0	2.43	2.41	0.807
14	363.0	2.17	2.23	-2.90
15	420.0	1.94	2.02	-4.39
16	480.0	1.77	1.83	-3.59
17	540.0	1.63	1.66	-2.23
18	610.0	1.41	1.49	-6.17
19	660.0	1.33	1.38	-4.51
20	720.0	1.24	1.27	-2.78
21	800.0	1.11	1.14	-2.72

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DATA SET: UPMW2A02

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-2A
COUNTY: Schenectady, NY	WELL DEPTH: 14.39 ft
PROJECT: United Plating	WATER TABLE: 10.560 ft
AQUIFER: Endless	THICKNESS: 3.83 ft
INTAKE RADIUS: 0.318 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 4.390 ft	SCREEN BASE: 14.39 ft
INITIAL HEAD: 1.850 ft	TRANS. RATIO: 1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: .00103 square m/day

CONDUCTIVITY: .000889 m/day

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	1.85	1.55	15.77
2	2.00	1.70	1.55	8.51
3	3.00	1.62	1.55	4.16
4	4.00	1.60	1.54	3.13
5	5.00	1.56	1.54	0.829
6	6.00	1.54	1.54	-0.280
7	7.00	1.52	1.54	-1.41
8	8.00	1.50	1.53	-2.58
9	9.00	1.49	1.53	-3.09
10	10.00	1.48	1.53	-3.60
11	15.00	1.44	1.51	-5.54
12	20.00	1.41	1.50	-6.83
13	25.00	1.40	1.49	-6.64
14	30.00	1.38	1.47	-7.23
15	63.00	1.34	1.39	-4.15
16	87.00	1.33	1.33	-0.562
17	140.0	1.30	1.21	6.35

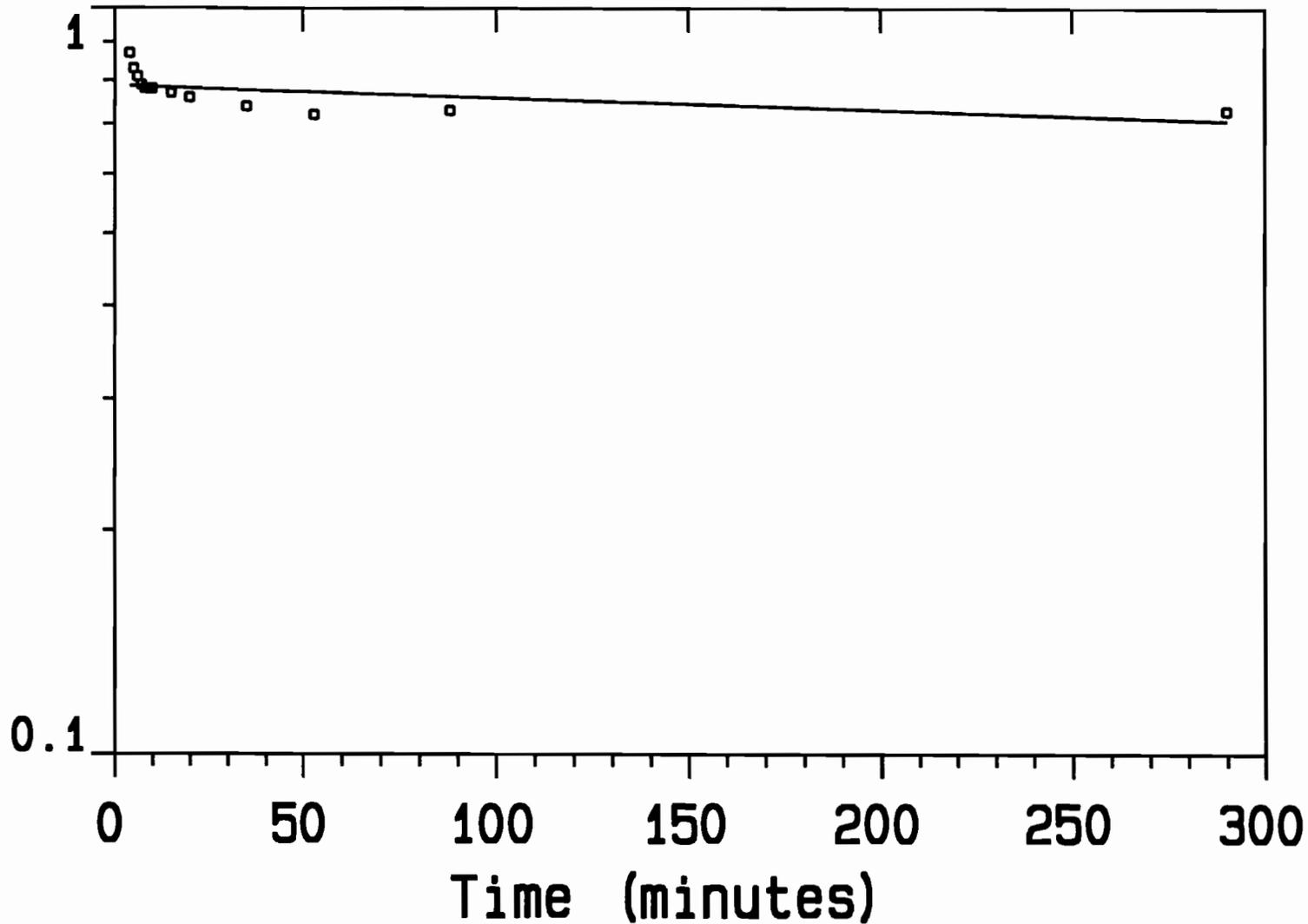
CURRENT RESOLUTION MARIIX NOT AVAILABLE

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Head (feet)



MODEL TYPE: **BOUWER and RICE**

CONDUCTIVITY: .0001590 m/day

TRANSMISSIVITY: .0000925 sq. m/day

INITIAL HEAD: .870 ft

Data Set: UPMW3A02

Date: 1-5-95

for: **NYSDEC**

by: **LMS Engineers**

WELL DATA: Units: ft

AQUIFER: Endless

THICKNESS: 1.910

SCREEN: top: 4.410 base: 14.41

DIAMETER: casing: .1660 intake: .6360

DEPTH: Water Table: 12.50 TD: 14.41

United Plating

Well: UPMW-3A

Schenectady, NY

Schenectady, NY

DATA SET: UPMW3A02

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-3A
COUNTY: Schenectady, NY	WELL DEPTH: 14.41 ft
PROJECT: United Plating	WATER TABLE: 12.500 ft
AQUIFER: Endless	THICKNESS: 1.91 ft
INTAKE RADIUS: 0.318 ft	CASING RADIUS: 0.083 ft
SCREEN TOP: 4.410 ft	SCREEN BASE: 14.41 ft
INITIAL HEAD: 0.870 ft	TRANS. RATIO: 1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 9.26E-5 square m/day

CONDUCTIVITY: .000159 m/day

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

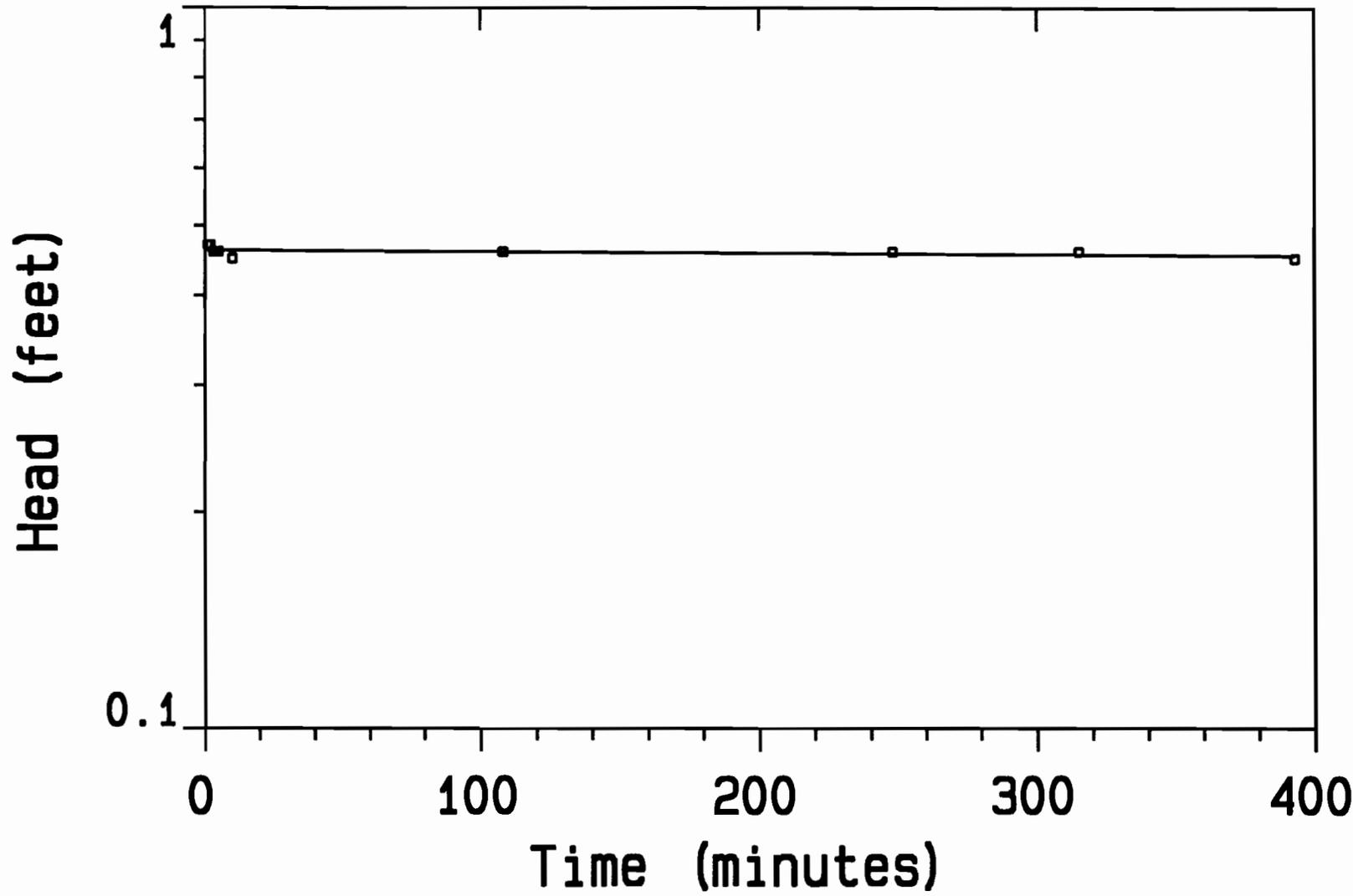
No.	TIME (mins)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	4.00	0.870	0.786	9.63
2	5.00	0.830	0.785	5.31
3	6.00	0.810	0.785	3.01
4	7.00	0.790	0.785	0.595
5	8.00	0.780	0.785	-0.641
6	9.00	0.780	0.784	-0.604
7	10.00	0.780	0.784	-0.567
8	15.00	0.770	0.782	-1.68
9	20.00	0.760	0.781	-2.83
10	35.00	0.740	0.777	-5.02
11	53.00	0.720	0.772	-7.22
12	88.00	0.730	0.762	-4.39
13	290.0	0.730	0.707	3.14

CURRENT RESOLUTION MARIIX NOT AVAILABLE

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LMS Engineers

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MODEL TYPE: BOUWER and RICE CONDUCTIVITY: .0000627 m/day TRANSMISSIVITY: .0000328 sq. m/day INITIAL HEAD: .470 ft		for: NYSDEC by: LMS Engineers WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 1.720 SCREEN: top: 2.890 base: 12.89 DIAMETER: casing: .3340 intake: .8020 DEPTH: Water Table: 11.17 TD: 12.89	United Plating Well: UPMW-4 Schenectady, NY Schenectady, NY
Data Set: UPMW4002	Date: 1-5-95		

DATA SET: UPMW4002

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-4
COUNTY: Schenectady, NY	WELL DEPTH: 12.89 ft
PROJECT: United Plating	WATER TABLE: 11.170 ft
AQUIFER: Endless	THICKNESS: 1.72 ft
INTAKE RADIUS: 0.401 ft	CASING RADIUS: 0.167 ft
SCREEN TOP: 2.890 ft	SCREEN BASE: 12.89 ft
INITIAL HEAD: 0.470 ft	TRANS. RATIO: 1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 3.29E-5 square m/day

CONDUCTIVITY: 6.27E-5 m/day

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

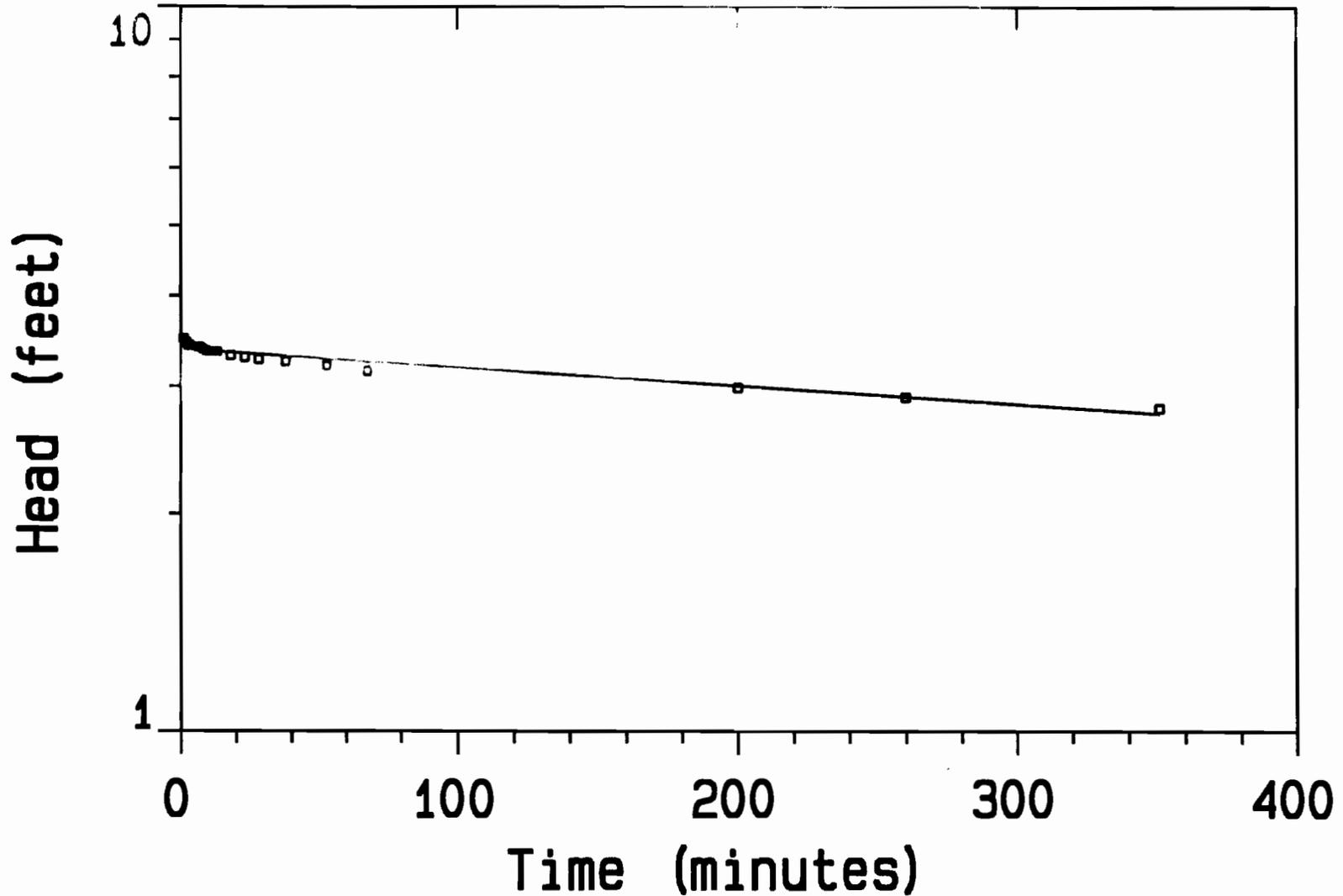
No.	TIME (mins)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	0.470	0.462	1.69
2	2.00	0.470	0.462	1.69
3	3.00	0.460	0.461	-0.433
4	4.00	0.460	0.461	-0.428
5	5.00	0.460	0.461	-0.424
6	10.00	0.450	0.461	-2.63
7	108.0	0.460	0.459	0.00570
8	248.0	0.460	0.457	0.587
9	315.0	0.460	0.456	0.865
10	393.0	0.450	0.454	-1.00

CURRENT RESOLUTION MARIIX NOT AVAILABLE

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LMS Engineers

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MODEL TYPE: BOUWER and RICE CONDUCTIVITY: .0009197 m/day TRANSMISSIVITY: .002108 sq. m/day INITIAL HEAD: 3.49 ft		for: NYSDEC by: LMS Engineers	United Plating Well: UPMW-5 Schenectady, NY Schenectady, NY
Data Set: UPMW5002	Date: 1-5-95	WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 7.520 SCREEN: top: 2.600 base: 12.60 DIAMETER: casing: .3340 intake: .8020 DEPTH: Water Table: 5.080 TD: 12.60	

DATA SET: UPMW5002

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-5
COUNTY: Schenectady, NY	WELL DEPTH: 12.60 ft
PROJECT: United Plating	WATER TABLE: 5.080 ft
AQUIFER: Endless	THICKNESS: 7.52 ft
INTAKE RADIUS: 0.401 ft	CASING RADIUS: 0.167 ft
SCREEN TOP: 2.600 ft	SCREEN BASE: 12.60 ft
INITIAL HEAD: 3.490 ft	TRANS. RATIO: 1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: .00210 square m/day

CONDUCTIVITY: .000920 m/day

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	3.49	3.37	3.25
2	2.00	3.45	3.37	2.18
3	3.00	3.42	3.37	1.38
4	4.00	3.40	3.37	0.863
5	5.00	3.40	3.36	0.921
6	6.00	3.40	3.36	0.979
7	7.00	3.39	3.36	0.744
8	8.00	3.37	3.36	0.214
9	9.00	3.36	3.36	-0.0245
10	10.00	3.35	3.35	-0.264
11	11.00	3.35	3.35	-0.206
12	12.00	3.35	3.35	-0.147
13	13.00	3.35	3.35	-0.0892
14	18.00	3.31	3.34	-1.00
15	23.00	3.29	3.33	-1.32
16	28.00	3.27	3.32	-1.64
17	38.00	3.25	3.30	-1.67
18	53.00	3.20	3.27	-2.36
19	68.00	3.15	3.24	-3.08
20	200.0	2.99	3.00	-0.546
21	260.0	2.90	2.90	-0.0998
22	351.0	2.80	2.75	1.68

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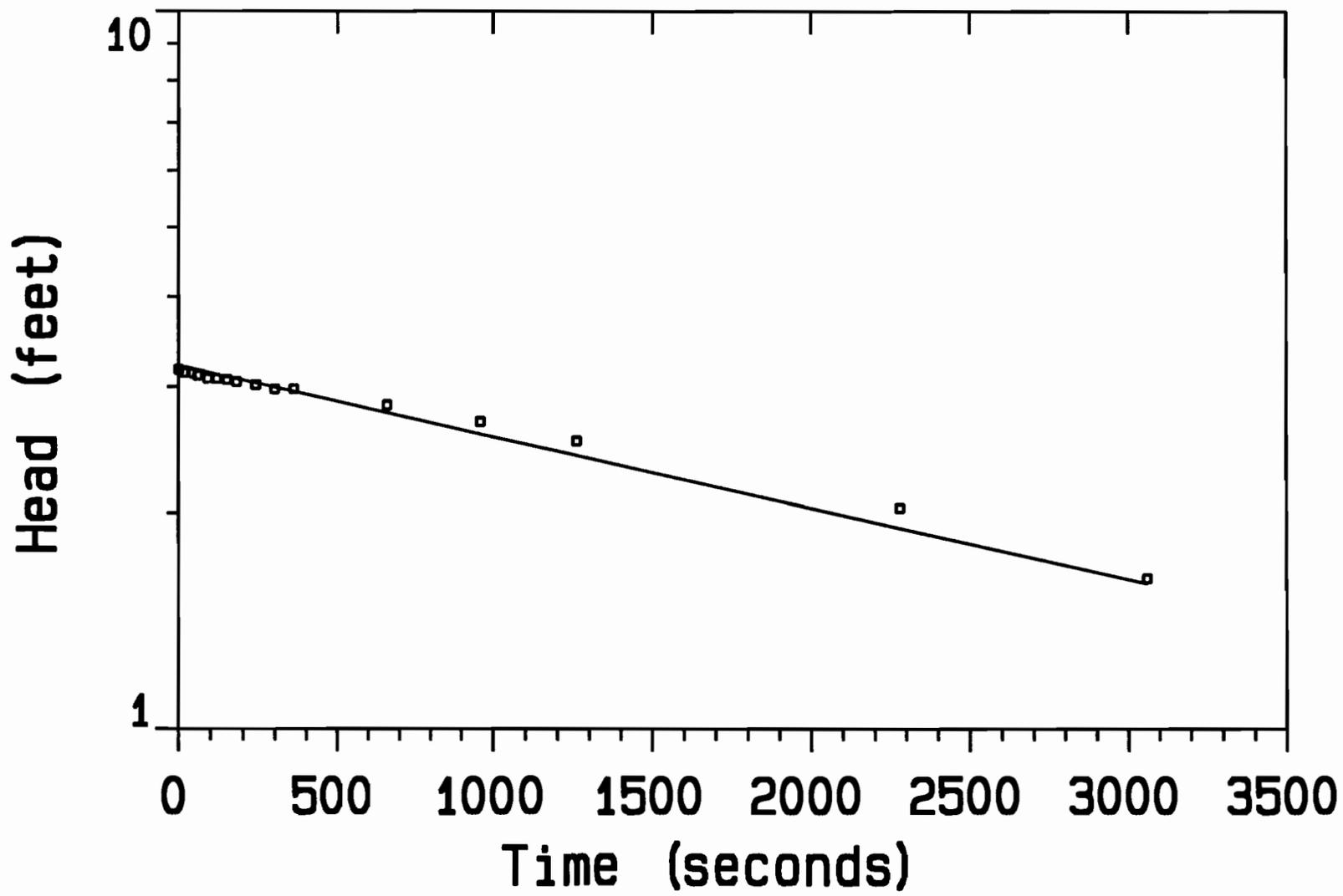
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CURRENT RESOLUTION MARIIX NOT AVAILABLE

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LMS Engineers

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MODEL TYPE: BOUWER and RICE CONDUCTIVITY: .01932 m/day TRANSMISSIVITY: .03293 sq. m/day INITIAL HEAD: 3.17 ft		for: NYSDEC by: LMS Engineers	United Plating Well: UPMW-6 Schenectady, NY Schenectady, NY
Data Set: UPMW6002	Date: 1-5-95	WELL DATA: Units: ft AQUIFER: Endless THICKNESS: 5.590 SCREEN: top: 3.110 base: 13.11 DIAMETER: casing: .3340 intake: .8020 DEPTH: Water Table. 4.200 ID: 13.11	

DATA SET: UPMW6002

CLIENT: NYSDEC	DATE: 1-5-95
LOCATION: Schenectady, NY	WELL NO.: UPMW-6
COUNTY: Schenectady, NY	WELL DEPTH: 13.11 ft
PROJECT: United Plating	WATER TABLE: 4.200 ft
AQUIFER: Endless	THICKNESS: 5.59 ft
INTAKE RADIUS: 0.401 ft	CASING RADIUS: 0.167 ft
SCREEN TOP: 3.110 ft	SCREEN BASE: 13.11 ft
INITIAL HEAD: 3.170 ft	TRANS. RATIO: 1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: .0329 square m/day

CONDUCTIVITY: .0193 m/day

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (secs)	Head, H (ft)		DIFFERENCE (percent)
		DATA	SYNTHETIC	
1	1.00	3.17	3.20	-1.20
2	20.00	3.14	3.19	-1.73
3	40.00	3.13	3.17	-1.59
4	60.00	3.11	3.16	-1.77
5	90.00	3.08	3.14	-2.06
6	120.0	3.08	3.12	-1.36
7	150.0	3.07	3.10	-0.999
8	180.0	3.05	3.07	-0.965
9	240.0	3.02	3.03	-0.577
10	300.0	2.98	2.99	-0.536
11	360.0	2.98	2.95	0.835
12	660.0	2.83	2.75	2.51
13	960.0	2.68	2.57	3.89
14	1260.0	2.52	2.40	4.57
15	2280.0	2.03	1.90	6.21
16	3060.0	1.62	1.59	1.70
17	4080.0	1.17	1.26	-7.74

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

*

LMS Engineers

*

APPENDIX G
TEST PIT LOGS

REPORT OF TEST PIT: UPTP-01

PAGE: 1 of 1

PROJECT: UNITED PLATING RI/ES

CLIENT: NYSDEC

DATE: 8-21-95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS, VT.

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	UPTP-01	2.5-3'		0-3 CRUSHED STONE, ARTIFICIAL FILL.	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
				3-5.5 BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. WEATHERED TILL.	
				5.5-6.5 GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. BASAL TILL.	
				END DEPTH - 6.5'	
				CRUSHED STONE TRENCH FOUND AT WEST END OF TRENCH. THIS APPEARS TO BE THE SOURCE OF WATER	

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH		TRACE	0-10%
				LITTLE	10-20%
				SOME	20-35%
				AND	35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>	SCALE:	

REPORT OF TEST PIT: UPTP-02

PAGE: 1 of 1

PROJECT: UNITED PLATING RE/FS

CLIENT: NYSDEC

DATE: 8.21.95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS, VT

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	UPTP-02	2-3'		0-5.5' SANDY FILL IN OLD SUMP. BLUE STAINING AT 3'. 12" CONCRETE PAD AT 4'. UNKNOWN USE. 1" METAL PIPE BELOW CONCRETE, EMPTY. 10" MASONRY PIPE AT 4.3', 4" WATER IN IT. FILL.	
2					
3					
4					
5	UPTP-02	5-6'		5.5-6' GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. BASALTILL. END DEPTH - 6'	
6					
7					
8					
9					
10					
11				WATER PERCHED ABOVE AND BELOW CONCRETE PAD. FOUND AT 4'	
12					
13					
14					
15					
16					

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH			
				TRACE	0-10%
				LITTLE	10-20%
				SOME	20-35%
				AND	35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>	SCALE:	

REPORT OF TEST PIT: UPTP-03

PAGE: 1 of 1

PROJECT: UNITED PLATING RE/FS

CLIENT: NYSDEC

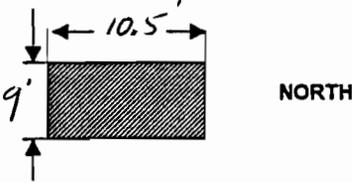
DATE: 8.21.95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS, VT

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	UPTP-03	4-5'	2 5 (IN MASONRY PIPE)	0-5' BROWN SANDY FILL, TRACE BRICK, WOOD, CLAY. 1" METAL PIPE AT ~ 4' 10" MASONRY PIPE ~ 4.3', DRY PERCHED WATER AT 4' - BLACK/GREEN OIL STAINED.	
2					
3					
4					
5					
6				5-6.5 BLUE/GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS, BASAL TILL.	
7					
8					
9					
10					
11				END DEPTH - 6.5'	
12					
13					
14					
15					
16					

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH		TRACE	0-10%
				LITTLE	10-20%
				SOME	20-35%
				AND	35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>	SCALE:	

REPORT OF TEST PIT: UPTP-04

PAGE: 1 of 1

PROJECT: UNITED PLATING RI/FS

CLIENT: NYSDEC

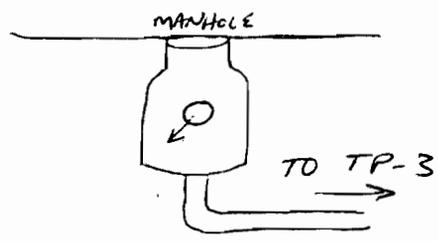
DATE: 8-21-95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS VT.

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	UPTP-04	4-5'		0-5' BROWN SANDY FILL, 4" METAL PIPE ~ 3.5' - DRY 10" MASONRY PIPE ~ 4' - DRY WATER PERCHED AT 3' - BLACK, OIL STAINED. MASONRY PIPE LED TO MANHOLE.	
2					
3					
4					
5					
6				END DEPTH - 5'	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					



GROUNDWATER			TEST PIT PLAN		PROPORTIONS	
DATE	TIME	DEPTH			TRACE	0-10%
					LITTLE	10-20%
					SOME	20-35%
					AND	35-50%
NOT ENCOUNTERED						
PHOTOGRAPH TAKEN						
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>		SCALE:	

REPORT OF TEST PIT: UPTP-05

PAGE: 1041

PROJECT: UNITED PLATING RI/FS

CLIENT: NYSDEC

DATE: 8-22-95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS VT

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE	
	NUMBER	DEPTH				
1	NO SAMPLES TAKEN			0-1.5 FILL - SAND & GRAVEL		
2				1.5-6.4 BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS WEATHERED TILL. PERFORATED PVC PIPE FOUND - FROM MANHOLE?		
3						
4						
5						
6						
7					6.4-9.5 BLUE GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS BASAL TILL	
8						
9						
10					END DEPTH - 9.5'	
11						
12						
13						
14						
15						
16					NO WATER	
GROUNDWATER			TEST PIT PLAN		PROPORTIONS	
DATE	TIME	DEPTH			TRACE	0-10%
					LITTLE	10-20%
					SOME	20-35%
					AND	35-50%
NOT ENCOUNTERED						
PHOTOGRAPH TAKEN						
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>		SCALE:	

REPORT OF TEST PIT: UPTP-06

PAGE: 1 of 1

PROJECT: UNITED PLATING RIFES

CLIENT: NYSDEC

DATE: 8-22-95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS VT

EQUIPMENT: KOMATSU PC 15D

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	UPTP-06	2.5-3'		0-4' BROWN SANDY FILL TRACE BRICK, TRACE WOOD	
2					
3					
4					
5				END DEPTH - 4'	
6				POSSIBLE TRENCH 4' BELOW GRADE SURFACE, FROM OUTSIDE SUMP BEHIND BUILDING.	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					NO WATER

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH			
				TRACE	0-10%
				LITTLE	10-20%
				SOME	20-35%
				AND	35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					

OBSERVER: <u>ML, PY</u>	JOB NUMBER: <u>650-092</u>	SCALE:
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PROJECT: UNITED PLATING RI/FS

CLIENT: NYSDEC

DATE: 8-22-95

CONTRACTOR: MC ENVIRONMENTAL/POLLUTION SOLUTIONS VT

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1				0-1.1' ASPHALT & COBBLE FILL	
2				1.1-3.4' BROWN SANDY FILL, TRACE WOOD.	
3					
4	UPTP-07	3.5-4'		3.4-5' BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. WEATHERED TILL.	
5	DAMP SPOT ON SOUTHERN WALL OF PIT SAMPLED			5-6' GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. BASAL TILL.	
6				END DEPTH - 6'	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH		TRACE	0-10%
				LITTLE	10-20%
				SOME	20-35%
				AND	35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>	SCALE:	

REPORT OF TEST PIT: UPTP-08

PAGE: 1 of 1

PROJECT: UNITED PLATING RI/FS

CLIENT: NYSDEC

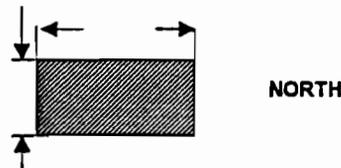
DATE: 8.22.95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS VT

EQUIPMENT: KOMATSU PL150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	NO SAMPLES TAKEN			0-1.5 ASPHALT & COBBLE FILL	
2				1.5-6 BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS WEATHERED TILL.	
3					
4					
5					
6					
7				END DEPTH - 6'	
8					
9					
10					
11					
12					
13					
14					
15					
16				NO WATER	

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH		TRACE	0-10%
				LITTLE	10-20%
				SOME	20-35%
				AND	35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					

OBSERVER: <u>ML, PY</u>	JOB NUMBER: <u>650-092</u>	SCALE:
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PROJECT: UNITED PLATING RE/FS

CLIENT: NYSDEC

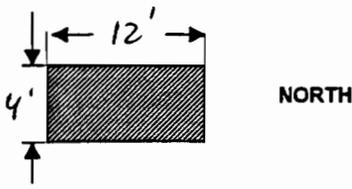
DATE: 8.22.95

CONTRACTOR: MC ENVIRONMENTAL/POLLUTION SOLUTIONS VT.

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE
	NUMBER	DEPTH			
1	NO SAMPLES TAKEN			0-1.1 CRUSHED STONE & GRAVEL FILL.	
2				1.1-5.8 BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. WEATHERED TILL	
3					
4					
5					
6					
7				5.8-6.1 BLUE GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. BASAL TILL.	
8					
9				END DEPTH - 6.1'	
10					
11					
12					
13					
14					
15					
16					NO WATER

GROUNDWATER			TEST PIT PLAN	PROPORTIONS		
DATE	TIME	DEPTH		TRACE 0-10% LITTLE 10-20% SOME 20-35% AND 35-50%		
NOT ENCOUNTERED						
PHOTOGRAPH TAKEN						
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>	SCALE:		

PROJECT: UNITED PLATING RI/ES

CLIENT: NYSDEC

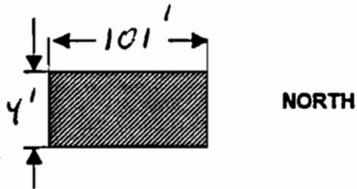
DATE: 8-22-95

CONTRACTOR: MC ENVIRONMENTAL / POLLUTION SOLUTIONS VT

EQUIPMENT: KOMATSU PC150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE	
	NUMBER	DEPTH				
1	NO SAMPLES TAKEN			0-4' BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. WEATHERED TILL.		
2						
3						
4					END DEPTH - 4'	
5						
6						
7						
8					1- GAS PIPE DISCOVERED AT ~ 2', GOING FROM FOSTER AVE TO CORNER OF FACILITY BETWEEN 1 STORY BUILDING & 2 STORY BUILDING	
9						
10						
11						
12						
13						
14						
15						
16					NO WATER	

GROUNDWATER			TEST PIT PLAN	PROPORTIONS								
DATE	TIME	DEPTH		<table border="0"> <tr> <td>TRACE</td> <td>0-10%</td> </tr> <tr> <td>LITTLE</td> <td>10-20%</td> </tr> <tr> <td>SOME</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table>	TRACE	0-10%	LITTLE	10-20%	SOME	20-35%	AND	35-50%
TRACE	0-10%											
LITTLE	10-20%											
SOME	20-35%											
AND	35-50%											
NOT ENCOUNTERED												
PHOTOGRAPH TAKEN												
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>60-092</u>	SCALE:								

REPORT OF TEST PIT: UPTP-11

PAGE: 1 of 1

PROJECT: UNITED PLATING RE/FS

CLIENT: NYSDEC

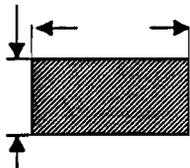
DATE: 8-22-95

CONTRACTOR: MC ENVIRONMENTAL/POLLUTION SOLUTIONS VT

EQUIPMENT: KOMATSU PC 150

ELEVATION/DATUM: GRADE SURFACE

DEPTH (ft)	SAMPLE		HNU/OVA	DESCRIPTION	WATER TABLE	
	NUMBER	DEPTH				
1	NO SAMPLES TAKEN			0-2.4 SAND & SILT FILL, DAMP. SOME ASPHALT AT 2'		
2						
3					2.4-6.5 BROWN SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS. WEATHERED TILL. DRY	
4						
5						
6						
7					6.5-8.5 GRAY SILT & FINE SAND, TRACE CLAY, TRACE VERY COARSE SAND, TRACE PEBBLES, COBBLES, BOULDERS, BASAL TILL. DRY.	
8						
9					END DEPTH - 8'.5'	
10						
11						
12						
13						
14						
15						
16					NO WATER	

GROUNDWATER			TEST PIT PLAN	PROPORTIONS	
DATE	TIME	DEPTH			
					TRACE 0-10%
					LITTLE 10-20%
					SOME 20-35%
					AND 35-50%
NOT ENCOUNTERED					
PHOTOGRAPH TAKEN					
OBSERVER: <u>ML, PY</u>			JOB NUMBER: <u>650-092</u>	SCALE:	

APPENDIX J

RISK ASSESSMENT CALCULATIONS

United Plating RA
650-097

TABLE J-1

CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SHALLOW SOIL SAMPLES - OFF-SITE SOILS

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.015	-	1.0E-02	1.50	1.7224E-05
1,1,1-Trichloroethane	0.012	-	9.0E-02 w	0.13	1.531E-06
Trichloroethylene	0.026	-	6.0E-03 e	4.33	4.9758E-05
SVOCs:					
Naphthalene	0.79	-	4.0E-02 w	19.75	0.00022678
2-Methylnaphthalene	0.29	-	NV	-	-
Acenaphthylene	1.1	-	NV	-	-
Acenaphthene	0.99	-	6.0E-02	16.50	0.00018946
Dibenzofuran	0.59	-	4.0E-03 e	147.50	0.00169367
Fluorene	1.2	-	4.0E-02	30.00	0.00034448
Phenanthrene	8.7	-	NV	-	-
Anthracene	2.8	-	3.0E-01	9.33	0.00010717
Carbazole	1.7	-	NV	-	-
Fluoranthene	16	-	4.0E-02	400.00	0.00459301
Pyrene	13	-	3.0E-02	433.33	0.00497576
Benzo(a)anthracene	7.8	-	NV	-	-
Chrysene	7.8	-	NV	-	-
Benzo(b)fluoranthene	7.8	-	NV	-	-
Benzo(k)fluoranthene	4.4	-	NV	-	-
Benzo(a)pyrene	7.7	-	NV	-	-
Indeno(1,2,3-c,d)pyrene	5.1	-	NV	-	-
Dibenzo(a,h)anthracene	2	-	NV	-	-
Benzo(g,h,i)perylene	4.7	-	NV	-	-
Pesticides/PCBs:					
Aldrin	0.0018	-	3.0E-05	60.00	0.00068895
Heptachlor epoxide	0.0043	-	1.3E-05	330.77	0.00379806

TABLE J-1 (Continued)

Endosulfan I	0.0035	-	6.0E-03	0.58	6.6981E-06
Dieldrin	0.0098	-	5.0E-05	196.00	0.00225057
4,4'-DDE	0.068	-	NV	-	-
Endrin	0.029	-	3.0E-04	96.67	0.00110998
Endosulfan II	0.0094	-	6.0E-03	1.57	1.7989E-05
4,4'-DDD	0.0037	-	NV	-	-
4,4'-DDT	0.059	-	5.0E-04	118.00	0.00135494
Methoxychlor	0.021	-	5.0E-03	4.20	4.8227E-05
Metals:					
Arsenic	15	-	3.0E-04	50000.00	0.67412578
Cadmium	4.3	-	5.0E-04	8600.00	0.09874963
Chromium VI	37	-	5.0E-03	7400.00	0.08497062
Copper	19	-	4.0E-02 e	475.00	0.00545419
Lead	227	-	NV	-	-
Mercury	0.22	-	8.6E-05 c	2567.09	0.0294767
Nickel	303	-	2.0E-02	15150.00	0.17396011
Zinc	308	-	3.0E-01	1026.67	0.01178872
CARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.015	5.2E-02 e	-	0.00078	3.6301E-07
1,1,1-Trichloroethane	0.012	NV	-	-	-
Trichloroethylene	0.026	1.1E-02 w	-	0.000286	1.331E-07
SVOCs:					
Naphthalene	0.79	NV	-	-	-
2-Methylnaphthalene	0.29	NV	-	-	-
Acenaphthylene	1.1	NV	-	-	-
Acenaphthene	0.99	NV	-	-	-
Dibenzofuran	0.59	NV	-	-	-
Fluorene	1.2	NV	-	-	-
Phenanthrene	8.7	NV	-	-	-
Anthracene	2.8	NV	-	-	-
Carbazole	1.7	2.0E-02	-	0.0340	1.5823E-05
Fluoranthene	16	NV	-	-	-
Pyrene	13	NV	-	-	-
Benzo(a)anthracene	7.8	7.3E-01 e	-	5.6940	0.00264996
Chrysene	7.8	7.3E-03 e	-	0.0569	2.65E-05
Benzo(b)fluoranthene	7.8	7.3E-01 e	-	5.6940	0.00264996
Benzo(k)fluoranthene	4.4	7.3E-02 e	-	0.3212	0.00014948

TABLE J-1 (Continued)

Benzo(a)pyrene	7.7	7.3E+00	-	56.2100	0.02615982
Indeno(1,2,3-c,d)pyrene	5.1	7.3E-01 e	-	3.7230	0.00173266
Dibenzo(a,h)anthracene	2	7.3E+00 e	-	14.6000	0.00679476
Benzo(g,h,i)perylene	4.7	NV	-	-	-
Pesticides/PCBs:					
Aldrin	0.0018	1.7E+01	-	0.0306	1.4241E-05
Heptachlor epoxide	0.0043	9.1E+00	-	0.0391	1.8211E-05
Endosulfan I	0.0035	NV	-	-	-
Dieldrin	0.0098	1.6E+01	-	0.1568	7.2974E-05
4,4'-DDE	0.068	3.4E-01	-	0.0231	1.076E-05
Endrin	0.029	NV	-	-	-
Endosulfan II	0.0094	NV	-	-	-
4,4'-DDD	0.0037	2.4E-01	-	0.0009	4.1327E-07
4,4'-DDT	0.059	3.4E-01	-	0.0201	9.3358E-06
Methoxychlor	0.021	NV	-	-	-
Metals:					
Arsenic	15	1.5E+01 c	-	226.50	0.10541185
Cadmium	4.3	6.3E+00 c	-	27.09	0.01260754
Chromium VI	37	4.2E+01 c	-	1554.00	0.72322302
Copper	19	NV	-	-	-
Lead	227	NV	-	-	-
Mercury	0.22	NV	-	-	-
Nickel	303	8.4E-01 d	-	254.52	0.1184522
Zinc	308	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - Slope factor or RfD based on inhalation.

d - Slope factor for inhalation of nickel refinery dust.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-2

CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SHALLOW SOIL SAMPLES - ON-SITE SOILS OUTSIDE FENCE

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.012	-	1.0E-02	1.20	2.4254E-05
1,1,1-Trichloroethane	0.01	-	9.0E-02 w	0.11	2.2458E-06
Trichloroethylene	0.019	-	6.0E-03 e	3.17	6.4005E-05
SVOCs:					
Phenanthrene	4.5	-	NV	-	-
Anthracene	1	-	3.0E-01	3.33	6.7373E-05
Carbazole	1	-	NV	-	-
Fluoranthene	4.5	-	4.0E-02	112.50	0.00227385
Pyrene	5	-	3.0E-02	166.67	0.00336867
Benzo(a)anthracene	2.9	-	NV	-	-
Chrysene	2.4	-	NV	-	-
Benzo(b)fluoranthene	2.8	-	NV	-	-
Benzo(k)fluoranthene	2.4	-	NV	-	-
Benzo(a)pyrene	2.5	-	NV	-	-
Indeno(1,2,3-c,d)pyrene	1.2	-	NV	-	-
Dibenzo(a,h)anthracene	0.55	-	NV	-	-
Benzo(g,h,i)perylene	1.1	-	NV	-	-
Pesticides/PCBs:					
Aldrin	0.0038	-	3.0E-05	126.67	0.00256019
Dieldrin	0.024	-	5.0E-05	480.00	0.00970178
4,4'-DDE	0.045	-	NV	-	-
Endrin	0.038	-	3.0E-04	126.67	0.00256019
Endosulfan II	0.0065	-	6.0E-03	1.08	2.1896E-05
4,4'-DDD	0.025	-	NV	-	-
4,4'-DDT	0.11	-	5.0E-04	220.00	0.00444665
Methoxychlor	0.012	-	5.0E-03	2.40	4.8509E-05

TABLE J-2 (Continued)

Metals:					
Arsenic	7.9	-	3.0E-04	26333.33	0.53225039
Cadmium	5.5	-	5.0E-04	11000.00	0.22233244
Chromium VI	33	-	5.0E-03	6600.00	0.13339946
Copper	45	-	4.0E-02 e	1125.00	0.02273855
Lead	64500	-	NV	-	-
Nickel	37	-	2.0E-02	1850.00	0.03739227
Zinc	397	-	3.0E-01	1323.33	0.02674727
CARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.012	5.2E-02 e	-	0.0006	3.9043E-07
1,1,1-Trichloroethane	0.01	NV	-	-	-
Trichloroethylene	0.019	1.1E-02 w	-	0.0002	1.3077E-07
SVOCs:					
Phenanthrene	4.5	NV	-	-	-
Anthracene	1	NV	-	-	-
Carbazole	1	2.0E-02	-	0.0200	1.2514E-05
Fluoranthene	4.5	NV	-	-	-
Pyrene	5	NV	-	-	-
Benzo(a)anthracene	2.9	7.3E-01 e	-	2.1170	0.00132457
Chrysene	2.4	7.3E-03 e	-	0.0175	1.0962E-05
Benzo(b)fluoranthene	2.8	7.3E-01 e	-	2.0440	0.0012789
Benzo(k)fluoranthene	2.4	7.3E-02 e	-	0.1752	0.00010962
Benzo(a)pyrene	2.5	7.3E+00	-	18.2500	0.01141872
Indeno(1,2,3-c,d)pyrene	1.2	7.3E-01 e	-	0.8760	0.0005481
Dibenzo(a,h)anthracene	0.55	7.3E+00 e	-	4.0150	0.00251212
Benzo(g,h,i)perylene	1.1	NV	-	-	-
Pesticides/PCBs:					
Aldrin	0.0038	1.7E+01	-	0.0646	4.0419E-05
Dieldrin	0.024	1.6E+01	-	0.3840	0.00024026
4,4'-DDE	0.045	3.4E-01	-	0.0153	9.573E-06
Endrin	0.038	NV	-	-	-
Endosulfan II	0.0065	NV	-	-	-
4,4'-DDD	0.025	2.4E-01	-	0.0060	3.7541E-06
4,4'-DDT	0.11	3.4E-01	-	0.0374	2.3401E-05
Methoxychlor	0.012	NV	-	-	-
Metals:					
Arsenic	7.9	1.5E+01 c	-	118.50	0.07414346

TABLE J-2 (Continued)

Cadmium	5.5	6.3E+00 c	-	34.65	0.02167992
Chromium VI	33	4.2E+01 c	-	1386.00	0.86719695
Copper	45	NV	-	-	-
Lead	64500	NV	-	-	-
Nickel	37	8.4E-01 d	-	31.08	0.01944623
Zinc	397	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - Slope factor or RfD based on inhalation.

d - Slope factor for inhalation of nickel refinery dust.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-3

CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SHALLOW SOIL SAMPLES - ON-SITE SOILS WITHIN FENCE

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.007	-	1.0E-02	0.70	4.5821E-06
Trichloroethylene	0.009	-	6.0E-03 e	1.50	9.8187E-06
SVOCs:					
Naphthalene	2.8	-	4.0E-02 w	70.00	0.00045821
2-Methylnaphthalene	2.4	-	NV	-	-
Acenaphthylene	12	-	NV	-	-
Acenaphthene	0.27	-	6.0E-02	4.50	2.9456E-05
Dibenzofuran	8.9	-	4.0E-03 e	2225.00	0.0145644
Fluorene	17	-	4.0E-02	425.00	0.00278196
Phenanthrene	93	-	NV	-	-
Anthracene	28	-	3.0E-01	93.33	0.00061094
Carbazole	25	-	NV	-	-
Fluoranthene	89	-	4.0E-02	2225.00	0.0145644
Pyrene	71	-	3.0E-02	2366.67	0.01549172
Benzo(a)anthracene	43	-	NV	-	-
Chrysene	47	-	NV	-	-
Benzo(b)fluoranthene	30	-	NV	-	-
Benzo(k)fluoranthene	36	-	NV	-	-
Benzo(a)pyrene	37	-	NV	-	-
Indeno(1,2,3-c,d)pyrene	22	-	NV	-	-
Dibenzo(a,h)anthracene	9.3	-	NV	-	-
Benzo(g,h,i)perylene	20	-	NV	-	-
Pesticides/PCBs:					
Aldrin	0.0025	-	3.0E-05	83.33	0.00054548
Heptachlor epoxide	0.014	-	1.3E-05	1076.92	0.00704932
Dieldrin	0.037	-	5.0E-05	740.00	0.00484389

TABLE J-3 (Continued)

4,4'-DDE	0.0029	-	NV	-	-
Endrin	0.083	-	3.0E-04	276.67	0.001811
4,4'-DDT	0.0074	-	5.0E-04	14.80	9.6878E-05
Methoxychlor	0.04	-	5.0E-03	8.00	5.2366E-05
Metals:					
Arsenic	7.8	-	3.0E-04	26000.00	0.17019075
Cadmium	49	-	5.0E-04	98000.00	0.64148823
Chromium VI	72	-	5.0E-03	14400.00	0.09425949
Copper	75	-	4.0E-02 e	1875.00	0.01227337
Lead	236	-	NV	-	-
Nickel	39	-	2.0E-02	1950.00	0.01276431
Zinc	280	-	3.0E-01	933.33	0.00610941
CARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.007	5.2E-02 e	-	0.0004	9.3476E-08
Trichloroethylene	0.009	1.1E-02 w	-	0.0001	2.5423E-08
SVOCs:					
Naphthalene	2.8	NV	-	-	-
2-Methylnaphthalene	2.4	NV	-	-	-
Acenaphthylene	12	NV	-	-	-
Acenaphthene	0.27	NV	-	-	-
Dibenzofuran	8.9	NV	-	-	-
Fluorene	17	NV	-	-	-
Phenanthrene	93	NV	-	-	-
Anthracene	28	NV	-	-	-
Carbazole	25	2.0E-02	-	0.5000	0.0001284
Fluoranthene	89	NV	-	-	-
Pyrene	71	NV	-	-	-
Benzo(a)anthracene	43	7.3E-01 e	-	31.3900	0.00806104
Chrysene	47	7.3E-03 e	-	0.3431	8.8109E-05
Benzo(b)fluoranthene	30	7.3E-01 e	-	21.9000	0.00562398
Benzo(k)fluoranthene	36	7.3E-02 e	-	2.6280	0.00067488
Benzo(a)pyrene	37	7.3E+00	-	270.1000	0.06936246
Indeno(1,2,3-c,d)pyrene	22	7.3E-01 e	-	16.0600	0.00412425
Dibenzo(a,h)anthracene	9.3	7.3E+00 e	-	67.8900	0.01743435
Benzo(g,h,i)perylene	20	NV	-	-	-
Pesticides/PCBs:					
Aldrin	0.0025	1.7E+01	-	0.0425	1.0914E-05

TABLE J-3 (Continued)

Heptachlor epoxide	0.014	9.1E+00	-	0.1274	3.2717E-05
Dieldrin	0.037	1.6E+01	-	0.5920	0.00015203
4,4'-DDE	0.0029	3.4E-01	-	0.0010	2.5321E-07
Endrin	0.083	NV	-	-	-
4,4'-DDT	0.0074	3.4E-01	-	0.0025	6.4612E-07
Methoxychlor	0.04	NV	-	-	-
Metals:					
Arsenic	7.8	1.5E+01 c	-	117.00	0.03004594
Cadmium	49	6.3E+00 c	-	308.70	0.07927506
Chromium VI	72	4.2E+01 c	-	3024.00	0.77657198
Copper	75	NV	-	-	-
Lead	236	NV	-	-	-
Nickel	39	8.4E-01 d	-	32.76	0.00841286
Zinc	280	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - Slope factor or RfD based on inhalation.

d - Slope factor for inhalation of nickel refinery dust.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-4

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SHALLOW SOIL SAMPLES - ALL ON-SITE SOILS**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.012	-	1.0E-02	1.20	7.8051E-06
1,1,1-Trichloroethane	0.01	-	9.0E-02 w	0.11	7.227E-07
Trichloroethylene	0.019	-	6.0E-03 e	3.17	2.0597E-05
SVOCs:					
Naphthalene	2.8	-	4.0E-02 w	70.00	0.0004553
2-Methylnaphthalene	2.4	-	NV	-	-
Acenaphthylene	12	-	NV	-	-
Acenaphthene	0.27	-	6.0E-02	4.50	2.9269E-05
Dibenzofuran	8.9	-	4.0E-03 e	2225.00	0.01447202
Fluorene	17	-	4.0E-02	425.00	0.00276432
Phenanthrene	93	-	NV	-	-
Anthracene	28	-	3.0E-01	93.33	0.00060707
Carbazole	25	-	NV	-	-
Fluoranthene	89	-	4.0E-02	2225.00	0.01447202
Pyrene	71	-	3.0E-02	2366.67	0.01539346
Benzo(a)anthracene	43	-	NV	-	-
Chrysene	47	-	NV	-	-
Benzo(b)fluoranthene	30	-	NV	-	-
Benzo(k)fluoranthene	36	-	NV	-	-
Benzo(a)pyrene	37	-	NV	-	-
Indeno(1,2,3-c,d)pyrene	22	-	NV	-	-
Dibenzo(a,h)anthracene	9.3	-	NV	-	-
Benzo(g,h,i)perylene	20	-	NV	-	-
Pesticides/PCBs:					
Aldrin	0.0038	-	3.0E-05	126.67	0.00082388
Heptachlor epoxide	0.014	-	1.3E-05	1076.92	0.00700461

TABLE J-4 (Continued)

Dieldrin	0.037	-	5.0E-05	740.00	0.00481317
4,4'-DDE	0.045	-	NV	-	-
Endosulfan II	0.0065	-	6.0E-03	1.08	7.0463E-06
Endrin	0.083	-	3.0E-04	276.67	0.00179952
4,4'-DDD	0.025	-	NV	-	-
4,4'-DDT	0.11	-	5.0E-04	220.00	0.00143094
Methoxychlor	0.04	-	5.0E-03	8.00	5.2034E-05
Metals:					
Arsenic	7.9	-	3.0E-04	26333.33	0.1712793
Cadmium	49	-	5.0E-04	98000.00	0.63741917
Chromium VI	72	-	5.0E-03	14400.00	0.09366159
Copper	75	-	4.0E-02 e	1875.00	0.01219552
Lead	64500	-	NV	-	-
Nickel	39	-	2.0E-02	1950.00	0.01268334
Zinc	397	-	3.0E-01	1323.33	0.00860733
CARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.012	5.2E-02 e	-	0.0006	1.6016E-07
1,1,1-Trichloroethane	0.01	NV	-	-	-
Trichloroethylene	0.019	1.1E-02 w	-	0.0002	5.3642E-08
SVOCs:					
Naphthalene	2.8	NV	-	-	-
2-Methylnaphthalene	2.4	NV	-	-	-
Acenaphthylene	12	NV	-	-	-
Acenaphthene	0.27	NV	-	-	-
Dibenzofuran	8.9	NV	-	-	-
Fluorene	17	NV	-	-	-
Phenanthrene	93	NV	-	-	-
Anthracene	28	NV	-	-	-
Carbazole	25	2.0E-02	-	0.5000	0.00012833
Fluoranthene	89	NV	-	-	-
Pyrene	71	NV	-	-	-
Benzo(a)anthracene	43	7.3E-01 e	-	31.3900	0.00805658
Chrysene	47	7.3E-03 e	-	0.3431	8.806E-05
Benzo(b)fluoranthene	30	7.3E-01 e	-	21.9000	0.00562087
Benzo(k)fluoranthene	36	7.3E-02 e	-	2.6280	0.0006745
Benzo(a)pyrene	37	7.3E+00	-	270.1000	0.06932403
Indeno(1,2,3-c,d)pyrene	22	7.3E-01 e	-	16.0600	0.00412197
Dibenzo(a,h)anthracene	9.3	7.3E+00 e	-	67.8900	0.01742469

TABLE J-4 (Continued)

Benzo(g,h,i)perylene	20	NV	-	-	-
Pesticides/PCBs:					
Aldrin	0.038	1.7E+01	-	0.6460	0.0001658
Heptachlor epoxide	0.014	9.1E+00	-	0.1274	3.2699E-05
Dieldrin	0.037	1.6E+01	-	0.5920	0.00015194
4,4'-DDE	0.045	3.4E-01	-	0.0153	3.9269E-06
Endosulfan II	0.0065	NV	-	-	-
Endrin	0.083	NV	-	-	-
4,4'-DDD	0.025	2.4E-01	-	0.0060	1.54E-06
4,4'-DDT	0.11	3.4E-01	-	0.0374	9.5991E-06
Methoxychlor	0.04	NV	-	-	-
Metals:					
Arsenic	7.9	1.5E+01 c	-	118.50	0.03041428
Cadmium	49	6.3E+00 c	-	308.70	0.07923113
Chromium VI	72	4.2E+01 c	-	3024.00	0.77614165
Copper	75	NV	-	-	-
Lead	64,500	NV	-	-	-
Nickel	39	8.4E-01 d	-	32.76	0.0084082
Zinc	397	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - Slope factor or RfD based on inhalation.

d - Slope factor for inhalation of nickel refinery dust.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-5

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SHALLOW GROUNDWATER**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (ug/l)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
VOCs:					
1,1,1-Trichloroethane	260	-	9.0E-02 w	2888.89	0.00010419
Trichloroethylene	430	-	6.0E-03 e	71666.67	0.00258481
Pesticides/PCBs:					
Arochlor 1260	0.59	-	2.0E-05 e	29500.00	0.00106398
Metals:					
Arsenic	589	-	3.0E-04	1963333.33	0.07081168
Beryllium	29	-	5.0E-03	5800.00	0.00020919
Cadmium	685	-	5.0E-04	1370000.00	0.04941189
Chromium VI	106000	-	5.0E-03	21200000.00	0.76462189
Copper	109000	-	4.0E-02 e	2725000.00	0.09828277
Lead	2810	-	NV	-	-
Nickel	4780	-	2.0E-02	239000.00	0.00862003
Silver	216	-	5.0E-03	43200.00	0.0015581
Zinc	7420	-	3.0E-01	24733.33	0.00089206
Cyanide	1020	-	2.0E-02	51000.00	0.00183942
CARCINOGENIC					
VOCs:					
1,1,1-Trichloroethane	260	NV	-	-	-
Trichloroethylene	430	1.1E-02 w	-	4.73	1
Pesticides/PCBs:					
Arochlor 1260	0.59	NV	-	-	-
Metals:					
Arsenic	589	NV	-	-	-

TABLE J-5 (Continued)

Beryllium	29	NV	-	-	-
Cadmium	685	NV	-	-	-
Chromium VI	106000	NV	-	-	-
Copper	109000	NV	-	-	-
Lead	2810	NV	-	-	-
Nickel	4780	NV	-	-	-
Silver	216	NV	-	-	-
Zinc	7420	NV	-	-	-
Cyanide	1020	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's Integrated Risk Information System (IRIS) or the

Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-6

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
INTERMEDIATE GROUNDWATER**

Only chromium was retained as a potential COC for intermediate groundwater, therefore no concentration-toxicity screening was conducted.

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TABLE J-7

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
DEEP GROUNDWATER**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (ug/l)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Arsenic	228	-	3.0E-04	760000.00	0.67087434
Cadmium	58	-	5.0E-04	116000.00	0.10239661
Chromium VI	882	-	5.0E-03	176400.00	0.15571347
Copper	1470	-	4.0E-02 e	36750.00	0.03244031
Lead	425	-	NV	-	-
Nickel	682	-	2.0E-02	34100.00	0.03010107
Zinc	2880	-	3.0E-01	9600.00	0.0084742
CARCINOGENIC					
Metals:					
Arsenic	228	NV	-	-	-
Cadmium	58	NV	-	-	-
Chromium VI	882	NV	-	-	-
Copper	1470	NV	-	-	-
Lead	425	NV	-	-	-
Nickel	682	NV	-	-	-
Zinc	2880	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-8

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SUBSURFACE SOIL DATA**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.005	-	1.0E-02	0.50	8.5211E-07
1,1,1-Trichloroethane	0.018	-	9.0E-02 w	0.20	3.4084E-07
Trichloroethylene	15	-	6.0E-03 e	2500.00	0.00426055
SVOCs:					
Acenaphthene	69	-	6.0E-02	1150.00	0.00195985
Fluorene	69	-	4.0E-02	1725.00	0.00293978
Phenanthrene	390	-	NV	-	-
Anthracene	120	-	3.0E-01	400.00	0.00068169
Carbazole	100	-	NV	-	-
Fluoranthene	490	-	4.0E-02	12250.00	0.02087668
Pyrene	370	-	3.0E-02	12333.33	0.0210187
Benzo(a)anthracene	290	-	NV	-	-
Chrysene	320	-	NV	-	-
Benzo(b)fluoranthene	190	-	NV	-	-
Benzo(k)fluoranthene	110	-	NV	-	-
Benzo(a)pyrene	150	-	NV	-	-
Indeno(1,2,3-c,d)pyrene	76	-	NV	-	-
Dibenzo(a,h)anthracene	44	-	NV	-	-
Benzo(g,h,i)perylene	74	-	NV	-	-
Metals:					
Arsenic	15	-	3.0E-04	50000.00	0.08521095
Cadmium	158	-	5.0E-04	316000.00	0.53863322
Chromium VI	775	-	5.0E-03	155000.00	0.26416396
Copper	712	-	4.0E-02 e	17800.00	0.0303361
Lead	344	-	NV	-	-
Nickel	102	-	2.0E-02	5100.00	0.00869152

TABLE J-8 (Continued)

Silver	50	-	5.0E-03	10000.00	0.01704219
Zinc	756	-	3.0E-01	2520.00	0.00429463
CARCINOGENIC					
VOCs:					
Tetrachloroethylene	0.005	5.2E-02 e	-	0.00026	7.2843E-09
1,1,1-Trichloroethane	0.018	NV	-	-	-
Trichloroethylene	15	1.1E-02 w	-	0.165	4.6227E-06
SVOCs:					
Acenaphthene	69	NV	-	-	-
Fluorene	69	NV	-	-	-
Phenanthrene	390	NV	-	-	-
Anthracene	120	NV	-	-	-
Carbazole	100	2.0E-02	-	2.0000	5.6033E-05
Fluoranthene	490	NV	-	-	-
Pyrene	370	NV	-	-	-
Benzo(a)anthracene	290	7.3E-01 e	-	211.7000	0.00593112
Chrysene	320	7.3E-03 e	-	2.3360	6.5447E-05
Benzo(b)fluoranthene	190	7.3E-01 e	-	138.7000	0.00388591
Benzo(k)fluoranthene	110	7.3E-02 e	-	8.0300	0.00022497
Benzo(a)pyrene	150	7.3E+00	-	1095.0000	0.0306782
Indeno(1,2,3-c,d)pyrene	76	7.3E-01 e	-	55.4800	0.00155436
Dibenzo(a,h)anthracene	44	7.3E+00 e	-	321.2000	0.00899894
Benzo(g,h,i)perylene	74	NV	-	-	-
Pesticides/PCBs:					
Dieldrin	0.056	1.6E+01	-	0.8960	2.5103E-05
Endosulfan II	0.037	NV	-	-	-
4,4'-DDT	0.02	3.4E-01	-	0.0068	1.9051E-07
Metals:					
Arsenic	15	1.5E+01 c	-	226.50	0.00634577
Cadmium	158	6.3E+00 c	-	995.40	0.02788775
Chromium VI	775	4.2E+01 c	-	32550.00	0.91194112
Copper	712	NV	-	-	-
Lead	344	NV	-	-	-
Nickel	102	8.4E-01 d	-	85.68	0.00240046
Silver	50	NV	-	-	-
Zinc	756	NV	-	-	-

TABLE J-8 (Continued)

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - Slope factor or RfD based on inhalation.

d - Slope factor for inhalation of nickel refinery dust.

e - EPA-ECAO Regional Support provisional value.

w - Value withdrawn from IRIS or HEAST.

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TABLE J-9

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SURFACE WATER SAMPLES**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR^a (mg/kg/day)⁻¹	REFERENCE DOSE^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Cadmium	536	-	5.0E-04	1,072,000.00	0.15634077
Chromium VI	26,100	-	5.0E-03	5,220,000.00	0.76128621
Copper	16,200	-	4.0E-02 c	405,000.00	0.05906531
Lead	6,280	-	NV	-	-
Nickel	963	-	2.0E-02	48,150.00	0.00702221
Silver	159	-	5.0E-03	31,800.00	0.00463772
Zinc	4,760	-	3.0E-01	15,866.67	0.002314
Cyanide	1,280	-	2.0E-02 d	64,000.00	0.00933378
CARCINOGENIC					
Metals:					
Cadmium	536	NV	-	-	-
Chromium VI	26,100	NV	-	-	-
Copper	16,200	NV	-	-	-
Lead	6,280	NV	-	-	-
Nickel	963	NV	-	-	-
Silver	159	NV	-	-	-
Zinc	4,760	NV	-	-	-
Cyanide	1,280	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - EPA-ECAO Regional Support provisional value.

d - RfD for free cyanide.

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TABLE J-10

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
SEDIMENT SAMPLES**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (ug/100 cm ²)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Cadmium	981	-	5.0E-04	1,962,000.00	0.10807168
Chromium VI	73,400	-	5.0E-03	14,680,000.00	0.80860975
Copper	26,500	-	4.0E-02 c	662,500.00	0.0364921
Lead	191,000	-	NV	-	-
Nickel	3,010	-	2.0E-02	150,500.00	0.0082899
Silver	2,830	-	5.0E-03	566,000.00	0.03117664
Zinc	32,900	-	3.0E-01	109,666.67	0.0060407
Cyanide	479	-	2.0E-02 d	23,950.00	0.00131922
CARCINOGENIC					
Metals:					
Cadmium	981	NV	-	-	-
Chromium VI	73,400	NV	-	-	-
Copper	26,500	NV	-	-	-
Lead	191,000	NV	-	-	-
Nickel	3,010	NV	-	-	-
Silver	2,830	NV	-	-	-
Zinc	32,900	NV	-	-	-
Cyanide	479	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - EPA-ECAO Regional Support provisional value.

d - RfD for free cyanide.

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TABLE J-11

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
BUILDING INTERIOR - WIPE SAMPLES**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (ug/100 cm²)	SLOPE FACTOR^a (mg/kg/day)⁻¹	REFERENCE DOSE^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Cadmium	56,200	-	5.0E-04	112,400,000.00	0.8413436
Chromium VI	62,300	-	5.0E-03	12,460,000.00	0.09326638
Copper	286,000	-	4.0E-02 c	7,150,000.00	0.05351963
Lead	31,800	-	NV	-	-
Nickel	19,200	-	2.0E-02	960,000.00	0.00718585
Silver	1,240	-	5.0E-03	248,000.00	0.00185635
Zinc	30,700	-	3.0E-01	102,333.33	0.00076599
Cyanide	5,510	-	2.0E-02 d	275,500.00	0.00206219
CARCINOGENIC					
Metals:					
Cadmium	56,200	6.3E+00 e	-	354,060.00	0.11854206
Chromium VI	62,300	4.2E+01 e	-	2,616,600.00	0.87605816
Copper	286,000	NV	-	-	-
Lead	31,800	NV	-	-	-
Nickel	19,200	8.4E-01 f	-	16,128.00	0.00539978
Silver	1,240	NV	-	-	-
Zinc	30,700	NV	-	-	-
Cyanide	5,510	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - EPA-ECAO Regional Support provisional value.

d - RfD for free cyanide.

e - Slope factor based on inhalation unit risk.

f - Slope factor for inhalation of nickel refinery dust.

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TABLE J-12

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
BUILDING INTERIOR - SWEEP SAMPLES**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Cadmium	6,140	-	5.0E-04	12,280,000.00	0.15821018
Chromium VI	270,000	-	5.0E-03	54,000,000.00	0.69571252
Copper	82,100	-	4.0E-02 c	2,052,500.00	0.02644352
Lead	69,000	-	NV	-	-
Nickel	177,000	-	2.0E-02	8,850,000.00	0.11401965
Silver	353	-	5.0E-03	70,600.00	0.00090958
Zinc	68,300	-	3.0E-01	227,666.67	0.00293316
Cyanide	2,750	-	2.0E-02 d	137,500.00	0.00177149
CARCINOGENIC					
Metals:					
Cadmium	6,140	6.3E+00 e	-	38,682.00	0.00335567
Chromium VI	270,000	4.2E+01 e	-	11,340,000.00	0.98374632
Copper	82,100	NV	-	-	-
Lead	69,000	NV	-	-	-
Nickel	177,000	8.4E-01 f	-	148,680.00	0.01289801
Silver	353	NV	-	-	-
Zinc	68,300	NV	-	-	-
Cyanide	2,750	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - EPA-ECAO Regional Support provisional value.

d - RfD for free cyanide.

e - Slope factor based on inhalation unit risk.

f - Slope factor for inhalation of nickel refinery dust.

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TABLE J-13

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
BUILDING INTERIOR - CONCRETE CHIP SAMPLES**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Cadmium	1,190	-	5.0E-04	2,380,000.00	0.27647254
Chromium VI	27,400	-	5.0E-03	5,480,000.00	0.63658382
Copper	5,910	-	4.0E-02 c	147,750.00	0.01716337
Lead	26,500	-	NV	-	-
Nickel	9,460	-	2.0E-02	473,000.00	0.05494601
Silver	221	-	5.0E-03	44,200.00	0.00513449
Zinc	7,800	-	3.0E-01	26,000.00	0.00302029
Cyanide	1,150	-	2.0E-02 d	57,500.00	0.00667948
CARCINOGENIC					
Metals:					
Cadmium	1,190	6.3E+00 e	-	7,497.00	0.00642833
Chromium VI	27,400	4.2E+01 e	-	1,150,800.00	0.986758
Copper	5,910	NV	-	-	-
Lead	26,500	NV	-	-	-
Nickel	9,460	8.4E-01 f	-	7,946.40	0.00681367
Silver	221	NV	-	-	-
Zinc	7,800	NV	-	-	-
Cyanide	1,150	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - EPA-ECAO Regional Support provisional value.

d - RfD for free cyanide.

e - Slope factor based on inhalation unit risk.

f - Slope factor for inhalation of nickel refinery dust.

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TABLE J-14

**CONCENTRATION-TOXICITY SCREENING FOR CONTAMINANTS OF CONCERN
BUILDING INTERIOR - WOOD CHIP SAMPLES**

ANALYTE	MAXIMUM CONCENTRATION DETECTED (mg/kg)	SLOPE FACTOR ^a (mg/kg/day) ⁻¹	REFERENCE DOSE ^b (mg/kg/day)	CHEMICAL SCORE (Ri)	Ri/Rt
NONCARCINOGENIC					
Metals:					
Cadmium	110	-	5.0E-04	220,000.00	0.51026141
Chromium VI	314	-	5.0E-03	62,800.00	0.14565359
Copper	16	-	4.0E-02 c	400.00	0.00092773
Lead	41,600	-	NV	-	-
Nickel	25	-	2.0E-02	1,250.00	0.00289916
Silver	4.8	-	5.0E-03	960.00	0.00222655
Zinc	43,500	-	3.0E-01	145,000.00	0.33630207
Cyanide	15	-	2.0E-02 d	750.00	0.00173949
CARCINOGENIC					
Metals:					
Cadmium	110	6.3E+00 e	-	693.00	0.04984894
Chromium VI	314	4.2E+01 e	-	13,188.00	0.94864048
Copper	16	NV	-	-	-
Lead	41,600	NV	-	-	-
Nickel	25	8.4E-01 f	-	21.00	0.00151057
Silver	4.8	NV	-	-	-
Zinc	43,500	NV	-	-	-
Cyanide	15	NV	-	-	-

NV - No value available.

a - Slope factor based on ingestion unit risk unless otherwise noted.

Source: EPA's Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

b - Chronic RfD for ingestion unless otherwise noted. Source: EPA's

Integrated Risk Information System (IRIS) or the Health Effects Assessment Summary Tables (HEAST) Report, FY-1995.

c - EPA-ECAO Regional Support provisional value.

d - RfD for free cyanide.

e - Slope factor based on inhalation unit risk.

f - Slope factor for inhalation of nickel refinery dust.

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TABLE J-15

SURFACE SOIL DATA
Off-Site Soils

Arsenic	Cadmium	Chromium	Mercury	Nickel
4.9	2.9	25	0.14	22
5.9	2.3	25	0.05	26
9.1	2.8	37	0.16	303
8.2	3	29	0.05	24
1	1.3	31	0.05	22
6.2	4.1	21	0.2	35
15	4.3	34	0.18	36
1	3	35	0.15	34
1	0.81	7	0.05	9.3
4.8	1.3	25	0.22	34

	Arsenic	Cadmium	Chromium	Mercury	Nickel				
Mean	5.71	Mean	2.581	Mean	26.9	Mean	0.125	Mean	54.53
Standard Error	1.38367	Standard Error	0.36909	Standard Error	2.75056	Standard Error	0.02167	Standard Error	27.7315
Median	5.4	Median	2.85	Median	27	Median	0.145	Median	30
Mode	1	Mode	3	Mode	25	Mode	0.05	Mode	22
Standard Deviation	4.37555	Standard Deviation	1.16717	Standard Deviation	8.69802	Standard Deviation	0.06852	Standard Deviation	87.6947
Sample Variance	19.1454	Sample Variance	1.36228	Sample Variance	75.6556	Sample Variance	0.00469	Sample Variance	7690.36
Kurtosis	1.07704	Kurtosis	-0.88647	Kurtosis	2.35765	Kurtosis	-1.85599	Kurtosis	9.75815
Skewness	0.89784	Skewness	-0.08791	Skewness	-1.28931	Skewness	-0.07773	Skewness	3.10886
Range	14	Range	3.49	Range	30	Range	0.17	Range	293.7
Minimum	1	Minimum	0.81	Minimum	7	Minimum	0.05	Minimum	9.3
Maximum	15	Maximum	4.3	Maximum	37	Maximum	0.22	Maximum	303
Sum	57.1	Sum	25.81	Sum	269	Sum	1.25	Sum	545.3
Count	10	Count	10	Count	10	Count	10	Count	10
Confidence Level (95%)	2.71194	Confidence Level (95%)	0.7234	Confidence Level (95%)	5.39098	Confidence Level (95%)	0.04247	Confidence Level (95%)	54.3527

Estimated contaminant concentrations in air, based on a regional average inhalable particulate (PM10) concentration of 20 ug/m³ (EPA 1993):

1.7E-07	6.6E-08	6.5E-07	3.3E-09	2.2E-06
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TABLE J-15 (Continued)

SURFACE SOIL DATA
Off-Site Soils

Zinc	Benzo(a)pyrene
193	0.31
162	1.3
308	4.1
137	0.68
116	0.21
124	1.8
232	2.2
271	7.7
132	0.046
136	0.62

<i>Zinc</i>		<i>Benzo(a)pyrene</i>	
Mean	181.1	Mean	1.8966
Standard Error	21.3882	Standard Error	0.75195
Median	149.5	Median	0.99
Mode	#N/A	Mode	#N/A
Standard Deviation	67.6354	Standard Deviation	2.37787
Sample Variance	4574.54	Sample Variance	5.65424
Kurtosis	-0.44037	Kurtosis	3.77781
Skewness	0.96009	Skewness	1.93129
Range	192	Range	7.654
Minimum	116	Minimum	0.046
Maximum	308	Maximum	7.7
Sum	1811	Sum	18.966
Count	10	Count	10
Confidence Level (95%)	41.92	Confidence Level (95%)	1.47379

4.5E-06

6.7E-08

SURFACE SOIL DATA
On-Site Soils - Outside Fence

TABLE J-16

	Arsenic	Cadmium	Chromium	Copper	Nickel
	3.8	2	22	34	22
	3.1	2.2	13	27	13
	3.1	1.2	17	29	22
	2.8	4.5	17	45	16
	1.8	1	19	27	20
	1.9	2.2	21	37	22
	1.6	2.1	20	34	17
	2.9	1.7	20	31	21
	3.4	5.5	32	35	20
	1.5	0.64	15	26	21
	7.9	4.9	33	22	15
	7.6	0.5	13	15	12
	2.7	0.5	10	16	7.5
	6	1.7	11	15	13
	1.2	1	19	27	37
	4.7	1	18	32	22
	<i>Arsenic</i>	<i>Cadmium</i>	<i>Chromium</i>	<i>Copper</i>	<i>Nickel</i>
Mean	3.5 Mean	2.04 Mean	18.75 Mean	28.25 Mean	18.7813
Standard Error	0.51688 Standard Error	0.3934 Standard Error	1.60857 Standard Error	2.08267 Standard Error	1.64758
Median	3 Median	1.7 Median	18.5 Median	28 Median	20
Mode	3.1 Mode	1 Mode	13 Mode	27 Mode	22
Standard Deviation	2.06753 Standard Deviation	1.57362 Standard Deviation	6.43428 Standard Deviation	8.33067 Standard Deviation	6.59032
Sample Variance	4.27467 Sample Variance	2.47627 Sample Variance	41.4 Sample Variance	69.4 Sample Variance	43.4323
Kurtosis	0.49668 Kurtosis	0.61285 Kurtosis	1.17832 Kurtosis	-0.09245 Kurtosis	3.23543
Skewness	1.15734 Skewness	1.28297 Skewness	1.05542 Skewness	-0.08184 Skewness	1.06229
Range	6.7 Range	5 Range	23 Range	30 Range	29.5
Minimum	1.2 Minimum	0.5 Minimum	10 Minimum	15 Minimum	7.5
Maximum	7.9 Maximum	5.5 Maximum	33 Maximum	45 Maximum	37
Sum	56 Sum	32.64 Sum	300 Sum	452 Sum	300.5
Count	16 Count	16 Count	16 Count	16 Count	16
Confidence Level (95%)	1.01307 Confidence Level (95%)	0.77106 Confidence Level (95%)	3.15274 Confidence Level (95%)	4.08195 Confidence Level (95%)	3.22919
Estimated contaminant concentrations in air, based on a regional average inhalable particulate (PM10) concentration of 20 ug/m ³ (EPA 1993):					
	9.0E-08	5.6E-08	4.4E-07	6.5E-07	4.4E-07

SURFACE SOIL DATA
On-Site Soils - Outside Fence

TABLE J-16 (Continued)

Zinc	Benzo(a)pyrene
83	0.12
119	0.38
98	0.19
127	0.69
69	0.22
104	0.59
134	2.5
166	1.5
397	2.1
71	0.04
49	0.26
44	0.17
25	0.079
43	0.05
75	0.18
73	0.15

<i>Zinc</i>		<i>Benzo(a)pyrene</i>	
Mean	104.813	Mean	0.57619
Standard Error	21.6522	Standard Error	0.19178
Median	79	Median	0.205
Mode	#N/A	Mode	#N/A
Standard Deviation	86.6089	Standard Deviation	0.76713
Sample Variance	7501.1	Sample Variance	0.58849
Kurtosis	9.37211	Kurtosis	2.10729
Skewness	2.80474	Skewness	1.78592
Range	372	Range	2.46
Minimum	25	Minimum	0.04
Maximum	397	Maximum	2.5
Sum	1677	Sum	9.219
Count	16	Count	16
Confidence Level (95%)	42.4375	Confidence Level (95%)	0.37589

2.9E-06

1.90E-08

SURFACE SOIL DATA
On-Site Soils - Within Fence

TABLE J-17

	Arsenic	Cadmium	Chromium	Copper	Nickel				
	6.5	3.7	24	43	29				
	3.9	1.9	22	37	29				
	6.1	3.3	23	45	35				
	2.3	11	55	58	33				
	1	0.5	20	42	4				
	5.4	7.3	72	39	23				
	4.8	7.2	62	47	26				
	4.3	2.4	24	39	39				
	1	3.5	18	17	16				
	2.5	0.5	62	33	14				
	7.8	2.5	42	62	17				
	5.6	6.8	30	63	23				
	4.4	10	34	51	37				
	3.7	49	54	75	38				
	<i>Arsenic</i>	<i>Cadmium</i>	<i>Chromium</i>	<i>Copper</i>	<i>Nickel</i>				
Mean	4.23571	Mean	7.82857	Mean	46.5	Mean	25.9286		
Standard Error	0.5395	Standard Error	3.2886	Standard Error	4.99387	Standard Error	3.89949	Standard Error	2.78233
Median	4.35	Median	3.6	Median	32	Median	44	Median	27.5
Mode	1	Mode	0.5	Mode	24	Mode	39	Mode	29
Standard Deviation	2.01861	Standard Deviation	12.3048	Standard Deviation	18.6854	Standard Deviation	14.5906	Standard Deviation	10.4105
Sample Variance	4.07478	Sample Variance	151.408	Sample Variance	349.143	Sample Variance	212.885	Sample Variance	108.379
Kurtosis	-0.54181	Kurtosis	11.5504	Kurtosis	-1.34478	Kurtosis	0.5203	Kurtosis	-0.2715
Skewness	-0.13919	Skewness	3.28899	Skewness	0.53548	Skewness	0.08685	Skewness	-0.59457
Range	6.8	Range	48.5	Range	54	Range	58	Range	35
Minimum	1	Minimum	0.5	Minimum	18	Minimum	17	Minimum	4
Maximum	7.8	Maximum	49	Maximum	72	Maximum	75	Maximum	39
Sum	59.3	Sum	109.6	Sum	542	Sum	651	Sum	363
Count	14	Count	14	Count	14	Count	14	Count	14
Confidence Level (95%)	1.05739	Confidence Level (95%)	6.44553	Confidence Level (95%)	9.7878	Confidence Level (95%)	7.64285	Confidence Level (95%)	5.45326

Estimated contaminant concentrations in air, based on a regional average inhalable particulate (PM10) concentration of 20 ug/m³ (EPA 1993):

1.1E-07 2.9E-07 9.7E-07 1.1E-06 6.3E-07

TABLE J-17 (Continued)

SURFACE SOIL DATA
On-Site Soils - Within Fence

	Benzo(a)pyrene	Dibenzofuran	Fluoranthene	Pyrene	Dibenzo(a,h)anthracene				
	0.34	0.028	0.94	0.82	0.078				
	0.027	0.01	0.068	0.062	0.01				
	0.027	0.01	0.054	0.078	0.01				
	0.01	0.01	0.21	0.3	0.01				
	1.5	0.28	4	3	0.47				
	5.1	0.63	12	10	1.3				
	5	1.1	12	10	1.3				
	37	8.9	89	71	9.3				
	0.58	0.01	0.8	0.81	0.073				
	0.77	0.01	1.1	1.2	0.17				
	0.2	0.01	0.32	0.33	0.04				
	0.26	0.01	0.53	0.56	0.054				
	0.11	0.01	0.14	0.18	0.024				
	0.23	0.01	0.43	0.44	0.047				
	<i>Benzo(a)pyrene</i>	<i>Dibenzofuran</i>	<i>Fluoranthene</i>	<i>Pyrene</i>	<i>Dibenzo(a,h)anthracene</i>				
Mean	3.65386	Mean	0.78771	Mean	8.68514	Mean	7.05571	Mean	0.92043
Standard Error	2.6066	Standard Error	0.62989	Standard Error	6.27761	Standard Error	5.0036	Standard Error	0.65582
Median	0.3	Median	0.01	Median	0.665	Median	0.685	Median	0.0635
Mode	0.027	Mode	0.01	Mode	12	Mode	10	Mode	0.01
Standard Deviation	9.75299	Standard Deviation	2.35682	Standard Deviation	23.4887	Standard Deviation	18.7218	Standard Deviation	2.45385
Sample Variance	95.1207	Sample Variance	5.55462	Sample Variance	551.718	Sample Variance	350.504	Sample Variance	6.0214
Kurtosis	12.9018	Kurtosis	13.3515	Kurtosis	12.9063	Kurtosis	12.8326	Kurtosis	12.8205
Skewness	3.54801	Skewness	3.62701	Skewness	3.54873	Skewness	3.5363	Skewness	3.53369
Range	36.99	Range	8.89	Range	88.946	Range	70.938	Range	9.29
Minimum	0.01	Minimum	0.01	Minimum	0.054	Minimum	0.062	Minimum	0.01
Maximum	37	Maximum	8.9	Maximum	89	Maximum	71	Maximum	9.3
Sum	51.154	Sum	11.028	Sum	121.592	Sum	98.78	Sum	12.886
Count	14	Count	14	Count	14	Count	14	Count	14
Confidence Level (95%)	5.10883	Confidence Level (95%)	1.23456	Confidence Level (95%)	12.3039	Confidence Level (95%)	9.80686	Confidence Level (95%)	1.28538
	1.8E-07		4.0E-08		4.2E-07		3.4E-07		4.4E-08

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TABLE J-18

SURFACE SOIL DATA
All On-Site Soils

	Arsenic		Cadmium		Chromium		Copper		Nickel	
	6.5	3.1	3.7	2.2	24	13	43	27	29	13
	3.9	3.1	1.9	1.2	22	17	37	29	29	22
	6.1	2.8	3.3	4.5	23	17	45	45	35	16
	2.3	1.8	11	1	55	19	58	27	33	20
	1	1.9	0.5	2.2	20	21	42	37	4	22
	5.4	1.6	7.3	2.1	72	20	39	34	23	17
	4.8	2.9	7.2	1.7	62	20	47	31	26	21
	4.3	3.4	2.4	5.5	24	32	39	35	39	20
	1	1.5	3.5	0.64	18	15	17	26	16	21
	2.5	7.9	0.5	4.9	62	33	33	22	14	15
	7.8	7.6	2.5	0.5	42	13	62	15	17	12
	5.6	2.7	6.8	0.5	30	10	63	16	23	7.5
	4.4	6	10	1.7	34	11	51	15	37	13
	3.7	1.2	49	1	54	19	75	27	38	37
	3.8	4.7	2	1	22	18	34	32	22	22

	Arsenic		Cadmium		Chromium		Copper		Nickel	
Mean	3.84333		Mean		4.74133		Mean		28.0667	
Standard Error	0.37314		Standard Error		1.61018		Standard Error		3.05803	
Median	3.55		Median		2.2		Median		21.5	
Mode	1		Mode		0.5		Mode		20	
Standard Deviation	2.04378		Standard Deviation		8.81934		Standard Deviation		16.7495	
Sample Variance	4.17702		Sample Variance		77.7808		Sample Variance		280.547	
Kurtosis	-0.64022		Kurtosis		23.6029		Kurtosis		0.86775	
Skewness	0.51069		Skewness		4.65177		Skewness		1.36967	
Range	6.9		Range		48.5		Range		62	
Minimum	1		Minimum		0.5		Minimum		10	
Maximum	7.9		Maximum		49		Maximum		72	
Sum	115.3		Sum		142.24		Sum		842	
Count	30		Count		30		Count		30	
Confidence Level (95%)	0.73134		Confidence Level (95%)		3.1559		Confidence Level (95%)		5.99363	

Estimated contaminant concentrations in air, based on a regional average inhalable particulate (PM10) concentration of 20 ug/m³ (EPA 1993):

9.1E-08	1.6E-07	6.8E-07	8.4E-07	5.1E-07
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TABLE J-18 (Continued)

SURFACE SOIL DATA
All On-Site Soils

Benzo(a)pyrene	Dibenzo(a,h)anthracene		Dibenzofuran		Fluoranthene		Pyrene		
0.34	0.38	0.078	0.11	0.028	0.036	0.94	0.88	0.82	0.75
0.027	0.19	0.01	0.03	0.01	0.01	0.068	0.39	0.062	0.4
0.027	0.69	0.01	0.069	0.01	0.028	0.054	1.3	0.078	1.4
0.01	0.22	0.01	0.055	0.01	0.01	0.21	0.54	0.3	0.47
1.5	0.59	0.47	0.057	0.28	0.04	4	1.2	3	1.4
5.1	2.5	1.3	0.47	0.63	0.094	12	3.9	10	3.3
5	1.5	1.3	0.33	1.1	0.23	12	3.2	10	3.3
37	2.1	9.3	0.55	8.9	0.18	89	4.5	71	5
0.58	0.04	0.073	0.01	0.01	0.01	0.8	0.045	0.81	0.057
0.77	0.26	0.17	0.053	0.01	0.01	1.1	0.46	1.2	0.51
0.2	0.17	0.04	0.036	0.01	0.01	0.32	0.31	0.33	0.28
0.26	0.079	0.054	0.017	0.01	0.01	0.53	0.18	0.56	0.14
0.11	0.05	0.024	0.01	0.01	0.01	0.14	0.093	0.18	0.079
0.23	0.18	0.047	0.033	0.01	0.01	0.43	0.39	0.44	0.4
0.12	0.15	0.035	0.01	0.01	0.01	0.27	0.27	0.23	0.29

<i>Benzo(a)pyrene</i>	<i>Dibenzo(a,h)anthracene</i>		<i>Dibenzofuran</i>		<i>Fluoranthene</i>		<i>Pyrene</i>		
Mean	2.01243	Mean	0.49203	Mean	0.3912	Mean	4.65067	Mean	3.89287
Standard Error	1.22995	Standard Error	0.30987	Standard Error	0.29635	Standard Error	2.96148	Standard Error	2.36137
Median	0.245	Median	0.0535	Median	0.01	Median	0.495	Median	0.49
Mode	0.027	Mode	0.01	Mode	0.01	Mode	12	Mode	10
Standard Deviation	6.73673	Standard Deviation	1.69725	Standard Deviation	1.62316	Standard Deviation	16.2207	Standard Deviation	12.9338
Sample Variance	45.3835	Sample Variance	2.88066	Sample Variance	2.63464	Sample Variance	263.111	Sample Variance	167.283
Kurtosis	27.533	Kurtosis	27.4386	Kurtosis	28.6998	Kurtosis	27.6887	Kurtosis	27.4143
Skewness	5.1664	Skewness	5.15574	Skewness	5.31431	Skewness	5.18721	Skewness	5.1522
Range	36.99	Range	9.29	Range	8.89	Range	88.955	Range	70.943
Minimum	0.01	Minimum	0.01	Minimum	0.01	Minimum	0.045	Minimum	0.057
Maximum	37	Maximum	9.3	Maximum	8.9	Maximum	89	Maximum	71
Sum	60.373	Sum	14.761	Sum	11.736	Sum	139.52	Sum	116.786
Count	30	Count	30	Count	30	Count	30	Count	30
Confidence Level (95%)	2.41066	Confidence Level (95%)	0.60734	Confidence Level (95%)	0.58083	Confidence Level (95%)	5.80438	Confidence Level (95%)	4.6282

8.8E-08

2.2E-08

1.9E-08

2.1E-07

1.7E-07

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TABLE J-19

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Current Land Use Scenario - Exposure to Children

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	0.17	108.9	223
IR - Ingestion rate (mg/day):	50	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	124	124	124	124	124	124
ED - Exposure duration (yrs):	10	10	10	10	10	10
BW - Average body weight (kg):	37.8	37.8	37.8	37.8	37.8	37.8
AT - Averaging time (days):	3,650	3,650	3,650	3,650	3,650	3,650

Intake (mg/kg-day): 3.77E-06 1.48E-06 1.45E-05 7.64E-08 4.89E-05 1.00E-04

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	108.9	3.4
IR - Ingestion rate (mg/day):	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	124	124	124	124	124
ED - Exposure duration (yrs):	10	10	10	10	10
BW - Average body weight (kg):	37.8	37.8	37.8	37.8	37.8
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550

Intake (mg/kg-day): 5.39E-07 2.12E-07 2.07E-06 6.99E-06 2.18E-07

United Plating Site

TABLE J-19 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Current Land Use Scenario - Exposure to Children

ON-SITE SOILS - OUTSIDE FENCE:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Zinc
CS - Contaminant concentration (mg/kg):	4.5	2.8	21.9	32.3	22	147.3
IR - Ingestion rate (mg/day):	50	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	56	56	56	56	56	56
ED - Exposure duration (yrs):	10	10	10	10	10	10
BW - Average body weight (kg):	37.8	37.8	37.8	37.8	37.8	37.8
AT - Averaging time (days):	3,650	3,650	3,650	3,650	3,650	3,650

Intake (mg/kg-day): 9.13E-07 5.68E-07 4.44E-06 6.56E-06 4.46E-06 2.99E-05

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CS - Contaminant concentration (mg/kg):	4.5	2.8	21.9	22	0.95
IR - Ingestion rate (mg/day):	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	56	56	56	56	56
ED - Exposure duration (yrs):	10	10	10	10	10
BW - Average body weight (kg):	37.8	37.8	37.8	37.8	37.8
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550

Intake (mg/kg-day): 1.30E-07 8.12E-08 6.35E-07 6.38E-07 2.75E-08

United Plating Site

TABLE J-19 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Current Land Use Scenario - Exposure to Children

ON-SITE SOILS - WITHIN FENCE:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	5.3	14.3	48.5	54.1	31.4	2	21	16.9
IR - Ingestion rate (mg/day):	25	25	25	25	25	25	25	25
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	56	56	56	56	56	56	56	56
ED - Exposure duration (yrs):	7	7	7	7	7	7	7	7
BW - Average body weight (kg):	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6
AT - Averaging time (days):	2,555	2,555	2,555	2,555	2,555	2,555	2,555	2,555
Intake (mg/kg-day):	4.66E-07	1.26E-06	4.27E-06	4.76E-06	2.76E-06	1.76E-07	1.85E-06	1.49E-06

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	5.3	14.2	48.5	8.8	2.2
IR - Ingestion rate (mg/day):	25	25	25	25	25
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	56	56	56	56	56
ED - Exposure duration (yrs):	7	7	7	7	7
BW - Average body weight (kg):	43.6	43.6	43.6	43.6	43.6
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	4.66E-08	1.25E-07	4.27E-07	7.74E-08	1.94E-08

United Plating Site

TABLE J-19 (Continued)

RISK CHARACTERIZATION
Ingestion of Chemicals in Soils
Current Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	3.77E-06	3.0E-04	0.0126
Cadmium	1.48E-06	5.0E-04	0.0030
Chromium	1.45E-05	5.0E-03	0.0029
Mercury	7.64E-08	3.0E-04	0.0003
Nickel	4.89E-05	2.0E-02	0.0024
Zinc	1.00E-04	3.0E-01	0.0003

Pathway Hazard Index: 0.0215

ON-SITE SOILS - OUTSIDE FENCE:

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	9.13E-07	3.0E-04	0.00304
Cadmium	5.68E-07	5.0E-04	0.00114
Chromium	4.44E-06	5.0E-03	0.00089
Copper	6.56E-06	4.0E-02	0.00016
Nickel	4.46E-06	2.0E-02	0.00022
Zinc	2.99E-05	3.0E-01	0.00010

Pathway Hazard Index: 0.00556

ON-SITE SOILS - WITHIN FENCE:

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	4.66E-07	3.0E-04	0.00155
Cadmium	1.26E-06	5.0E-04	0.00252
Chromium	4.27E-06	5.0E-03	0.00085
Copper	4.76E-06	4.0E-02	0.00012
Nickel	2.76E-06	2.0E-02	0.00014
Dibenzofuran	1.76E-07	4.0E-03	0.00004
Fluoranthene	1.85E-06	4.0E-02	0.00005
Pyrene	1.49E-06	3.0E-02	0.00005

Pathway Hazard Index: 0.00532

TABLE J-19 (Continued)

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	5.39E-07	1.8E+00	9.44E-07
Cadmium	2.12E-07	NV	-
Chromium	2.07E-06	NV	-
Nickel	6.99E-06	NV	-
Benzo(a)pyrene	2.18E-07	7.3E+00	1.59E-06
Total Pathway Risk:			2.54E-06

ON-SITE SOILS - OUTSIDE FENCE:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	1.30E-07	1.8E+00	2.28E-07
Cadmium	8.12E-08	NV	-
Chromium	6.35E-07	NV	-
Nickel	6.38E-07	NV	-
Benzo(a)pyrene	2.75E-08	7.3E+00	2.01E-07
Total Pathway Risk:			4.29E-07

ON-SITE SOILS - WITHIN FENCE:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	4.66E-08	1.8E+00	8.16E-08
Cadmium	1.25E-07	NV	-
Chromium	4.27E-07	NV	-
Benzo(a)pyrene	7.74E-08	7.3E+00	5.65E-07
Dibenzo(a,h)anthracene	1.94E-08	7.3E+00	1.41E-07
Total Pathway Risk:			7.88E-07

United Plating Site

TABLE J-20

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Residential Land Use Scenario - Exposure to Children

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	0.17	108.9	223
IR - Ingestion rate (mg/day):	200	200	200	200	200	200
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15	15
AT - Averaging time (days):	2,190	2,190	2,190	2,190	2,190	2,190

Intake (mg/kg-day): 1.07E-04 4.22E-05 4.13E-04 2.17E-06 1.39E-03 2.85E-03

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	108.9	3.4
IR - Ingestion rate (mg/day):	200	200	200	200	200
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550

Intake (mg/kg-day): 9.21E-06 3.62E-06 3.54E-05 1.19E-04 3.73E-06

United Plating Site

TABLE J-20 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Residential Land Use Scenario - Exposure to Adults

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	0.17	108.9	223
IR - Ingestion rate (mg/day):	100	100	100	100	100	100
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70	70
AT - Averaging time (days):	8,760	8,760	8,760	8,760	8,760	8,760

Intake (mg/kg-day): 1.15E-05 4.52E-06 4.42E-05 2.33E-07 1.49E-04 3.05E-04

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	108.9	3.4
IR - Ingestion rate (mg/day):	100	100	100	100	100
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550

Intake (mg/kg-day): 3.95E-06 1.55E-06 1.52E-05 5.11E-05 1.60E-06

United Plating Site

TABLE J-20 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Residential Land Use Scenario - Exposure to Children

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	4.6	7.9	34.1	42	25.4	0.97	10.5	8.5
IR - Ingestion rate (mg/day):	200	200	200	200	200	200	200	200
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15	15	15	15
AT - Averaging time (days):	2,190	2,190	2,190	2,190	2,190	2,190	2,190	2,190
Intake (mg/kg-day):	5.88E-05	1.01E-04	4.36E-04	5.37E-04	3.25E-04	1.24E-05	1.34E-04	1.09E-04

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	4.6	7.9	34.1	4.4	1.1
IR - Ingestion rate (mg/day):	200	200	200	200	200
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	5.04E-06	8.66E-06	3.74E-05	4.82E-06	1.21E-06

United Plating Site

TABLE J-20 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Residential Land Use Scenario - Exposure to Adults

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	4.6	7.9	34.1	42	25.4	0.97	10.5	8.5
IR - Ingestion rate (mg/day):	100	100	100	100	100	100	100	100
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70	70	70	70
AT - Averaging time (days):	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
Intake (mg/kg-day):	6.30E-06	1.08E-05	4.67E-05	5.75E-05	3.48E-05	1.33E-06	1.44E-05	1.16E-05

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	4.6	7.9	34.1	4.4	1.1
IR - Ingestion rate (mg/day):	100	100	100	100	100
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	2.16E-06	3.71E-06	1.60E-05	2.07E-06	5.17E-07

United Plating Site

TABLE J-20 (Continued)

RISK CHARACTERIZATION
Ingestion of Chemicals in Soils
Residential Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS (Children):

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	1.07E-04	3.0E-04	0.3580
Cadmium	4.22E-05	5.0E-04	0.0844
Chromium	4.13E-04	5.0E-03	0.0826
Mercury	2.17E-06	3.0E-04	0.0072
Nickel	1.39E-03	2.0E-02	0.0696
Zinc	2.85E-03	3.0E-01	0.0095

Pathway Hazard Index: 0.6113

OFF-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	1.15E-05	3.0E-04	0.0384
Cadmium	4.52E-06	5.0E-04	0.0090
Chromium	4.42E-05	5.0E-03	0.0088
Mercury	2.33E-07	3.0E-04	0.0008
Nickel	1.49E-04	2.0E-02	0.0075
Zinc	3.05E-04	3.0E-01	0.0010

Pathway Hazard Index: 0.0655

ON-SITE SOILS (Children):

Contaminant of Concern	Value	RfD	Hazard Quotient
Arsenic	5.88E-05	3.0E-04	0.19604
Cadmium	1.01E-04	5.0E-04	0.20201
Chromium	4.36E-04	5.0E-03	0.08720
Copper	5.37E-04	4.0E-02	0.01342
Nickel	3.25E-04	2.0E-02	0.01624
Dibenzofuran	1.24E-05	4.0E-03	0.00310
Fluoranthene	1.34E-04	4.0E-02	0.00336
Pyrene	1.09E-04	3.0E-02	0.00362

Pathway Hazard Index: 0.52499

TABLE J-20 (Continued)

NONCARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	6.30E-06	3.0E-04	0.02100
Cadmium	1.08E-05	5.0E-04	0.02164
Chromium	4.67E-05	5.0E-03	0.00934
Copper	5.75E-05	4.0E-02	0.00144
Nickel	3.48E-05	2.0E-02	0.00174
Dibenzofuran	1.33E-06	4.0E-03	0.00033
Fluoranthene	1.44E-05	4.0E-02	0.00036
Pyrene	1.16E-05	3.0E-02	0.00039

Pathway Hazard Index: 0.05625

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS (Children):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	9.21E-06	1.8E+00	1.61E-05
Cadmium	3.62E-06	NV	-
Chromium	3.54E-05	NV	-
Nickel	1.19E-04	NV	-
Benzo(a)pyrene	3.73E-06	7.3E+00	2.72E-05

Total Pathway Risk: 4.33E-05

OFF-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	3.95E-06	1.8E+00	6.90E-06
Cadmium	1.55E-06	NV	-
Chromium	1.52E-05	NV	-
Nickel	5.11E-05	NV	-
Benzo(a)pyrene	1.60E-06	7.3E+00	1.17E-05

Total Pathway Risk: 1.86E-05

ON-SITE SOILS (Children):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	5.04E-06	1.8E+00	8.82E-06
Cadmium	8.66E-06	NV	-
Chromium	3.74E-05	NV	-
Benzo(a)pyrene	4.82E-06	7.3E+00	3.52E-05
Dibenzo(a,h)anthracene	1.21E-06	7.3E+00	8.80E-06

Total Pathway Risk: 5.28E-05

TABLE J-20 (Continued)

CARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	2.16E-06	1.8E+00	3.78E-06
Cadmium	3.71E-06	NV	-
Chromium	1.60E-05	NV	-
Benzo(a)pyrene	2.07E-06	7.3E+00	1.51E-05
Dibenzo(a,h)anthracene	5.17E-07	7.3E+00	3.77E-06
Total Pathway Risk:			2.26E-05

United Plating Site

TABLE J-21

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Commercial/Industrial Land Use Scenario - Exposure to Workers

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	0.17	108.9	223
IR - Ingestion rate (mg/day):	50	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	250	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70	70
AT - Averaging time (days):	9,125	9,125	9,125	9,125	9,125	9,125

Intake (mg/kg-day): 4.11E-06 1.61E-06 1.58E-05 8.32E-08 5.33E-05 1.09E-04

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CS - Contaminant concentration (mg/kg):	8.4	3.3	32.3	108.9	3.4
IR - Ingestion rate (mg/day):	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550

Intake (mg/kg-day): 1.47E-06 5.77E-07 5.64E-06 1.90E-05 5.94E-07

United Plating Site

TABLE J-21 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Ingestion of Chemicals in Soils
 Commercial/Industrial Land Use Scenario - Exposure to Workers

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{IR} \times \text{CF} \times \text{FI} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	4.6	7.9	34.1	42	25.4	0.97	10.5	8.5
IR - Ingestion rate (mg/day):	50	50	50	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	250	250	250	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70	70	70	70
AT - Averaging time (days):	9,125	9,125	9,125	9,125	9,125	9,125	9,125	9,125
Intake (mg/kg-day):	2.25E-06	3.86E-06	1.67E-05	2.05E-05	1.24E-05	4.75E-07	5.14E-06	4.16E-06

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	4.6	7.9	34.1	4.4	1.1
IR - Ingestion rate (mg/day):	50	50	50	50	50
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
FI - Fraction ingested:	1	1	1	1	1
EF - Exposure frequency (days/yr):	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	8.04E-07	1.38E-06	5.96E-06	7.69E-07	1.92E-07

United Plating Site

TABLE J-21 (Continued)

RISK CHARACTERIZATION
 Ingestion of Chemicals in Soils
 Commercial/Industrial Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Arsenic	4.11E-06	3.0E-04	0.0137
Cadmium	1.61E-06	5.0E-04	0.0032
Chromium	1.58E-05	5.0E-03	0.0032
Mercury	8.32E-08	3.0E-04	0.0003
Nickel	5.33E-05	2.0E-02	0.0027
Zinc	1.09E-04	3.0E-01	0.0004
Pathway Hazard Index:			0.0234

ON-SITE SOILS:

Contaminant of Concern	Value	RfD	Hazard Quotient
Arsenic	2.25E-06	3.0E-04	0.00750
Cadmium	3.86E-06	5.0E-04	0.00773
Chromium	1.67E-05	5.0E-03	0.00334
Copper	2.05E-05	4.0E-02	0.00051
Nickel	1.24E-05	2.0E-02	0.00062
Dibenzofuran	4.75E-07	4.0E-03	0.00012
Fluoranthene	5.14E-06	4.0E-02	0.00013
Pyrene	4.16E-06	3.0E-02	0.00014
Pathway Hazard Index:			0.02009

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	1.47E-06	1.8E+00	2.57E-06
Cadmium	5.77E-07	NV	-
Chromium	5.64E-06	NV	-
Nickel	1.90E-05	NV	-
Benzo(a)pyrene	5.94E-07	7.3E+00	4.34E-06
Total Pathway Risk:			6.91E-06

TABLE J-21 (Continued)

CARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	8.04E-07	1.8E+00	1.41E-06
Cadmium	1.38E-06	NV	-
Chromium	5.96E-06	NV	-
Benzo(a)pyrene	7.69E-07	7.3E+00	5.61E-06
Dibenzo(a,h)anthracene	1.92E-07	7.3E+00	1.40E-06
Total Pathway Risk:			8.42E-06

United Plating Site

TABLE J-22

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Current Land Use Scenario - Exposure to Children

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Carcinogenic:

	<u>Benzo(a)pyrene</u>
CS - Contaminant concentration (mg/kg):	3.4
CF - Conversion factor (kg/mg):	1.00E-06
SA - Skin surface area (cm ² /event):	1845
AF - Soil to skin adherence factor (mg/cm ²):	1.0
ABS - Absorption factor (unitless):	0.05
EF - Exposure frequency (days/yr):	124
ED - Exposure duration (yrs):	10
BW - Average body weight (kg):	37.8
AT - Averaging time (days):	<u>25,550</u>
Intake (mg/kg-day):	4.03E-07

United Plating Site

TABLE J-22 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Current Land Use Scenario - Exposure to Children

ON-SITE SOILS - OUTSIDE FENCE:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Carcinogenic:

	<u>Benzo(a)pyrene</u>
CS - Contaminant concentration (mg/kg):	0.95
CF - Conversion factor (kg/mg):	1.00E-06
SA - Skin surface area (cm ² /event):	1845
AF - Soil to skin adherence factor (mg/cm ²):	1.0
ABS - Absorption factor (unitless):	0.05
EF - Exposure frequency (days/yr):	56
ED - Exposure duration (yrs):	10
BW - Average body weight (kg):	37.8
AT - Averaging time (days):	<u>25,550</u>
Intake (mg/kg-day):	5.08E-08

United Plating Site

TABLE J-22 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Current Land Use Scenario - Exposure to Children

ON-SITE SOILS - WITHIN FENCE:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	2	21	16.9
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	2055	2055	2055
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05	0.05
EF - Exposure frequency (days/yr):	56	56	56
ED - Exposure duration (yrs):	7	7	7
BW - Average body weight (kg):	43.6	43.6	43.6
AT - Averaging time (days):	2,555	2,555	2,555
Intake (mg/kg-day):	7.23E-07	7.59E-06	6.11E-06

Carcinogenic:

	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	8.8	2.2
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	2055	2055
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05
EF - Exposure frequency (days/yr):	56	56
ED - Exposure duration (yrs):	7	7
BW - Average body weight (kg):	43.6	43.6
AT - Averaging time (days):	25,550	25,550
Intake (mg/kg-day):	3.18E-07	7.95E-08

United Plating Site

TABLE J-22 (Continued)

RISK CHARACTERIZATION
Dermal Contact with Chemicals in Soils
Current Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

ON-SITE SOILS - WITHIN FENCE:

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Dibenzofuran	7.23E-07	4.0E-03	0.00018
Fluoranthene	7.59E-06	4.0E-02	0.00019
Pyrene	6.11E-06	3.0E-02	0.00020

Pathway Hazard Index: 0.00057

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	4.03E-07	7.3E+00	2.94E-06

Total Pathway Risk: 2.94E-06

ON-SITE SOILS - OUTSIDE FENCE:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	5.08E-08	7.3E+00	3.71E-07

Total Pathway Risk: 3.71E-07

ON-SITE SOILS - WITHIN FENCE:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	3.18E-07	7.3E+00	2.32E-06
Dibenzo(a,h)anthracene	7.95E-08	7.3E+00	5.81E-07

Total Pathway Risk: 2.90E-06

United Plating Site

TABLE J-23

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Residential Land Use Scenario - Exposure to Children

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Carcinogenic:

	<u>Benzo(a)pyrene</u>
CS - Contaminant concentration (mg/kg):	3.4
CF - Conversion factor (kg/mg):	1.00E-06
SA - Skin surface area (cm ² /event):	876
AF - Soil to skin adherence factor (mg/cm ²):	1.0
ABS - Absorption factor (unitless):	0.05
EF - Exposure frequency (days/yr):	350
ED - Exposure duration (yrs):	6
BW - Average body weight (kg):	15
AT - Averaging time (days):	<u>25,550</u>
Intake (mg/kg-day):	8.16E-07

United Plating Site

TABLE J-23 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Residential Land Use Scenario - Exposure to Adults

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Carcinogenic:

	<u>Benzo(a)pyrene</u>
CS - Contaminant concentration (mg/kg):	3.4
CF - Conversion factor (kg/mg):	1.00E-06
SA - Skin surface area (cm ² /event):	2184
AF - Soil to skin adherence factor (mg/cm ²):	1.0
ABS - Absorption factor (unitless):	0.05
EF - Exposure frequency (days/yr):	350
ED - Exposure duration (yrs):	24
BW - Average body weight (kg):	70
AT - Averaging time (days):	<u>25,550</u>
Intake (mg/kg-day):	1.74E-06

United Plating Site

TABLE J-23 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Residential Land Use Scenario - Exposure to Children

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	0.97	10.5	8.5
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	876	876	876
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05	0.05
EF - Exposure frequency (days/yr):	350	350	350
ED - Exposure duration (yrs):	6	6	6
BW - Average body weight (kg):	15	15	15
AT - Averaging time (days):	2,190	2,190	2,190
Intake (mg/kg-day):	2.72E-06	2.94E-05	2.38E-05

Carcinogenic:

	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	4.4	1.1
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	876	876
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05
EF - Exposure frequency (days/yr):	350	350
ED - Exposure duration (yrs):	6	6
BW - Average body weight (kg):	15	15
AT - Averaging time (days):	25,550	25,550
Intake (mg/kg-day):	1.06E-06	2.64E-07

United Plating Site

TABLE J-23 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Residential Land Use Scenario - Exposure to Adults

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	0.97	10.5	8.5
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	2184	2184	2184
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05	0.05
EF - Exposure frequency (days/yr):	350	350	350
ED - Exposure duration (yrs):	24	24	24
BW - Average body weight (kg):	70	70	70
AT - Averaging time (days):	8,760	8,760	8,760
Intake (mg/kg-day):	1.45E-06	1.57E-05	1.27E-05

Carcinogenic:

	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	4.4	1.1
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	2184	2184
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05
EF - Exposure frequency (days/yr):	350	350
ED - Exposure duration (yrs):	24	24
BW - Average body weight (kg):	70	70
AT - Averaging time (days):	25,550	25,550
Intake (mg/kg-day):	2.26E-06	5.64E-07

United Plating Site

TABLE J-23 (Continued)

RISK CHARACTERIZATION
Dermal Contact with Chemicals in Soils
Residential Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

ON-SITE SOILS (Children):

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Dibenzofuran	2.72E-06	4.0E-03	0.00068
Fluoranthene	2.94E-05	4.0E-02	0.00074
Pyrene	2.38E-05	3.0E-02	0.00079

Pathway Hazard Index: 0.00221

ON-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Dibenzofuran	1.45E-06	4.0E-03	0.00036
Fluoranthene	1.57E-05	4.0E-02	0.00039
Pyrene	1.27E-05	3.0E-02	0.00042

Pathway Hazard Index: 0.00118

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS (Children):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	8.16E-07	7.3E+00	5.96E-06

Total Pathway Risk: 5.96E-06

OFF-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	1.74E-06	7.3E+00	1.27E-05

Total Pathway Risk: 1.27E-05

ON-SITE SOILS (Children):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	1.06E-06	7.3E+00	7.71E-06
Dibenzo(a,h)anthracene	2.64E-07	7.3E+00	1.93E-06

Total Pathway Risk: 9.64E-06

TABLE J-23 (Continued)

CARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	2.26E-06	7.3E+00	1.65E-05
Dibenzo(a,h)anthracene	5.64E-07	7.3E+00	4.12E-06
Total Pathway Risk:			2.06E-05

United Plating Site

TABLE J-24

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Commercial/Industrial Land Use Scenario - Exposure to Workers

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Carcinogenic:

	<u>Benzo(a)pyrene</u>
CS - Contaminant concentration (mg/kg):	3.4
CF - Conversion factor (kg/mg):	1.00E-06
SA - Skin surface area (cm ² /event):	2184
AF - Soil to skin adherence factor (mg/cm ²):	1.0
ABS - Absorption factor (unitless):	0.05
EF - Exposure frequency (days/yr):	250
ED - Exposure duration (yrs):	25
BW - Average body weight (kg):	70
AT - Averaging time (days):	<u>25,550</u>
Intake (mg/kg-day):	1.30E-06

United Plating Site

TABLE J-24 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Dermal Contact with Chemicals in Soils
 Commercial/Industrial Land Use Scenario - Exposure to Workers

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Dibenzofuran	Fluoranthene	Pyrene
CS - Contaminant concentration (mg/kg):	0.97	10.5	8.5
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	2184	2184	2184
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05	0.05
EF - Exposure frequency (days/yr):	250	250	250
ED - Exposure duration (yrs):	25	25	25
BW - Average body weight (kg):	70	70	70
AT - Averaging time (days):	9,125	9,125	9,125
Intake (mg/kg-day):	1.04E-06	1.12E-05	9.08E-06

Carcinogenic:

	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CS - Contaminant concentration (mg/kg):	4.4	1.1
CF - Conversion factor (kg/mg):	1.00E-06	1.00E-06
SA - Skin surface area (cm ² /event):	2184	2184
AF - Soil to skin adherence factor (mg/cm ²):	1.0	1.0
ABS - Absorption factor (unitless):	0.05	0.05
EF - Exposure frequency (days/yr):	250	250
ED - Exposure duration (yrs):	25	25
BW - Average body weight (kg):	70	70
AT - Averaging time (days):	25,550	25,550
Intake (mg/kg-day):	1.68E-06	4.20E-07

United Plating Site

TABLE J-24 (Continued)

RISK CHARACTERIZATION
 Dermal Contact with Chemicals in Soils
 Commercial/Industrial Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

ON-SITE SOILS:

Contaminant of Concern	Intake Value	RfD	Hazard Quotient
Dibenzofuran	1.04E-06	4.0E-03	0.00026
Fluoranthene	1.12E-05	4.0E-02	0.00028
Pyrene	9.08E-06	3.0E-02	0.00030

Pathway Hazard Index: 0.00084

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	1.30E-06	7.3E+00	9.47E-06

Total Pathway Risk: 9.47E-06

ON-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Benzo(a)pyrene	1.68E-06	7.3E+00	1.23E-05
Dibenzo(a,h)anthracene	4.20E-07	7.3E+00	3.06E-06

Total Pathway Risk: 1.53E-05

United Plating Site

TABLE J-25

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Current Land Use Scenario - Exposure to Children

ON-SITE SOILS - OUTSIDE FENCE:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Zinc
CA - Contaminant concentration in air (mg/m ³):	9.03E-08	5.62E-08	4.38E-07	6.47E-07	4.40E-07	2.95E-06
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	4	4	4	4	4	4
EF - Exposure frequency (days/yr):	56	56	56	56	56	56
ED - Exposure duration (yrs):	10	10	10	10	10	10
BW - Average body weight (kg):	37.8	37.8	37.8	37.8	37.8	37.8
AT - Averaging time (days):	3650	3650	3650	3650	3650	3650
Intake (mg/kg-day):	5.42E-09	3.38E-09	2.63E-08	3.89E-08	2.64E-08	1.77E-07

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CA - Contaminant concentration in air (mg/m ³):	9.03E-08	5.62E-08	4.38E-07	4.40E-07	1.90E-08
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	4	4	4	4	4
EF - Exposure frequency (days/yr):	56	56	56	56	56
ED - Exposure duration (yrs):	10	10	10	10	10
BW - Average body weight (kg):	37.8	37.8	37.8	37.8	37.8
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	7.75E-10	4.82E-10	3.76E-09	3.78E-09	1.63E-10

United Plating Site

TABLE J-25 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Current Land Use Scenario - Exposure to Children

ON-SITE SOILS - WITHIN FENCE:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CA - Contaminant concentration in air (mg/m ³):	1.06E-07	2.85E-07	9.70E-07	1.08E-06	6.28E-07	4.04E-08	4.20E-07	3.37E-07
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	2	2	2	2	2	2	2	2
EF - Exposure frequency (days/yr):	56	56	56	56	56	56	56	56
ED - Exposure duration (yrs):	7	7	7	7	7	7	7	7
BW - Average body weight (kg):	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6
AT - Averaging time (days):	2555	2555	2555	2555	2555	2555	2555	2555
Intake (mg/kg-day):	2.76E-09	7.42E-09	2.53E-08	2.81E-08	1.64E-08	1.05E-09	1.09E-08	8.78E-09

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CA - Contaminant concentration in air (mg/m ³):	1.06E-07	2.85E-07	9.70E-07	1.75E-07	4.41E-08
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	2	2	2	2	2
EF - Exposure frequency (days/yr):	56	56	56	56	56
ED - Exposure duration (yrs):	7	7	7	7	7
BW - Average body weight (kg):	43.6	43.6	43.6	43.6	43.6
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	2.76E-10	7.42E-10	2.53E-09	4.56E-10	1.15E-10

United Plating Site

TABLE J-25 (Continued)

RISK CHARACTERIZATION
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Current Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

ON-SITE SOILS - OUTSIDE FENCE:

Contaminant of Concern	Intake Value	RfC	Hazard Quotient
Arsenic	5.42E-09	NV	-
Cadmium	3.38E-09	NV	-
Chromium	2.63E-08	NV	-
Copper	3.89E-08	NV	-
Nickel	2.64E-08	NV	-
Zinc	1.77E-07	NV	-

Pathway Hazard Index: NV

ON-SITE SOILS - WITHIN FENCE:

Contaminant of Concern	Intake Value	RfC	Hazard Quotient
Arsenic	2.76E-09	NV	-
Cadmium	7.42E-09	NV	-
Chromium	2.53E-08	NV	-
Copper	2.81E-08	NV	-
Nickel	1.64E-08	NV	-
Dibenzofuran	1.05E-09	NV	-
Fluoranthene	1.09E-08	NV	-
Pyrene	8.78E-09	NV	-

Pathway Hazard Index: NV

CARCINOGENIC RISK ESTIMATE

ON-SITE SOILS - OUTSIDE FENCE:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	7.75E-10	1.5E+01	1.17E-08
Cadmium	4.82E-10	6.3E+00	3.04E-09
Chromium	3.76E-09	4.2E+01	1.58E-07
Nickel	3.78E-09	8.4E-01	3.17E-09
Benzo(a)pyrene	1.63E-10	6.1E+00	9.95E-10

Total Pathway Risk: 1.77E-07

TABLE J-25 (Continued)

CARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS - WITHIN FENCE:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	2.76E-10	1.5E+01	4.17E-09
Cadmium	7.42E-10	6.3E+00	4.68E-09
Chromium	2.53E-09	4.2E+01	1.06E-07
Benzo(a)pyrene	4.56E-10	6.1E+00	2.78E-09
Dibenzo(a,h)anthracene	1.15E-10	6.1E+00	7.01E-10
Total Pathway Risk:			1.18E-07

United Plating Site

TABLE J-26

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Residential Land Use Scenario - Exposure to Children

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CA - Contaminant concentration in air (mg/m ³):	1.68E-07	6.61E-08	6.46E-07	3.35E-09	2.18E-06	4.46E-06
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15	15
AT - Averaging time (days):	2,190	2,190	2,190	2,190	2,190	2,190
Intake (mg/kg-day):	3.97E-08	1.56E-08	1.53E-07	7.92E-10	5.16E-07	1.05E-06

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CA - Contaminant concentration in air (mg/m ³):	1.68E-07	6.61E-08	6.46E-07	2.18E-06	6.74E-08
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	3.41E-09	1.34E-09	1.31E-08	4.42E-08	1.37E-09

United Plating Site

TABLE J-26 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Residential Land Use Scenario - Exposure to Adults

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CA - Contaminant concentration in air (mg/m ³):	1.68E-07	6.61E-08	6.46E-07	3.35E-09	2.18E-06	4.46E-06
IR - Inhalation rate (m ³ /hr):	3.0	3.0	3.0	3.0	3.0	3.0
ET - Exposure time (hrs/day):	0.43	0.43	0.43	0.43	0.43	0.43
EF - Exposure frequency (days/yr):	350	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70	70
AT - Averaging time (days):	8,760	8,760	8,760	8,760	8,760	8,760
Intake (mg/kg-day):	6.90E-09	2.72E-09	2.65E-08	1.38E-10	8.96E-08	1.83E-07

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CA - Contaminant concentration in air (mg/m ³):	1.68E-07	6.61E-08	6.46E-07	2.18E-06	6.74E-08
IR - Inhalation rate (m ³ /hr):	3.0	3.0	3.0	3.0	3.0
ET - Exposure time (hrs/day):	0.43	0.43	0.43	0.43	0.43
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	2.37E-09	9.31E-10	9.10E-09	3.07E-08	9.50E-10

United Plating Site

TABLE J-26 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Residential Land Use Scenario - Exposure to Children

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CA - Contaminant concentration in air (mg/m ³):	9.15E-08	1.58E-07	6.81E-07	8.41E-07	5.08E-07	1.94E-08	2.09E-07	1.70E-07
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15	15	15	15
AT - Averaging time (days):	2,190	2,190	2,190	2,190	2,190	2,190	2,190	2,190
Intake (mg/kg-day):	2.16E-08	3.74E-08	1.61E-07	1.99E-07	1.20E-07	4.59E-09	4.94E-08	4.02E-08

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CA - Contaminant concentration in air (mg/m ³):	9.15E-08	1.58E-07	6.81E-07	8.85E-08	2.20E-08
IR - Inhalation rate (m ³ /hr):	3.7	3.7	3.7	3.7	3.7
ET - Exposure time (hrs/day):	1.0	1.0	1.0	1.0	1.0
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	6	6	6	6	6
BW - Average body weight (kg):	15	15	15	15	15
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	1.86E-09	3.20E-09	1.38E-08	1.79E-09	4.46E-10

APPENDIX K-1

CORRESPONDENCE WITH NYSDEC NATURAL HERITAGE PROGRAM

**Lawler,
Matusky
& Skelly
Engineers**

Environmental Science & Engineering Consultants

JOHN P. LAWLER, P. E.
FELIX E. MATUSKY, P. E.
MICHAEL J. SKELLY, P. E.
KARIM A. ABOOD, P. E.
PATRICK J. LAWLER, P. E.
FRANCIS M. MCGOWAN, P. E.
THOMAS L. ENGLERT, P. E.
PETER M. MCGROODY, P. E.
THOMAS E. PEASE, P. E.
THOMAS B. VANDERBEEK, P. E.

Principal
SUSAN G. METZGER, Ph. D.

ONE BLUE HILL PLAZA
P. O. BOX 1509
PEARL RIVER, NEW YORK 10865
(914) 735-8300
FACSIMILE (914) 735-7468

11 October 1995
File No. 650097

Ms. Nancy Davis-Ricci
Significant Habitat Unit
Wildlife Services Center
NYSDEC-Information Service
700 Troy Schenectady Road
Latham, N. Y. 121100-2400

Dear Ms. Davis-Ricci:

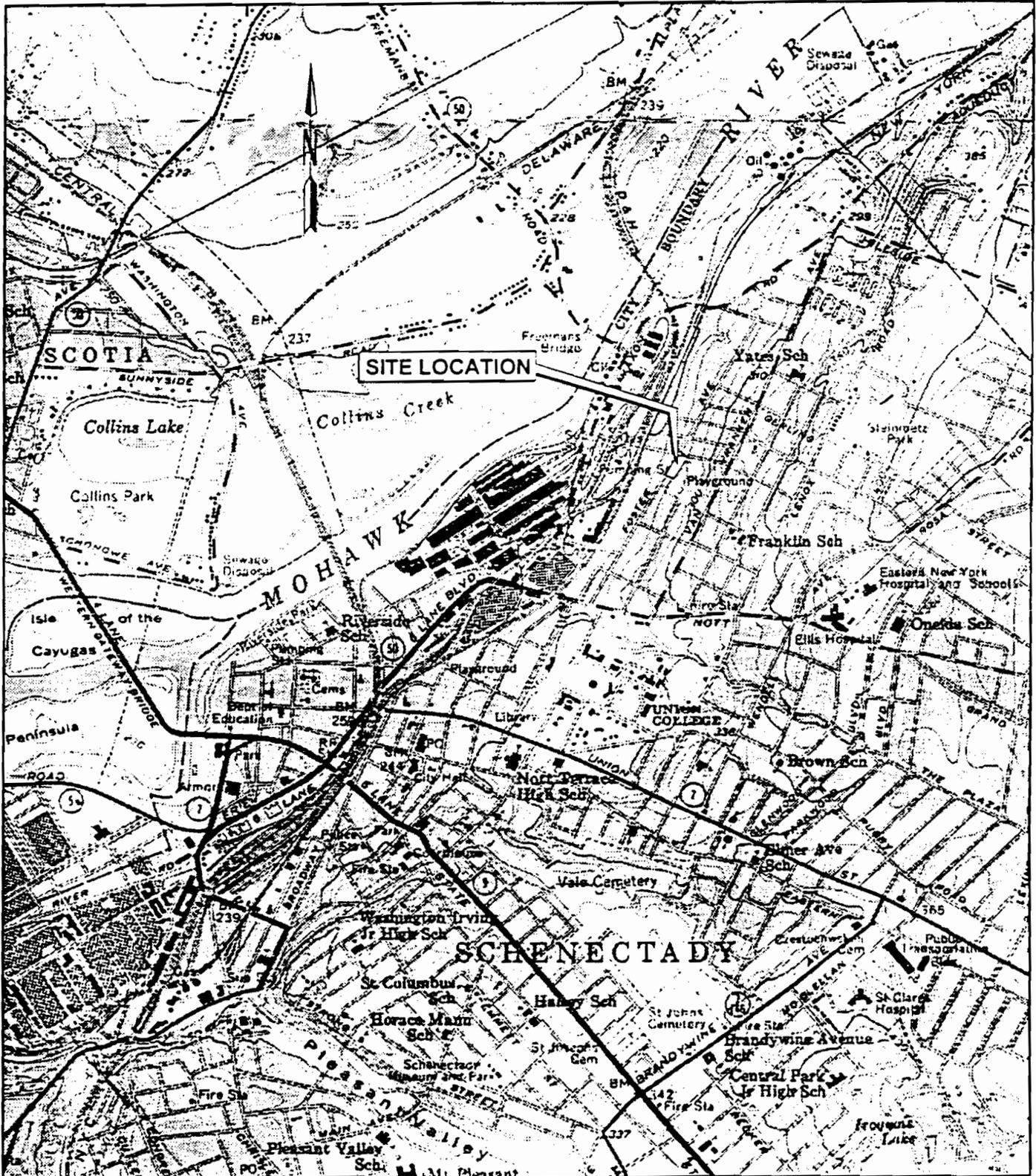
Lawler, Matusky and Skelly Engineers (LMS) is conducting an environmental assessment of the United Plating Corporation site located in the City of Schenectady, New York (County of Schenectady, Schenectady Quadrant). We are requesting that your office review the threatened and endangered species files for the area of study (as indicated on the attached map) and forward the results of this search to LMS.

If you have any questions or require additional information, please call me at (914) 735-8300, ext. 294. Your time and assistance on this matter is greatly appreciated.

Yours truly,



Christine Barker
Project Scientist



QUADRANGLE LOCATION



0 2000 ft



Figure 1-1

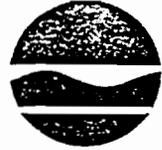
Site Location

UNITED PLATING CORPORATION
 NYSDEC I.D. No. 447018

LAWLER, MATUSKY & SKELLY ENGINEERS
 Pearl River, New York

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wildlife Resources Center
700 Troy-Schenectady Road
Latham, NY 12110-2400

(518) 783-3932



October 25, 1995

Christine Barker
Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza
PO Box 1509
Pearl River, New York 10965

Dear Ms. Barker:

We have reviewed the New York Natural Heritage Program files with respect to your recent request for biological information concerning the Environmental Assessment of the United Plating Corporation site, as indicated on your enclosed map, located in the City of Schenectady, Schenectady County, New York State.

Enclosed is a computer printout covering the area you requested to be reviewed by our staff. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data which have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. You should contact our regional office, Division of Regulatory Affairs, at the address enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State Law.

If this proposed project is still active one year from now we recommend that you contact us again so that we may update this response.

Sincerely,

A handwritten signature in cursive script that reads "Beth O'Neill".

Beth O'Neill
Information Services
New York Natural Heritage Program

Encs.

cc: Reg. 4, Wildlife Mgr.

BIOLOGICAL AND CONSERVATION DATA SYSTEM - ELEMENT OCCURRENCE REPORT, 20 OCT 1995

Prepared by N.Y.S.D.E.C. Natural Heritage Program, Latham New York

(This report contains sensitive information which should be treated in a sensitive manner. Refer to the users guide for explanation of codes and ranks.)

* COUNTY & TOWN	USGS TOPO MAP/ LAT. & LONG.	PREC- ISION	LAST SEEN	EO RANK	SCIENTIFIC AND COMMON NAME	ELEMENT TYPE	NY STATUS	US STATUS	HERITAGE RANKS	OFFICE USE	OFFICE USE	OFFICE USE
* SCHENECTADY												
CITY OF SCHENECTADY	SCHENECTADY 424937 735536	S	1993	D	LEUCOSPORA MULTIFIDA LEUCOSPORA	VASCULAR PLANT	U		G5 S1		4207378	8
CITY OF SCHENECTADY	SCHENECTADY 424914 735642	M	1946	H	POLYGONUM ERECTUM ERECT KNOTWEED	VASCULAR PLANT	U		G5 SH		4207378	11

2 Records Processed

APPENDIX K-2

CORRESPONDENCE WITH U.S. FISH AND WILDLIFE SERVICE

**Lawler,
Matusky
& Skelly
Engineers**

Environmental Science & Engineering Consultants

JOHN P. LAWLER, P. E.
FELIX E. MATUSKY, P. E.
MICHAEL J. SKELLY, P. E.
KARIM A. ABOOD, P. E.
PATRICK J. LAWLER, P. E.
FRANCIS M. MCGOWAN, P. E.
THOMAS L. ENGLERT, P. E.
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THOMAS E. PEASE, P. E.
THOMAS B. VANDERBEEK, P. E.

Principal
SUSAN G. METZGER, Ph.D.

ONE BLUE HILL PLAZA
P. O. BOX 1508
PEARL RIVER, NEW YORK 10965
(914) 735-8300
FACSIMILE (914) 735-7488

11 October 1995
File No. 650097

1 607753 9334
Mr. Tom McCartney
United States Department of the Interior
Fish and Wildlife Service
3817 Luker Rd.
Cortland, New York 13045

Dear Mr. McCartney:

Lawler, Matusky and Skelly Engineers (LMS) is conducting an environmental assessment of the United Plating Corporation site located in the City of Schenectady, New York (County of Schenectady, Schenectady Quadrant). We are requesting that your office determine whether there are any federally listed (or proposed) endangered or threatened species in the vicinity of the project area. A map is enclosed to facilitate your review.

If you have any questions or require additional information, please call me at (914) 735-8300, ext. 294. Your time and assistance on this matter is greatly appreciated.

Yours truly,



Christine Barker
Project Scientist

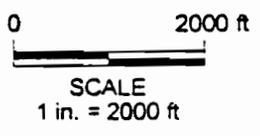
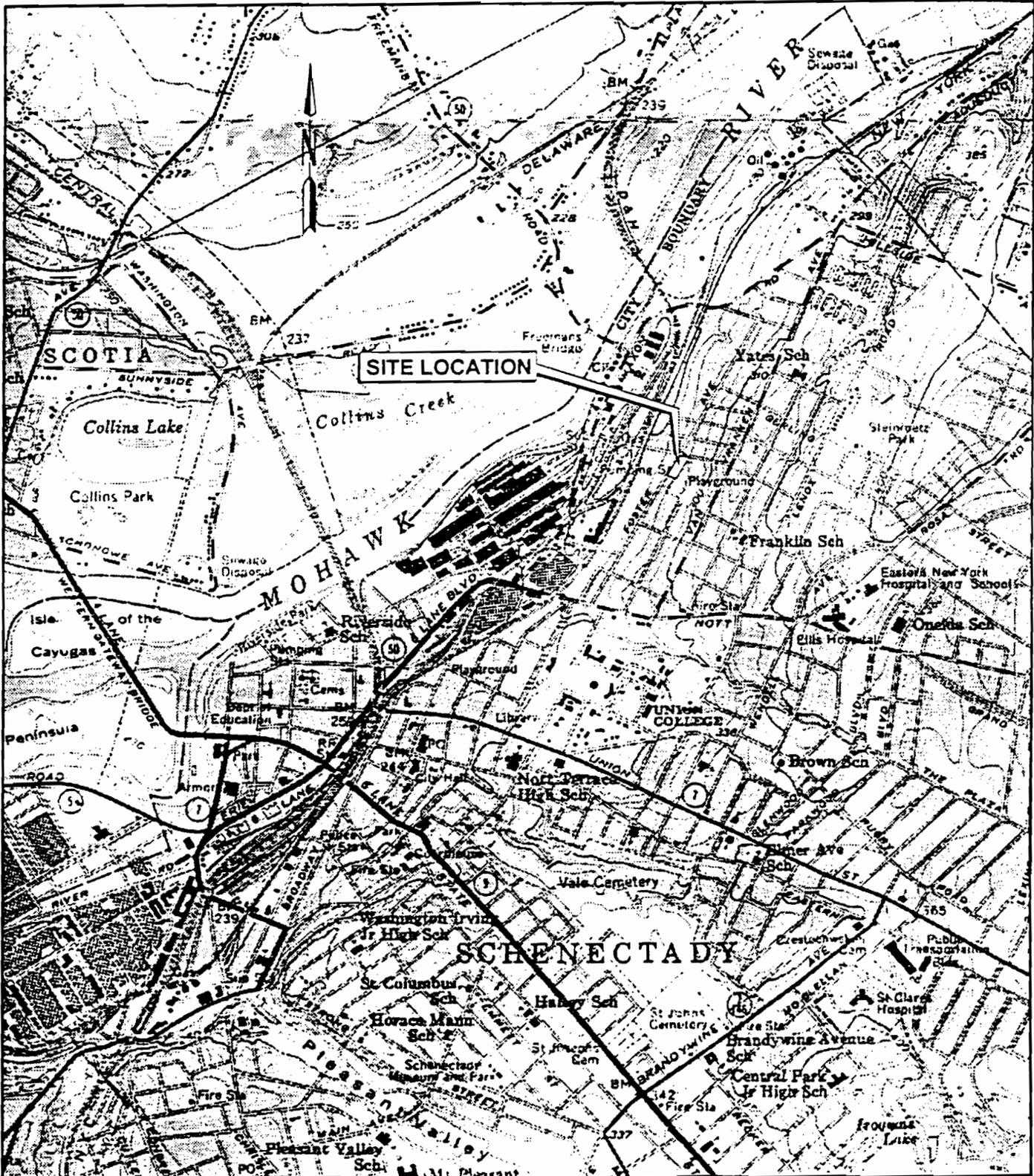


Figure 1-1

Site Location

UNITED PLATING CORPORATION
 NYSEDEC.I.D. No. 447018

LAWLER, MATUSKY & SKELLY ENGINEERS
 Pearl River, New York

Map source: USGS 7.5 minute quadrangle map, Schenectady, NY, 1954.

APPENDIX L
SITE PHOTOGRAPHS



United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

November 27, 1995

Ms. Christine Barker
Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza
P.O. Box 1509
Pearl River, NY 10965

Dear Ms. Barker:

This responds to your letters of October 11, 1995, requesting information on the presence of endangered or threatened species in the vicinity of the following project sites:

1. Davis-Howland Oil Corporation located at 2000 Anderson Avenue in the City of Rochester, Monroe County, New York, and
2. United Plating Corporation on Foster Street in the City of Schenectady, Schenectady County, New York.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the respective project impact areas. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the U.S. Fish and Wildlife Service (Service). Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of Federally listed and proposed endangered and threatened species in New York is enclosed for your information.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under the Fish and Wildlife Coordination Act or other legislation.

For additional information on fish and wildlife resources, or State-listed species in the City of Rochester, we suggest you contact:

New York State Department of
Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, NY 14414
(716) 226-2466

New York State Department of
Environmental Conservation
Wildlife Resources Center - Information Serv.
New York Natural Heritage Program
700 Troy-Schenectady Road
Latham, NY 12110-2400
(518) 783-3932

For information on the City of Schenectady, contact the New York State Department of Environmental Conservation, Region 4, 2176 Guilderland Avenue, Schenectady, NY 12306 (telephone: [518] 382-0680).

The National Wetlands Inventory (NWI) map of the Rochester East Quadrangle is available but does not show any wetlands in the project vicinity. An NWI map of the Schenectady Quadrangle is not yet available. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes.

Work in certain waters and wetlands of the United States in Monroe County may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without stipulations, or recommend denial of the permit depending upon the potential adverse impacts on fish and wildlife resources associated with project implementation. The need for a Corps permit may be determined by contacting Mr. Paul Leuchner, Chief, Regulatory Branch, U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, NY 14207 (telephone: [716] 879-4321).

For waters and wetlands in Schenectady County contact Mr. Joseph Seebode, Chief, Regulatory Branch, U.S. Army Corps of Engineers, 26 Federal Plaza, New York, NY 10278 (telephone: [212] 264-3996).

If you have any questions regarding this letter, contact Tom McCartney at (607) 753-9334.

Sincerely,

ACTING FOP
Sherry W. Morgan
Field Supervisor

Enclosure

cc: NYSDEC, Avon & Schenectady, NY (Regulatory Services)
NYSDEC, Latham, NY
COE, Buffalo & New York, NY
EPA, Chief, Marine & Wetlands Protection Branch, New York, NY

United Plating Site

TABLE J-26 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Residential Land Use Scenario - Exposure to Adults

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CA - Contaminant concentration in air (mg/m ³):	9.15E-08	1.58E-07	6.81E-07	8.41E-07	5.08E-07	1.94E-08	2.09E-07	1.70E-07
IR - Inhalation rate (m ³ /hr):	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
ET - Exposure time (hrs/day):	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
EF - Exposure frequency (days/yr):	350	350	350	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70	70	70	70
AT - Averaging time (days):	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
Intake (mg/kg-day):	3.76E-09	6.49E-09	2.80E-08	3.46E-08	2.09E-08	7.97E-10	8.59E-09	6.99E-09

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CA - Contaminant concentration in air (mg/m ³):	9.15E-08	1.58E-07	6.81E-07	8.85E-08	2.20E-08
IR - Inhalation rate (m ³ /hr):	3.0	3.0	3.0	3.0	3.0
ET - Exposure time (hrs/day):	0.43	0.43	0.43	0.43	0.43
EF - Exposure frequency (days/yr):	350	350	350	350	350
ED - Exposure duration (yrs):	24	24	24	24	24
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	1.29E-09	2.23E-09	9.60E-09	1.25E-09	3.10E-10

United Plating Site

TABLE J-26 (Continued)

RISK CHARACTERIZATION
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Residential Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS (Children):

Contaminant of Concern	Intake Value	RfC	Hazard Quotient
Arsenic	3.97E-08	NV	-
Cadmium	1.56E-08	NV	-
Chromium	1.53E-07	NV	-
Mercury	7.92E-10	3.0E-04	0.000003
Nickel	5.16E-07	NV	-
Zinc	1.05E-06	NV	-

Pathway Hazard Index: 0.000003

OFF-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	RfC	Hazard Quotient
Arsenic	6.90E-09	NV	-
Cadmium	2.72E-09	NV	-
Chromium	2.65E-08	NV	-
Mercury	1.38E-10	3.0E-04	0.0000005
Nickel	8.96E-08	NV	-
Zinc	1.83E-07	NV	-

Pathway Hazard Index: 0.0000005

ON-SITE SOILS (Children):

Contaminant of Concern	Value	RfC	Hazard Quotient
Arsenic	2.16E-08	NV	-
Cadmium	3.74E-08	NV	-
Chromium	1.61E-07	NV	-
Copper	1.99E-07	NV	-
Nickel	1.20E-07	NV	-
Dibenzofuran	4.59E-09	NV	-
Fluoranthene	4.94E-08	NV	-
Pyrene	4.02E-08	NV	-

Pathway Hazard Index: NV

United Plating Site

TABLE J-27

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Commercial/Industrial Land Use Scenario - Exposure to Workers

OFF-SITE SOILS:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Mercury	Nickel	Zinc
CA - Contaminant concentration in air (mg/m ³):	1.68E-07	6.61E-08	6.46E-07	3.35E-09	2.18E-06	4.46E-06
IR - Inhalation rate (m ³ /hr):	20	20	20	20	20	20
ET - Exposure time (hrs/day):	-	-	-	-	-	-
EF - Exposure frequency (days/yr):	250	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70	70
AT - Averaging time (days):	9,125	9,125	9,125	9,125	9,125	9,125
Intake (mg/kg-day):	3.29E-08	1.29E-08	1.26E-07	6.56E-10	4.27E-07	8.73E-07

Carcinogenic:

	Arsenic	Cadmium	Chromium	Nickel	Benzo(a)pyrene
CA - Contaminant concentration in air (mg/m ³):	1.68E-07	6.61E-08	6.46E-07	2.18E-06	6.74E-08
IR - Inhalation rate (m ³ /hr):	20	20	20	20	20
ET - Exposure time (hrs/day):	-	-	-	-	-
EF - Exposure frequency (days/yr):	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	1.17E-08	4.62E-09	4.51E-08	1.52E-07	4.71E-09

United Plating Site

TABLE J-27 (Continued)

EXPOSURE ASSESSMENT CALCULATIONS
 Inhalation of Airborne (Particulate-Phase) Chemicals
 Commercial/Industrial Land Use Scenario - Exposure to Workers

ON-SITE SOILS:

$$\text{Intake} = \frac{\text{CA} \times \text{IR} \times \text{ET} \times \text{EF} \times \text{ED}}{\text{BW} \times \text{AT}}$$

Noncarcinogenic:

	Arsenic	Cadmium	Chromium	Copper	Nickel	Dibenzofuran	Fluoranthene	Pyrene
CA - Contaminant concentration in air (mg/l)	9.15E-08	1.58E-07	6.81E-07	8.41E-07	5.08E-07	1.94E-08	2.09E-07	1.70E-07
IR - Inhalation rate (m ³ /hr):	20	20	20	20	20	20	20	20
ET - Exposure time (hrs/day):	-	-	-	-	-	-	-	-
EF - Exposure frequency (days/yr):	250	250	250	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70	70	70	70
AT - Averaging time (days):	9,125	9,125	9,125	9,125	9,125	9,125	9,125	9,125
Intake (mg/kg-day):	1.79E-08	3.09E-08	1.33E-07	1.65E-07	9.94E-08	3.80E-09	4.09E-08	3.33E-08

Carcinogenic:

	Arsenic	Cadmium	Chromium	Benzo(a)pyrene	Dibenzo(a,h)anthracene
CA - Contaminant concentration in air (mg/l)	9.15E-08	1.58E-07	6.81E-07	8.85E-08	2.20E-08
IR - Inhalation rate (m ³ /hr):	20	20	20	20	20
ET - Exposure time (hrs/day):	-	-	-	-	-
EF - Exposure frequency (days/yr):	250	250	250	250	250
ED - Exposure duration (yrs):	25	25	25	25	25
BW - Average body weight (kg):	70	70	70	70	70
AT - Averaging time (days):	25,550	25,550	25,550	25,550	25,550
Intake (mg/kg-day):	6.40E-09	1.10E-08	4.76E-08	6.19E-09	1.54E-09

TABLE J-26 (Continued)

NONCARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	RfC	Hazard Quotient
Arsenic	3.76E-09	NV	-
Cadmium	6.49E-09	NV	-
Chromium	2.80E-08	NV	-
Copper	3.46E-08	NV	-
Nickel	2.09E-08	NV	-
Dibenzofuran	7.97E-10	NV	-
Fluoranthene	8.59E-09	NV	-
Pyrene	6.99E-09	NV	-

Pathway Hazard Index: NV

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS (Children):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	3.41E-09	1.5E+01	5.14E-08
Cadmium	1.34E-09	6.3E+00	8.44E-09
Chromium	1.31E-08	4.2E+01	5.50E-07
Nickel	4.42E-08	8.4E-01	3.71E-08
Benzo(a)pyrene	1.37E-09	6.1E+00	8.34E-09

Total Pathway Risk: 6.55E-07

OFF-SITE SOILS (Adults):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	2.37E-09	1.5E+01	3.57E-08
Cadmium	9.31E-10	6.3E+00	5.87E-09
Chromium	9.10E-09	4.2E+01	3.82E-07
Nickel	3.07E-08	8.4E-01	2.58E-08
Benzo(a)pyrene	9.50E-10	6.1E+00	5.79E-09

Total Pathway Risk: 4.55E-07

TABLE J-26 (Continued)

CARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS (Children):

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	1.86E-09	1.5E+01	2.80E-08
Cadmium	3.20E-09	6.3E+00	2.02E-08
Chromium	1.38E-08	4.2E+01	5.80E-07
Benzo(a)pyrene	1.79E-09	6.1E+00	1.09E-08
Dibenzo(a,h)anthracene	4.46E-10	6.1E+00	2.72E-09
Total Pathway Risk:			6.42E-07

ON-SITE SOILS (Adults)

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	1.29E-09	1.5E+01	1.95E-08
Cadmium	2.23E-09	6.3E+00	1.40E-08
Chromium	9.60E-09	4.2E+01	4.03E-07
Benzo(a)pyrene	1.25E-09	6.1E+00	7.61E-09
Dibenzo(a,h)anthracene	3.10E-10	6.1E+00	1.89E-09
Total Pathway Risk:			4.46E-07

United Plating Site

TABLE J-27 (Continued)

RISK CHARACTERIZATION
 Inhalation of Airborne (Particulate-Phase) Contaminants
 Commercial/Industrial Land Use Scenario

NONCARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	RfC	Hazard Quotient
Arsenic	3.29E-08	NV	-
Cadmium	1.29E-08	NV	-
Chromium	1.26E-07	NV	-
Mercury	6.56E-10	3.0E-04	0.000002
Nickel	4.27E-07	NV	-
Zinc	8.73E-07	NV	-

Pathway Hazard Index: 0.000002

ON-SITE SOILS:

Contaminant of Concern	Value	RfC	Hazard Quotient
Arsenic	1.79E-08	NV	-
Cadmium	3.09E-08	NV	-
Chromium	1.33E-07	NV	-
Copper	1.65E-07	NV	-
Nickel	9.94E-08	NV	-
Dibenzofuran	3.80E-09	NV	-
Fluoranthene	4.09E-08	NV	-
Pyrene	3.33E-08	NV	-

Pathway Hazard Index: NV

CARCINOGENIC RISK ESTIMATE

OFF-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	1.17E-08	1.5E+01	1.77E-07
Cadmium	4.62E-09	6.3E+00	2.91E-08
Chromium	4.51E-08	4.2E+01	1.90E-06
Nickel	1.52E-07	8.4E-01	1.28E-07
Benzo(a)pyrene	4.71E-09	6.1E+00	2.87E-08

Total Pathway Risk: 2.26E-06

TABLE J-27 (Continued)

CARCINOGENIC RISK ESTIMATE (Continued)

ON-SITE SOILS:

Contaminant of Concern	Intake Value	Slope Factor	Calculated Risk
Arsenic	6.40E-09	1.5E+01	9.66E-08
Cadmium	1.10E-08	6.3E+00	6.96E-08
Chromium	4.76E-08	4.2E+01	2.00E-06
Benzo(a)pyrene	6.19E-09	6.1E+00	3.77E-08
Dibenzo(a,h)anthracene	1.54E-09	6.1E+00	9.38E-09
Total Pathway Risk:			2.21E-06

APPENDIX K
HABITAT-BASED ASSESSMENT DOCUMENTATION

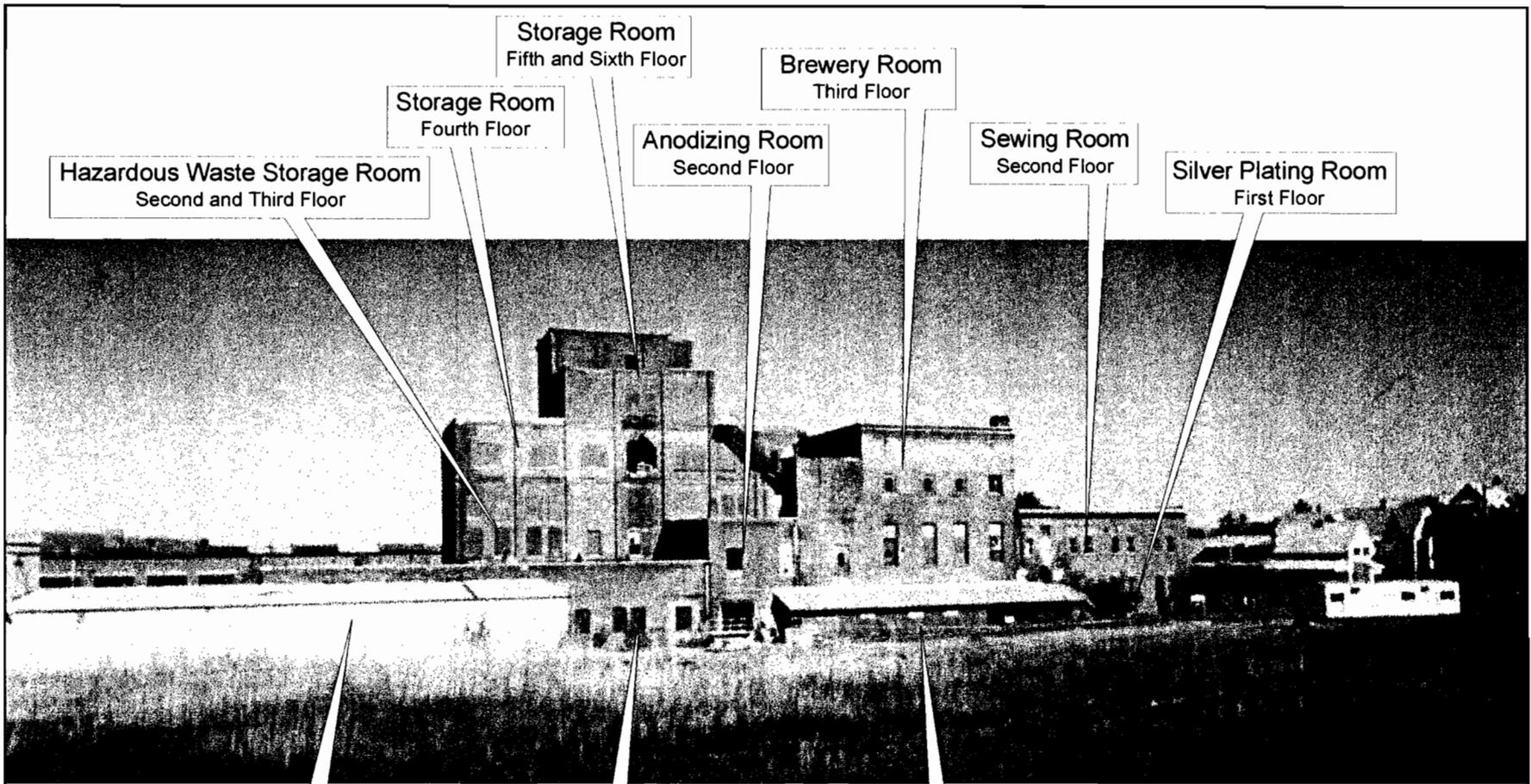


Photo date: June 1995

Wastewater Building
First Floor

Main Plating Room
First Floor

Chrome Room
First Floor

Photo 1. Rear view of United Plating Building looking north.

UNITED PLATING
NYSDEC I.D. No. 447018
LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Pearl River, New York

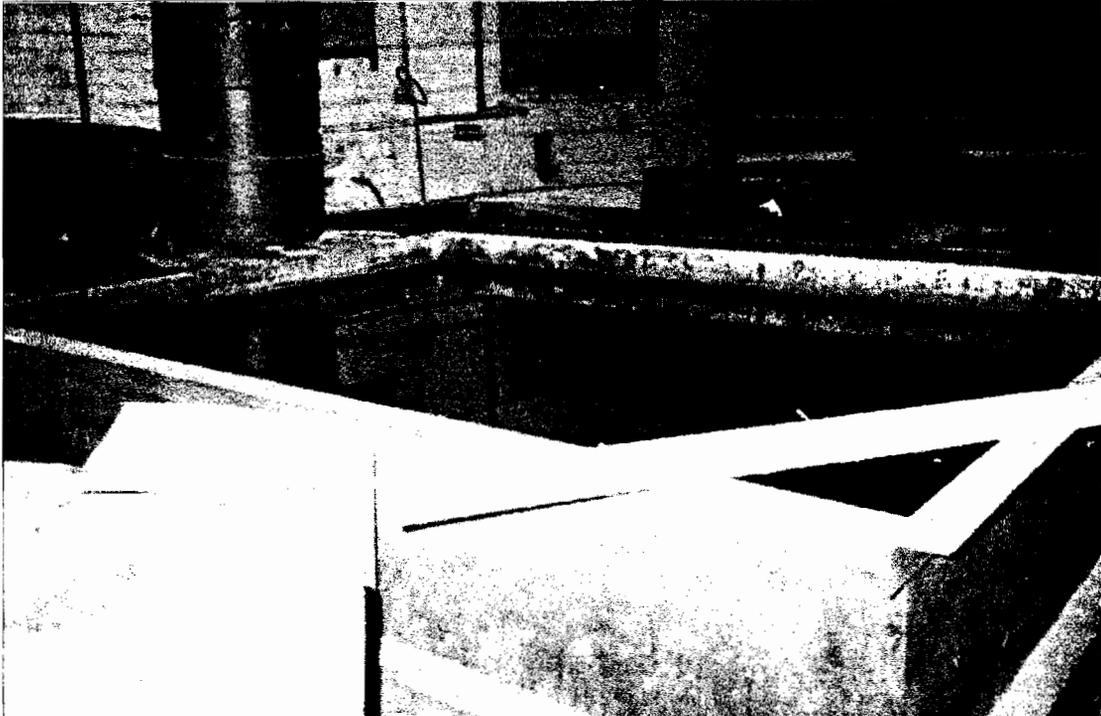


Photo date: 7 November 1990

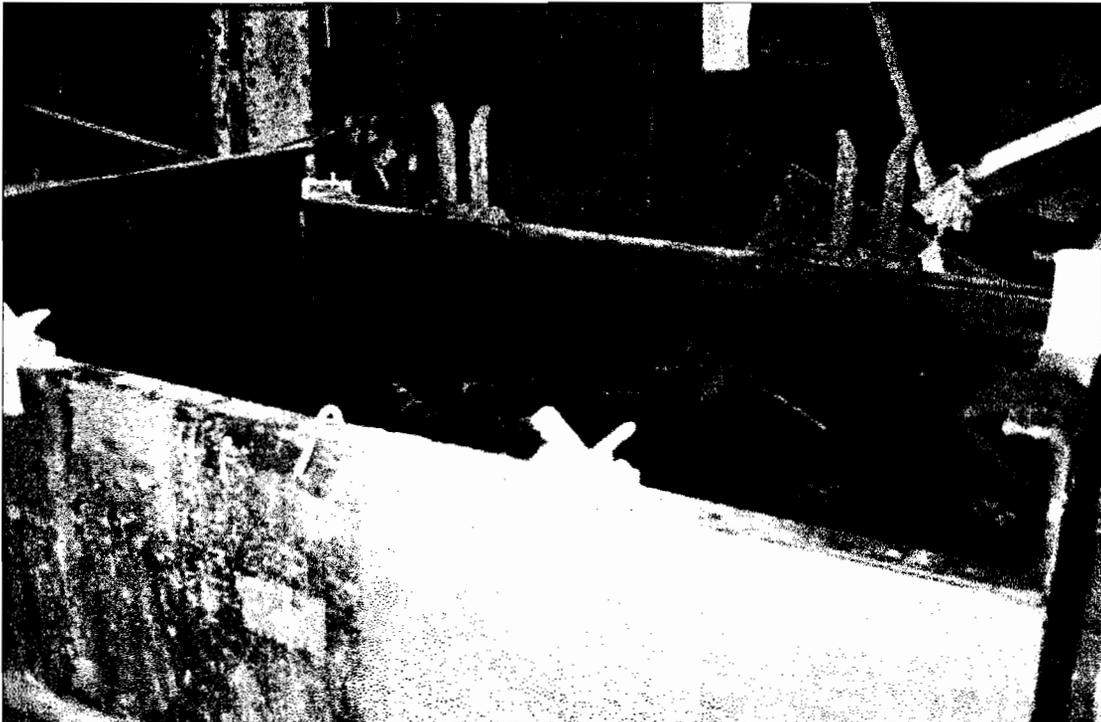


Photo date: 7 November 1990

Photos 2 & 3. Two tanks of unknown plating solutions during EPA drum removal
No. EPA 6W.

UNITED PLATING NYSDEC I.D. No. 447018
LAWLER, MATUSKY & SKELLY ENGINEERS LLP Pearl River, New York



Photo Date: 7 November 1990

Photo 4. One of the general labs off the silver plating room showing chemical supplies. Taken during Drum Removal No. EPA 6W.

UNITED PLATING NYSDEC I.D. No. 447018
LAWLER, MATUSKY & SKELLY ENGINEERS LLP Pearl River, New York



Photo date: 7 November 1990
(Drum Removal No.: EPA 6W)

Photo 5 & 6. Two typical areas with drums of as yet unknown materials.

UNITED PLATING NYSDEC I.D. No. 447018
LAWLER, MATUSKY & SKELLY ENGINEERS LLP Pearl River, New York

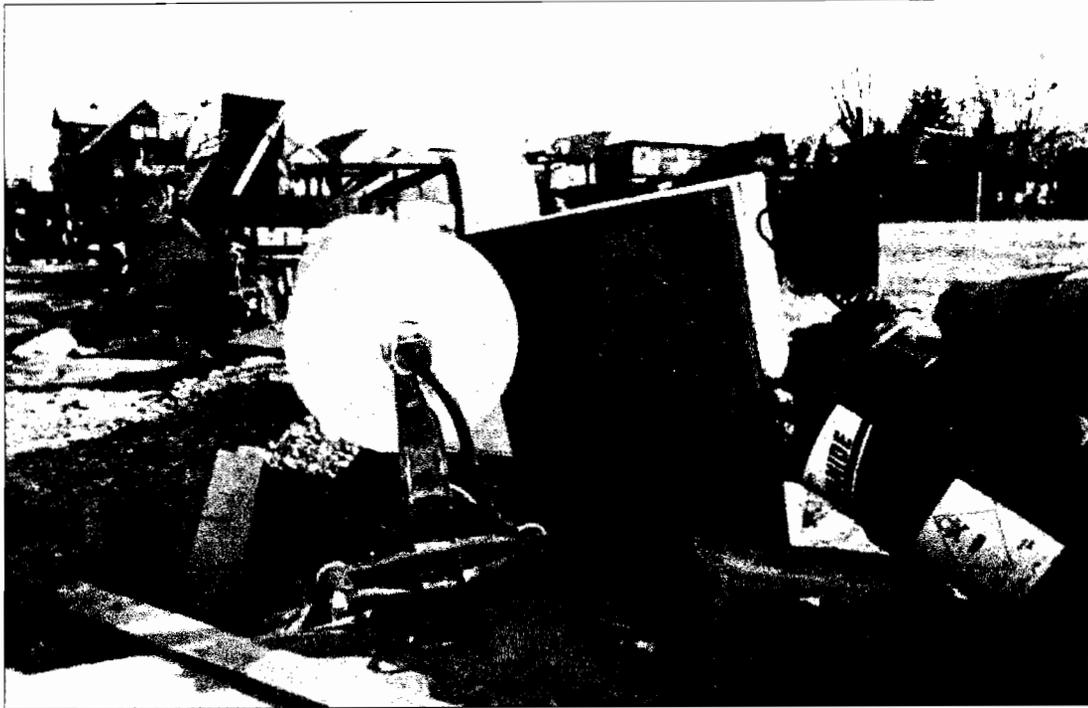


Photo 7. Back lot prior to debris removal.

Photo date: 7 November 1990
(Drum Removal No.: EPA 6W)



Photo 8. Plating salts and sludges.

Photo date: 7 November 1990
(Drum Removal No.: EPA 6W)

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LAWLER, MATUSKY & SKELLY ENGINEERS LLP Pearl River, New York

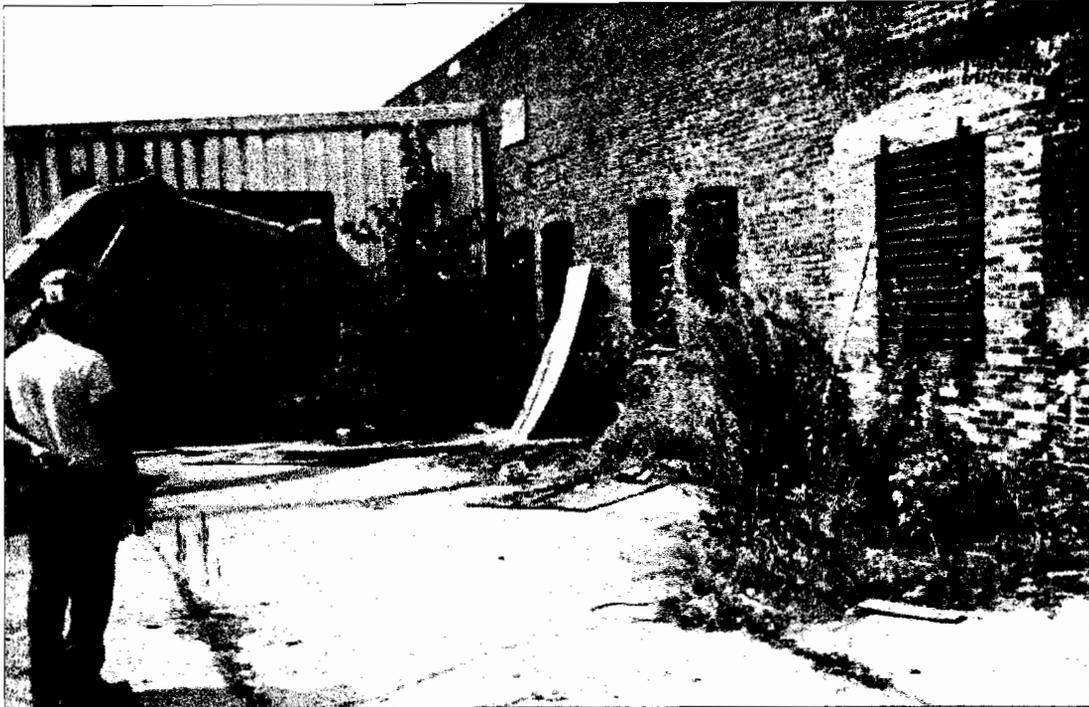


Photo date: 21 August 1995

Photo 9. Rear lot showing sump area prior to test pits.

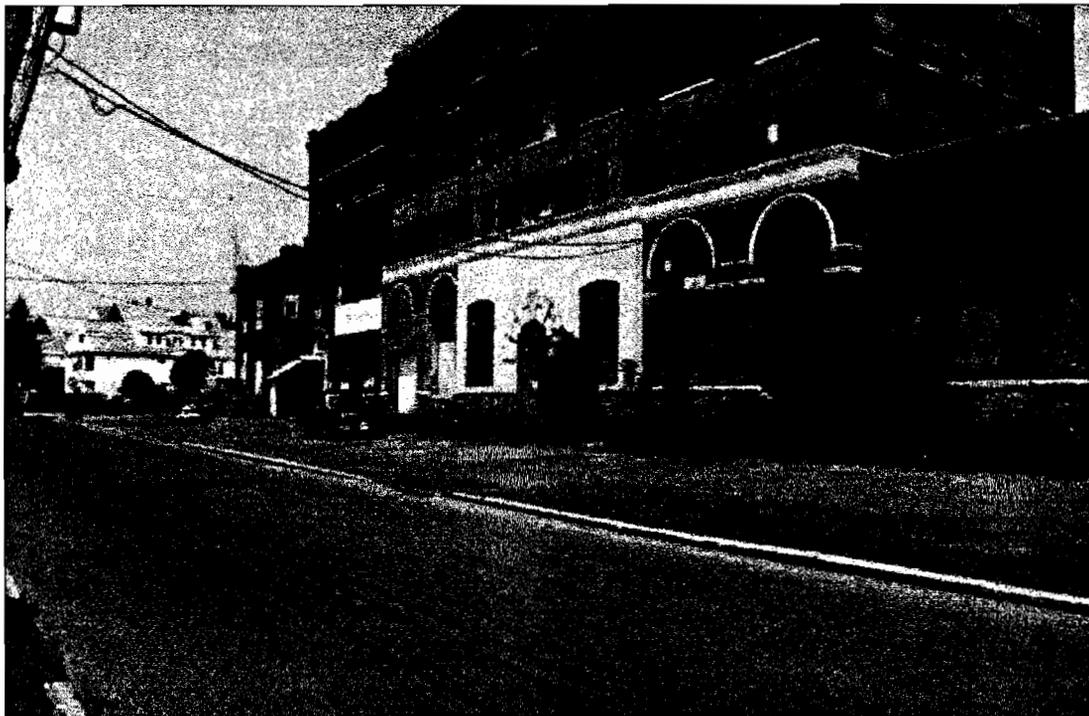


Photo date: June 1995

Photo 10. Front of United Plating building.

UNITED PLATING NYSDEC I.D. No. 447018
LAWLER, MATUSKY & SKELLY ENGINEERS LLP Pearl River, New York



Photo 11. General lab off silver plating room.

Photo date: June 1995



Photo 12. Chrome plating room sump.

Photo date: 18 January 1996

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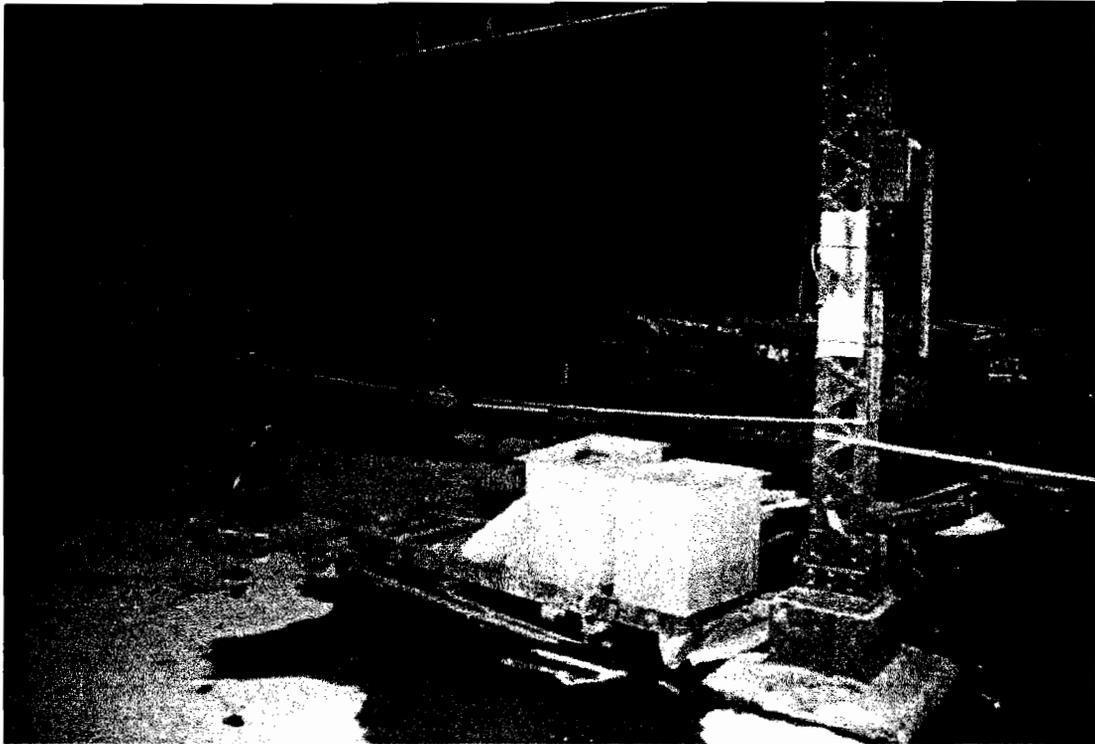


Photo 13. Main plating room looking southwest.

Photo date: June 1995

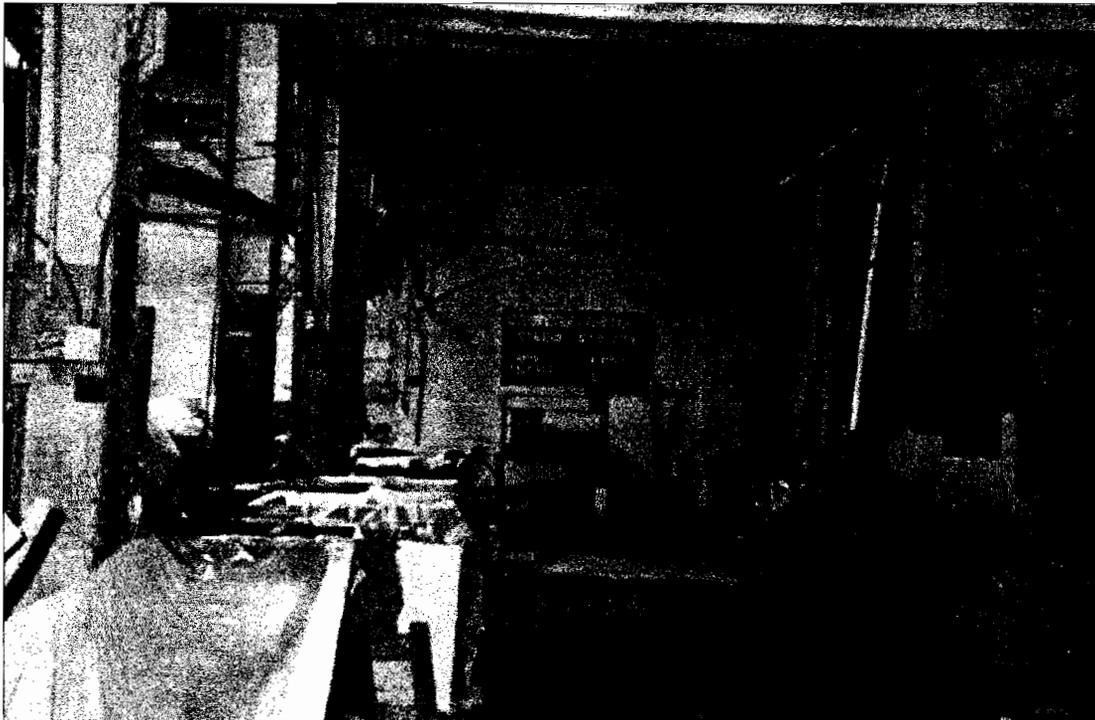


Photo 14. Main plating room looking south.

Photo date: June 1995

UNITED PLATING NYSDEC I.D. No. 447018
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APPENDIX M

**ERD ENVIRONMENTAL, INC.
GEOPHYSICS REPORT**



ERD Environmental, Inc.

An ERD Waste Corp. Company

6205 Easton Road • Pipersville, PA 18947-1025 • 215.766.7230 • Fax 215.766.2051 • www.erdwaste.com

LMS Engineers,
One Blue Hill Plaza, P.O. Box 1509
Pearl River, NY 10965
Attn: Michael Lehtinen

**RE: Results of a Geophysical Investigation at the former United Plating Site,
Schenectady, New York**

Dear Mr. Lehtinen:

Enclosed please find a copy of the report for the above referenced site. If you have any questions concerning this report, please call me at 215-766-7230. ERD looks forward to the opportunity of working with you again.

Sincerely,
ERD Environmental, Inc.

Dee Chu
Project Geophysicist

DC/dc
Enclosure
cc: John Walker

C:\RPT1096\LMSUNITE.GPR

Geophysical Investigation Report
Former United Plating Site
Schenectady, New York

ERD Environmental, Inc. (ERD) was retained by Lawler, Matusky & Skelly Engineers, LLP. (LMS), to conduct a geophysical investigation at the above referenced site. The site is located at the intersection of Foster Avenue and Seneca Street in the City of Schenectady, New York. Based on the information provided from LMS, the facility formerly disposed plating waste into the sewer and various drainage lines at the site. In order to complete remedial activities on these lines the locations and depths must be determined. A geophysical investigation using both ground penetrating radar (GPR) and metal detection was used at the site to accomplish this task. Under the supervision of personnel from LMS, field work was conducted on August 18, 1997.

Figure 1 is a site map showing several existing site features. Three buildings, including one 6-story brick building, one 1-story metal building, and one 2-story concrete building, constituted the majority of the site. A total of three manholes were noted along Foster Avenue in the vicinity of the survey area. The survey area was fairly flat and covered with gravel and asphalt. Brush and trees covered most of the southern portion of the survey area. The access in this area was arduous.

A Subsurface Interface Radar (SIR-3) unit with a 500-MHZ antenna (manufactured by Geophysical Survey System, Inc.) was used at the site. A model PR-8304 profiling chart recorder was used to record the radar images obtained at the site.

This unit introduces 500 MHZ radar pulses into the ground via a transmitter in the antenna which is pulled across the surface. Because the radar pulses are a form of electromagnetic energy, their interaction with the subsurface is dependent on the electromagnetic properties of the materials they encounter. When the waves reach a layer or object with different electromagnetic properties than the overlying material, a portion of the wave is reflected off the new layer or object back toward the ground surface. The reflected wave, intercepted by the receiver, is processed and sent to a graphic recorder, which produces a picture-like representation or profile of the subsurface. The visual output produced by the GPR shows the subsurface along the line across which the antenna is pulled. The horizontal axis is the distance the antenna has traveled, but the vertical axis is actually a measure of wave travel time, or the time it takes for the wave to reach an object and be reflected back up to the surface. Although the vertical axis tends to be directly proportional to depth, the travel time is affected by changes in the soil layer. The most accurate method for assessing depths is to calibrate the instrument using an object or layer present at a known

depth. If no such object or layer is available for calibration, assumptions about the subsurface material and approximate depth of penetration can be used to assign approximate depths to unknown targets.

The depth of penetration of the GPR is a function of the electromagnetic properties of the subsurface material. As the conductivity of the subsurface material increases, the depth of penetration of the GPR decreases. Therefore, dense clay layers, high moisture contents, or high salt or metal ion concentrations in the soil may inhibit penetration of the GPR signal.

A Fisher TW-6 metal detector was also used at the site in order to confirm the results obtained based on the GPR survey. This unit is a transmitter/receiver type metal detector and is able to find a 4" metal pipe at depths of 6 feet. The transmitter induces a current through both soil and water. This current generates an electromagnetic field around a buried metal object. The electromagnetic field is bisected by the receiver which produces a visual signal in the meter and an audible signal from the speaker.

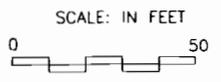
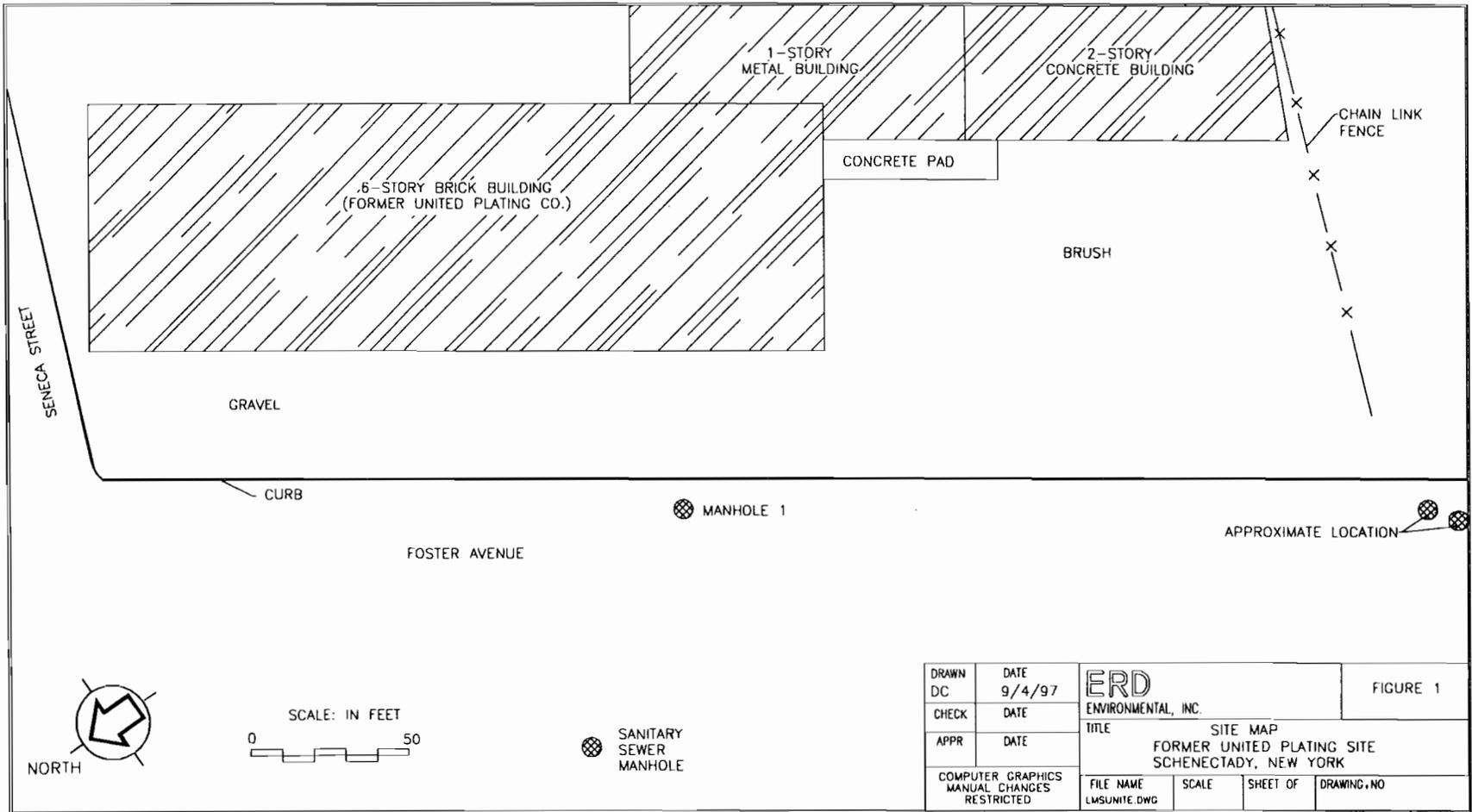
According to the site specific geology provided from LMS, the subsurface at the site is composed of mostly glacial till. The till has a significant amount of fine grained material which may limit the equipment penetration. Based on the site plan provided by City of Schenectady and information obtained during previous site visits conducted by LMS, a total of two underground pipes were tied inside Manhole 1. The sanitary sewer line ran along Foster Avenue and a 4-inch pipe appeared to run in a direction from the manhole toward the building. The survey was carried out by collecting data in the vicinity of this manhole (Figure 2). Data collected in this area exhibited a strong reflecting layer at the shallow subsurface (Profile 1). No radar images resembling underground pipes were detected based on the data collected in this area. The fine grained materials underlying the site as discussed above may have affected the depth of penetration in this area. However, it is possible that a high content of halite for the purpose for snow removal in the winter may in turn significantly affect the depth of penetration.

Additional data, parallel to the building, were collected between the manhole and building. An underground target resembling a pipe target (Profile 6) appeared to be detected along two northeast-southwest directional lines located near the building. As discussed above, the surface/subsurface condition in this area may be slightly better, in terms of effectiveness of the equipment penetration, than along the paved road. However two GPR profiles collected close to the road appeared to show a blurry image of this target (Profile 7), suggesting the data collected in the gravel area approximately 10 feet inside the curb were possibly affected by the high content of conductive materials in the shallow subsurface.

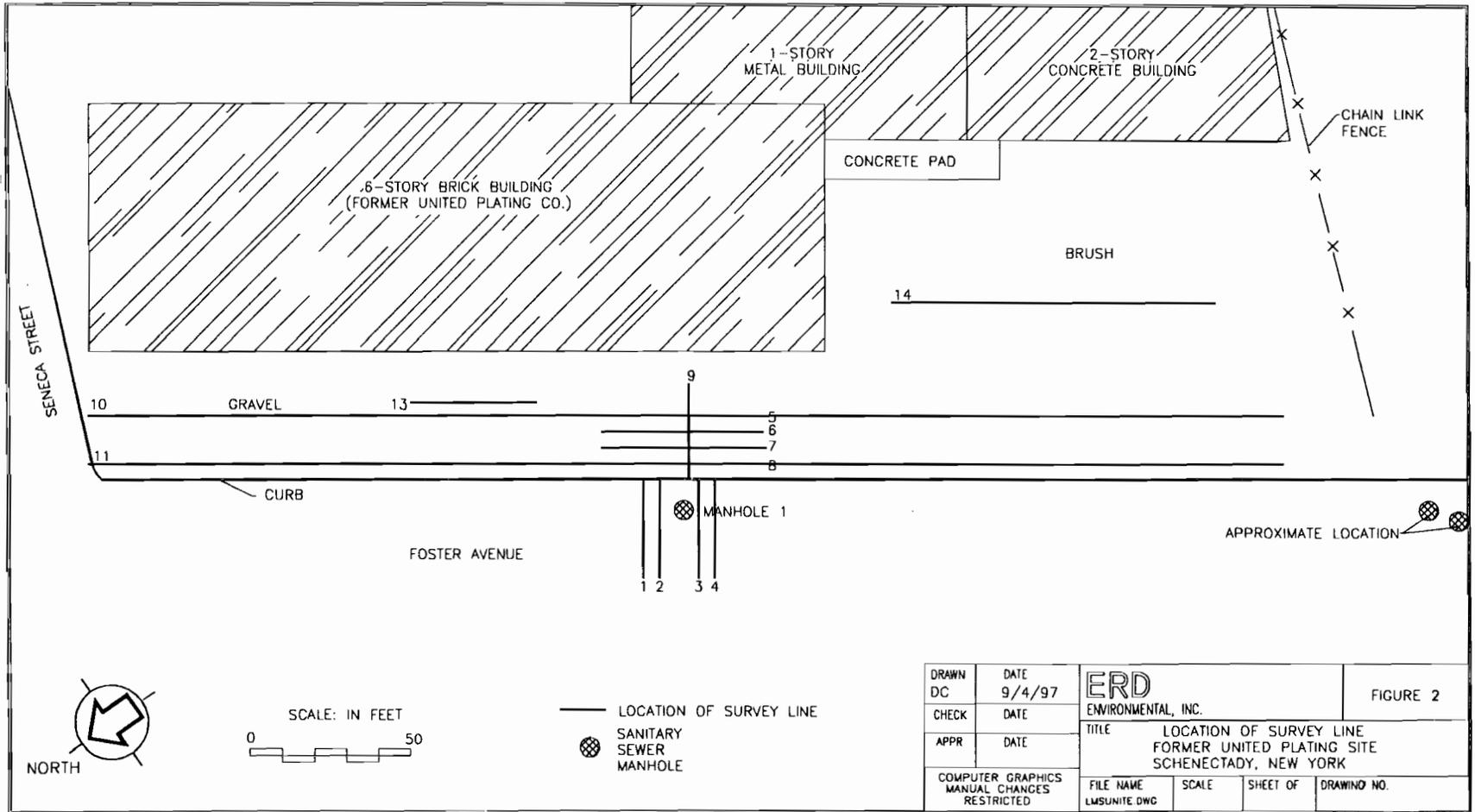
As discussed in the field, ERD recommended collection of two GPR profiles along the entire length of the gravel area. If targets are detected along these profiles, additional data can be collected to confirm the

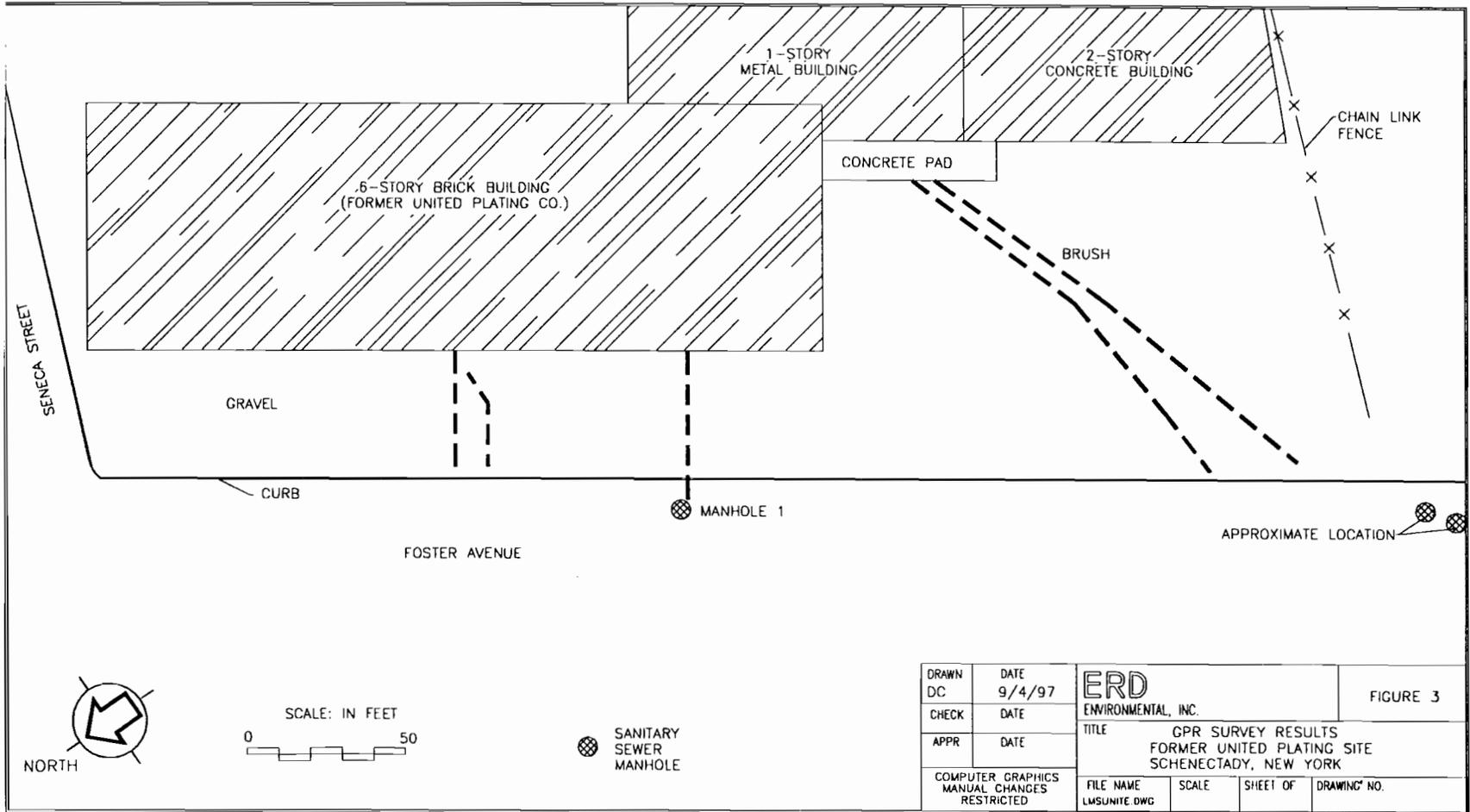
gravel area. If targets are detected along these profiles, additional data can be collected to confirm the presence of these buried utilities.

The results of the survey revealed a total of five potential underground utility lines present in the subsurface of the survey area. Figure 3 shows the locations of these lines. The depths of these lines ranged from 1 foot to 2 feet below grade. Attachment 1 contains a copy of the GPR traces of these targets discussed above. The depth of equipment penetration in the gravel and brush areas at the site is estimated to be approximately 2.5 feet below grade. The subsurface in areas along the length of the road and approximately 10 feet inside the curb may contain a significant amount of conductive materials, such as clayey type of fill and halite for snow removal in the winter. The use of this type of equipment in these areas has minimum results.



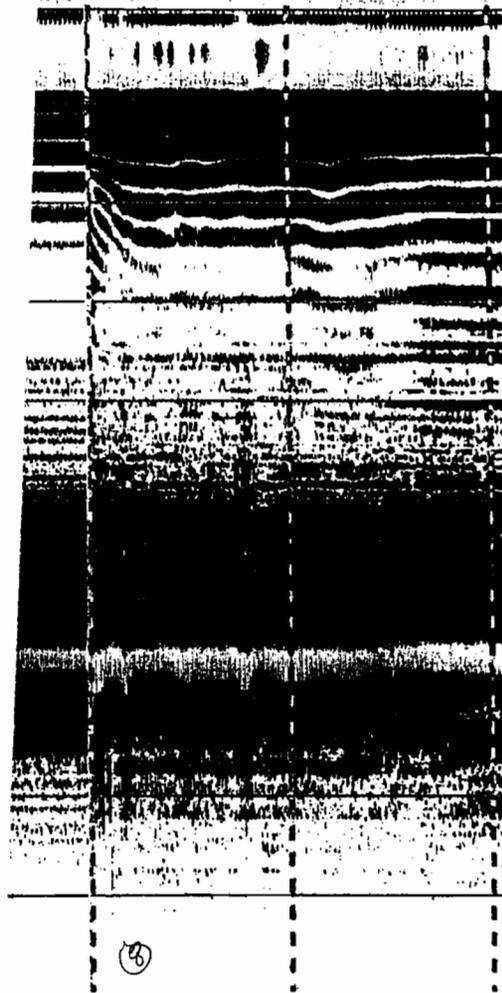
DRAWN DC	DATE 9/4/97	ERD ENVIRONMENTAL, INC.	FIGURE 1	
CHECK	DATE		TITLE SITE MAP FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK	
APPR	DATE	FILE NAME LMSUNITE.DWG	SCALE	SHEET OF
COMPUTER GRAPHICS MANUAL CHANGES RESTRICTED		DRAWING NO		





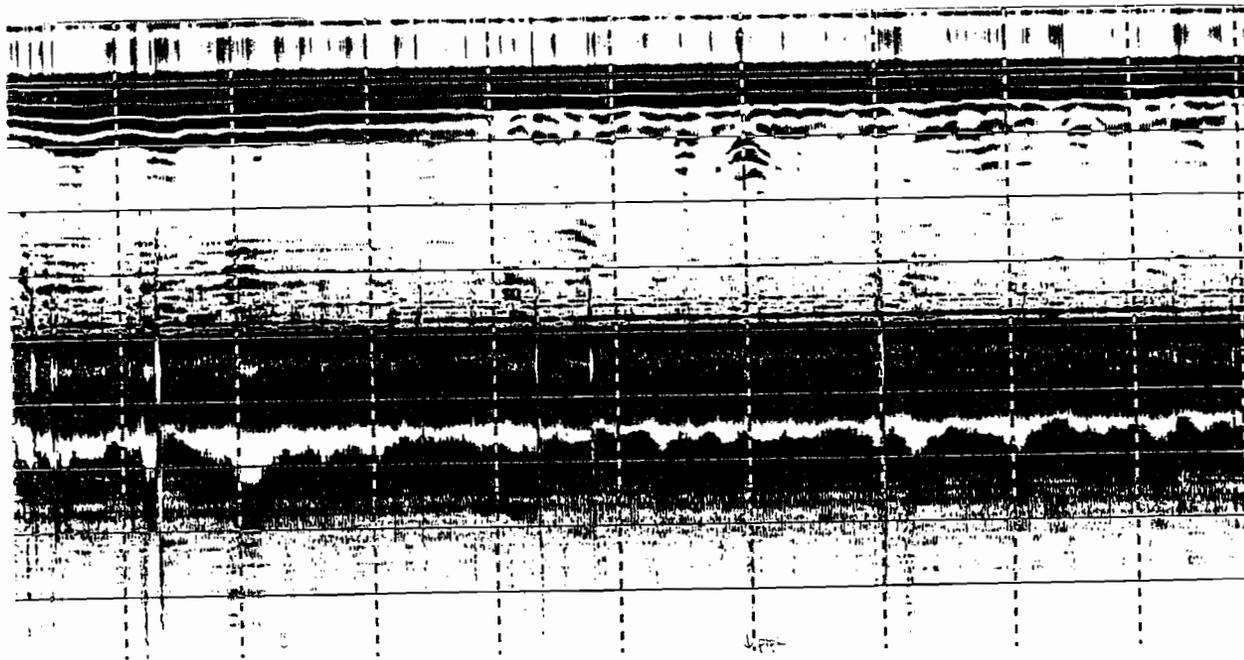
DRAWN DC	DATE 9/4/97	ERD ENVIRONMENTAL, INC.	FIGURE 3	
CHECK	DATE		TITLE GPR SURVEY RESULTS FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK	
APPR	DATE	FILE NAME LMSUNITE.DWG	SCALE	SHEET OF
COMPUTER GRAPHICS MANUAL CHANGES RESTRICTED		DRAWING NO.		

Attachment 1



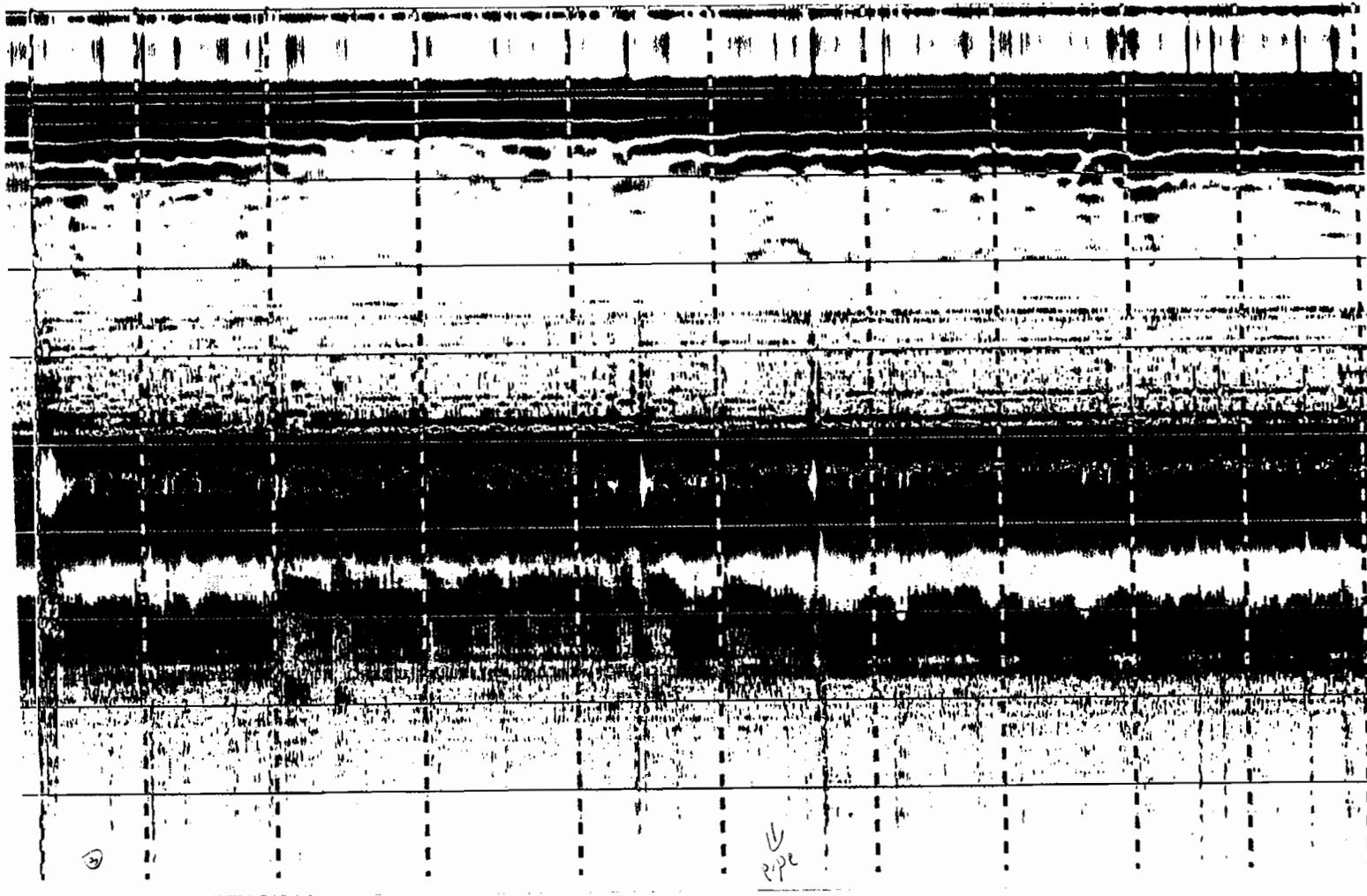
HORIZONTAL SCALE = 5 FEET
 VERTICAL SCALE = 1 FOOT

DRAWN	DATE	ERD ENVIRONMENTAL, INC.	PROFILE 1		
CHECK	DATE		TITLE		
APPR	DATE	GPR PROFILE SHOWING A STRONG REFLECTING LAYER IN THE SHALLOW SUBSURFACE FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK			
GPR GRAPHICS MANUAL CHANGES RESTRICTED		FILE NAME	SCALE	SHEET OF	DRAWING NO. D



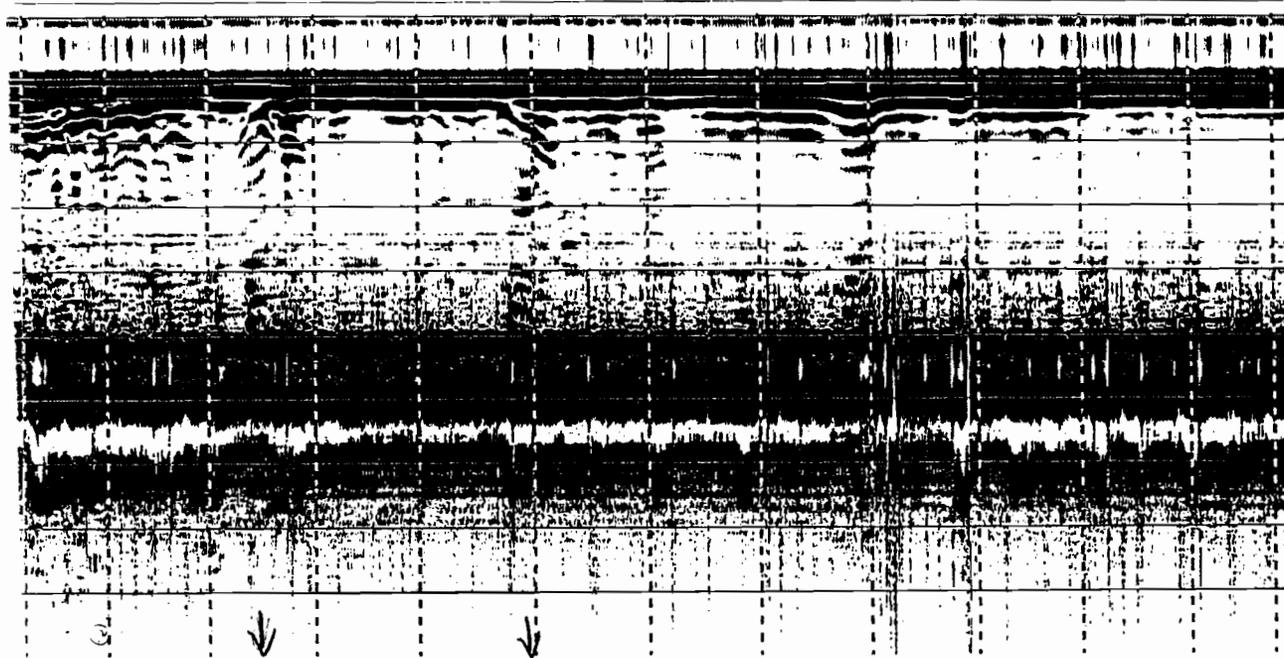
HORIZONTAL SCALE = 5 FEET
 VERTICAL SCALE = 1 FOOT

DRAWN	DATE	ERD ENVIRONMENTAL, INC.	, PROFILE 6		
CHECK	DATE				
APPR	DATE	TITLE GPR PROFILE SHOWING A POSSIBLE UNDERGROUND PIPE FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK			
GPR GRAPHICS MANUAL CHANGES RESTRICTED		FILE NAME	SCALE	SHEET OF	DRAWING NO. D



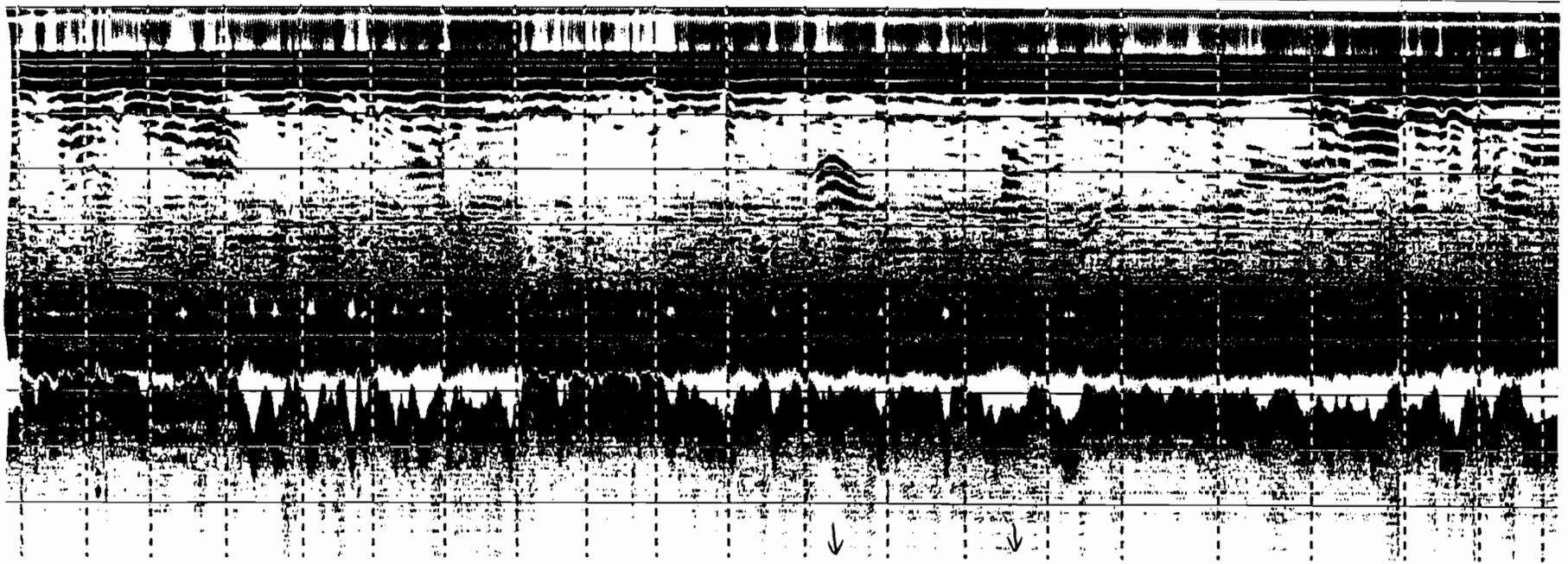
HORIZONTAL SCALE = 5 FEET
 VERTICAL SCALE = 1 FOOT

DRAWN	DATE	ERD		,PROFILE 7	
CHECK	DATE	ENVIRONMENTAL, INC.			
APPR	DATE	TITLE A BLURRY GPR IMAGE OF A POSSIBLE UNDERGROUND PIPE FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK			
GPR GRAPHICS MANUAL CHANGES RESTRICTED		FILE NAME	SCALE F	SHEET OF	DRAWING NO. D



HORIZONTAL SCALE = 5 FEET
 VERTICAL SCALE = 1 FOOT

DRAWN	DATE	ERD ENVIRONMENTAL, INC.	PROFILE 13		
CHECK	DATE		TITLE GPR IMAGES OF TWO PIPE TARGETS AT 13 AND 24 FEET FROM THE START OF THIS PROFILE FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK		
APPR	DATE				
GPR GRAPHICS MANUAL CHANGES RESTRICTED		FILE NAME	SCALE	SHEET OF	DRAWING NO. D



HORIZONTAL SCALE = 5 FEET
 VERTICAL SCALE = 1 FOOT

DRAWN	DATE	ERD ENVIRONMENTAL, INC.		PROFILE 14	
CHECK	DATE			TITLE GPR IMAGES OF TWO PIPE TARGETS AT 57 AND 67 FEET FROM THE START OF THIS PROFILE FORMER UNITED PLATING SITE SCHENECTADY, NEW YORK	
APPR	DATE	FILE NAME	SCALE		
GPR GRAPHICS MANUAL CHANGES RESTRICTED					D