Final
Summary Report
Site-Wide Groundwater Monitoring (1997-1998)
Former Plum Brook Ordnance Works, Sandusky, Ohio

Volume II
Appendices

Submitted to:

Commander
U.S. Army Corps of Engineers
Nashville District
P. O. Box 1070
Nashville, Tennessee 37202-1070

Prepared by:

IT Corporation
312 Directors Drive
Knoxville, Tennessee 37923

Project Number 771481

June 1999

Revision 1

APPENDIX A

TELECONFERENCE NOTE ON BTEX IN QUARRY

INTERNATIONAL TECHNOLOGY CORPORATION

RECORD OF ☒ TELECON ☐ MEETING

Project Name	Number	Phase	Task	Subtask
PBOW				

Date 11/18/98 Time 1315

CALL FROM ☒ CALL TO ☐ NAME: David Kessler

Other Participants — Name/Location/Representing:

CALL FROM ☐ CALL TO ☒ NAME: Martin Jones (V.P.)

Telephone Number: 419-625-8141

Company Name: Wagon Quarry

Address:

Topic: BTEX in Bedrock

City: Sandusky

State: OH Zip Code:

Summary (Decisions & Specific Actions Required by Named Persons):

Inquired about H_2S and BTEX in bedrock.

Martin Jones (VP-mechincal engineer) said that the BTEX and H_2S in the bedrock is all natural. Very common in the limestone in the area. Hydrogen sulfide is particularly noticed from zones (in the quarry) around depths of ~90-120 Ft and 130-160 Ft. Oil can be found (in the area) in the limestone at the surface all the way to the base of the limestone. The organics are very common throughout this entire region. Low levels are seen as far away as Sandusky Rocks Co. (near intersection of Rt 4 and turnpike)

Required Action:

Prepared by (Signature): David Kessler

Distribution:
Original to Project File
Copy to Project Manager
Copy to Preparer

☒ Other Distribution (By Preparer)
Mike Springberg, Rick Ellis
Mike Gunderson,

PAGE ___ OF ___

548A-8-87

APPENDIX B

HTRW DRILL LOGS, WELL CONSTRUCTION DIAGRAMS, PHOTOGRAPHS, WELL DEVELOPMENT/REDEVELOPMENT LOGS AND GROUNDWATER LEVEL MEASUREMENT RECORDS

HTRW DRILLING LOG

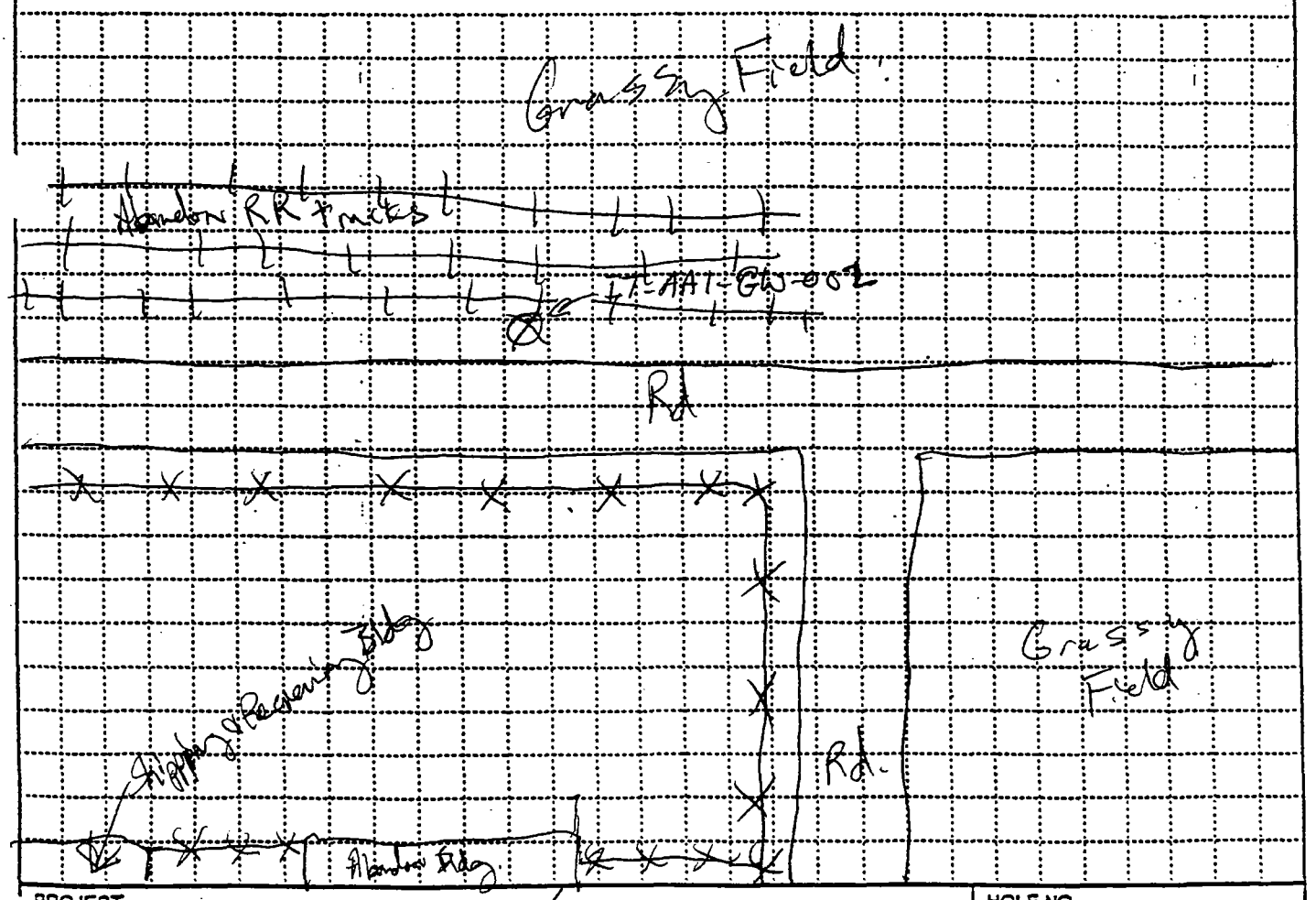
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-AA1-GW-002
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT: AA1 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Dimich D 120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Dimich D120 drill Rig. 3¼ O.D. HSA. 2" x 2" SS Split Spoon, 140 lb. Hammer	8. HOLE LOCATION: N=623068.35 E=1917727.57 See Sketch	
	9. SURFACE ELEVATION: 638.60 Ft. ~~642.00 (From Topo)~~ DKL	
	10. DATE STARTED: 9/19/97	11. DATE COMPLETED: 9/19/97
12. OVERBURDEN THICKNESS: 23.0'	15. DEPTH GROUNDWATER ENCOUNTERED: 21.5	
13. DEPTH DRILLED INTO ROCK: none	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 5.59 on 10-5-97	
14. TOTAL DEPTH OF HOLE: 23.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
3	X		NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
						NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buekner / [signature]

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT: Plum Brook Ordnance Works | HOLE NO. IT-AA1-GW-002

HTRW DRILLING LOG

HOLE NUMBER: IT-AA1-GW-002

PROJECT: Plum Brook Ordnance Works | INSPECTOR: G. Buckner | SHEET 2 OF 2 SHEETS 4

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Gravel Surface 0.3 Gravel, br, Dry, Fill. 0.5	HNU		Blow counts	Sample thru 4 1/4" I.D. HSA... Using 2'x2" s.s. split spoon.
	1	SAND, sdy (30%) Damp Grayish br v F gra lo	18.0 ppm	3/4 (68) 3/5	3/4 3/5	Ran 2.0' Rec 1.8' Loss 0.2' 15:30 Auger to 2.0' 2.0'
	2	2.3 Becoming orangish br. 2.5'				
	3	SILT sdy (10%) Black (has burn odor) v F gra Dry to slightly Damp lo pl.	4.5 ppm	4/8 (68) 8/9	4/8 8/9	Ran 2.0' Rec 1.7' Loss 0.3 Auger to 4.0' 4.0'
	4	4.2' Becoming mottled Gray, Orange brown. other remains the same.				
	5	5.1'	3.5 ppm	2/3 (68) 5/7	2/3 5/7	Ran 2.0' Rec 1.6' Loss 0.4' Auger to 6.0' 6.0'
	6	Silt clay stiff to slightly stiff moist (slightly Damp) mottled orangish br + Gray med pl, lo to hi pl. 7.0'				
	7	Silt sdy (30%) v F gra Damp (wet) lo pl. mottled br + gray. 8.0'	3.0 ppm	Geotech Sample IT-AA1-GW-001 6'-8'	2/3 3/4	Ran 2.0' Rec 1.8' loss 0.2' Auger to 8.0' 8.0'
	8	Silt clay (25-20%) sdy (30%) v F gra stiff moist orangish br to gray med plasticity				15:00
	9		2.0 ppm		2/4 5/8	Ran 2.0' Rec 1.9' loss 0.1' Auger to 10.0 10.0'
	10					

HTRW DRILLING LOG

HOLE NUMBER IT-AA1-GW-002

PROJECT AA1/Plum Brook Ordnance Works | INSPECTOR G. Buckner | SHEET 3 OF 3 SHEETS 4

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	~~STRATIGRAPHIC SAMPLE NO.~~ (f)	REMARKS (g)
		Silt Sly (25%) wet (Damp) lo to stif v F gra br	HNU		Blow Counts	
	11		3.0 ppm		4/6 12/12	Raw: 2.0', Rec: 1.8 Loss: 0.2
		11.5' decreasing Sand content (10%)				
	12					Auger to 12' 12.0'
		12.5'				15:10
		Silt slightly damp. Clay (40%) Gray, mod to High Plasticity 12.8'			3/5	Raw 2.0', Rec 1.6', loss 0.4
	13	Clay, silt (20%) gray slightly Damp to Dry ~~Homogeneous~~ high Plast slightly stif	2.0 ppm		5/6	
						Auger to 14' 14'
	14			Geotech Sample ~~IT-AA1~~ IT-AA1-GW-001 14'-16'		15:18
	15		2.2 ppm		3/4 7/8	Raw 2.0' Rec 1.9 Loss 0.1
	16	16.0'				Auger to 16.0' 16.0
		Clay silty v f gra (5%) Gray, slightly Damp 16.5'			2/3 5/7	Raw 2.0', Rec 2.0', ~~Loss~~ 0.0'
	17	Clay, silty ~~Hard~~ Plas slightly Damp to Dry Gray high Pl slightly stif.	1.5 ppm			
	18					Auger to 18.0' 18'
					8/14 11/14	Raw Rec loss
	19		1.8 ppm			
	20					Auger to 20.0' 20'

HTRW DRILLING LOG

HOLE NUMBER: IT-AA1-GW-002

PROJECT: Plum Brook Ordnance Works

INSPECTOR: G. Buckner

SHEET 4 OF 4 SHEETS

ELEV. (8)	DEPTH (9)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (7)	GEOTECH SAMPLE OR CORE BOX NO. (10)	ANALYTICAL SAMPLE NO. (11)	REMARKS (12)
		Gravel/Silty (Coarse grained) Clay (45%) gray Fine grn sil; Lthy Damp to Damp Stiff	ppm 2.0	Geotech Sample IT-AA1-GW-001 20'-22' 16:00 -	8000 counts 10/21 20/58	16:00
	21	21.5 wet				
	22					Auger to 22.0'
			1.6 ppm		6/50/6 inches	
	23	23.6 Top of Bedrock (shale) 23.0' T.D of Hole				Auger Refusal 23.0'
						16:30 Begin well construction
	24					15' screen 22'-7' 1' sand 6' 3' Bentonite 3' Bottom Protection Casing 5' 2.5' stickup
	25					
	26					
	27					
	28					
	29					
	30					

PROJECT: AA1 / Plum Brook Ordnance Works

HOLE NO. IT-AA1-GW-002

HTRW DRILLING LOG

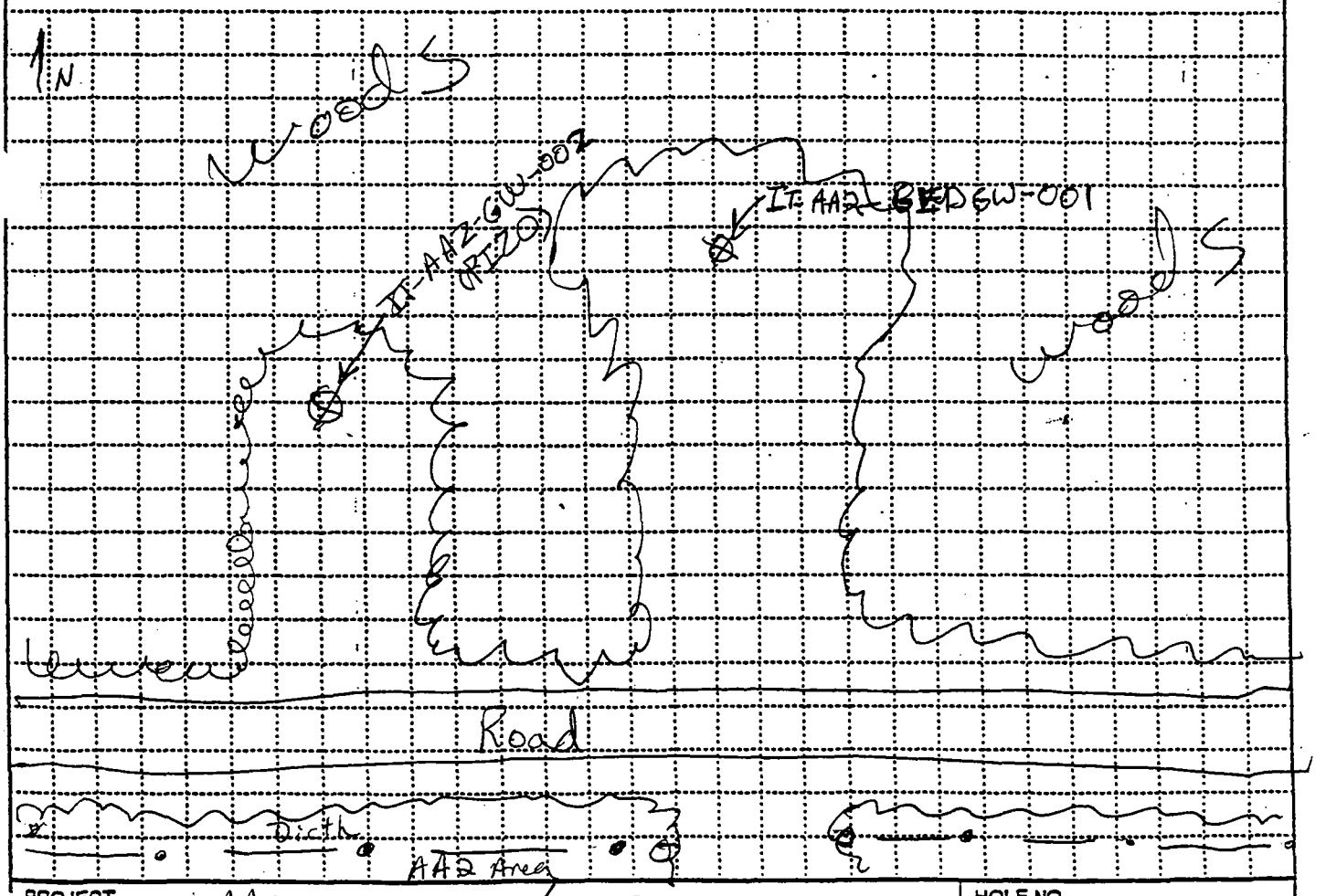
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-AA2-GW-002
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 3 SHEETS
3. PROJECT: AA2 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Dierich D 120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Dierich D 120 (Drill Rig), 8 1/4 O.D. HSA, 2" x 2" SS. split Spoon, 140 lb Hammer	8. HOLE LOCATION: N=623589.11 E=1909487.30 See Sketch	
	9. SURFACE ELEVATION: 641.50 Ft. ~~6450~~ / (From Topo) DKK	
	10. DATE STARTED: 9/22/97	11. DATE COMPLETED: 9/22/97
12. OVERBURDEN THICKNESS: 19.5'	15. DEPTH GROUNDWATER ENCOUNTERED: Not encountered	
13. DEPTH DRILLED INTO ROCK: None	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: No water Present	
14. TOTAL DEPTH OF HOLE: 19.5'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
3	X		NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
						NA%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Piezometer			Piezometer	Greg Buckner /

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT: AA2 / Plum Brook Ordnance Works — HOLE NO. IT-AA2-GW-002

HTRW DRILLING LOG

HOLE NUMBER: IT-AA2-GW-002

PROJECT: Plum Brook Ordnance Works/AA2 | INSPECTOR: G. Buckner | SHEET 2 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	PENETRATION RESISTANCE (f)	REMARKS (g)
		Losses & Organics 0.1	HNU		Blow Counts	Sample thru 4 1/4" ID HSA using 2'x2" SS split spoon 1350
		Silt Sdy (20%) v F Gra. low Pl. Pt Soft/loose Sl. Moist Dmp.		~~2/3~~	2/3	
				~~5/12~~	5/7	
644	1		12.0 ppm			Raw 2.0' Rec 1.2' Loss 0.8
						Auger to 2.0' 2.0'
643	2	2.2'				
		Silt br to yellowish br. (mottled) Stiff Dm low to med Pl.		~~5/9~~	5/9	Raw 2.0' Rec 1.3' Loss 0.7'
	3		6.0 ppm	~~12/12~~	12/12	
						Auger to 4.0' 4.0'
641	4	4.0' Becoming mottle orange brown & gray is to be other replacing the same				
				~~6/9~~	6/9	Raw 2.0' Rec 0.8' Loss 1.2'
640	5		6.2 ppm	~~13/14~~	13/14	
	6			6.0'		Auger to 6.0' 6.0' 14:40
				~~3/4~~	3/4	Raw 2.0' Rec 1.7' Loss 0.3
638	7		4.0 ppm	~~5/7~~ Geotech sample IT-AA2-GW-002 6'-8' 14:10	5/7	
	8			8.0		Auger to 8.0' 8.0'
				~~3/5~~	3/5	Raw 2.0' Rec 2.0' Loss
	9		3.0 ppm	~~5/7~~	5/7	
635	10					Auger to 10.0' 10.0'

HIRW DRILLING LOG

HOLE NUMBER IT-AA2-GW-002

PROJECT Plum Brook Ordnance Works/AA2 | INSPECTOR G. Buckner | SHEET 3 OF 3 SHEETS

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS (ft)	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
635		Clay Silty (10%) gray Med med to high Plasticity slightly Damp. Homogeneous	AN	Geotech Sample	Blow Counts	14:20
	11		2.0 ppm	IT-AA2-GW-002 10'-12' - 14:20	2/3 5/4	Raw 2.0' Rec 1.8' loss 0.2'
633	12					Auger to 12.0' 12.0'
		12.2 slight increase in silt content (25%) other Remain the same			2/3	
	13		1.5 ppm		3/5	Raw 2.0' Rec 1.8' loss 0.2'
	14					Auger to 14.0' 14.0'
630	15		1.2 ppm		1/2 3/3	Raw 2.0' Rec 1.7' loss 0.3'
629	16					Auger to 16.0' 16.0'
		16.4'				14:35
628	17	Clay Gravel (Shale) (20%) med to fine grain Soft Slightly Damp to Damp Gray	1.8 ppm	Geotech Sample IIAA2-GW-002 14:35 16'-18'	1/2 4/7	Raw 2.0' Rec 1.8' Loss 0.2'
627	18					Auger to 18.0' 18.0'
		18.3				14:40
626	19	Gravel (Fine to med grained shale) Clay Dry to slightly Damp. Stiff	0.8 ppm		5/10 50-5 inches	Raw 1.5' Rec 1.5' Loss 0.0'
		Spoon Refusal 19.5'				14:50
		19.5' T.D. of Hole.				
625	20					

PROJECT Plum Brook Ordnance Works / AA-2 | HOLE NO. IT-AA2-GW-002

HTRW DRILLING LOG

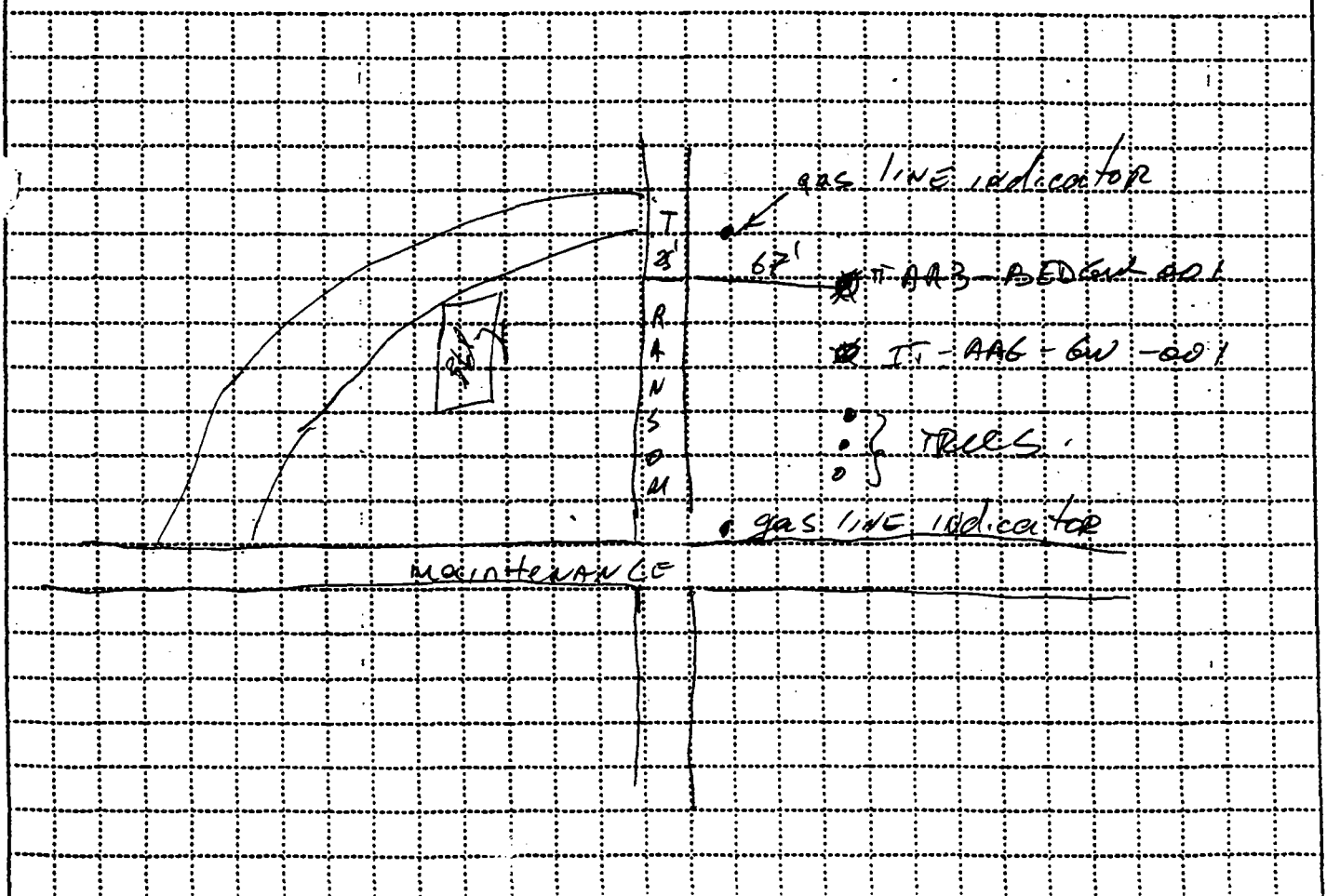
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-AA3-GW-002
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 3 SHEETS
3. PROJECT: AA3 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley / Greg Conard	6. MANUFACTURER'S DESIGNATION OF DRILL: Diedrich 50	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diedrich 50, 8.25" HSA 2" x 2' SS. 3pt Spoon, 140 lb Hammer	8. HOLE LOCATION: N = 625027.71 E = 1914956.35 See Sketch	
	9. SURFACE ELEVATION: 634.10 Ft. ~~635.0 / (From Topo)~~ DKK	
	10. DATE STARTED: 9/18/97	11. DATE COMPLETED: 9/18/97
12. OVERBURDEN THICKNESS: unknown	15. DEPTH GROUNDWATER ENCOUNTERED: ~8.0	
13. DEPTH DRILLED INTO ROCK: None	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 5.75 on 10/4/97	
14. TOTAL DEPTH OF HOLE: 17.0	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
3	X		NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
						NA

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buckner / Elkhorn

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT	HOLE NO.
AA3 / Plum Brook Ordnance Works	IT-AA3-GW-002

HTRW DRILLING LOG

HOLE NUMBER: IT-AA3-GW-002

PROJECT: ~~IT CORP~~ Plum Brook Ordnance

INSPECTOR: Ed Rankenskiy

SHEET 2 OF 2 SHEETS 3

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Top Soil	HNU	2		10% recovery
		Silty sand	ppm	6		
		Black		6		
	1	dry	Ø	8		
		Loose				
	2					
		Silty Clay	2 ppm	2		50% recovery
		Low plasticity		3		
		Medium dense		14		
		Brown				
	3	~~damp~~ slightly damp		13		
	4				4.0'	
		Clayey silt	4 ppm	2	Geotech sample	100% recover
		~~Low~~ medium plasticity		3	sample #	
		Loose		5	IT-AA3-GW-002	
	5	Yellowish brown		6	4'-6'	
		moist			9-18-97	
	6				6.0	
		Clayey silt	2 ppm	2		
		medium plasticity		3		
		yellowish brown		1		
	7	Loose		4		
		moist				
	8				8.0'	
		Clayey silt	4 ppm	2	Geotech sample	50% recover
		medium plasticity		2	sample #	water table
		some fine sand		4	IT-AA3-GW-002	at 10'
	9	yellowish brown		5	8'-10'	
		Loose				
		saturated				

PROJECT: PLUM BROOK ORDNANCE WORKS

HOLE NO. IT-AA3-GW-002

HTRW DRILLING LOG

HOLE NUMBER IT-AA3-GW-002

PROJECT

INSPECTOR

SHEET 3 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Silty sand	2 ppm	4		50% recovery
		Fine		4		
		Loose		4		
		Low plastisity		4		
	11	Yellowish Brown				
		wet				
	12	— — —	— —	—	12'	
		Clayey silt		1		90% recovery
		Medium plastisity	10 ppm	1	Geotech sample sample # IT-AA3-GW-002 12'-14'	
		Grey		2		
	13	Saturated		3		
	14	— — — —	—		14'	
		Same as above	2 ppm	1		100% recovery
				2		
				3		
				4		
	15					
	16	— — —	—	— — —	— —	—
	17	BOH @ 17				
	18	~~BOH @ 18'~~				
	19					

PROJECT

HOLE NO. IT-AA3-GW-002

HTRW DRILLING LOG

DISTRICT: USACE / Nashville	HOLE NUMBER: IT-AA1-BEDGW-001	SHEET 1 OF 8

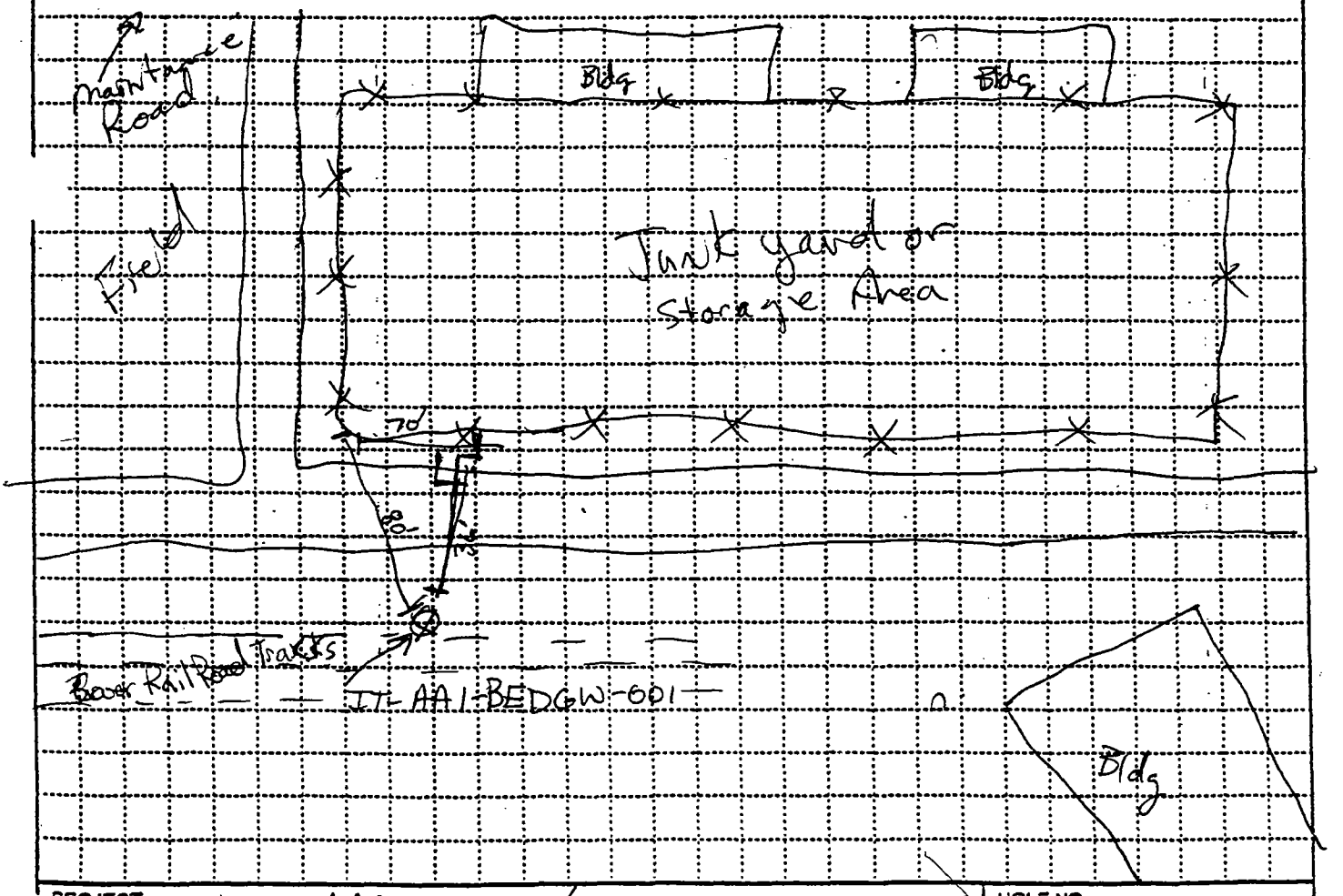
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling
3. PROJECT: AA1 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Diedrich D 120
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diedrich D 120, CBrott Rig, 12 1/4" TD HSA, 2 1/2" SS Spl:+ Spoon, 140lb Hammer, 10" Roller Cone Bit, 3" x 10' Core Barrel, 835 Ingersoll Rand Air Compressor	8. HOLE LOCATION: N=623064.04, E=1917718.26 See Sketch
	9. SURFACE ELEVATION: 638.80 Ft. ~~647.00 (From Topo)~~ DKK
	10. DATE STARTED: 9/8/97 — 11. DATE COMPLETED: 9/24/97
12. OVERBURDEN THICKNESS: 23.1	15. DEPTH GROUNDWATER ENCOUNTERED: 19.8' 1st encounter in Overburden / ~55.0
13. DEPTH DRILLED INTO ROCK: 42.9	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 30.41 on 10-5-97
14. TOTAL DEPTH OF HOLE: 66.0	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
2	X		

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buckner /

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT	HOLE NO.
AA1 / Plum Brook Ordnance Works	IT-AA1-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: GW-001

PROJECT: AAI/Plum Brook Ordnance Works

INSPECTOR: G. Bickner

SHEET 2 OF 2 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Grassy Surface 0.2'	HNU			16:35
		SAND Silty (40%) Dark br. Very Fine grained Dry to slightly Damp. lo to V lo.			3/3 4/5	Sample From 4'/4 ID Augers, using 2'x2" Split Spoon (SS)
	1		2.2 ppm			Ran 2.0' Rec 1.0' Loss 1.0'
	2	2.0' Becoming Orange Brown				Auger to 2.0' 2.0'
					5/7 7/8	Ran 2.0' Rec 1.6' Loss 0.6'
		3.0'	2.0 ppm			
	3	SILT Sdy (15%) Very F gra Black low Pl. lo				Has a Burn smell.
	4	4.0 Becoming Brown				Auger to 4.0' 4.0'
					2/3 4/5	Ran 2.0' Rec 1.7 Loss 0.3
	5	5.2'	1.2 ppm			
		SILT Cly (30%) Slightly Damp mottled Orange br + gray Med Pl.				Auger to 6.0' 6.0'
	6			~~Geotech Sample~~		
		6.5' Decreasing Clay Content (10%)			2/2 2/3	Ran 2.0' Rec 1.2 Loss 0.8
	7		0.8 ppm			
	8	8.0'				Auger to 8.0' 8.0'
		Silt Sdy V F gra Orange Brown + gray to slight Damp to Damp Low to Non Pl. 9.0'			3/5 6/7	Ran 2.0' Rec 2.0' Loss 0.0
	9	Silt Cly (20%) Low Pl. Gr Med.	0.2 ppm			
	10					Auger to 10.0' 10.0'

PROJECT: AAI/Plum Brook Ordnance Works

HOLE NO. IT-AAI-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: GW-001

PROJECT: AA1/Plum Brook Ordnance Works | INSPECTOR: G. Buckner | SHEET 3 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	PENETRATION RESISTANCE NO. (f)	REMARKS (g)
		SILT Sty Low Pl. V F Gra		Geotech Sample Sample# IT-AA1-BEDGW-001 10'-12' ~~1850~~ 1650	Blow Counts 3/6 7/8	Raw 2.0' Rec 1.5 Loss 0.5
	11		1.0 PPM			
	12	12.2				Auger to 12.0' 12'
		Clay Sty G mod to High Pl. Homogeneous			2/3 4/4	Raw 2.0' Rec 2.0' loss 0.0'
	13		0.0 PPM			
	14					Auger to 14.0' 14.0'
			0.5 PPM		2/3 3/4	Raw 2.0' Rec 2.0' loss 0.0'
	15					
	16					Auger to 16.0' 16.0'
			0.0 PPM		3/3 5/5	Rec 2.0' Rec 2.0' loss 0.0'
	17					
	18	18.5'		18.0 Geotech Sample Sample# IT-AA1-BEDGW-001 (1720) 19'-20'		Auger to 18' 18.0'
		Clay Gvl (slate) Fgvl mod to High Pl.	0.0 PPM		2/2 4/8	Raw 2.0' Rec 2.0 loss 0.0
	19	19.8' Refusal		20.0		
	20					

PROJECT: AA1/Plum Brook Ordnance Works | HOLE NO. IT-AA1-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: GW-001

PROJECT: AAI/Plum Brook Ordnance Works

INSPECTOR: G. Buckner

SHEET 4 OF 4 SHEETS 8

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		SILT Gravel Dry to Slight Hy Damp. Stiff low Plasticity moist to wet	HNU		Blow Counts	
	21		0.8 ppm		6/8 19/11	Ran 2.0' Rec 1.8' Loss 0.2' ✓
	22	22.0' Gravel Fine to Med.				Auger to 22.0' 22.0'
	23	Spoon Refusal 23.1	0.5 ppm		5/38 50/inch	Ran 1.1' Rec 1.1' Loss 0.0' 1740
	24	Shale (siltstone) gray, slightly weathered slightly damp soft - moderately hard	ppm 0.0			Continued by Ed Ranewski 80% recovery Start 0900 Finished 1000
	25					
	26					
	27					
	28					
	29					
	30					

PROJECT: AAI/ Plum Brook Ordnance Works

HOLE NO. IT-AAI-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: (GW) - 001

PROJECT: PLum Brook Ordnance Work

INSPECTOR: E. Kanusky

SHEET 8 OF 5 SHEETS

ELEV. (8)	DEPTH (D)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (H)	GEOTECH SAMPLE OR CORE BOX NO. (G)	ANALYTICAL SAMPLE NO. (F)	REMARKS (P)
	31	Shale (siltstone) weathered grey damp soft- moderately hard	0 ppm			Start- 0900 Finished- 1000
	32					
	33					
	34					
	35	Shale (siltstone) slightly weathered grey soft to moderately hard - clay wet	0 ppm			70% recovery St 1030 Finished 1200
	36	Interbedded w/clay medium plasticity grey wet				Sample stick to the core barrel Water Table @ 35'
	37					
	38					
	39					

PROJECT

HOLE NO. IT-AA1-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-A A1-BEDGW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR:

SHEET 6 OF 6 SHEETS

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
		Shaley LIMESTONE, DPK 12/15/88				
		~~Shale (siltstone)~~ w/ foss. slightly weathered gray, moderately hard, dry				start 1500 stop 1800 100% recovery
	41	Interpretation of Shaley LIMESTONE made from description, cross-section, and representative rock sample.				
	42					
	43					
	44					
	45					
	46					
	47	LIMESTONE Shale ~~(siltstone)~~ DPK slightly weathered moderately hard gray, dry				100% start 1510 Finished 1810 3 feet
	48					
	49					

PROJECT

HOLE NO. IT-AA1-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: AAI-BEDGW-00

PROJECT: Lure Broad Deployment

INSPECTOR:

SHEET 7 OF 7 SHEETS 8

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
		LIMESTONE				
		shale (~~siltstone~~) DKL				0910 - started
		~~grey~~				1210 - Finished
		slightly weathered				100% recovery
		moderately hard				
	51	grey w/brown surface				strong petroleum
		~~dry~~ slightly damp				odor from
		petroleum odor				52' to 54'
	52					Rainbow thin
						on surface
	53	silty LIMESTONE DKL				
		siltstone (sandstone)				
		slightly weathered				
		moderately hard				
	54	dry				
		brownish grey				
	55	silt LIMESTONE				
		siltstone (sandstone				
		slightly weathered				
	56	moderately hard				
		~~dry~~ - moist - wet				
		petroleum odor				
	57	brownish grey				
	58					
	59					

PROJECT

HOLE NO. IT-AAI-BEDGW-001

HTRW DRILLING LOG

PROJECT: Plum Brook Ordnance
INSPECTOR:
HOLE NUMBER: AAI-BEDGW-001
SHEET 2 OF 8 SHEETS

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS (ft)	FIELD SCREENING RESULTS (ft)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
		LIMESTONE Siltstone ~~(sandstone)~~ Dk slightly wheathered moderately hard brownish grey clay				1500 - stupt 1900 - finished 90% recover petroleum odor WT - at 62'
	61	LIMESTONE Siltstone ~~(sandstone)~~ Dk fiss-filiscous moderately wheathered grey, moderately hard saturated				
	62	LIMESTONE Siltstone ~~(sandstone)~~ Dk fossiliscous slightly wheathered moderately hard grey saturated				
	63					
	64					
	65					
	66	BOH at 66'				
	67					
	68					
	69					

PROJECT:
HOLE NO. IT-AAI-BEDGW-001

HTRW DRILLING LOG

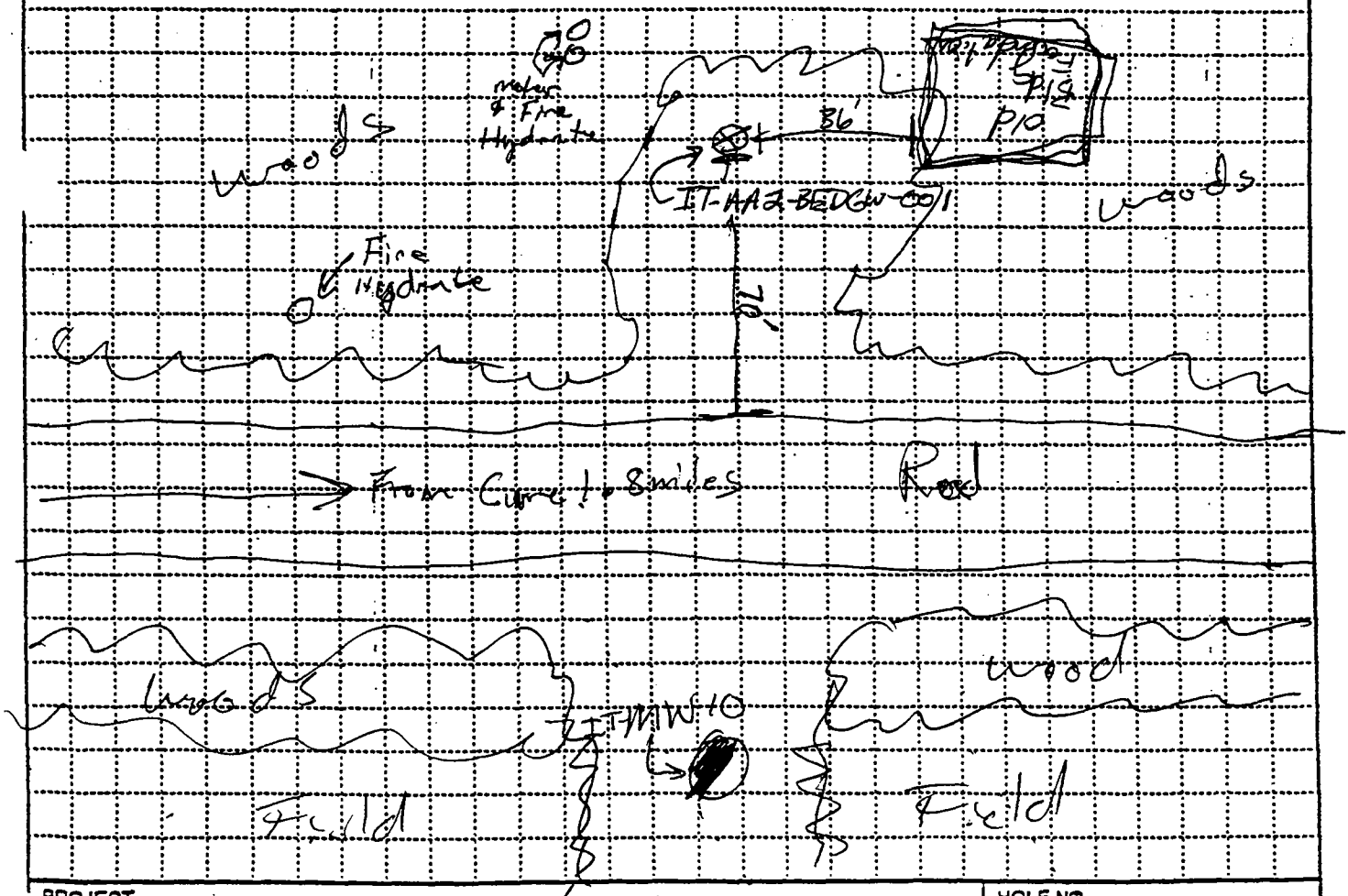
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-AA2-BEDGW-001
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 6 SHEETS
3. PROJECT: AA2 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Drenich D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Drenich D-120 (Drill Rig) 12¼ HSA ID, SS Split Spoon, 140lb Hammer, 11" Roller Cone Bit, 10" x 3" Core Barrel, 825 Ingersoll Rand Air Compressor.	8. HOLE LOCATION: N=623599.94 E=1409552.48 See Sketch	
	9. SURFACE ELEVATION: 641.60 Ft. ~~640.0~~ (From Topo) DKK	
	10. DATE STARTED: 9/6/97	11. DATE COMPLETED: 10/2/97
12. OVERBURDEN THICKNESS: 18.8'	15. DEPTH GROUNDWATER ENCOUNTERED: 34.0	
13. DEPTH DRILLED INTO ROCK: 25.2'	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 12.48 ON 10-5-97	
14. TOTAL DEPTH OF HOLE: 44.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
2	X		1

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buekner / [signature]

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT: Plum Brook Ordnance Works | HOLE NO. IT-AA2-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: GW-001

PROJECT: AA-2 / Plum Brook Ordnance Works | INSPECTOR: G. Duckner | SHEET 2 OF 2 SHEETS 6

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Leaves + organics 0.2'	HNU		Blow counts	Sample Thru 4 1/4 ID HSA, using 2' x 2" SS split Spoon, 140 lb Hammer.
	1	Silt Sdy V F gra br + Orangish br Mottled 0.7 lo low Pl. Becoming ~~Hard~~ stiff. ML	6.0 PPM		2/9 9/10	RAN: 2.0' REC: 1.0' Loss: 1.0'
	2	2.2'				Auger to 2.0' 2.0'
	3	SILT Layering Present Mottled Brown + yellow br. Dry Sdy (Very little) Dry lo pl. med ML	0.0 PPM		6/6 9/8	RAN 2.0' REC 1.0' Loss 1.0'
	4	4.0' Becoming mottled + layered Orange br + gr				Auger to 4.0' 4.0'
	5	5.5' mst	4.6 PPM		5/6 7/10	Ran 2.0' Rec 1.8' Loss 0.2'
	6	6.0'				Auger to 6.0' 6.0'
	7	SILT Br Dry to mst lo pl. med ML	1.0 PPM		5/13 11/9	Ran 2.0' Rec 2.0' Loss 0.0'
	8	7.8' Becoming mst to wet				Auger to 8.0' 8.0'
		8.5'			3/3	Ran 2.0'
	9	SILT ~~wet~~ GB wet med Gr GB low ~~to med~~ to Pl.	2.2 PPM		2/3	Rec 2.0' Loss 0.0'
	10					Auger to 10' 10.0'

HTRW DRILLING LOG

HOLE NUMBER GW-001

PROJECT AA2/Plum Brook Ordnance Works | INSPECTOR G. Buckner | SHEET 3 OF 3 SHEETS 6

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Silt Gr Homogeneous Wet to Mst low to Med Plast.	Hnu.	Geotech Sample Sample # IT-AA2-BEDGW-001 1.0'-12' 14:40	3/2 3/4	Ran 2.0' Rec 1.6' Loss 0.4'
	11	ML	2.0 ppm			
	12	12.2'				Auger to 12.0' 12.0'
		Silt Clay (30%) Homogeneous Firm Med Gray Damp med. Pl.			2/2 3/4	Ran 2.0' Rec 1.8' Loss 0.2'
	13	ML	4.1 ppm			
		13.5'				Auger to 14.0' 14'
	14	Silt Clay (30%) gravel (Shale) Fgra Gray Damp to Mst Med Pl.				
		14.0' no gravel Present.			2/3 5/5	Ran 2.0' Rec 1.7' Loss 0.3
	15		4.0 ppm			
	16					Auger to 16.0' 16'
				Geotech Sample Sample # IT-AA2-BEDGW-001-16'-18' (15:00)	3/4 8/10	Ran 2.0' Rec 1.6 Loss 0.4
	17	17.0'				
		Clay Sily Gravel Present (Shale) Gr med to Dense Mst to Dmp.	3.8 ppm			
	18	18.8'	10.2 ppm			Auger to 18' 18.0'
		Spoon & Auger Refusal			8/50/4inch (1510)	Spoon Refusal at 18.8' 1 inches to one in the End of Spoon.
	19					
	20					

HTRW DRILLING LOG

HOLE NUMBER: IT-AA2-BEDGW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR: ED KANEVSKY

SHEET 4 OF 4 SHEETS 6

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Siltstone				Start 1025
		slightly weathered				Finished 1105
		dry				90% recovery
	21	grey				
		soft-to moderately hard				
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					

PROJECT

HOLE NO. IT-AA2-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-AA2-BEDGW-001

PROJECT: Plum Brook Ordnance

INSPECTOR: ED KANESKY

SHEET 5 OF 5 SHEETS 6

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS (ft)	FIELD SCREENING RESULTS (ft)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
		~~siltstone~~ Limestone moderately weathered moderately hard ~~moi~~ damp grey				Start 1310 End 1400 100% recovery
	31					
		~~siltstone~~ Limestone moderately weathered moderately hard moist grey				
	32					
	33					
	34	~~siltstone~~ Limestone moderately weathered moderately hard wet grey				
	35					
	36					
	37					
	38					
	39					

PROJECT

HOLE NO. ~~AA~~ IT-AA2-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-AA2-BEDGW-001

PROJECT: Plumbrook Ordnance Works

INSPECTOR: ED KANERSKY

SHEET 6 OF 6 SHEETS

ELEV. (0)	DEPTH (0)	DESCRIPTION OF MATERIALS (0)	FIELD SCREENING RESULTS (0)	GEOTECH SAMPLE OR CORE BOX NO. (0)	ANALYTICAL SAMPLE NO. (0)	REMARKS (0)
		Siltstone (Limestone?)				Start 1350
		Slightly weathered				END 1530
		moderately hard				100% recovery
	41	moist				
		grey				
	42					
	43	Limestone				
		Slightly weathered				
		moist.				
	44	grey				
		moderately hard				
	45					
			BOH @ 45			
	46					
	47					
	48					
	49					

PROJECT

HOLE NO. IT-AA2-BEDGW-001

HTRW DRILLING LOG

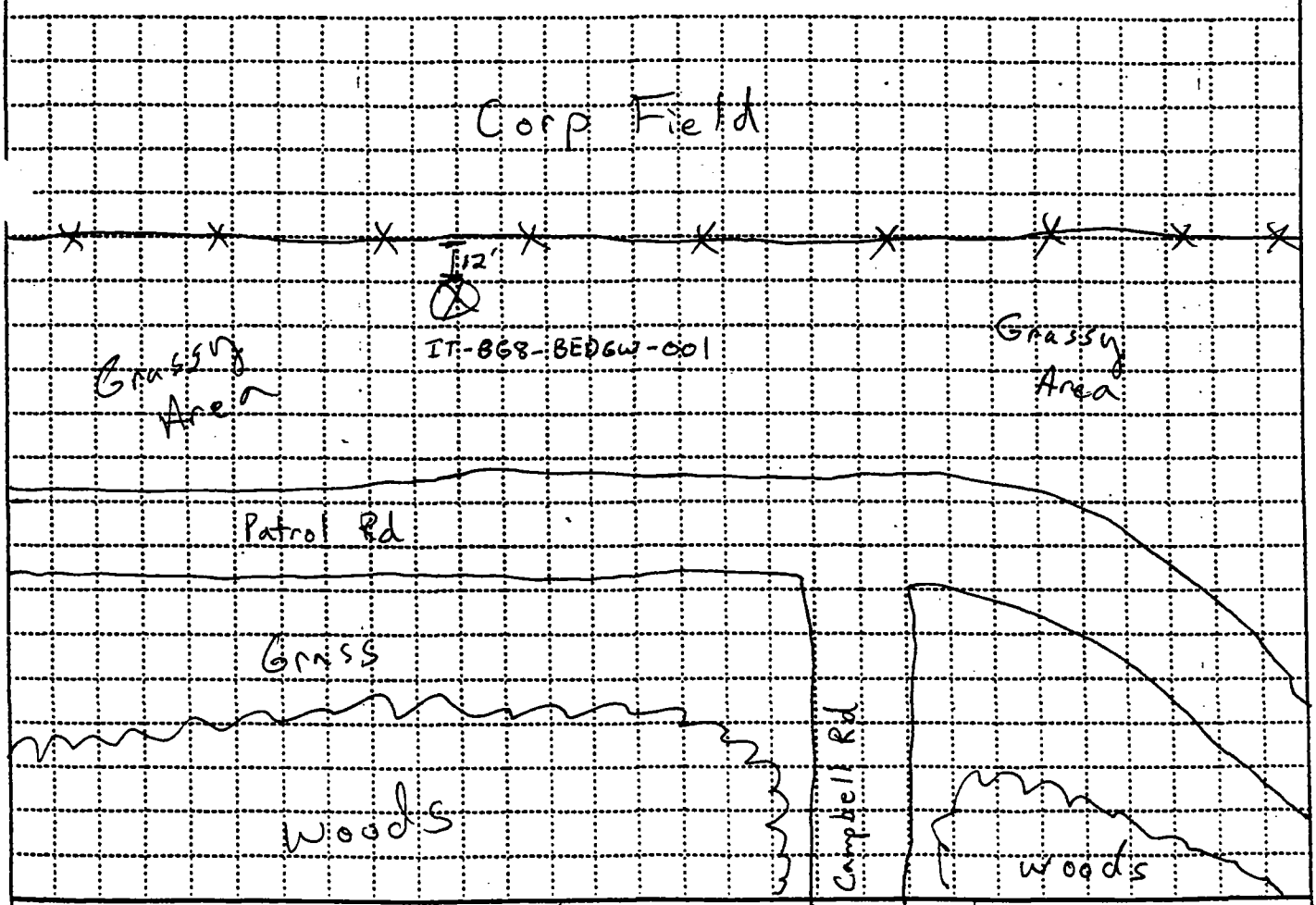
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-BG8-BEDGW-001
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 4
3. PROJECT: BG8 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Diearich D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diearich D-120 (Drill Rig) 12" ID HSA, 2"x2" SS Split Spoon, 140 lb Hammer, 10 inch Roller Cone Bit, 3" x 10' Core barrel, 825 Ingersoll Rand Air Compressor	8. HOLE LOCATION: N=618635.28 E=1909856.87 See Sketch	
	9. SURFACE ELEVATION: 673.70 Ft. ~~690~~ (From Topo) DKG	
	10. DATE STARTED: 9/4/97	11. DATE COMPLETED: 9/20/97
12. OVERBURDEN THICKNESS: ~~3.5'~~ 3.0'	15. DEPTH GROUNDWATER ENCOUNTERED: 9-10' GS'	
13. DEPTH DRILLED INTO ROCK: 18.0	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 2.5' GS' - 12 hours	
14. TOTAL DEPTH OF HOLE: 21.0	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
1	X		1

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
NA						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buckner / [signature]

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT: BG8 / Plum Brook Ordnance Works — HOLE NO. IT-BG8-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: MW001

PROJECT: Plum Brook Ordnance Work | INSPECTOR: G. Buckner | SHEET 2 OF 2 SHEETS 4

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	~~ANALYTICAL SAMPLE NO.~~ BLOW COUNTS (f)	REMARKS (g)
690.0		Grassy Surface 0.2'	HNU			Sample Thru 4 1/4" ID Augers using 2" ID SS split spoon.
		SILT sdy br mst F gra well sorted	2.0 ppm	0'-2' IT-B68-BEDGW-001 (0930)	2/2 2/5	Ran 2.0 Rec 1.0 Lost 1.0
	1	1.5'				
688.5		Clay sdy br mst F gra well sorted lean				Auger to 2'
687.0	2		1.0 ppm		4/50/5.5"	
		3.0' Top of Weathered Rock				
	3	Auger Refusal 3.5'				
685.5						CONTINUED BY ED KANEVSKY 9/19/97
	4	Drill thru no core collected				Log from Cuttings because Rig cannot get core barrel
	5					rock is to shallow
		Shale w/ ~~Quartz~~ mineral intrusions				
	6	according to cuttings				
	7	Shale (siltstone) slightly weathered grey moderately hard moist				Water @ 7'-8' Begin casing
	8					
	9	Shale weathered grey moist				
	10	~~Mostly~~ Shale sandstone				

PROJECT: Plum Brook Ordnance Works

HOLE NO. IT-B68-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-BG8-BEDGW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR: ES Kanevsky

SHEET 3 OF 3 SHEETS 4

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Slightly weathered grey, ~~[illegible]~~ moderately hard moist ~~[illegible]~~				5' recovery
	11					50% water table ?
	12	No recovery ~~core~~				coring was very fast
	13					
	14					coring was very fast
	15					
	16					
	17	Shale (siltstone) weathered, moderately hard grey wet				100% recovery
	18					
	19					

PROJECT: Plum Brook Ordnance Work

HOLE NO. IT-BG8-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: BG8-001

PROJECT: Plum Brook Ordinance Works

INSPECTOR: ED KANCUSKY

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Slate (siltstone) slightly weathered grey, moderately hard wet				
	21	BOH @ 21'				
	22					

PROJECT

HOLE NO. IT-BG8-BEDRW-001

HTRW DRILLING LOG

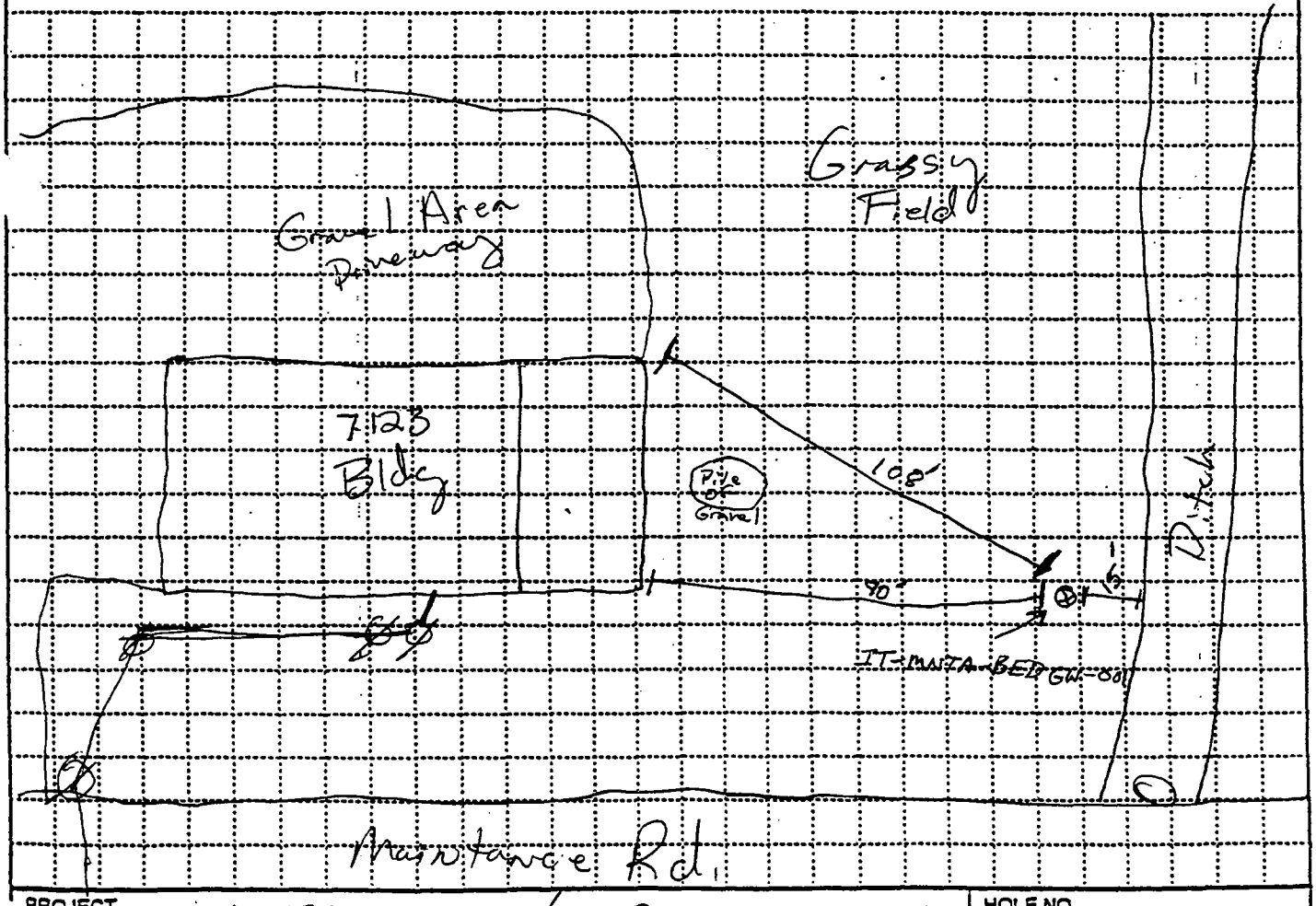
DISTRICT: USACE / Nashville	IT-MNTA-BED GW-001	HOLE NUMBER
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 8 SHEETS
3. PROJECT: MNTA / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Diedrich D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diedrich D-120 (Drill Rig) 12.25" ID HSA, 2"x2" SS Split Spoon, 140 lb Hammer 10 inch Roller Cone Bit, 10" x 3" Core barrel, 825 Ingersol Rand Air Compressor	8. HOLE LOCATION: N = 623808.29 E = 1918699.38 See Sketch	
	9. SURFACE ELEVATION: 636.05 ft ~~629.0~~ / (From Topo) DKK	
	10. DATE STARTED: 9/5/97	11. DATE COMPLETED: 9/22/97
12. OVERBURDEN THICKNESS: 24.8'	15. DEPTH GROUNDWATER ENCOUNTERED: 1 overburden water (7.0') / 55.2'	
13. DEPTH DRILLED INTO ROCK: 39.0'	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 27.77 10-6-97	
14. TOTAL DEPTH OF HOLE: 65.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
2	X		2

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buekner / [signature]

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT		HOLE NO.
MNTA	/ Plum Brook Ordnance Works	IT-MNTA-BED GW-001

ENG FORM 5056-R, AUG 94 (Proponent: CECW-EG)

HTRW DRILLING LOG

IT - MNTA - BEDGW-001

PROJECT	INSPECTOR	HOLE NUMBER	SHEET
MNTA/Plum Brook Ordnance Works	G. Buckner	BEDGW-001	2 of 8

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	~~ANALYTICAL SAMPLE NO.~~ (f)	REMARKS (g)
	629.0	Grassy Surface 0.2'	HNU		Blow count	Sample thru 4 1/4 ID augers using 2" ID SS spoon (08:30)
		Silt br (Dark 10 YR 5+f) mst Low pl ~~Hard~~ 0.6' loose 0.7'			3/5 7/8	
	1	ML	1.2 ppm			Ran 2.0' Rec 0.8' Loss 1.2'
	2					Auger to 2'
					4/7 9/8	Ran 2.0' Rec 1.4 Loss 0.6
	3	3.2'				
		Silt s+f br (orangish and mottled gray) dry Low to med pl ML	9.0 ppm			
	4	4.4'				Auger to 4'
		Silt sdy F gra mst to Dry well sorted ML			2/3 5/7	Ran 2.0' Rec 1.2' Loss 0.8'
	5	5.2'				
		Clay s+f Dry med to High Pl lean mottled (Br, Gray + Orange br) Homogeneous CH	6.8 ppm			
	6					Auger to 6'
		6.5' wet			2/4 4/4	Ran 2.0' Rec 1.6 Loss 0.4
	7	7.0' saturated	9.0 ppm			
	8	8.2'				Auger to 8'
		Silt, wet, F gra, well sorted sdy to saturated. Br ML 8.3				
		Clay mst fat Br CH 8.8'			3/4 7/8	Ran 2.0' Rec 1.6' Loss 0.4'
	9	Silt, wet, F gra, well sorted sdy to saturated. ML 8.9	5.0 ppm			
		Clay mst fat Br CH				
	10					Auger to 10'

HTRW DRILLING LOG

HOLE NUMBER: IT-MNTA-BED GW-001

PROJECT: MNTA / Plum Brook Ordnance Works | INSPECTOR: G. Buckner | SHEET 3 OF 3 SHEETS

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS (ft)	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
		Clay Silty (10%) lean Stiff mst mottled (Gray, br, Orangish Br). med. pl. CL 11.8'	HNU 2.8 ppm		Blow Counts 3/6 9/10	Raw 2.0' Rec 2.0' Loss 0.0' Auger to 12'
	12	Clay Fat mst to wet Gray med to high Pl. Stiff. Homogeneous CH	6.4 ppm	Geotech Sample (0930) Sample # IT-MNTA-BEDGW-001 12'-14'	1/3 6/6	Raw 2.0' Rec 1.8' Loss 0.2' Auger to 14'
	14				1/3 5/6	Raw 2.0' Rec 1.8' Loss 0.2' Auger to 16'
	16	Clay Shale fragments Present Gray Very stiff. mst to wet Fat CL 16.4	9.0 ppm		5/7 10/13	Raw 2.0' Rec 1.6' loss 0.4' Auger to 18'
	18	18' Dry to moist CB 9-5-97 18.4		Geotech Sample (0945) Sample # IT-MNTA-BEDGW-001 18'-20'	2/10 11/13	09:10 Raw 2.0' Rec 1.7' Loss 0.3' Auger to 20'
	19	Clay Shale fragments Present Gray Very stiff mst to wet Fat. 19' Stiff CB	8.2 ppm			
	20					

PROJECT: MNTA / Plum Brook Ordnance Works | HOLE NO. IT-MNTA-BED GW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-MNTA-BEDGW-001

PROJECT: MNTA/Plum Brook Ordnance Work

INSPECTOR: G. Buckner

SHEET 4 OF 4 SHEETS 8

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
	21	Clay Shale Frag. Present Gray stf Dry to Mst med to High Plasticity lean to Fat. CL 21.6'	9.6 ppm		7/14 19/24	Raw 2.0' Rec 2.0' Loss 0.0'
	22	Clay sdy Shale + limestone Frag. Present lean to Fat Dry to mst. F. Gray to V F Gray. well sorted				Auger to 22.0'
	23	Poor Rec. CL	1.8 ppm	~~1/21~~ 9-5-97 ~~24/20~~	17/21 24/20	Raw 2.0' Rec 0.2' Loss 1.8
	24	24.8'				Auger to 24.0'
	25	Shale, weathered Gray Thinly Bedded Dry. Spoon Refusal 25.4'	2.2 ppm		6/12 50/5inch	Raw 2.0' Rec 1.2 Loss 0.8
	26	Shale weathered Gray Thinly Bedded. Dry.				Auger to 26.0' Because of spoon refusal we will discontinue samples we will try to auger into weathered shale.
	27					28'
	28	28' Augers are very hard to turn. (4 1/4 in) Bedrock becoming more competent.				
	29					~~We will work 2 hours & then~~ Auger to 30' thru weathered (Fissel) shale. Drillers said it is starting to get hard.
	30					

PROJECT: MNTA/Plum Brook Ordnance Works

HOLE NO. IT-MNTA-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-MATA-BED GW-001

PROJECT: MNTA / Plum Brook Ordnance Works

INSPECTOR: G. Buckner

SHEET 5 OF 5 SHEETS 8

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Shale Gray Thinly Bedded Dry.				Logged from cuttings (10:50) Begin Pulling 4 1/4 inch Auger. Will Thru Boring with 12 1/4 inch Augers. 11:20 Complete Pulling Augers Begin Boring with 12 1/4. 4 1/4 Auger Beginning to ~~[illegible]~~ bang down. Must Be in competent Bedrock. Auger to 32.6'
	31					
	32	Shaley LIMESTONE DRILLING ~~Shale~~ slightly weathered (siltstone ~~[illegible]~~ moderately hard Grey dry	Start of LIMESTONE			Logging continued by ED RANEUSKY ~~[illegible]~~ start 1610 End 1705
	33					
	34					
	35					* Interpretation of shale to shaley LIMESTONE based upon description of rock, cross-section, and representative rock sample.
	36	Shaley LIMESTONE ~~Shale~~ slightly-moderately weathered (siltstone) moderately hard Grey dry				
	37					
	38					
	39					
	40					

HTRW DRILLING LOG

HOLE NUMBER: IT-MNTA-BEDGW 001

PROJECT: Plum Brook Ordinance Work

INSPECTOR: E Kanevsky

SHEET 8 OF 6 SHEETS

ELEV. (0)	DEPTH (0)	DESCRIPTION OF MATERIALS: Shaly LIMESTONE	FIELD SCREENING RESULTS (4)	GEOTECH SAMPLE OR CORE BOX NO. (6)	ANALYTICAL SAMPLE NO. (7)	REMARKS (8)
		~~Shale~~ ?DKK 11/16/99 slightly weathered (siltstone) Hard Grey ~~[illegible]~~ dry				Start 0800 Excl 1330
	41					
	42					
	43					
	44		← ~~Start of~~ LIMESTONE DKK			Start 11 30 9/12/99 100% recovery
	45					
	46	Shaley LIMESTONE, vs/slightly DKK weathered, moderately hard dry w/some intrusion of quartz (mineral) sandstone				*Interpretation of Shale to Shaley LIMESTONE based upon description of rock, cross-section, and representative rock sample.
	47					
	48					
	49					

PROJECT: MNTA/Plum Brook Ordinance Work

HOLE NO. IT-MNTA-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-MNTA-BEDGW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR: E. Kanevsky

SHEET 7 OF 7 SHEETS 8

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS (ft)	FIELD SCREENING RESULTS (ft)	GEOTECH SAMPLE OR CORE BOX NO. (ft)	ANALYTICAL SAMPLE NO. (ft)	REMARKS (ft)
		shaley DKK ~~Slate~~ LIMESTONE				
		slightly weathered		H_2S		H_2S - odor
		Hard		7 ppm		from 4 - 10 ppm
	51	Grey, slightly damp w/ quartz? intrusions (mineral) sandstone		-		at wellhead
	52					
	53	shaley DKK ~~Slate~~ LIMESTONE slightly weathered sandstone Hard				
	54	Grey Gray ~~w/ quartz? intrusions (mineral)~~				
		~~Slate~~ DKK LIMESTONE slightly weathered moderately Grey hard slightly damp				
	55	DKK LIMESTONE (shaley) ~~Slate~~ slightly weathered /w fossils		H_2S		
	56	Grey moderately hard wet		68 ppm		
	57	Surface of the core covered w/black H_2S reaction				
		Rainbow ~~sh~~ sheen on the				
	58	surface of the core				
	59					
	60					

PROJECT: P BOW

HOLE NO. IT-MNTA-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-MNTA-BEDGW-001

PROJECT: Plum Borough Ordnance WOP | INSPECTOR: E. Kanansky | SHEET 8 OF 8 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	CONTROL SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Shaley ~~SLATE~~ LIMESTONE				
		slightly weathered				
		gray (siltstone) w/black surfaces				
	61	(H2S reaction), moderately				
		hard				
		wet				
		some fossiles				
	62	strong petroleum				
		odor				
	63					
	64					
		BOH @ 64'				
	65					
		65' BOH.				
	66					
	67					
	68					
	69					
	70					

PROJECT: PBOW | HOLE NO. IT-MNTA-BEDGW-001

HTRW DRILLING LOG

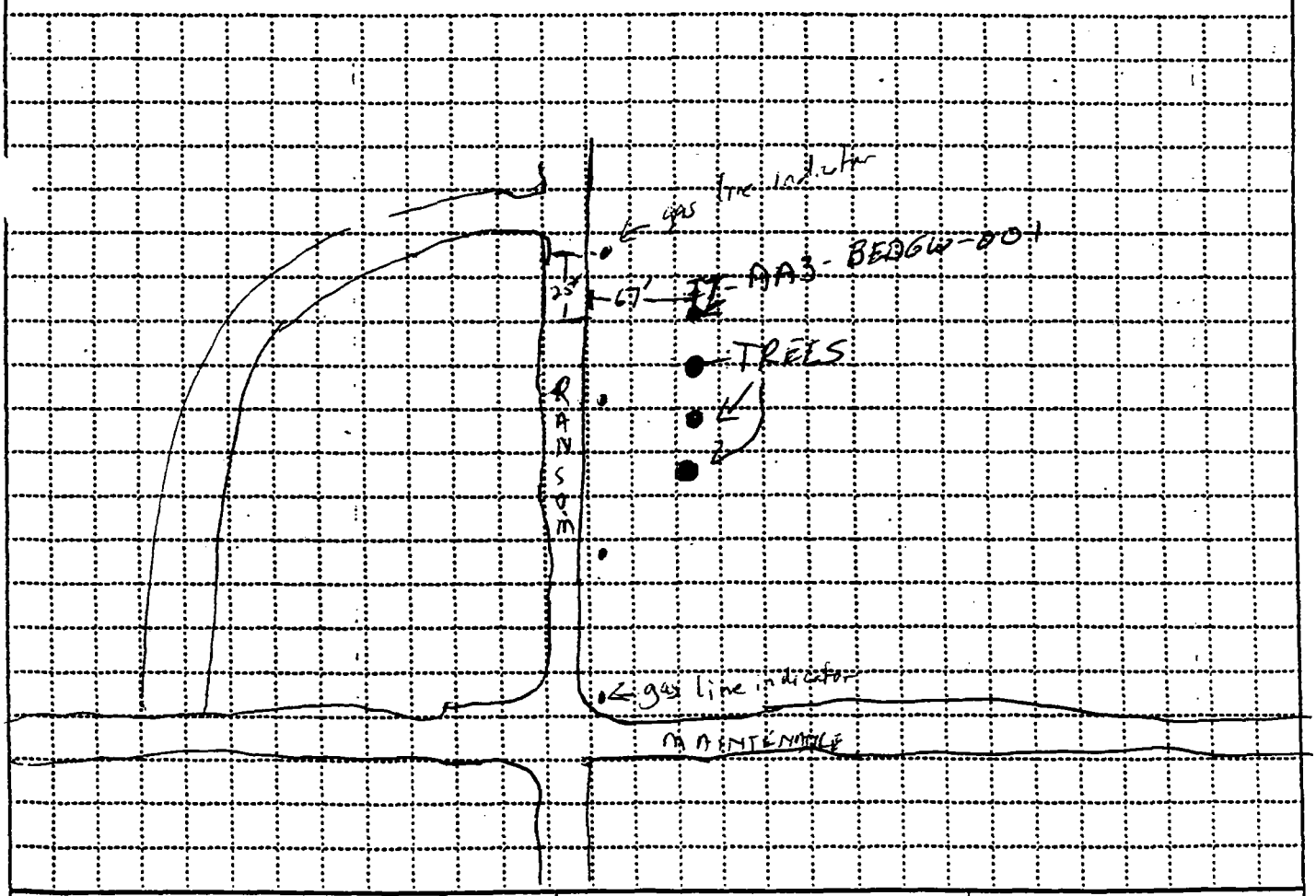
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-AA3-BEDGW-001
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 7 SHEETS
3. PROJECT: AA3 / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Diedrich D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diedrich D-120 drilling; 12.25" ID HSA 3'x3" split spoon sampler, 140 lb hammer; 10" & 6" Roller Cone Bit, 3" x 10' Core Barrel	8. HOLE LOCATION: N=625030.61, E=1914957.28 See Sketch	
	9. SURFACE ELEVATION: 634.10 Ft. ~~635.0 / (From Topo)~~ DFK	
	10. DATE STARTED: 9/6/97	11. DATE COMPLETED: 10-5-97
12. OVERBURDEN THICKNESS: 25.9'	15. DEPTH GROUNDWATER ENCOUNTERED: 11.0' (Overburden) / ~44.0 Bedrock	
13. DEPTH DRILLED INTO ROCK: 28.1	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 20.00 on 10-7-97	
14. TOTAL DEPTH OF HOLE: 54.0	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
2	X		1

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buekner / Ed Kanevsky

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT	HOLE NO.
AA3 / Plum Brook Ordnance Works	IT-AA3-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: GW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR: G. Buckner

SHEET 2 OF 2 SHEETS 7

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
	634.9	Grassy Surface 0.25'	Hnu		Blow Count	Sample thru 4 1/4" ID augers using 2" ID split spoon. (07:50)
634.0	1	Silt br-dk sl dmp low plasticity ML	PID 26ppm		1/3 3/3	Run 2.0 Rec 1.0 Loss 1.0
	2					Auger to 2' 2.0
633.3		2.7' Gravel (ls) Float wea dry, wht-gr, sd GW 3.1	PID 12ppm		3/4 26/17	Run 2.0 Rec 1.5 Loss 0.5
631.9	3	Cly-Silt (80%) br(orangish) + gr sl dmp mottled, low plasticity ML				
	4					Auger to 4' 4.0
	5		PID 14ppm		3/3 3/5	Run 2.0 Rec 1.3 Loss 0.7
629.0	6	(cl ~35%) 6.0' Becoming more clayey				Auger to 6' 6.0
	7	ML	PID 22ppm		2/2 3/3	Run 2.0 Rec 1.5 Loss 0.5
627.0	8	(cl ~10%) 8.0 Decreasing cl content		8.0 Geotech Sample ~~JAR~~ GP Sample # IT-AA3-BED GW-001 8'-10'		Auger to 8' 8.0
626.0	9	ML	PID 8ppm		2/3 3/7	Run 2.0 Rec 2.0 Loss 0.0
	10			10.0		Auger to 10' 10.0

PROJECT: AA3 / Plum Brook Ordnance Works

HOLE NO.: IT-AA3-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: GW-001

PROJECT: AA3 \ PlumBrook Ordnance Works

INSPECTOR: G. Buckner

SHEET 3 OF 3 SHEETS 2

ELEV. (8)	DEPTH (8)	DESCRIPTION OF MATERIALS (8)	FIELD SCREENING RESULTS (8)	GEOTECH SAMPLE OR CORE BOX NO. (8)	ANALYTICAL SAMPLE NO. (8)	REMARKS (8)
624.9		Cly-silt (85%) gr, homogeneous mst cl ~15% soft ML				
	11	11.0 Saturated	PID 0 ppm		2/3 2/2	Run 2.0 Rec 2.0 Loss 0.0
	12					Auger to 12' 12.0
	13		PID 6 ppm		2/3 2/2	Run 2.0 Rec 1.9 Loss 0.1
	14					Auger to 14' 14.0
620.6		14.4				
	15	Cly-silt gr, med plasticity clay ~25% soft ML	PID 2 ppm		0/1 2/3	Run 2.0 Rec 1.7 Loss 0.3
619.1		15.9				
	16	Cly-silt ~clay ~15% sl dmp soft gr, homogeneous ML			NA	Auger to 16' 16.0
	17					Run 2.0 Rec 0.0 Loss 2.0 missed 2' of sampl
	18					Auger to 18' 18.0
	19		PID 0 ppm		2/2 2/3	Run 2.0 Rec. 2.0 Loss 0.0
	20					Auger to 20' 20.0

PROJECT: AA3 \ Plum Brook Ordnance Works

HOLE NO.: FT-AA3-BED6W-001

HTRW DRILLING LOG

HOLE NUMBER: GW 001

PROJECT: PlumBrook Ordnance Works

INSPECTOR: G. Buckner

SHEET 4 OF 4 SHEETS 7

ELEV. (8)	DEPTH (D)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (F)	GEOTECH SAMPLE OR CORE BOX NO. (G)	ANALYTICAL SAMPLE NO. (H)	REMARKS (I)
614.9		Cly-Silt, soft cl ~15% gr, homogenous sl dmp 20.8 v soft	PID 0ppm		1/2 2/2	Run 2.0 Rec 2.0 Loss 0.0
	21					
	22			22.0		Auger to 22' 22.0
		22.8		Geo tech Sample ~~SAR~~ 2 sample # IT-AA3-BEDGW-001 22'-24'	3/3 3/10	Run 2.0 Rec 2.0 Loss 0.0
612.2	23	Clay ~(90%) Silt ~(10%) stiff gr, homogeneous med plasticity CL 24.0	PID 2ppm			
611.0	24	Clay med plasticity Very stiff CL sl dmp fine gravels (well rounded) present, s 25.5	PID 0ppm	24.0		Auger to 24' 24.0
609.5		Clay, med plasticity, v st, sl dmp, gr, fine + coarse gravels present CL 25.9			3/23 26/50/5"	Run 1.9 Rec 1.9 Loss 0.1
609.1	26	Spoon refusal on bedrock				Auger to 26' 26.0 Auger refusal at 26', (0958) - Begin Pulling 4 1/4" ID augers -
	27	Shale moderately weathered soft - to moderately hard				Continue by ED KAWESKY
	28	damp GREY				
	29					
	30					

PROJECT: AA3 \ PlumBrook Ordnance Works

HOLE NO.: IT-AA3-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-AA3-BEDGW-001

PROJECT: Plum Brook Ordnance

INSPECTOR: ED Kanesky

SHEET 5 OF 5 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		SHALE				
		moderately weathered				
		soft- to moderately hard				
	31	grey				
		damp				
	32					
	33					
		~~siltstone~~ limestone				
		moderately weathered				
		grey, moderately hard				
	34	moist				
		~~Siltstone~~ Limestone				
		slightly weathered				
	35	soft- to moderately hard				
		grey				
		dry				
	36					
	37					
	38					
	39					

PROJECT: AA3 / Plum Brook Ordnance Works

HOLE NO. IT-AA3-BEDGW-001

HIRW DRILLING LOG

HOLE NUMBER: IT-AA3-BEDGW-001

PROJECT: Plum Brook Ordinance | INSPECTOR: ED KANEVSKY | SHEET 6 OF 6 SHEETS 7

ELEV. (8)	DEPTH (1)	DESCRIPTION OF MATERIALS (2)	FIELD SCREENING RESULTS (3)	GEOTECH SAMPLE OR CORE BOX NO. (4)	ANALYTICAL SAMPLE NO. (5)	REMARKS (6)
		~~Siltstone~~ Limestone moderately weathered soft-to moderately hard grey dry				Start 1530. Finish 1720 100% recovery
	41					
	42					
	43					
	44	~~Siltstone~~ Limestone slightly-moderately weathered soft-moderately hard grey wet				Start grey5 Finished 1000 100% recover
	45					
	46					
	47					
	48					
	49					

PROJECT: AA3 / Plum Brook Ordnance Works II | HOLE NO. IT-AA3-BEDGW-001

HIRW DRILLING LOG

PROJECT Plum Brook Ordnance Works | INSPECTOR Ed Kanevsky | HOLE NUMBER IT-AA3-BEDGW-001 | SHEET 1 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
	51	~~Siltstone~~ Limestone moderately weathered ~~too~~ soft to moderately hard Grey wet				
	52					
	53					
	54					
		BOH @ 54				
	55					
	56					
	57					
	58					
	59					

PROJECT AA3 / Plum Brook Ordnance Works | HOLE NO. IT-AA3-BEDGW-001

HTRW DRILLING LOG

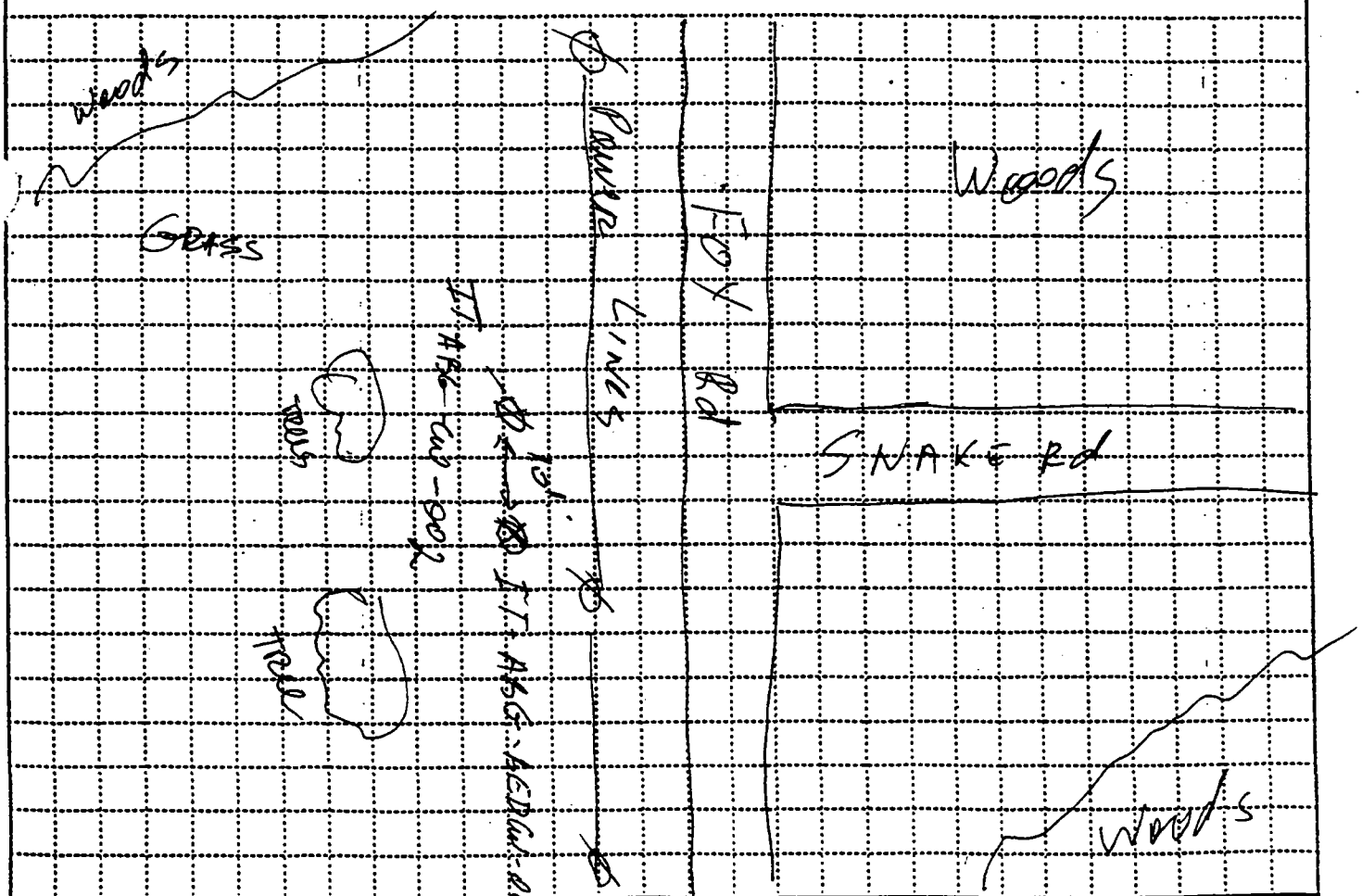
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-ABG-GW-002
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF SHEETS 2
3. PROJECT: ABG / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley / Greg Conard	6. MANUFACTURER'S DESIGNATION OF DRILL: Diedrich D-50	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diedrich D-50 Drill Rig 4¼" ID HSA, 2" x 2" SS split Spoon; 140 lb. Hammer	8. HOLE LOCATION: N = 621578.51, E = 1921515.58 See Sketch	
	9. SURFACE ELEVATION: 658.20 Ft. ~~658.00 (From Topo)~~ DKK	
	10. DATE STARTED: 9/11/97	11. DATE COMPLETED: 9/11/97
12. OVERBURDEN THICKNESS: 6.0'	15. DEPTH GROUNDWATER ENCOUNTERED: 2.3'	
13. DEPTH DRILLED INTO ROCK: 1.0'	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE: 7.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
2	X		NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
						%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		~~Greg Brooksher~~ / ED KAUFMAN

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT	HOLE NO.
ABG / Plum Brook Ordnance Works	IT-ABG-GW-002

ENG FORM 5056-R, AUG 94 (Proponent: CECW-EG)

HTRW DRILLING LOG

HOLE NUMBER: IT-ABG-GW-002

PROJECT: Plum Brook Ordnance Work

INSPECTOR: ED RANKSY

SHEET: 2 OF 2 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Brass top soil 0.4	HNU	~~2~~		2 1/2" - 2' - split spoon
		sand, fine well sorted	Brek ground	~~5~~ ~~7~~	2/5	80% recovery
657	1	~~damp~~ slightly damp Yellowish Brown Loose	Q	~~10~~	7/10	
			HNU 0.8 ppm	Geotech-Sample. Sample # IT-ABG-GW-002 0'-2' 2.0		
656	2	5' Black ash 2.3	HNU	~~11~~		80% recovery
		Silty sand fine ~~damp slightly~~ damp Green well sorted dense	9.8 PPM	~~12~~ ~~20~~ ~~19~~	11/12 20/19	
				Geotech Sample Sample # IT-ABG-GW-002 2'-4' 4.0		
655	3					
654	4	Silty sand, gray, moist loose 4.4 ~~1" - shale, gray, loose~~	HNU	~~6~~	6/	4" recovery
		No recovery	8.6 ppm	~~50/4~~	50/4 inches	
653	5					
652	6	Shale 6.0				Auger to 7.0'
651	7	BOH @ 7'				

PROJECT: Plum Brook Ordnance Work

HOLE NO.: IT-ABG-GW-002

HTRW DRILLING LOG

DISTRICT: USACE / Nashville		HOLE NUMBER: IT-ABG-BEDGW-001
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT: Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Diearich D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diearich D-120 (Drill Rig) 12" ID HSA, 2x2" SS Split spoon, 140 Hammer 10" & 6" Roller Cone Bit, 3x10' Core Barrel, 825 Ingersoll Rand Air Compressor	8. HOLE LOCATION: N=621579.50, E=1921506.02 See sketch	
	9. SURFACE ELEVATION: 658.20 Ft. ~~658.00 / (From Topo)~~ DKK	
	10. DATE STARTED: 9/4/97	11. DATE COMPLETED: 9/10/97
12. OVERBURDEN THICKNESS: 6.0'	15. DEPTH GROUNDWATER ENCOUNTERED: 4.2 (overburden) / 12.5'	
13. DEPTH DRILLED INTO ROCK: 15.5	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 5.51 on 10-4-97	
14. TOTAL DEPTH OF HOLE: 21.5	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

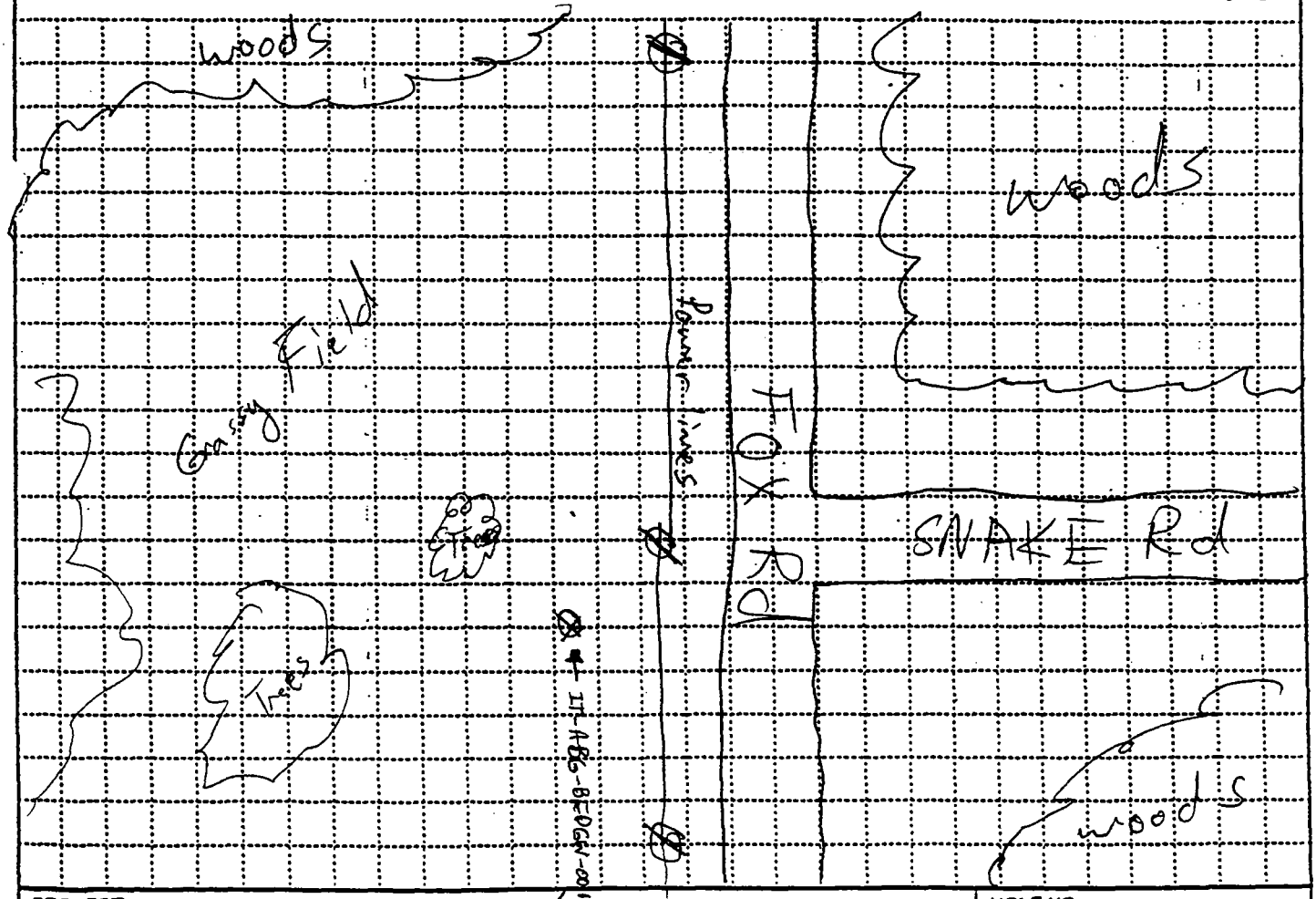
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
2	X		1

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buekner / Ed Kanarsky

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook Ordnance Works	IT-ABG-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: IT-ABG-BED GW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	SAMPLE NO. (f)	REMARKS (g)
658.0		Grassy Surface 0.2	HNU		Blow counts	Sample thru 4 1/4" ID augers, 5' split spoon 2' x 2".
		SILT sdy Moist F-gra gr'l (shale) lo 1.0'			3/5 9/10	
657.0	1	SAND V F Gra mst well sorted yel Br. lo 2.5'	9.0 ppm			Ran 2.0' Rec 1.8' Loss 0.2'
						Auger to 2'
	2				6/9 17/20	Ash smell like burned material.
655.5		Ash sdy Bl F-gra Dry 2.9'				Ran 2.0' Rec 1.4' loss 0.6'
655.1	3	SAND gr V F gra well sorted mst lo	6.8 ppm	IT-ABG-BEDGW-001 2'-4' (1030)		
	4	Saturated ~~wet~~ 4.2'				Auger to 4'
			5.5 ppm		6/10 50/4in	
	5			IT-ABG-BEDGW-001 4'-6' 10:35		Ran 2.0' Rec 0.9' Loss 1.1
652.0	6	Spoon Refusal 6.0'				Auger to 6'
		Shale Fissel (can auger into it) weathered				
		Auger Refusal 7.0'				
651.0	7	shale, slightly weathered slightly damp Grey	H_2S 0.ppm			ED RANEVSKY continued logging water at 4' Rising Start 1540 End 1805 WL 6' from top
	8	HARD				
	9					

PROJECT: Plum Brook Ordnance Works

HOLE NO. IT-ABG-BEDGW-001

HTRW DRILLING LOG

HOLE NUMBER: ITABG-BEDAW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR:

SHEET 4 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
						4'4 - cored W1 - 5' GS
	11					
		Shale slightly weathered DAMP Grey Hard	H_2S 0ppm			Start 0745 End 1130
	12					
		Shale highly weathered wet Gray Hard				
	13					
	14					
		Shale slightly weathered DAMP Brownish grey Hard				
	15					
	16					
	17					
	18					
	19					

HTRW DRILLING LOG

HOLE NUMBER: IT-ABG-BEDGW-001

PROJECT: Plum Brook Ordinance Wks

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
	21					Could'nt recover 3' of bedrock 70% recovery WL-5'
	22	BOH at ~~[illegible]~~ 21.5				
	23					
	24					
	25					

PROJECT: Plum Brook Ordnance Works

HOLE NO. IT-ABG-BEDGW-001

HTRW DRILLING LOG

DISTRICT: USACE / Nashville		HOLE NUMBER: IT-TNTB-BEDGW-002
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT: TNTB / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Diedrich D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Diedrich D-120 (Drill Rig) 12 1/4 inch ID HSA, 2' x 2" SS split spoon, 140 lb. Hammer, 2" x 10" Core Barrel, 10" & 6" Roller Cone Bit, 825 Ingersoll Rand Air Compressor	8. HOLE LOCATION: N=616835.18 E=1918020.88 See Sketch	
	9. SURFACE ELEVATION: 670.10 Ft ~~670.0~~ (From Topo) DKK	
	10. DATE STARTED: 9/5/97	11. DATE COMPLETED: 9/24/97
12. OVERBURDEN THICKNESS: ~~1.0~~ 2.8'	15. DEPTH GROUNDWATER ENCOUNTERED: ~11.0	
13. DEPTH DRILLED INTO ROCK: 22.4'	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 6.50 on 10-4-97	
14. TOTAL DEPTH OF HOLE: 25.2	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

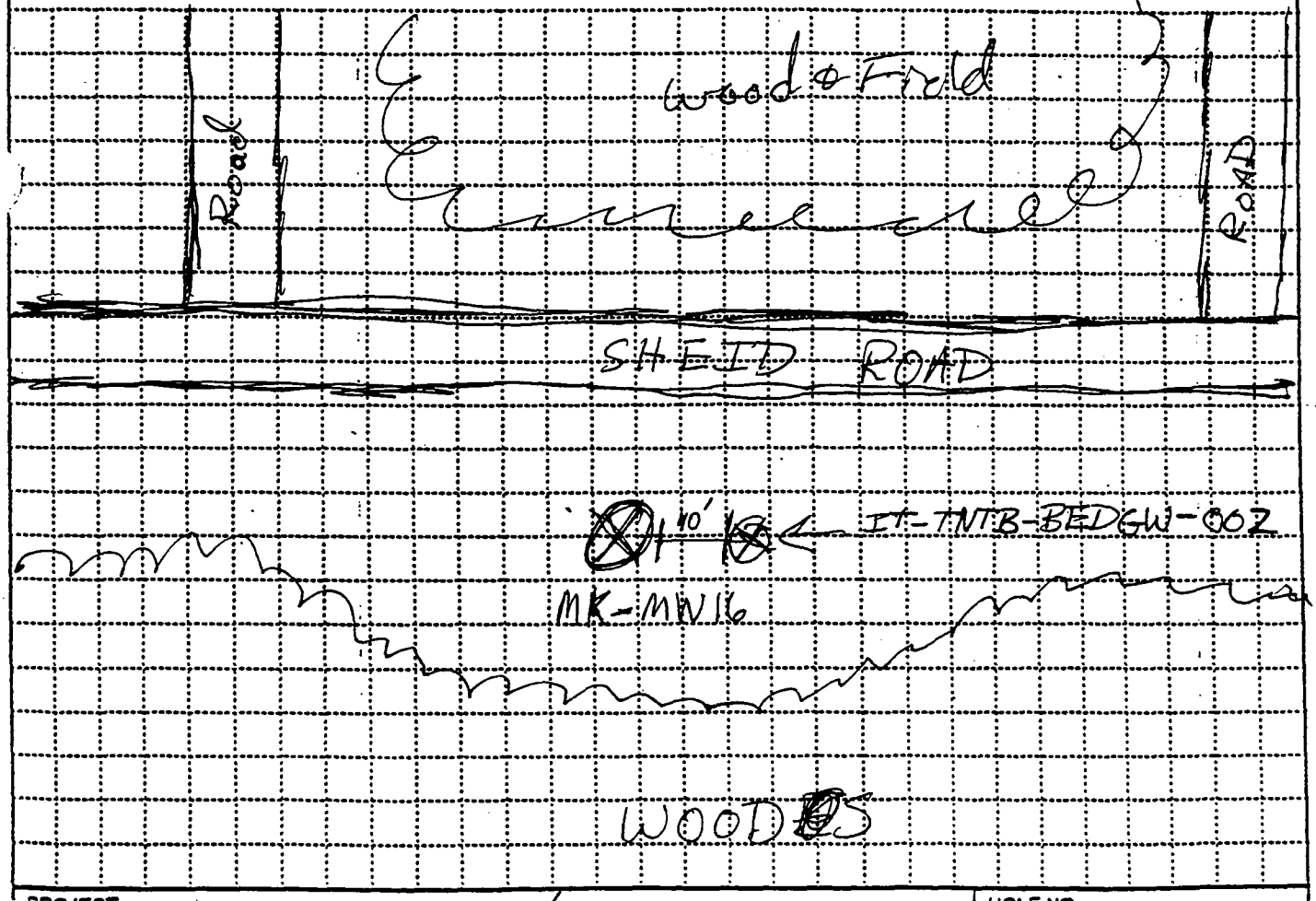
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
/	X		1

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buekner / [signature]

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
TNTB / Plum Brook Ordnance Works	IT-TNTB-BEDGW-002

HTRW DRILLING LOG

HOLE NUMBER: IT-TNTB-BEDGW-002

PROJECT: TNTB / Plum Brook Ordnance Works | INSPECTOR: G. Buckner | SHEET 2 OF 2 SHEETS 4

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYSIS OR SAMPLE NO. (f)	REMARKS (g)
		~~SILT~~ Gravel ~~and (shale)~~ sin br & gr mx (mottled) lo Dry GM 0.8'	HNU		Blow Count 4/7	Sample thru 4 1/4" ID auger using 2" ID SS split spoon
	1	SILT gvl (shale) br & gray (mottled) bdd Low Pl. ML 2.8'	30.0 ppm	2.0'	6/5	Raw 2.0' Rec 1.2' Loss 0.8' Auger to 2.0' 2.0
	2			Geotech sample ~~Sample #~~ IT-TNTB-BEDGW-002 2'-4' 9-5-97 4.0'	3/13 30/50 min	
	3	Shale wea dk gr bdd Spoon Refusal 3.9'	18.0 ppm			Raw 2.0' Rec 1.6' Loss 0.4' Auger to 4.0' 4.0'
	4	Shale Highly weathered Gray				Use 12" roller cone bit to set 10" casing 5' in to bedrock. Logged from cuttings
	5					
	6					
	7					
	8	8.0' Shale ~~MBD~~ weathered, gray		8.0' Box 1		8.0' Bottom of casing. Casing will not go any deeper. Shale is falling into hole. Shale is competent. 9-24-97 09:30 Begin coring at IT-TNTB-BEDGW-002. - Begin at 8' using 13.5' core bbl and Air.
	9					
	10					

HIRW DRILLING LOG

HOLE NUMBER: IT-TNTB-BEDGW-002

PROJECT: Plum Brook Ordnance Works | INSPECTOR: G. Bretover | SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
						P-1
						End 13:50 ← Lunch
						Start 10:50
						Time ~~13:50~~ 2:40 ← ~~Lunch~~
						Run ~~10.0'~~ 8.0'
	11	Shale, slo weathered, fg-vfg the nodules, gray mod. hard. wet/saturated thinly bedded.				Rec 8.0
						Loss ~~2.0~~ 0.0'
						Air Pressure 140psi - 120psi
						WL - 14:00
	12					
	13					
	14					
	15					
	16		Slight H_2S oder after pulling barrel could near boiling in the hole.			P-2
	17		~~Slig~~ Still 0 0ppm			End 16:35
						Start 14:35
						Time 2:00
						Run = ~~10.0'~~ 9.0'
	18					Rec - 8.0
						Loss 1.0
						Air Pressure 120psi
		Spin				W.L. 25.2'
	19					
	20					

HARD DRILLING LOG

IT-TNTB-BEDGW-002

PROJECT: Plum Brook Ordnance Works/TNTB | INSPECTOR: G. Buckner | SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (g)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Shale, slightly weathered, pyrite nodules, gray, mod. hard, wet, thinly bedded				
	21					
	22					
	23		H_2S 0.0 ppm			
	24					
	25	Spin 25.0 Limestone, hard, gray to light gray, c grained				
		25.2' Bottom of Hole				16:40 Begin Reaming hole with the 6" Roller cone bit.
	26					
	27					
	28					
	29					
	30					

PROJECT: Plum Brook Ordnance Works/TNTB | HOLE NO. IT-TNTB-BEDGW-002

HTRW DRILLING LOG

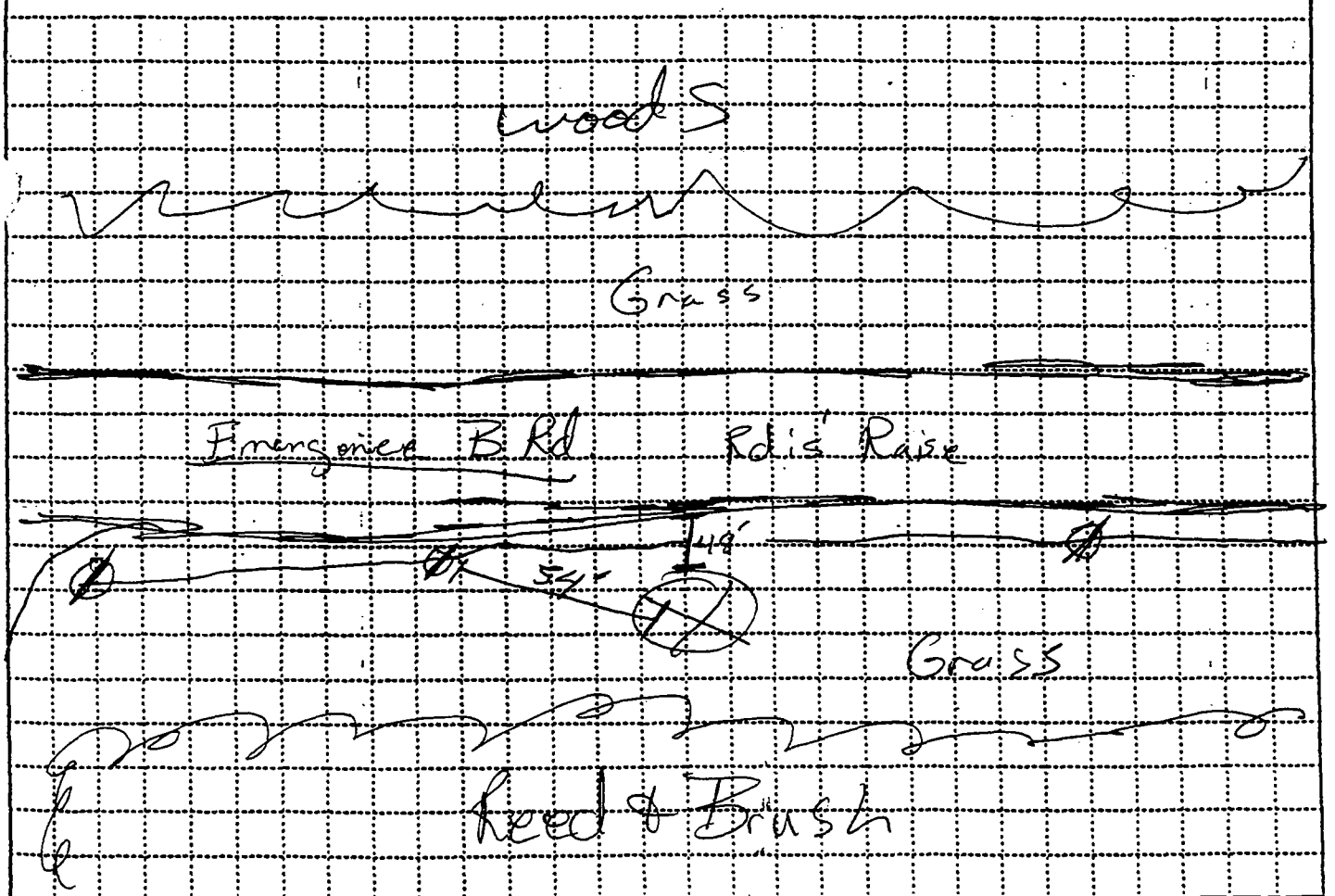
DISTRICT: USACE / Nashville		HOLE NUMBER: IT-TNTB-BEDGW-001
1. COMPANY NAME: IT Corp	2. DRILL SUBCONTRACTOR: Belasco Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT: TNTB / Plum Brook Ordnance Works	4. LOCATION: Sandusky, Ohio	
5. NAME OF DRILLER: Allen Dudley	6. MANUFACTURER'S DESIGNATION OF DRILL: Dicrich-D-120	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Dicrich D-120 (Drill Rig) 12 1/4 in ID HSA, 2'x2" SS split Spoon 140lb Hammer, 10 inch Roller Cone Bit, 3"x10' Core barrel, 825 Ingersoll Rand Air Compressor	8. HOLE LOCATION: N=618737.55 E=1417218.02 See Sketch	
	9. SURFACE ELEVATION: 659.80 Ft. ~~646.0'~~ / (~~From Topo~~) DKK	
	10. DATE STARTED: 9/6/97	11. DATE COMPLETED: 10/1/97
12. OVERBURDEN THICKNESS: ~1.0'	15. DEPTH GROUNDWATER ENCOUNTERED: Not encountered in overburden / ~13.0	
13. DEPTH DRILLED INTO ROCK: 24'	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 4.95 on 10-4-97	
14. TOTAL DEPTH OF HOLE: 25'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
1	X		1

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		X		Greg Buckner / Ed Kamrsky

LOCATION SKETCH/COMMENTS — SCALE: Not to Scale



PROJECT: TNTB / Plum Brook Ordnance Works — HOLE NO. IT-TNTB-BEDGW-001

ENG FORM 5056-R, AUG 94 (Proponent: CECW-EG)

HTRW DRILLING LOG

HOLE NUMBER: IT-TNTB-BEDGW-001

PROJECT: TNTB/Plum Brook Ordnance Works | INSPECTOR: G. Boettner | SHEET 2 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Grassy Surface 0.2	HNU	Geotech Sample	Blow Count	Sample Thru 4¼" HSA using 2'x2" S.S. Split Spoon. (1250)
		SILT Dark br, Dry, organics & Rootlets				
		~~Shale~~ (GA) SILT 0.5'			3/3 7/41	
	1	grl. (Shale Black), mottled Br + orange mottle, Dry, low tomed Pl. 1.0'	ppm	Sample # IT-TNTB-BEDGW-001 0'-2'		Ran 2.0' Rec 1.7 Loss 0.3
		Shale (Black) Dry Thinly Bedded	19.0'			
						Auger to 2' 2.0'
	2					Spoon Refusal
			45.0 ppm			Logs from Cuttings until we hit competent Bedrock.
	3				50/4.in	
						(1330) Pack up + demobilize
	4					use 10" Roller cone bit to set casing.
		Auger Refusal 4.5'				
		Shale/silt Stone (logged from cuttings				
	5					
	6					
	7					
	8					
	9	9.0' Shale/silt stone. Mod. Hard, Slightly Damp, Sl. weathered gray, no odor.			P-1	Begin Coring with 3" ID Core barrel, 10' 9-25-97 End 15:30 Start 12:00 Time 3:30. Core barrel is broken. Core 0.5 50% Rec
	10					

HTRW DRILLING LOG

IT-TNTB-BEDGW-001

PROJECT: Plum Brook Ordnance Works

INSPECTOR: G. Bruckner

HOLE NUMBER: BEDGW-001

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	REMARKS (g)
		Shale, slightly weathered soft- to moderate hard grey moist		P-2		Begin Coring at ± 10' using 2" 10' core barrel 0920 9-31-97
	11					W/ @ 11.5'
	12					End 1020 Start 09:20 Time Ran 8.5' Rec. loss: 1 Air Pressure: 120 PSI
	13	Shale, wheathered soft-moderate hard grey wet				
	14	shale slightly weathered soft- moderate hard grey moist				
	15					
	16					
	17	Shale, wheathered soft to moderate hard grey wet				
	18					
	19					
	20					

HTRW DRILLING LOG

HOLE NUMBER: FT-TNTB-BEDGW-001

PROJECT: Plum Brook Ordnance Work | INSPECTOR: B. Ranevsky | SHEET 4 OF 4 SHEETS

ELEV. (10)	DEPTH (10)	DESCRIPTION OF MATERIALS (2)	FIELD SCREENING RESULTS (7)	GEOTECH SAMPLE OR CORE BOX NO. (8)	ANALYTICAL SAMPLE NO. (9)	REMARKS (7)
		Shale wheathered to moderately wheathered soft to moderately hard	H_2S			End 1130 80% recovery
	21	grey saturated	1 ppm at well Head			
			0 ppm BZ			
	22					
	23					
	24					
	25					
		BOH @ 25'				

Monitoring Well Construction Form (Overburden)

Project:	PBOW	Well Number:	IT-AA1-GW-002
Location:	Erie County, Sandusky Ohio	Site Location:	AA1 OU #
Client:	Nashville USACE	Installation Date	9-19-97
Subcontractor:	Balasc Drilling	Northing:	623068.35
Driller:	Allen Dudley	Easting:	1917727.57
IT Field Representative:	Greg Buckner	IT Project Number:	771481

Protective Cover Elevation (ft): [illegible]

Top of Casing Elevation (ft): 640.85

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 638.60

Approximate Diameter of Borehole (in): 8.25

Well Casing Diameter (in): 2

Depth to Water (ft):

During Drilling: 21.8

Date: 9-19-97

Post Development: 5.59 TOC

Date: 10-5-97

Top of Bentonite Seal (ft): 3

Top of Filter Pack (ft): 6

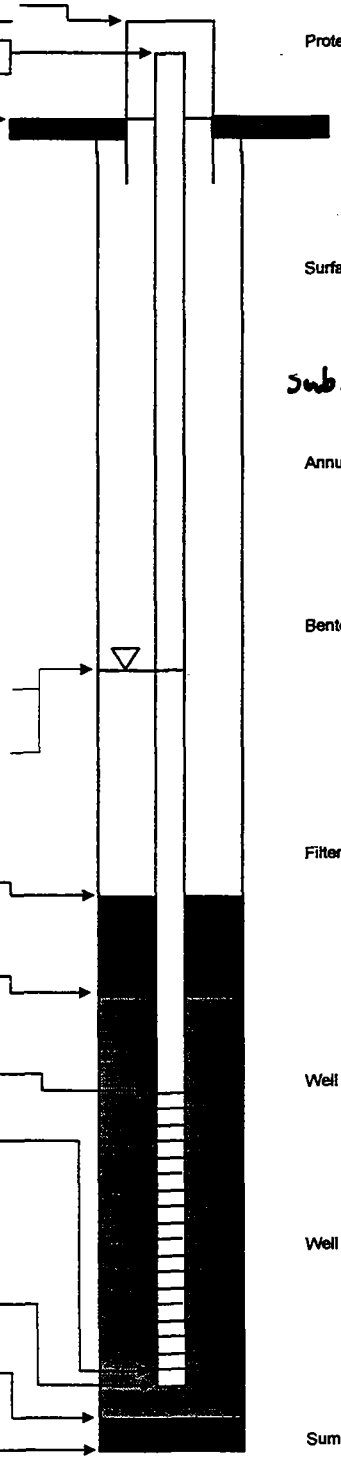
Top of Screen Interval (ft): 6.75

Bottom of Screen Interval (ft): 21.75

Bottom of Well (ft): 22

Bottom of Filter Pack (ft): 23

Bottom of Borehole (ft): 23



Protective Casing:

Type: Steel

Dimensions (in): 6

Length (ft): 7.5

Guard Post: 4 at 8'

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Subsurface Pad 6" of Gravel

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie (Pumped)

Bentonite Seal:

Manufacturer:

Type: (Pellets) Slurry

Installation: 6-in lifts One Section

(Gravity) Tremie Pumped

Hydration time (hrs): 48

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 400lb

Installation: Gravity (Tremie)

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.01

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material: —

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Pizometer

~~Monitoring Well~~ Construction Form (Overburden)

Project:	PBOW	Well Number:	IT-AA2-GW-002
Location:	Erie County, Sandusky Ohio	Site Location:	AA2 OU #
Client:	Nashville USACE	Installation Date	9-22-97
Subcontractor:	Balasco Drilling	Northing:	623589.11
Driller:	Allen Drilling	Easting:	1909481.30
IT Field Representative:	Greg Bruder	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 643.95

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 641.50

Approximate Diameter of Borehole (in): 8.25

Well Casing Diameter (in): 2

Depth to Water (ft):

During Drilling: No encountered

Date: 9-22-97

Post Development: NA TOC

Date: NA

Top of Bentonite Seal (ft): 2.5

Top of Filter Pack (ft): 5.5

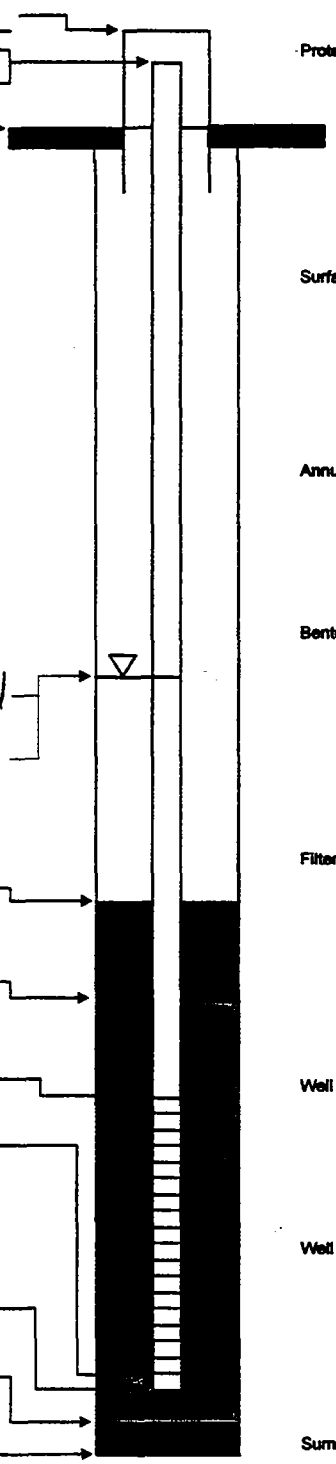
Top of Screen Interval (ft): 8.25

Bottom of Screen Interval (ft): 18.25

Bottom of Well (ft): 18.5

Bottom of Filter Pack (ft): 19.5

Bottom of Borehole (ft): 19.5



Protective Casing:

Type: None

Dimensions (in): NA

Length (ft): NA

Guard Post: NA

Surface Pad:

Dimensions: ~~NA~~ None

Type: ~~Concrete~~ NA

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie (Pumped)

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: (Pellets) Slurry

Installation: 6-in lifts One Section

Gravity Tremie Pumped

Hydration time (hrs): 48 hr

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft³): 300 lb

Installation: Gravity (Tremie)

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material: —

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Overburden)

Project:	PBOW	Well Number:	IT-AA3-GW-002
Location:	Erie County, Sandusky Ohio	Site Location:	AA3 OU #
Client:	Nashville USACE	Installation Date	9-18-97
Subcontractor:	Falasco Drilling	Northing:	625027.71
Driller:	Greg Coppard	Easting:	1914956.35
IT Field Representative:	Ed Kanevsky	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 636.11

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 634.10

Approximate Diameter of Borehole (in): 8.25

Well Casing Diameter (in): 2

Depth to Water (ft):

During Drilling: 28.0

Date: 9-18-97

Post Development: 5.75 TOC

Date: 10-4-97

Top of Bentonite Seal (ft): 1.5

Top of Filter Pack (ft): 3.0

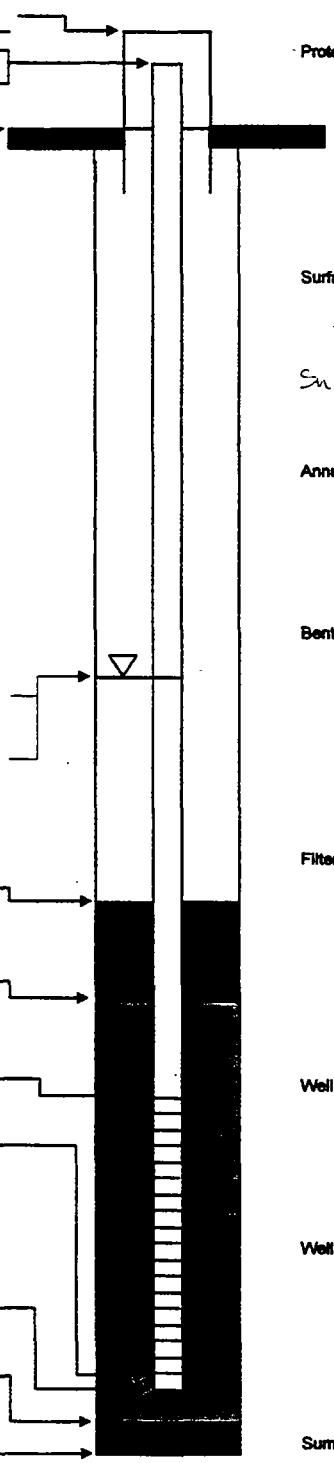
Top of Screen Interval (ft): 5.75

Bottom of Screen Interval (ft): 15.75

Bottom of Well (ft): 16.0

Bottom of Filter Pack (ft): 17.0

Bottom of Borehole (ft): 17.0



Protective Casing:

Type: Steel

Dimensions (in): 6.0

Length (ft): 5.5

Guard Post: 8

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Subsurface Pad 6' of gravel

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie Pumped

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: Pellets Slurry

Installation: 6-in lifts One Section

Gravity Tremie Pumped

Hydration time (hrs): 48

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 300lb

Installation: Gravity Tremie

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material:

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Overburden)

Project:	PBOW	Well Number:	IT-ABG-GW-002
Location:	Erie County, Sandusky Ohio	Site Location:	ABG OU #
Client:	Nashville, USACE	Installation Date	9-11-97
Subcontractor:	Belasco Drilling	Northing:	621578.51
Driller:	Greg Conard	Easting:	1921515.58
IT Field Representative:	Ed Kanevsky	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 661.06

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 658.20

Top of Sand 0.0

Approximate Diameter of Borehole (in): 8.25

Well Casing Diameter (in): 2.0 in

Depth to Water (ft):

During Drilling: 2.3

Date: 9-11-97

Post Development: 6.10 TOC

Date: 10 4-97

Top of Bentonite Seal (ft): 1.5

Top of Filter Pack (ft): 2.0

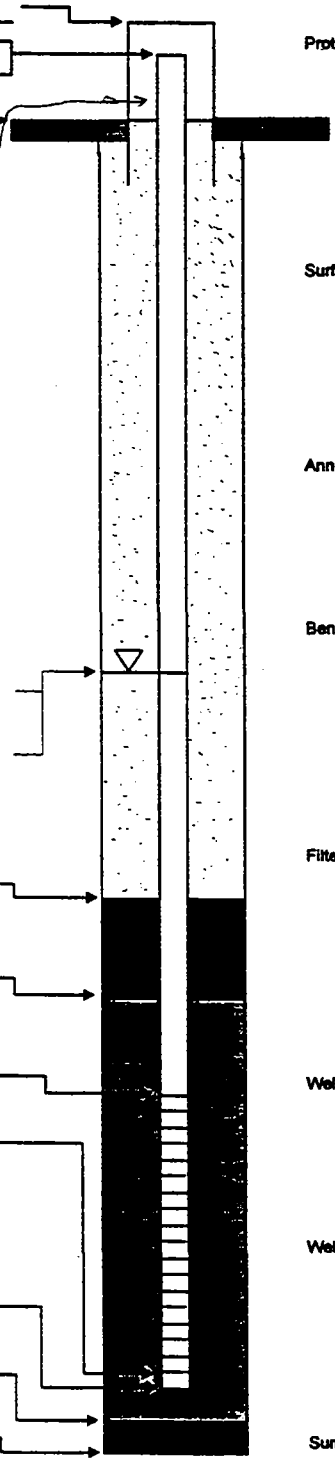
Top of Screen Interval (ft): 2.50

Bottom of Screen Interval (ft): 6.50

Bottom of Well (ft): 6.75

Bottom of Filter Pack (ft): 7.0

Bottom of Borehole (ft): 7.0



Protective Casing:

Type: Steel

Dimensions (in): 6.0

Length (ft): 5.0

Guard Post: 8.0

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie (Pumped)

Bentonite Seal:

Manufacturer: 1/4 Pellets

Type: (Pellets) Slurry

Installation: 6-in lifts One Section

Gravity Tremie Pumped

Hydration time (hrs): 48hr

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft³): 50 lb

Installation: Gravity (Tremie)

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2.0

Well Screen Casing:

Manufacturer: Johnson

Type: Wire wrap

Slot Size (in): 0.01

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material: —

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-AA1-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	AA 1 OU #
Client:	Nashville USACE	Installation Date	9-24-97
Subcontractor:	Belasco Drilling	Northing:	623069.04
Driller:	Greg Conrad	Easting:	1917718.26
IT Field Representative:	Ed Karwusky / Greg Brown	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 641.04

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 638.80

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10.0

Depth to Bedrock (ft): 23.1

Bottom of Surface Casing (ft): 27.0

Depth to Water (ft):

During Drilling: 55.0

Date: 9-22-97

Post Development: 30.41 TOC

Date: 10-5-97

Approximate Diameter of Section 2 Borehole (in): 6

Well Casing Diameter (in): 2

Top of Bentonite Seal (ft): 40.0

Top of Filter Pack (ft): 45.0

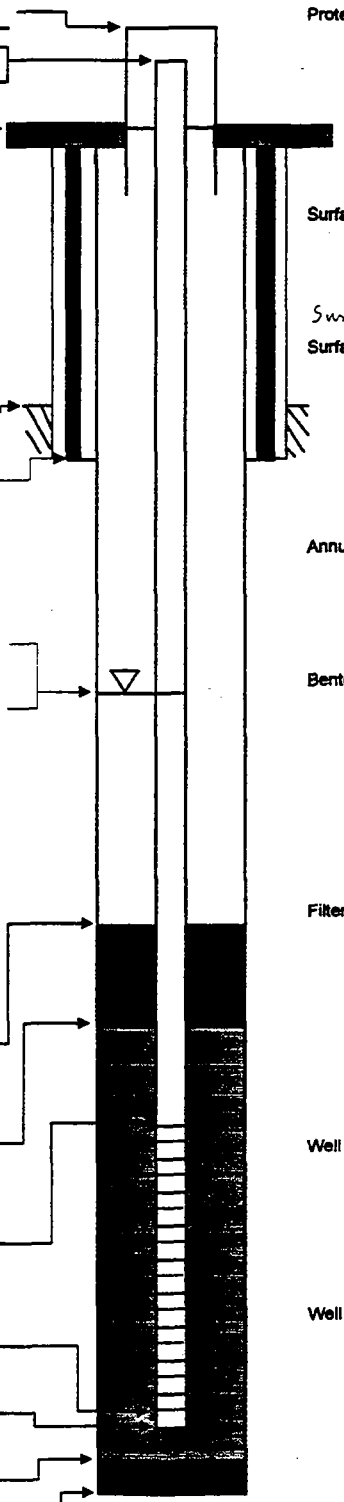
Top of Screen Interval (ft): 49.75

Bottom of Screen Interval (ft): 64.75

Bottom of Well (ft): 65.0

Bottom of Filter Pack (ft): 66.0

Bottom of Borehole (ft): 66.0



Protective Casing:

Type: Steel

Dimensions (in): 6

Length (ft): 9.5

Guard Post: 8

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Surface Pad: 6 inches of Gravel

Surface Casing:

Type: Steel

Diameter (in): 10

Installation: Tremie Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie Pumped

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: Pellets Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 400lb

Installation: Gravity Tremie

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material: —

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-AA2-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	AA2 OU #
Client:	Nashville USACE	Installation Date	10-2-97
Subcontractor:	Salasco Drilling	Northing:	623599.94
Driller:	Allen Dudley	Easting:	1909552.48
IT Field Representative:	Greg Buettner/Ed Kurevsky	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 644.06

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 641.60

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10.0

Depth to Bedrock (ft): 18.8

Bottom of Surface Casing (ft): 20.0

Very Hard Rock, Rather Come would Not per, very deep.

Depth to Water (ft):

During Drilling: ~34.0

Date: 10-2-97

Post Development: 12.48 TOC

Date: 10-5-97

Approximate Diameter of Section 2 Borehole (in): 6

Well Casing Diameter (in): 2

Top of Bentonite Seal (ft): 18

Top of Filter Pack (ft): 23

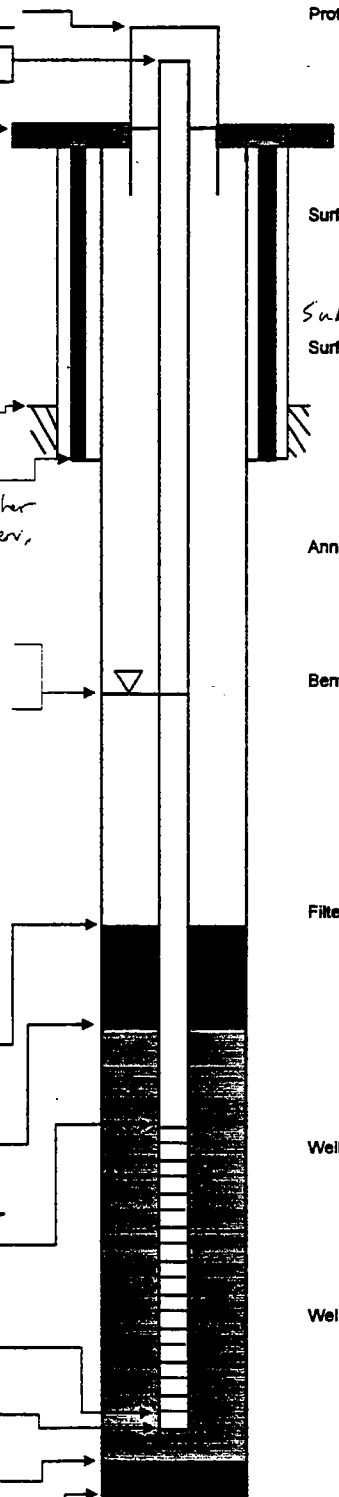
Top of Screen Interval (ft): ~~28~~ 27.25

Bottom of Screen Interval (ft): 42.75

Bottom of Well (ft): 43.0

Bottom of Filter Pack (ft): 44.0

Bottom of Borehole (ft): 44.0



Protective Casing:

Type: Steel

Dimensions (in): 6

Length (ft): 4.5

Guard Post: 8

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Subsurface Pad 6" of Gravel

Surface Casing:

Type: Steel

Diameter (in): 10

Installation: Tremie Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie Pumped

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: Pellets Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48hr

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 400lb

Installation: Gravity Tremie

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

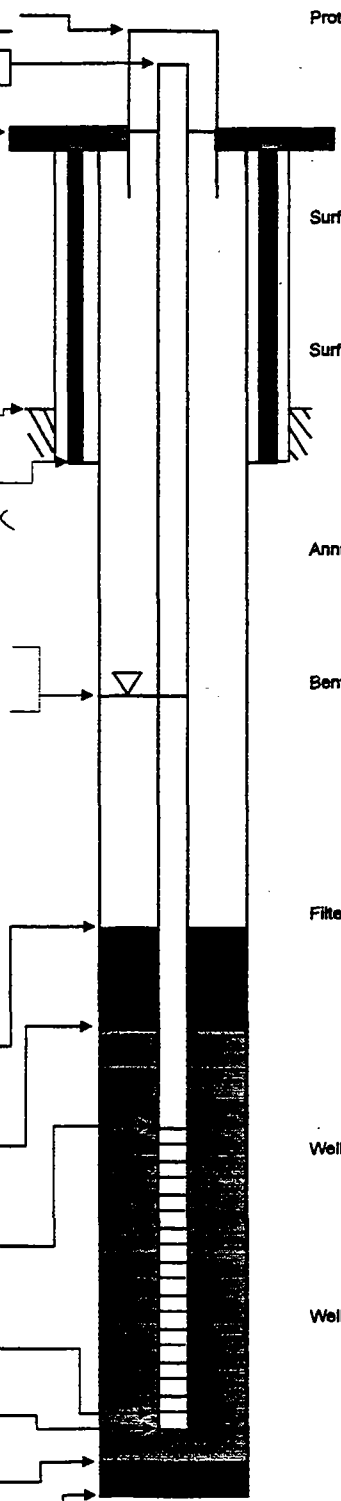
Backfill Material: —

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-AA3-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	AA3 OU #
Client:	Nashville USACE	Installation Date	10-5-97
Subcontractor:	Belasco Drilling	Northing:	625036.61
Driller:	Allen Dudley	Easting:	1914957.28
IT Field Representative:	Ed Kaverdy / Greg Smithner	IT Project Number:	771481



Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 636.43

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 634.10

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10.0

Depth to Bedrock (ft): 25.9

Bottom of Surface Casing (ft): 28.0

Very Hard Rock

Depth to Water (ft):

During Drilling: ~44.0

Date: 10-4-97

Post Development: 28.00 TOC

Date: 10-7-97

Approximate Diameter of Section 2 Borehole (in): 6.0

Well Casing Diameter (in): 2.0

Top of Bentonite Seal (ft): 28.0

Top of Filter Pack (ft): 33.0

Top of Screen Interval (ft): 37.75

Bottom of Screen Interval (ft): 52.75

Bottom of Well (ft): 53.00

Bottom of Filter Pack (ft): 54.00

Bottom of Borehole (ft): 54.00

Protective Casing:

Type: Steel

Dimensions (in): 6.0

Length (ft): 9.5

Guard Post: 8.0

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Surface Casing:

Type: Low Carbon Steel

Diameter (in): 10.0

Installation: (Tremie) Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie (Pumped)

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: (Pellets) Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48 hrs

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 400 lb

Installation: Gravity (Tremie)

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2 in

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.01

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material: ——

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-BG8-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	BG 8 OU #
Client:	Nashville USACE	Installation Date	9/20/97
Subcontractor:	Balasco Drilling	Northing:	618635.28
Driller:	Greg Conford	Easting:	1909856.87
IT Field Representative:	Ed Kanensky	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 676.56

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 637.70

Approximate Diameter of Section 1 Borehole (in): 14 25

Diameter of Surface Casing (in): 10

Depth to Bedrock (ft): 3.0

Bottom of Surface Casing (ft): 4.0

Depth to Water (ft):

During Drilling: ~7.0-8.0

Date: 9-19-97

Post Development: 5.51 TOC

Date: 10-4-97

Approximate Diameter of Section 2 Borehole (in): 6

Well Casing Diameter (in): 2in

Top of Bentonite Seal (ft): 2.0

Top of Filter Pack (ft): 4.0

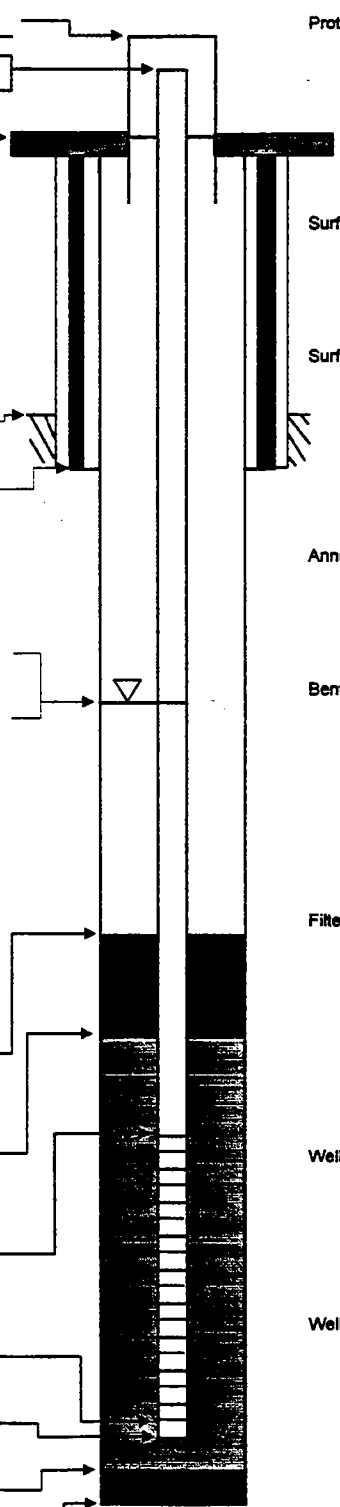
Top of Screen Interval (ft): 4.75'

Bottom of Screen Interval (ft): 19.75'

Bottom of Well (ft): 20.0

Bottom of Filter Pack (ft): 21.0

Bottom of Borehole (ft): 21.0



Protective Casing:

Type: Steel

Dimensions (in): 6

Length (ft): 6

Guard Post: 6

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Surface Casing:

Type: Steel

Diameter (in): 10

Installation: Tremie Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie Pumped

Bentonite Seal:

Manufacturer: 1/4in Pellets

Type: Pellets Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 400lb

Installation: Gravity Tremie

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material:

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-MNTA-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	PBOW OU #
Client:	Nashville USACE	Installation Date	9-22-97
Subcontractor:	Balasco Drilling	Northing:	623808.29
Driller:	Allen Dudley	Easting:	1918699.38
IT Field Representative:	Greg Buckner	IT Project Number:	771481

Protective Cover Elevation (ft): ~~[illegible]~~

Top of Casing Elevation (ft): ~~[illegible]~~ 638.40

Top of Casing Stickup (ft): 3.0

Land Surface Elevation (ft): 636.05

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10

Depth to Bedrock (ft): 24.8

Bottom of Surface Casing (ft): 31.0

Depth to Water (ft):

During Drilling: 55.2'

Date:

Post Development: 27.77 TOC

Date: 10-6-97

Approximate Diameter of Section 2 Borehole (in): 6

Well Casing Diameter (in): 2

Top of Bentonite Seal (ft): 29'

Top of Filter Pack (ft): 44

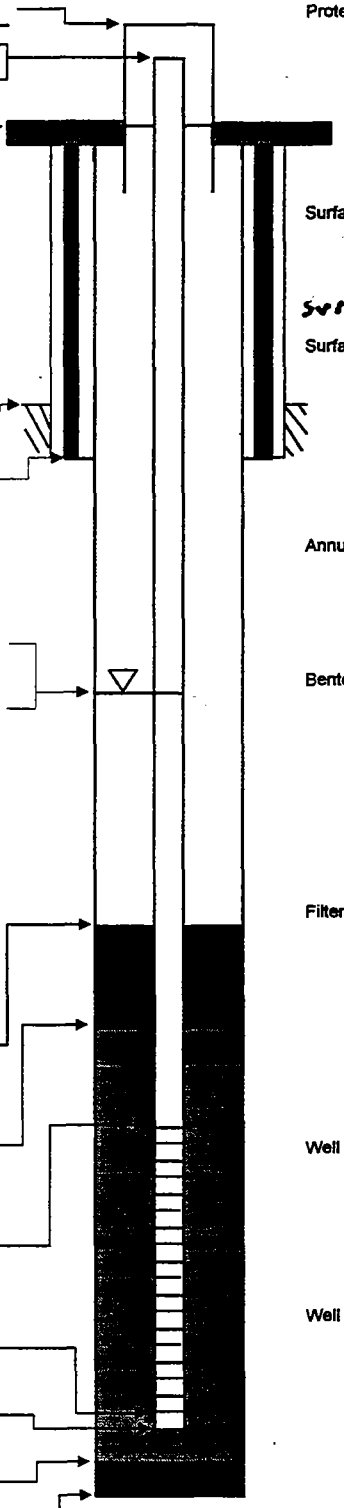
Top of Screen Interval (ft): 48.75

Bottom of Screen Interval (ft): 63.75

Bottom of Well (ft): 64

Bottom of Filter Pack (ft): 65

Bottom of Borehole (ft): 65



Protective Casing:

Type: steel

Dimensions (in): 6

Length (ft): 9.5

Guard Post: 4 at 8'

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Surface Pad Base 6 in of Gravel

Surface Casing:

Type: PVC

Diameter (in): 2

Installation: Tremie Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie (Pumped)

Bentonite Seal:

Manufacturer:

Type: (Pellets) Slurry

Installation: 6-in lifts One Section (Gravity) Tremie Pumped

Hydration time (hrs): 48

Filter Pack Material:

Manufacturer:

Product Name: Filter Pack Sand

Size: #5

Volume Added (lb): 400 lb

Installation: (Gravity) (Tremie)

Well Casing:

Manufacturer: Johnston

Type: PVC

Diameter (in): 2 in

Well Screen Casing:

Manufacturer: Johnston

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material: ——

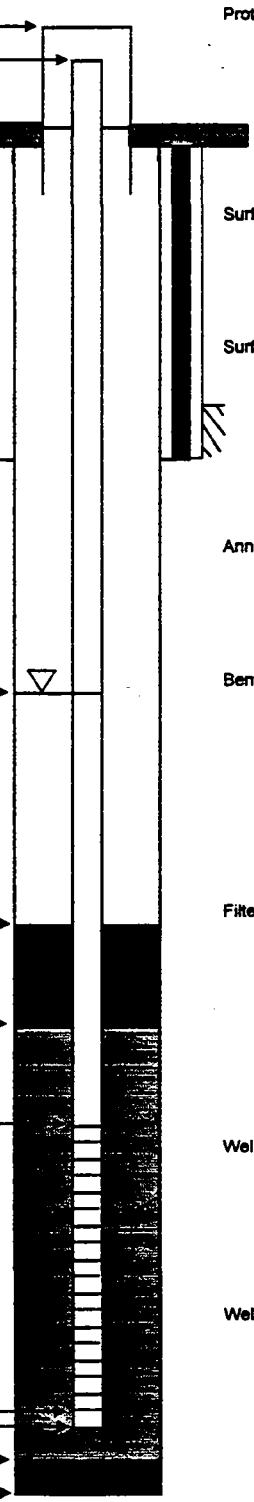
Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Wellcon1\Bedrock

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-ABG-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	ABG OU #
Client:	Nashville USACE	Installation Date	9-10-97
Subcontractor:	Belasco Drilling	Northing:	621579.50
Driller:	Gene Conard / Allen Dathery	Easting:	1921506.02
IT Field Representative:	Ed Kanevsky / Greg Buckner	IT Project Number:	771481



Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 661.60.59

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 658.20

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10.0

Depth to Bedrock (ft): 6.0

Bottom of Surface Casing (ft): 7.0

Very hard Rock 10" Roller Cone will not drill.

Depth to Water (ft):

During Drilling: 12.5

Date: 9-10-97

Post Development: 5.51 TOC

Date: 10-4-97

Approximate Diameter of Section 2 Borehole (in): 6.0

Well Casing Diameter (in): 2 in

Top of Bentonite Seal (ft): 6.0

Top of Filter Pack (ft): 9.0

Top of Screen Interval (ft): 10.75

Bottom of Screen Interval (ft): 20.75

Bottom of Well (ft): 21.0

Bottom of Filter Pack (ft): 22.0

Bottom of Borehole (ft): 22.0

Protective Casing:

Type: Steel

Dimensions (in): 6.0

Length (ft): 9.5

Guard Post: 8.0

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Surface Casing:

Type: Low carbon Steel

Diameter (in): 10.0

Installation: Tremie Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie Pumped

Bentonite Seal:

Manufacturer: 1/4 Inch Pellets

Type: Pellets Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48 hrs

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 300 lb

Installation: Gravity Tremie

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2 in

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

Backfill Material:

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-TNTB-BEDGW-001
Location:	Erie County, Sandusky Ohio	Site Location:	TNTB OU #
Client:	Nashville USACE	Installation Date	9-30-97
Subcontractor:	Belasco Drilling	Northing:	618737.55
Driller:	Allen Dudley / Greg Conrad	Easting:	1917218.02
IT Field Representative:	Greg Buckner / Ed Kamenski	IT Project Number:	771481

Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 662.43

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 659.80

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10.0

Depth to Bedrock (ft): 1.0 / 14.0 → To competent Bedrock

Bottom of Surface Casing (ft): 9.0

Depth to Water (ft):

During Drilling: ~13.0

Date: 9-30-97

Post Development: 4.75 TOC

Date: 10-4-97

Approximate Diameter of Section 2 Borehole (in): 6.0

Well Casing Diameter (in): 2.0

Top of Bentonite Seal (ft): 4.5

Top of Filter Pack (ft): 7.5

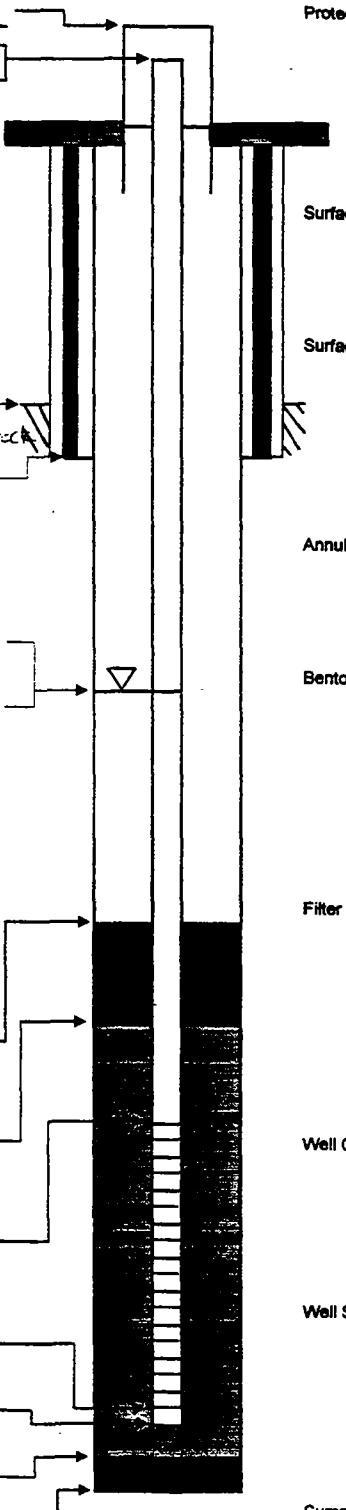
Top of Screen Interval (ft): 8.75

Bottom of Screen Interval (ft): 23.75

Bottom of Well (ft): 24.0

Bottom of Filter Pack (ft): 25.0

Bottom of Borehole (ft): 25.0



Protective Casing:

Type: Steel

Dimensions (in): 6.0

Length (ft): 9.5

Guard Post: 8

Surface Pad:

Dimensions: 4' x 4' x 4' x 4'

Type: Concrete

Surface Casing:

Type: Low Carbon Steel

Diameter (in): 10

Installation: Tremie Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie Pumped

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: Pellets Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48hrs

Filter Pack Material:

Manufacturer:

Product Name:

Size: #5

Volume Added (ft^3): 300lb

Installation: Gravity Tremie

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.010

Slot Type: Continous Factory slot

Sump/End Cap: PVC

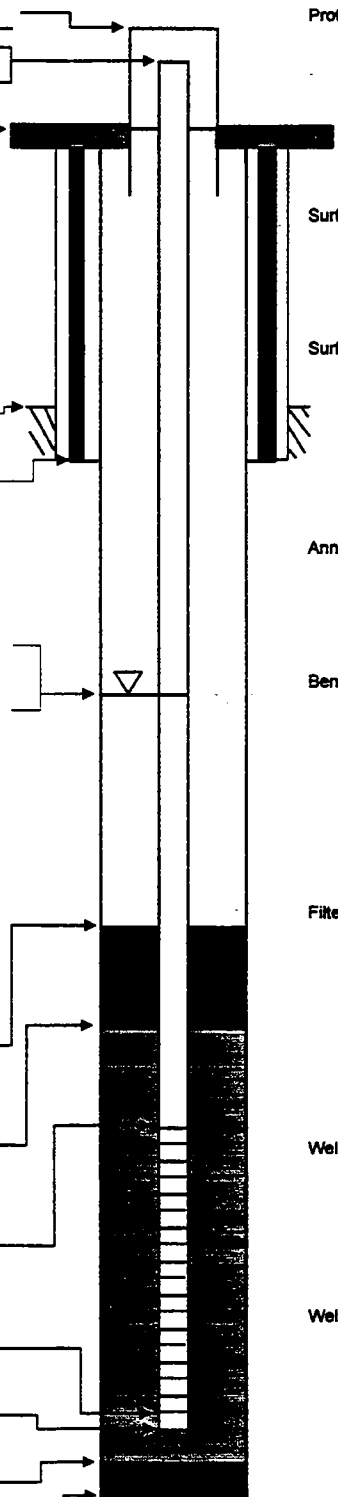
Backfill Material:

Depths and heights are referenced to ground surface unless specified TOC.

All elevations are referenced to MSL (NAVD 88).

Monitoring Well Construction Form (Bedrock)

Project:	PBOW	Well Number:	IT-TNTB-BEDGW-002
Location:	Erie County, Sandusky Ohio	Site Location:	TNTB OU #
Client:	Nashville USACE	Installation Date	9-24-97
Subcontractor:	Belasco Drilling	Northing:	616835.18
Driller:	Allen Dudley & Assoc	Easting:	1918020.88
IT Field Representative:	Greg Bredenn	IT Project Number:	771481



Protective Cover Elevation (ft):

Top of Casing Elevation (ft): 673.35

Top of Casing Stickup (ft): 2.5

Land Surface Elevation (ft): 670.10

Approximate Diameter of Section 1 Borehole (in): 14.25

Diameter of Surface Casing (in): 10.0

Depth to Bedrock (ft): 2.8

Bottom of Surface Casing (ft): 8.0

Depth to Water (ft):

During Drilling: ~11.0

Date: 9-24-97

Post Development: 6.50 TOC

Date: 10-4-97

Approximate Diameter of Section 2 Borehole (in): 6.0

Well Casing Diameter (in): 2.0

Top of Bentonite Seal (ft): 7.0

Top of Filter Pack (ft): 11.2

Top of Screen Interval (ft): 13.95

Bottom of Screen Interval (ft): 23.95

Bottom of Well (ft): 24.2

Bottom of Filter Pack (ft): 25.2

Bottom of Borehole (ft): 25.2

Protective Casing:

Type: Steel

Dimensions (in): 6.0

Length (ft): 9.5

Guard Post: 8.0

Surface Pad:

Dimensions: 4'x4'x4'x4'

Type: Concrete

Surface Casing:

Type: Low Carbon Steel

Diameter (in): 10.0

Installation: (Tremie) Haliburton Cementing Plug Other Plug

Annular Space Seal:

Type: Bentonite-Cement Grout

Installation: Gravity Tremie (Pumped)

Bentonite Seal:

Manufacturer: 1/4 inch Pellets

Type: (Pellets) Slurry

Installation: 6-in lifts One Section Gravity Tremie Pumped

Hydration time (hrs): 48hr

Filter Pack Material:

Manufacturer:

Product Name:

Size: #50

Volume Added (ft^3): 300 lb

Installation: Gravity (Tremie)

Well Casing:

Manufacturer: Johnson

Type: PVC

Diameter (in): 2in

Well Screen Casing:

Manufacturer: Johnson

Type: Wire Wrap

Slot Size (in): 0.01

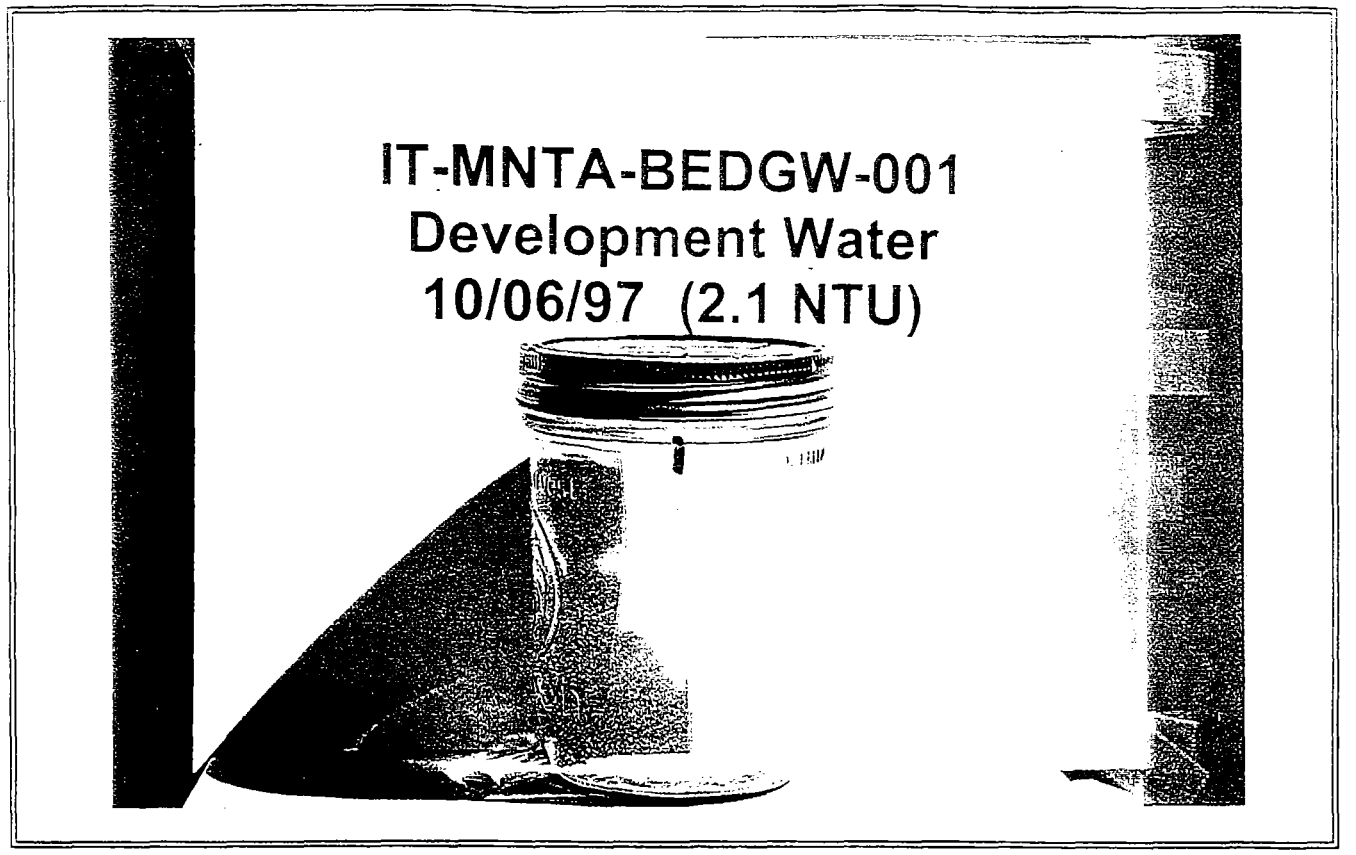
Slot Type: Continous Factory slot

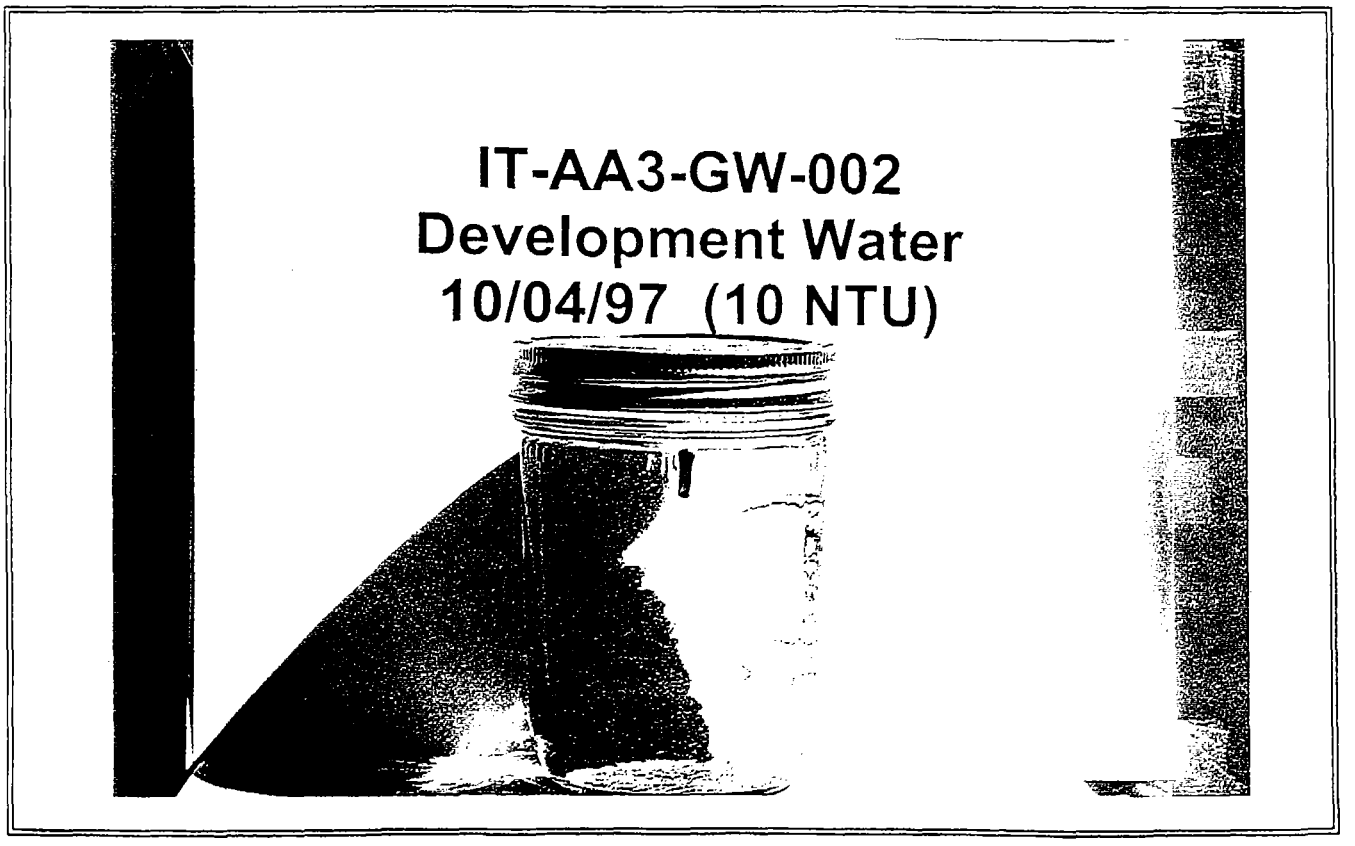
Sump/End Cap: PVC

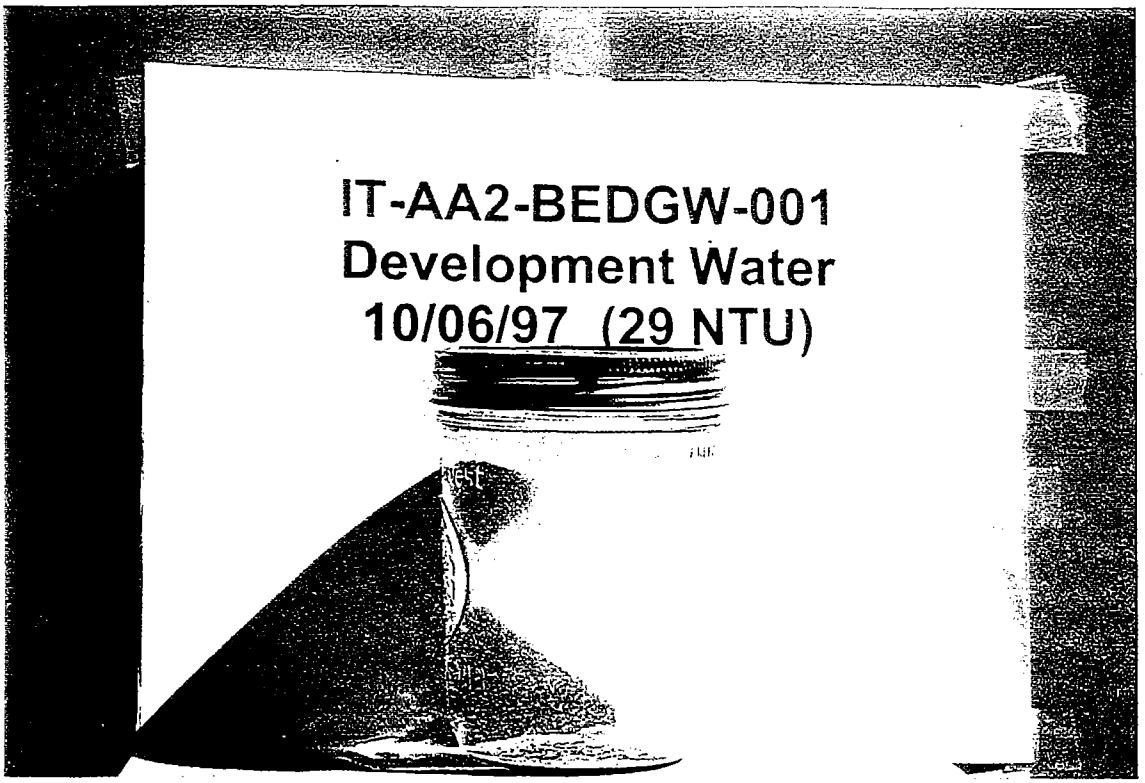
Backfill Material: ——

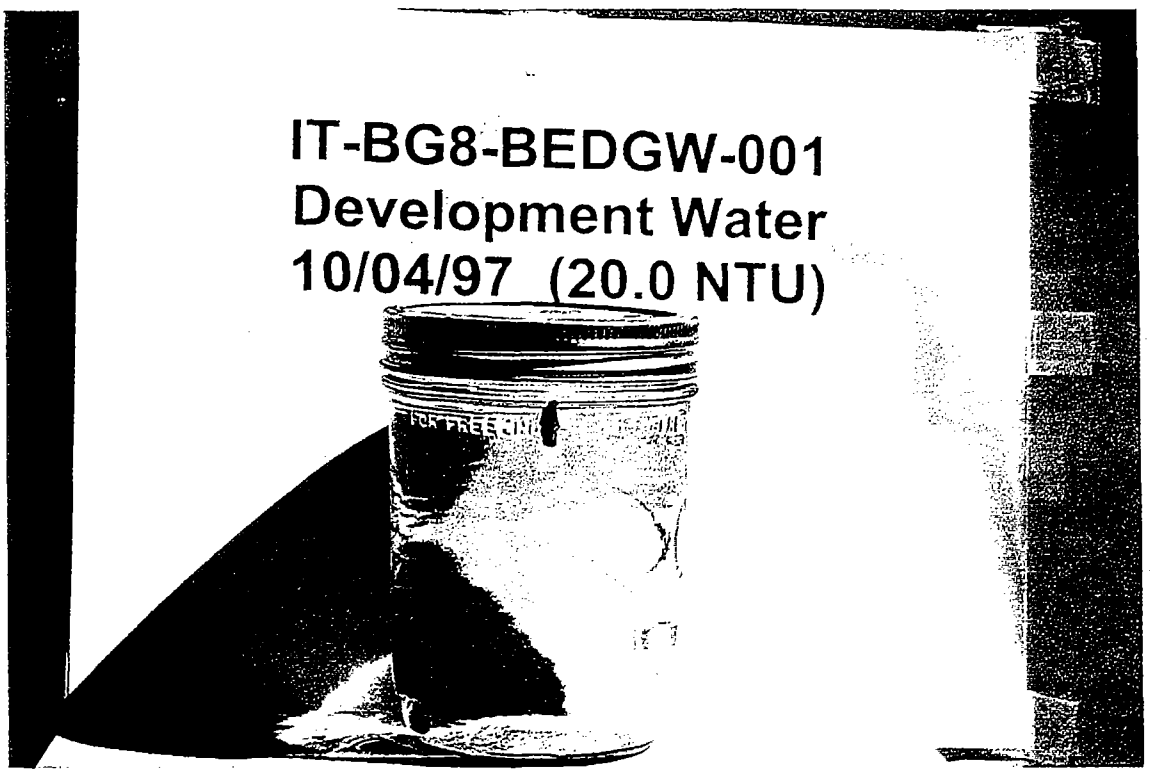
Depths and heights are referenced to ground surface unless specified TOC.

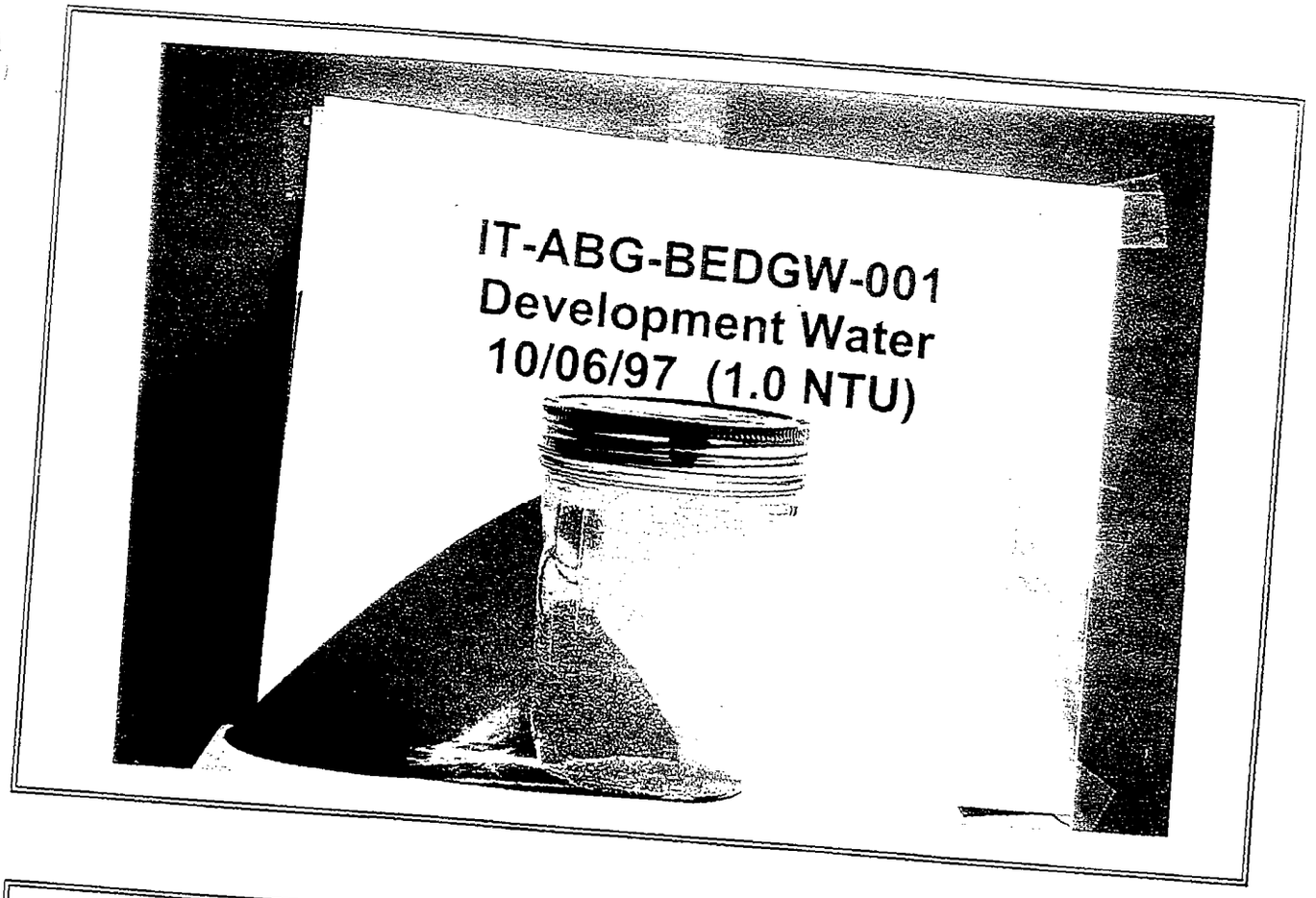
All elevations are referenced to MSL (NAVD 88).

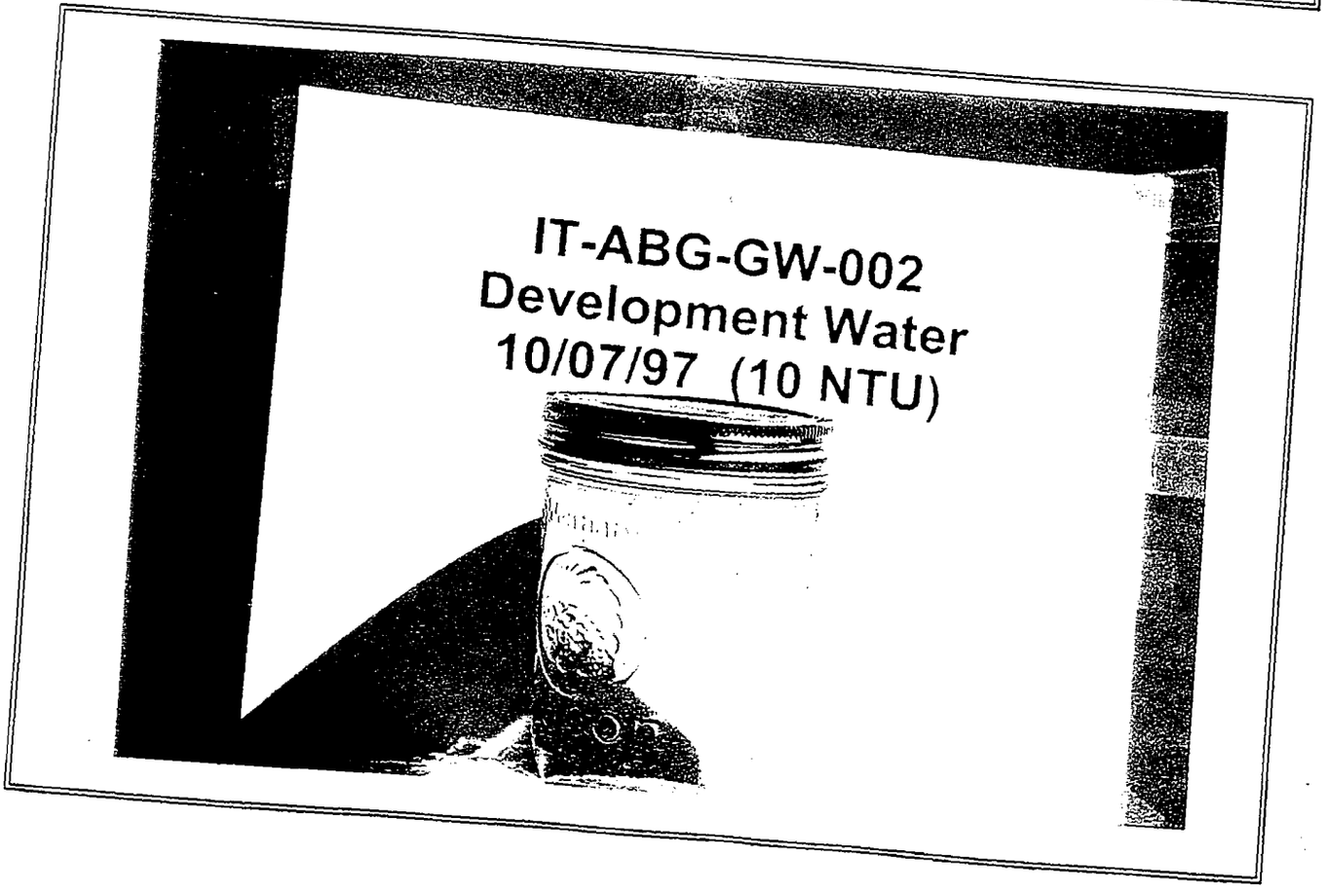

IT-MNTA-BEDGW-001
Development Water
10/06/97 (2.1 NTU)

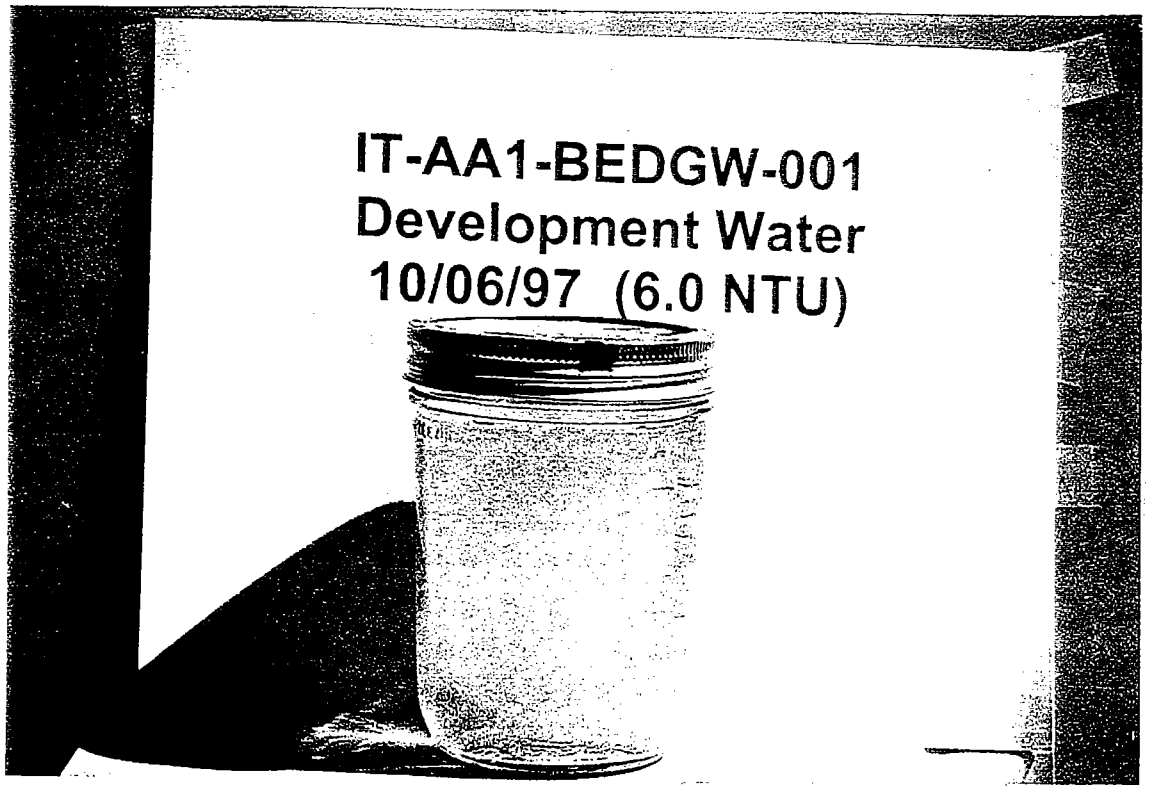

IT-AA3-GW-002
Development Water
10/04/97 (10 NTU)

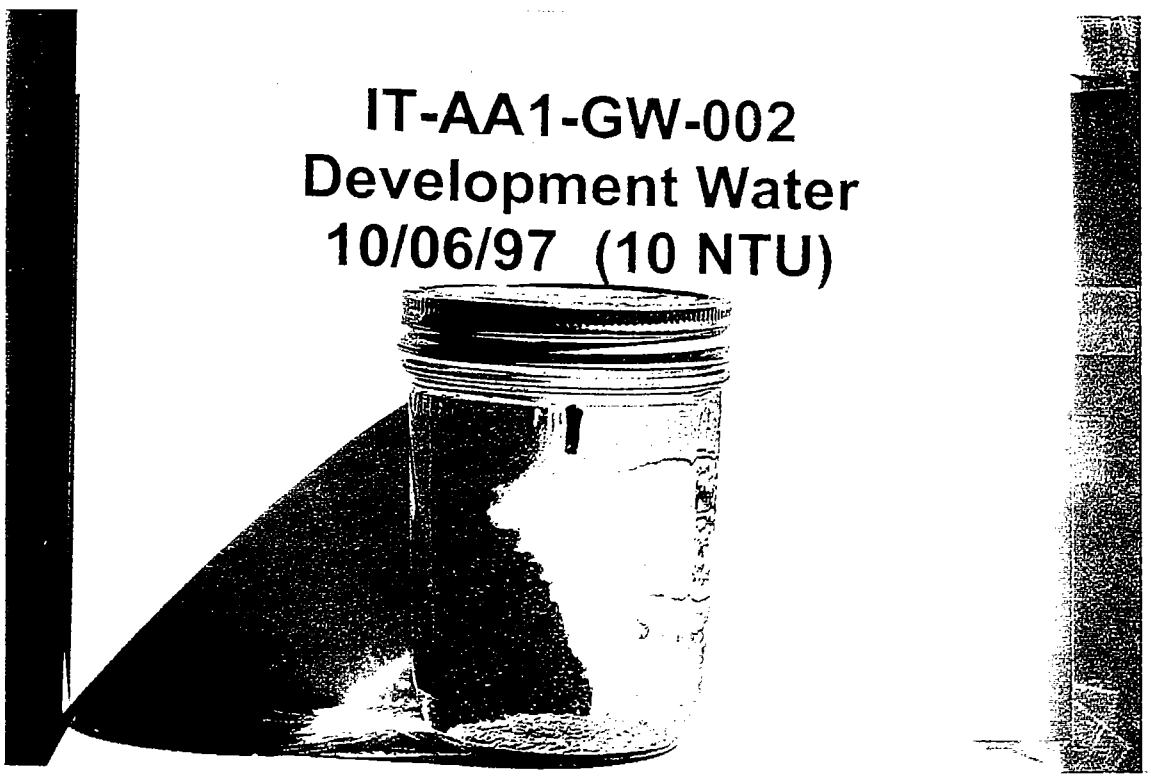

IT-AA2-BEDGW-001
Development Water
10/06/97 (29 NTU)

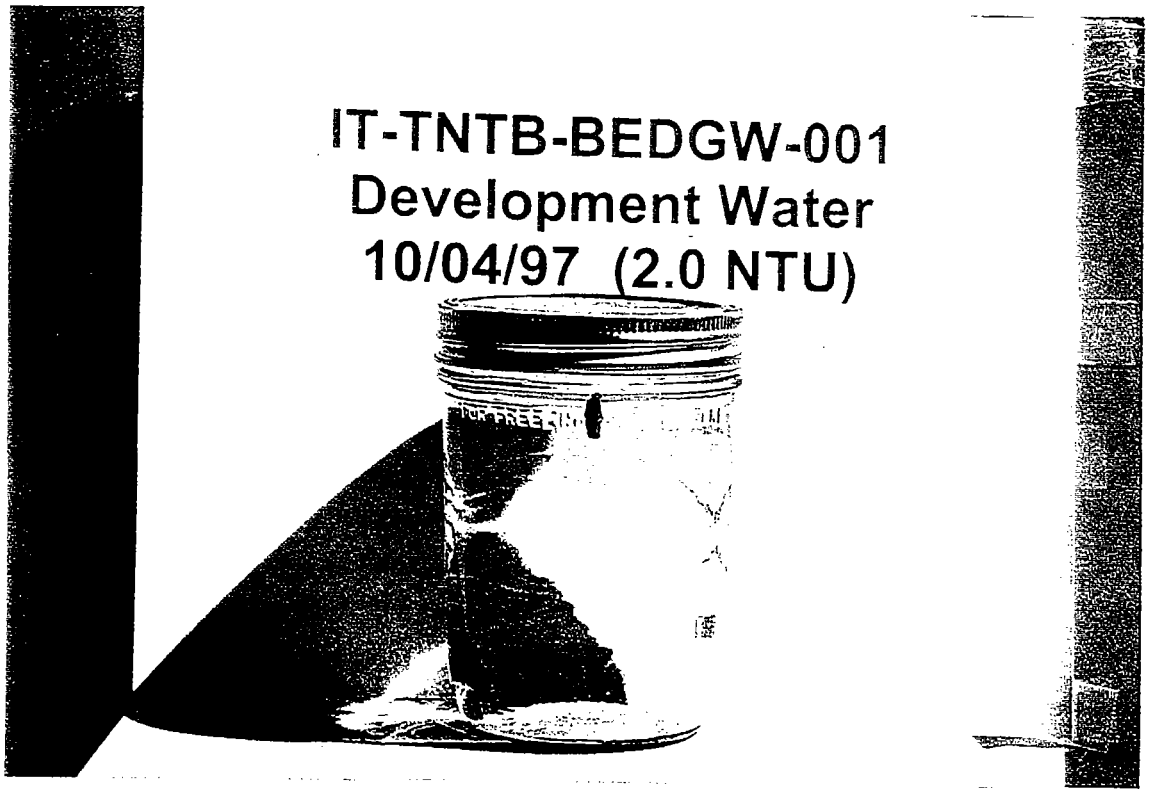

IT-BG8-BEDGW-001
Development Water
10/04/97 (20.0 NTU)

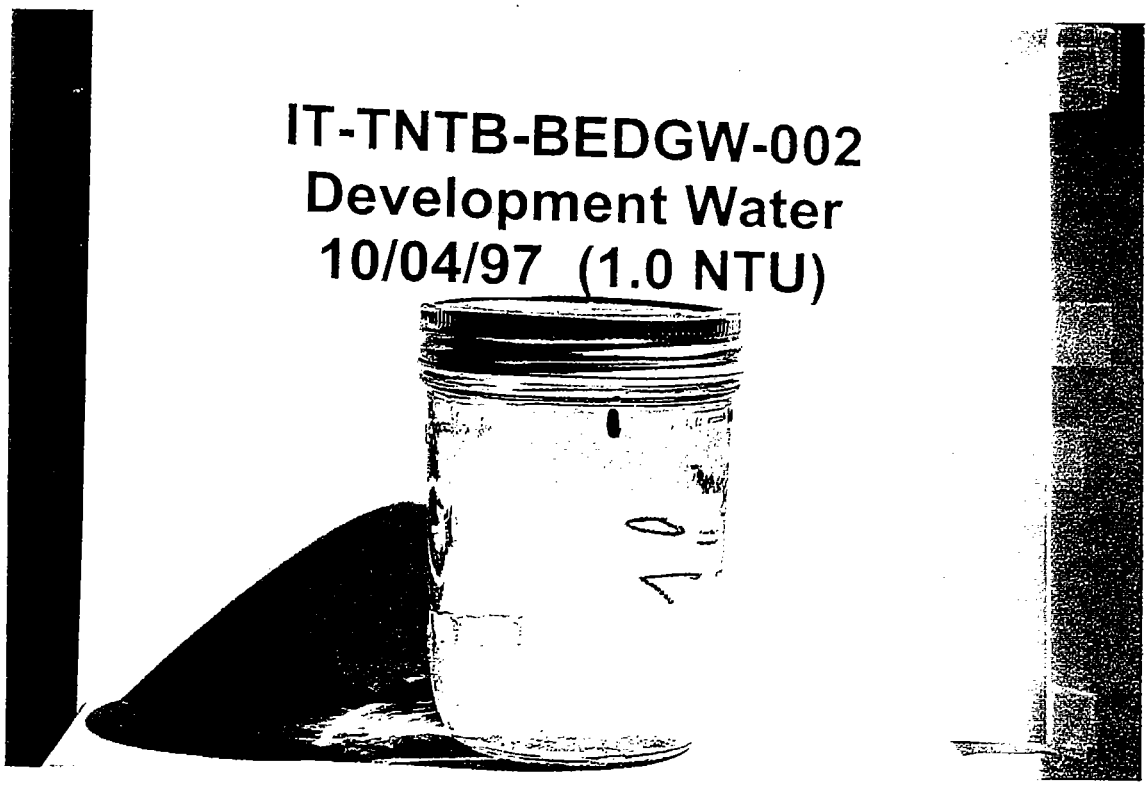

IT-ABG-BEDGW-001
Development Water
10/06/97 (1.0 NTU)


IT-ABG-GW-002
Development Water
10/07/97 (10 NTU)


IT-AA1-BEDGW-001
Development Water
10/06/97 (6.0 NTU)


IT-AA1-GW-002
Development Water
10/06/97 (10 NTU)


IT-TNTB-BEDGW-001
Development Water
10/04/97 (2.0 NTU)


IT-TNTB-BEDGW-002
Development Water
10/04/97 (1.0 NTU)

Well Development Log

Project Number: 771481
Project Name: PBOW
Form Completed by: B. Bennett
Well Developed by/firm:

OU No:
Site No.:
Well No.: IT-MNTA-BEDGW-001
Date Started: 10-6-97

High H_2S
Necessitating Air flow + compressor

Monitoring Well Information

Development Method: Bail 3 gals, then
Development Equipment: Grundfos pump

Screen Height (ft): 15'
Filter pack lenght (ft):
Casing Diameter (in): 2"

Begining Measurements
Depth to Water (ft): 27.77
Total depth of Well (ft): 65.00
WC = 37.23

Monitoring Well Purge Calculations

Volume of Water in Casing:
Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.
Well Volume (gallons) = Water Column (ft) x Gal/ft = 37.23 ft x .164 gal/ft = 6.11 gallons

Volume of Water in Filter Pack:
Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.
Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (37.23)ft x (1.312) gal/ft x 0.3 = ~~29.31~~ 14.65 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 14.65 gal + 6.11 gal = 20.76 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
20.76	41.52	62.28	83.04	103.80

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	MV	
1510	initial	27.77	365	clear	15°	7.19	8.09	.34	-367.4	1 gpm
1540	10	≈50.00	365	gaseous cloudy-clear	15.7	6.96	9.3	-.87	12.96	1.5 GPM
1550	20	≈51.60	257	H_2S Tint-clear	16.3	6.95	8.51	-1.31	13.01	1.0 GPM
1600	30	≈52.40	155	"	15.3	6.96	8.43	3.32	13.05	
1610	40	≈52.70	78	"/clear	14.5	6.96	8.34	-.67	13.02	
1620	50	52.75	127	"	14.8	6.98	8.09	-.67	12.86	
1630	60	52.75	98	"	14.6	6.98	8.21	-.42	12.91	
1640	70	52.80	78	"	14.7	6.96	8.14	-.49	13.02	
1650	80	52.83	51	"	14.8	6.96	8.09	-.51	13.01	

~~1.5 gpm~~ 1.0-1.5

Trying to maintain 1 GPM flow if possible = [illegible]

10 gals/10 min

Well Development Log

OU No:
Site No.:
Well No.: IT-MNTA-13EDGW-001
Date Started: 10-6-97

Development Record (continuation)

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O mV
1710	105	≈ 57.58'	210	clear	15.7	6.92	7.96	-1.50
~~1710~~								

Range and Average Discharge Rate:
Maximum Drawdown during Development: at gpm.
Disposition of Development Water: Drums Baker Tank Other
Number of Containers for Development Water:

Comments: Avg = 1 GPM ; Drawdown =

Final Measurements

Total depth of Well (ft): 65.0
Date Completed: 10-6-97
Hours Developed: 2

Well Development Log

Project Number: 771481
Project Name: PBOW
Form Completed by: B. BUNDT
Well Developed by/firm: IT

OU No:
Site No.:
Well No.: IT ABG-BEDGW-001
Date Started: 10-4-97

Monitoring Well Information

Development Method: Bailer for 3 gal to Surge
Development Equipment: Grundfos Pump

Screen Height (ft):
Filter pack lenght (ft):
Casing Diameter (in):

Begining Measurements
Depth to Water (ft): 7.68
Total depth of Well (ft): 23.35 → in contrast to log
WC = 15.67

Monitoring Well Purge Calculations

Volume of Water in Casing:

Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 15.67 ft x .164 gal/ft = 2.57 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (15.67)ft x (1.312) gal/ft x 0.3 = 6.17 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 6.17 gal + 2.57 gal = 8.74 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
8.74	17.48	26.22	34.96	43.7

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments ~~D.O.~~ ORP Pumping @ 2 GPM
1515	Initial	7.68	781	Cleanish to gray	17.2°	7.57	.823	2.80
1525	5	6.42	428	"	19.3°	7.94	.797	2.64 207.6
1530	10	7.05	45	Clear	16.5°	7.58	.823	.83 -221.4
1535	20	7.06	30		16.1	7.50	.820	1.01 -210.2
1540	30	7.07	14		~~16.4~~ 16.4	7.46	.819	1.05 -170.8
1545	40	7.09	0		16.1	7.45	.815	1.48 ~~227.5~~ -171.7
1547	45	7.09	1		16.1	7.44	.816	2.68 -196.4

5 gal / 2 min
10/4
50/20

Well Development Log

Project Number: 771481
Project Name: PBGW
Form Completed by: B. BUNDT
Well Developed by/firm: IT

OU No:
Site No.:
Well No.: IT-TNTB-BEDGW-001
Date Started: 10-4-97

Monitoring Well Information

Development Method: Bail 3 gal via Bailer
Development Equipment: Grundfos Pump

Screen Height (ft): 15'
Filter pack lenght (ft):
Casing Diameter (in): 2"

Begining Measurements
Depth to Water (ft): 4.95
Total depth of Well (ft): 25.00
WC = 20.05

Monitoring Well Purge Calculations

Volume of Water in Casing:

Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 20.05 ft x .164 gal/ft = 3.29 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (20.05)ft x (1.312) gal/ft x 0.3 = 7.89 gal

26.306 x .3

Purge Well Volume:

Purge well Volume = Filter pack volume + Well Volume = 7.89 gal + 3.29 gal = 11.18 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
11.18	22.36	33.54	44.72	55.9

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	MV
1325	initial	4.95	>999	Cloudy-brg	16.5	7.73	3.49	2.12	-319.4 → Pumping @ 2.5 gpm → Bailer = 3gal
1335	10	4.99	619	"	15.0	7.74	3.58	.79	-323.9 → Pumping
1340	20	5.10	238	"/clearing	14.7	7.85	3.39	.75	-323.8 - "
1345	30	5.17	279	clearing	15.3	7.84	3.33	.91	-301.7
1350	40	5.27	297	sample	15.3	7.87	3.27	.87	-242
1355	50	5.39	271	"	15.2	7.85	3.19	.78	-241.0
1400	60	5.41	232	"	15.8	7.83	3.16	.58	-245.5
1410	75	5.46	227	"	14.9	7.80	3.13	.90	-306.4
1415.	85	5.49	108	clearing	14.4	7.74	3.15	1.10	-307.6

5 gal/min
4
10/20

Well Development Log

OU No:
Site No.:
Well No.: IT-NTB-BEDGW-001
Date Started: 10-4-97

Development Record (continuation)

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O. mV
1425	113	5.58	110	STABLE	14.4	7.68	3.22	.83 309.7 Clarity: Semi cloudy/Grey
1430	116	5.59	72	CLEARING	14.4	7.64	3.31	.90

Range and Average Discharge Rate:
Maximum Drawdown during Development: 2.5 gpm.
Disposition of Development Water: Drums Baker Tank Other
Number of Containers for Development Water: 2 drums

Comments: NTU STABILIZING @ ≈ 100-200 NTU following purging of 5 well volumes

Final Measurements

Total depth of Well (ft): 25.00
Date Completed: 10-4-97
Hours Developed:

Well Development Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	PIBOW	Site No.:	
Form Completed by:	B. Burnett	Well No.:	IT-TNTB-BEDGW-002
Well Developed by/firm:	B. Burnett + Greg Conrad / BEMCO	Date Started:	10-4-97

Development Method: Bailer used to surge then pumped

Development Equipment: Grundfos Pump + generator

Monitoring Well Information

Screen Height (ft): 10'

Filter pack lenght (ft):

Casing Diameter (in): 2"

Begining Measurements

Depth to Water (ft): 6.50

Total depth of Well (ft): 25.20

Water Col = 18.7

Monitoring Well Purge Calculations

Volume of Water in Casing:

Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 18.7 ft x .164 gal/ft = 3.07 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (18.7)ft x (1.312) gal/ft x 0.3 = 7.36 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 7.36 gal + 3.07 gal = 10.43 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
10.43	20.86	31.29	41.72	52.15

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	D.O.	MV	Comments Pumping @ 2.5 GPM
1115	INITIAL	6.50	202	clear to gray	14.7	8.14	1.16	-.17	-407.9	1st 3gal purged
1130	10	7.65	75	clear	14.2	8.06	1.17	-.37	-370.4	VIA Bailer
1135	20	7.90	30	clear	13.7	8.03	1.18	.22	-363.7	
1140	30	7.97	3	clear	13.3	8.12	1.17	.79	-352.7	
1150	40	7.99	0		13.2	8.07	1.17	.02	-348.6	
1150	50	8.01	2		13.4	8.07	1.17	.72	-352.2	
1155	60	8.02	1		13.3	8.08	1.17	.71	-351.7	

2.5 gpm
5g/2min
10g/4min
120 min

Bar
Screen = 15'
6" dia
2"
DTB = 22.21
DTW = 5.51
WC = 16.7

Well Development Log

Project Number: 771481
Project Name: PBW
Form Completed by: B. Bruff
Well Developed by/firm: IT

OU No:
Site No.:
Well No.: IT-BG8-BEDGW-001
Date Started: 10-4-97

Monitoring Well Information

Development Method: pump
Development Equipment: grundfos pump

Screen Height (ft): 15'
Filter pack lenght (ft):
Casing Diameter (in): 2"

Begining Measurements
Depth to Water (ft): 5.51
Total depth of Well (ft): 22.21
Water Col = 16.7

Monitoring Well Purge Calculations

Volume of Water in Casing:
Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.
Well Volume (gallons) = Water Column (ft) x Gal/ft = 16.7 ft x .164 gal/ft = 2.739 gallons

Volume of Water in Filter Pack:
36-4=32
Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.
Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (16.7)ft x (1.312) gal/ft x 0.3 = 21.91 6.573 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 6.573 gal + 2.739 gal = 9.312 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
9.312	18.624	27.936	37.248	46.56

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	mV	Comments DO Pumping @ 2GPM
0945	1 Vol	8.00	>999	Silty Brown	15.2	7.49	3.19	-474.8	0.60
0950	10 gal	12.15	192	clear	13.8	7.56	3.19	-485.7	0.14
0955	20	12.15	191	clear	14.0	7.59	3.20	-456.1	0.50
1005	30	12.25	31	clear	13.4	7.60	3.22	-442.5	1.03
1010	40	12.26	99	clear	13.2	7.60	3.19	-438.2	1.14
1014	60	12.30	20	clear	13.0	7.61	3.18	-432.2	1.03

Well Development Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	PIBOW	Site No.:	?
Form Completed by:	B. BUNDT	Well No.:	IT-A18-(13)PIBOW-002
Well Developed by/firm:	IT	Date Started:	10-4-97

Monitoring Well Information

Development Method:	Bailer	Screen Height (ft):	4'	Begining Measurements	
Development Equipment:	Bailer	Filter pack lenght (ft):		Depth to Water (ft):	6.10
		Casing Diameter (in):	2"	Total depth of Well (ft):	9.30
				WC = 3.2	

Monitoring Well Purge Calculations

Volume of Water In Casing:

Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2 $)^2$) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 3.2 ft x .164 gal/ft = .525 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6 $)^2$ - (2 $)^2$) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (3.2)ft x (1.312) gal/ft x 0.3 = 1.260 gal = 1.26

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 1.26 gal + .525 gal = 1.78 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
1.78	3.57	5.1	7.12	8.9

Development Record

	Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O	MV	
10/4/97	1600	Initial	6.10	>999	DARK BROWN	17.1	7.14	1.72	.31	-198.1	
	1620	3 1/2	6.33	624	"	17.7	7.49	1.80	.69	-197.2	
10/5	0920	4	6.15	>999	"	16.4	6.90	1.94	3.16	-210.0	
	0940	5 1/2	6.35	>999	SLIGHTLY CLEARING	16.6	7.29	1.86	5.21	-179.9	less Sediment/sand 0.05
10/6	0830	9	6.33	>999		16.8	6.85	1.86	4.38	10.5	

Manson Rd

Well Development Log

Project Number: 771481
Project Name: TBN
Form Completed by: B. Burnett
Well Developed by/firm:

OU No:
Site No.:
Well No.: IT-AA3-BE06W-001
Date Started: 10-7-97

Monitoring Well Information

Development Method:
Development Equipment: Grundfos

Screen Height (ft): 15'
Filter pack lenght (ft):
Casing Diameter (in): 2"

Begining Measurements
Depth to Water (ft): 20.00
Total depth of Well (ft): 51.92
WC = 31.92

Monitoring Well Purge Calculations

Volume of Water in Casing:

Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 31.92 ft x .164 gal/ft = 5.23 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (31.92)ft x (1.312) gal/ft x 0.3 = 12.56 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 12.56 gal + 5.23 gal = 17.79 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
17.79	35.58	53.37	71.16	88.95

Development Record

	Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	Comments M.V.	
	0820	INITIAL	20.00	604	Semi-clear	15.1	7.28	3.07	.34	12.65	
	0830	5									
	1040	8									
	1300	10									
	1700	25	-	702	Black-gray to clear	16.6	7.77	4.98	.69	12.64	dry
10-8-97	0830	29	=22	641	"	15.5	7.61	4.71	.52	N/A	dry
	0850	32	29'	>999	"	14.7	7.40	3.25	3.94		dry
	1130	35	21.45	977	"	15.6	7.61	3.24	~~5.69~~ 1.29		dry

H_2S TINT.

FROM: ECONOMY COPIER SERVICE FAX: 205-852-0724 08-03-97 Fri 12:11 PAGE: 04

~~Top of Casing to top of PVC~~ 6.47 water level from top of casing

Casing Height - 2' 3 5/8"

Well Development Log

Page | of

Project Number:	771491	OU No:	
Project Name:	PBOW	Site No.:	
Form Completed by:	GB.	Well No.:	IT-A43-GW-002
Well Developed by/firm:	IT Corp.	Date Started:	10-4-97

Monitoring Well Information

Development Method:	Surge with Bailer & Pump.	Screen Height (ft):	10'	Begining Measurements	
Development Equipment:	Bailer & Grundfos Pump	Filter pack lenght (ft):	0.04'	Depth to Water (ft):	5.75
		Casing Diameter (in):	2"	Total depth of Well (ft):	18.01

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (_____)^2) = _____ gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = _____ ft x _____ gal/ft = _____ gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((_____)^2 - (_____)^2) = _____ gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (_____)ft x (_____) gal/ft x 0.3 = _____ gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = _____ gal + _____ gal = 7.91 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
7.91	15.82	23.73	31.64	39.55

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	~~Clarity~~ Redox (Color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments
14:00	20	9.03	999		21.2	6.36	0.925	2.5 Gal/min/Begin Develop. Standing water is very silty. Silt will not take measurement until it clears up
1443	30		512		22.8	6.49	0.806	
1453	34		63		22.1	6.61	0.809	
1505	40		10		21.9	6.66	0.807	Purge Rate 0.5 gal/min
1510	43		10		21.9	6.75	0.805	
1515	48		10		21.9	6.77	0.808	

Well Development Log

Project Number: 771
Project Name: PBW
Form Completed by: B. Pendt
Well Developed by/firm:

OU No:
Site No.:
Well No.: IT-AA1-GW-002
Date Started: 10-5-97

Monitoring Well Information

Development Method: Bailer for 3 gal
Development Equipment: Then Grundfos Pump

Screen Height (ft): 15'
Filter pack lenght (ft):
Casing Diameter (in): 2"

Begining Measurements
Depth to Water (ft): 5.59
Total depth of Well (ft): 24.61
WC = 19.02

Monitoring Well Purge Calculations

Volume of Water in Casing:
Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.
Well Volume (gallons) = Water Column (ft) x Gal/ft = 19.02 ft x .164 gal/ft = 3.12 gallons

Volume of Water in Filter Pack:
Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.
Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (19.02)ft x (1.312) gal/ft x 0.3 = 7.486 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 7.486 gal + 3.12 gal = 10.606 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
10.606	21.212	31.818	42.424	53.03

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	MV
1015	initial	5.59	>999	Dark Brown/silty	14.6	6.87	3.41	2.76	-95.0
1035	10	13.00	>999	" "	15.6	6.74	3.67	1.78	-224.2
1107	12	12.00	>999	1/cleaning	22.7	7.18	3.87	6.13	-198.
1110	14	12.30	>999	" more clear	18.7	6.79	3.06	6.70	-171.1
1140	20	8.00	>999	"	26.9	7.05	3.69	5.48	-176.1
1510	23	6.79	>999	"	16.8	6.79	3.18	4.70	-100.4
1540	37	11.20	>999	Dark Brown/silty	16.9	6.96	3.21	4.69	-96.7
1620	46	13.20	>999	"	15.6	6.89	3.19	6.71	-97.8
1705	55	13.10	>999	cleaning	15.7	6.90	3.32	6.03	-181.9

Pumping @ ≈ 1.5 gpm
- well drying out / will allow for recharge
- recharge to 7.7 before pumping
- Continue bailing while people in IT-AA1 Probe well
- completed 5 hrs
- Suspect → Last well = 10.5

top of water column 10/6	0950	after 14 hr recharge	5.68	291	after recharge of 1/2 gal clear clean	16.1	6.32	2.83	5.61	10.4
[illegible]	[illegible]	—		>999	silty-Brown	15.9	6.43	3.07	6.53	

Well Development Log

Project Number:
Project Name: PBW
Form Completed by: B. Bennett
Well Developed by/firm:

High H_2S

OU No:
Site No.:
Well No.: IT-AA1-BEDGW-001
Date Started: 10-5-97 SV

Monitoring Well Information

Development Method: Pump = 3 gal; then
Development Equipment: bailer/hand pump

Screen Height (ft): 15'
Filter pack lenght (ft):
Casing Diameter (in): 2"

Begining Measurements
Depth to Water (ft): 30.41
Total depth of Well (ft): 66
WC = 35.59

Monitoring Well Purge Calculations

Volume of Water In Casing:

Gallons/foot = 0.041 x d^2. where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 35.59 ft x .164 gal/ft = 5.84 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (35.59)ft x (1.312) gal/ft x 0.3 = 14 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 14 gal + 5.84 gal = 19.84 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
19.84	39.68	59.52	79.36	99.20

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments DO	MV	pumping @ 1 GPM
1100	Initial	30.41	565	cloudy Brown	13.7	7.25	3.94	.81	-534.1	
1205	10	34.32	>999	Grayish/black to clear	16.1	7.09	6.50	.57	-355.4	
1220	20	42.8	>999	"	17.4°	6.95	7.83	.08	-362.2	- well dried up / allow recharge
1245	25	45.6	>999	"	16.8	6.87	7.86	.78	-363.2	- pumping @ 1/2 gpm
1455	31	38.5	>649	cloudy gaseous	18.1	6.81	7.41	.20	-361.2	- Free Product observed on [illegible]
1540	36	36.21	513	"	20.0	7.03	7.41	1.21	-369.1	
1620	40	35.19	598	"	16.7	6.99	7.33	.49	-361.7	
1710	45	35.25	473	clearing/"	16.5	6.90	7.39	-1.05	-352.9	
1730	50	—	—	—	—	—	—	—		

cont. p. 2

MON-MONT. pumping @ ≈ 1gpm for ≈ 7 MIN before well dries out, then allow recharge for ≈ 20 MIN. } Each cycle yielding ≈ 5 gal - will take WQ readings every other cycle.

Well Development Log

OU No:
Site No.:
Well No.: IT-AA1-BEDGW-001
Date Started: 10-6-97 MONT.

By MON. MONT. 0930 water level recharge = 30.6'

Development Record (continuation)

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	M.V.
0940	[redacted] 55	≈ 33'	627	clear to grey-brown	13.9	6.93	7.28	.91	-266.8 } initially pumping @ 1.25 gpm
1015	60	—	—	"	—	—	—	—	—
1045	65	≈ 32'	591	"	15.5	6.92	7.32	(.91) → (10.4) → SUSPECT!	
1130	70	"	—	—	—	—	—		
1215	75	"	621	"	15.3	6.94	7.30	.95	
1350	80	"	744	"	18.1	7.16	6.10	.32	
1415	85	≈ 32	676	"	17.7	7.01	6.02	-1.45	/ FINAL: as per G. Buckner/M. Sprague

Range and Average Discharge Rate:
Maximum Drawdown during Development: at gpm.
Disposition of Development Water: Drums Baker Tank Other
Number of Containers for Development Water:

Comments:

Final Measurements

Total depth of Well (ft): 66

Date Completed:

Hours Developed:

0815

T. Protective casing 3.08

Well Development Log

Page 1 of 2

Project Number:	771481	OU No:	PBOW
Project Name:	PBOW	Site No.:	AA2
Form Completed by:	Greg Buck	Well No.:	IT-AA2-BEDGW-001
Well Developed by/firm:	IT Corp	Date Started:	10-5-97

Monitoring Well Information

Development Method:	Surge with Bailer + Pump Grundfos 2"	Screen Height (ft):	15'	Begining Measurements	
Development Equipment:		Filter pack lenght (ft):	26'	Depth to Water (ft):	12.49'
		Casing Diameter (in):	2"	Total depth of Well (ft):	45.74

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (_____)^2) = _____ gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = _____ ft x _____ gal/ft = _____ gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((_____)^2 - (_____)^2) = _____ gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (_____)ft x (_____) gal/ft x 0.3 = _____ gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = _____ gal + _____ gal = _____ gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
16.2	32.4	48.6	64.8	81

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O
0905	5 gal	31.2	568	Slightly Cloudy	15.4	7.25	0.96	5.0 / 0923 Well Went Dry
09:23	well went Dry. 14 gals. Pumped / will allow to recharge.							
09:40	Begin Purging well again			0994	Dry again		15 gal	Pumping out will allow to Recharge
12:45 (17)	10 water (end)							
12:54	15		466		16.3	7.40	1.54	0.0. 4.97
13:02	17		999		16.9	7.41	1.10	5.41
13:07	19		997		17.2	7.20	1.13	3.89
13:13	20		999		17.2	7.19	1.15	4.73
13:20	well went Dry. 22 gal.							

$[(0.041)(2.0)^2](26.3) + [(0.041)(2.0)^2](12.49) - [(0.041)(2.0)^2](45.74) = 2.94$ gal

Well Development Log

OU No:
Site No.: AA2
Well No.: IT-AA2-BE DGW-001
Date Started: 10-5-97

Development Record (continuation)

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments
15:10	21		999		17.5	7.46	1.08	DO-6.71, Redox/mv. 48.0
15:18	24		994		17.2	7.46	1.14	D.O-7.09 " 136.6
18:00	35		999		17.2	7.45	1.09	5.56
10-6-97		Water = 16.69	will Purge again					
11:20	36		735		14.8	7.49	1.11	3.39 135.4
11:24	37		291		13.5	7.42	1.10	4.70 -25.3
11:26	38		999		13.8	7.35	1.14	3.33 -138.1
11:30	41	well went	Dry.					
			USACE		well	is	developed	

Range and Average Discharge Rate: ~~0.25 gpm~~ well went Dry
Maximum Drawdown during Development: at gpm.
Disposition of Development Water: Drums Baker Tank Other
Number of Containers for Development Water:

Comments: well is clean in Top portion of well after it sets over night.

Final Measurements

Total depth of Well (ft): 45.74
Date Completed: 10-6-97
Hours Developed: 6hrs+

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	PBW	Site No.:	
Form Completed by:	B. Bandt	Well No.:	EB-SP03
Well Developed by/firm:	IT	Date Started:	10-9-97

Monitoring Well Information

Development Method:	Bailer	Screen Height (ft):		Begining Measurements	
Development Equipment:		Filter pack lenght (ft):		Depth to Water (ft):	6.50
		Casing Diameter (in):	2"	Total depth of Well (ft):	11.90
				wc = 5.40	

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 5.4 ft x .164 gal/ft = .886 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (5.4)ft x (1.312) gal/ft x 0.3 = 2.13 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = .886 gal + 2.13 gal = 3.02 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
3.02	6.04	9.06	-	

Development Record

Time (24 hr)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	
1220	Initial	6.5	394	Rusty Brown	19.4	6.3	2.81	3.51	Bailing
1230	4 1/2	10'	7999	"	~~19.8~~ 18.3	6.56	2.63	6.49	
1315	9	10'	> 761	"	18.6	6.51	3.29	5.51	- dried out

FROM: ECOLOGY COPIER SERVICE FAX: 206-352-0724 Oct-03-97 Fri 12:11 PAGE: 04

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	[illegible]	Site No.:	
Form Completed by:	[illegible]	Well No.:	GCLMW01
Well Developed by/firm:	FT	Date Started:	10-9-97

Monitoring Well Information

Development Method: Grundfos

Development Equipment:

Screen Height (ft):

Filter pack lenght (ft):

Casing Diameter (in): 4"

Begining Measurements

Depth to Water (ft): 8.03

Total depth of Well (ft): 13.20

WC = 5.17

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (4)^2) = .656 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 5.17 ft x .656 gal/ft = 3.39 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((10)^2 - (4)^2) = 3.44 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (5.17)ft x (3.44) gal/ft x 0.3 = 5.34 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 3.39 gal + 5.34 gal = 8.73 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
8.73	17.46	26.19		

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	Comments RATE
1110	initial	9.00	892	Semi-clear	18.9	6.51	.341	5.72	↓
1125	10	10.10	49	clearing	19.4	6.53	.502	5.79	1/2 GPM
1150	27	10.15	23	clear	19.8	6.45	.513	2.51	"

FROM: ECONOMY COPIER SERVICE FAX: 205-852-0724 Oct-03-97 Fri 12:11 PAGE: 04

Redevelopment

Well ~~Development~~ Log

Project Number:	771481	OU No:	
Project Name:	PBOW	Site No.:	
Form Completed by:	R. Benedt	Well No.:	GCL-MW-02A
Well Developed by/firm:	IT + BELASCO	Date Started:	10-7-97

Monitoring Well Information

Development Method: Pump ~~[illegible]~~

Development Equipment:

Screen Height (ft):

Filter pack lenght (ft):

Casing Diameter (in): 4"

Borehole dia = 10"

Begining Measurements

Depth to Water (ft): 7.41

Total depth of Well (ft): 25.20

WC = 17.79

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (4)^2) = .656 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 17.79 ft x .656 gal/ft = 11.67 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((10)^2 - (4)^2) = 3.44 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (17.79)ft x (3.44) gal/ft x 0.3 = 18.36 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 18.36 gal + 11.67 gal = 30.03 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
30.03	60.06	90.09	120.12	150.15

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	mV	Pump Rate
1140	Initial	7.41	861	Semi-clear	16.9	7.77	.976	3.25	227.8	
1202	18	≈16'	>999	silty "	19.0	7.81	.664	6.39		1.25 GPM
1340	20	≈12'	870	"	19.8	7.82	.649	7.69		≈ ½ GPM
1430	38	≈16'	>999	"	23.7	7.73	.668	8.38		
1500	56	≈15.62	204	Clearing	20.3	8.09	.549	7.05		
1620	80	15.71	303	Clear!	21.8	8.21	.555	4.71		
1730	110	15.80	200		19.7	7.59	.561	4.61		
1900	150	16.90	~~[illegible]~~ 69		18.4	7.58	.547	4.34		

FROM: ECONOMY COPIER SERVICE FAX: 205-852-0724 Oct-03-97 Fri 12:11 PAGE: 04

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	PBOW	Site No.:	
Form Completed by:	B. Bunnt	Well No.:	GCL-MW-02B
Well Developed by/firm:	IT	Date Started:	10-7-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Pump + Bail	Filter pack lenght (ft):		Depth to Water (ft):	7.92
		Casing Diameter (in):	4"	Total depth of Well (ft):	12.60
				WC =	4.68

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (4)^2) = .656 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 4.68 ft x .656 gal/ft = 3.07 gallons

Volume of Water in Filter Pack: 100 - 16 = 84

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((10)^2 - (4)^2) = 3.44 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (4.68)ft x (3.44) gal/ft x 0.3 = 4.83 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 4.83 gal + 3.07 gal = 7.9 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
7.9	15.8	23.7	31.6	39.5

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	Comments mV	Comments Method
1125 Initial	Initial	≈8.00	212	Semi-clear turbidity	18.7	7.36	.457	3.18	261.3	Pump
1133	8 gal	dried out well		"	18.1	7.47	.634			"
1153	12 +42	≈11'	>999	"	18.1	7.46	.639	5.34		Bailed
1340	15	"	>999	"	22.8	7.53	.637	4.22		pump
1510	32	10'	829	"	21.2	7.56	.596	4.69		Bailing
1750	47	10'	495		18.5	7.82	.628	5.38		pump

Borehole dia = 10"

FROM: ELLIOTT COPIER SERVICE FAX: 205-852-0724 OCT-03-97 Fri 12:11 PAGE: 04

Redevelopment

Well ~~Development~~ Log

Project Number: 771481
Project Name: PBOW
Form Completed by: B Bondt
Well Developed by/firm:

OU No:
Site No.:
Well No.: GCL MW03
Date Started: 10-9-97

Monitoring Well Information

Development Method:
Development Equipment: Mannifold

Screen Height (ft):
Filter pack lenght (ft):
Casing Diameter (in): 4"

Begining Measurements
Depth to Water (ft): 6.33
Total depth of Well (ft): 11.33
WC = 5.0

Monitoring Well Purge Calculations

Volume of Water in Casing:
Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (4)^2) = .656 gal/ft.
Well Volume (gallons) = Water Column (ft) x Gal/ft = 5 ft x .656 gal/ft = 3.28 gallons

Volume of Water in Filter Pack:
100 - 16 = 84
Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((10)^2 - (4)^2) = 3.44 gal/ft.
Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (5)ft x (3.44) gal/ft x, 0.3 = 5.16 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 3.28 gal + 5.16 gal = 8.44 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
8.44	16.88	25.32	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level ((ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.
0930	INITIAL	7.00	279	SEMI-CLEAR	17.9	6.15	.333	5.25
0936	3	8.90						MAINTAINING ≈ 1/2-3/4 GPM
0944	5	9.00	286		19.1	6.88	.389	3.90 w/STABLE DTW @ ≈ 9.00
1045	25	8.80	11		20.3	7.26	.388	2.33 " "

FROM: BLOOMSBURY COPIER SERVICE FAX: 205-852-0724 OCT-03-97 Fri 12:11 PAGE: 04

Redevelopment

Well ~~Development~~ Log

Project Number:	771481	OU No:	
Project Name:	PBCW	Site No.:	
Form Completed by:	B. Barrett	Well No.:	IT MW01
Well Developed by/firm:	IT Corp	Date Started:	10-7-97

Monitoring Well Information

Development Method:	Bailer	Screen Height (ft):		Begining Measurements	
Development Equipment:		Filter pack lenght (ft):		Depth to Water (ft):	6.79
		Casing Diameter (in):	2"	Total depth of Well (ft):	11.75
					4.96

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 4.96 ft x .164 gal/ft = .814 gallons

Volume of Water in Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (4.96)ft x (1.312) gal/ft x 0.3 = 1.95 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 1.95 gal + .814 gal = 2.76 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
2.76	5.52	8.29	11.05	13.8

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	M.V	
0945	IN/MAL	6.79	292	Silty Brown	16.0	8.10	.426	5.05	N/A	Bailing
100	2	10.50		"						
1020	3 1/2	≈ 10.50	848	"	16.6	7.47	.519	4.57		Bailed
1730	~~2~~ 6	10.48	710	"	16.9	7.37	.523	4.61		Bailed
0920	8	10.40	505	"	16.2	7.84	.426	4.93		

198

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771 481	OU No:	
Project Name:	PBOW	Site No.:	
Form Completed by:	B Brandt	Well No.:	IT MW09
Well Developed by/firm:	IT	Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Bailer	Filter pack lenght (ft):		Depth to Water (ft):	6.75
		Casing Diameter (in):	2"	Total depth of Well (ft):	15.00
				WC =	8.25

Monitoring Well Purge Calculations

Volume of Water In Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 8.25 ft x .164 gal/ft = 1.353 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (8.25)ft x (1.312) gal/ft x 0.3 = 3.25 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 3.25 gal + 1.35 gal = 4.6 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
4.6	8.12	13.8	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	Comments BAILING
1820	INITIAL	6.75	430	Brown silty	17.7	7.44	2.23	2.93	
1835	5+3=8	12.5	7999	"	16.0	7.39	2.88	4.30	
10/9 0830	9+1=10	12.4	7999	"	14.6	7.43	2.87	5.56 → 4.80	

Just is on 10-8 to 0820 on 10-9, well did not recharge, at all!!

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	PIBOU	Site No.:	
Form Completed by:	B. Brandt	Well No.:	MW-MW-12
Well Developed by/firm:	IT	Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Bail	Filter pack lenght (ft):		Depth to Water (ft):	10.29
		Casing Diameter (in):	2"	Total depth of Well (ft):	15.05
				WC = 4.76	

Monitoring Well Purge Calculations

Volume of Water In Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 4.76 ft x .164 gal/ft = .78 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (4.76)ft x (1.312) gal/ft x 0.3 = ~~6.25~~ gal 1.87

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = ~~6.25~~ 1.87 gal + .78 gal = ~~7.03~~ 2.65 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
2.65 ~~7.03~~	5.3 ~~14.06~~	7.95 ~~21.09~~	-	

dried 3X

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	MV
0945	1 Within	10.29	165	CLEAR	15.6	7.47	.810	2.02	
1000	3 gal	dry							
1745		10.55	220		19.7	7.49	.797	2.22	Bailed Dry

Redevelopment Well ~~Development~~ Log

Project Number:	771481	OU No:	
Project Name:	PIEW	Site No.:	
Form Completed by:	B. Bunpt	Well No.:	MW-2W09
Well Developed by/firm:	IT	Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Pump-grundfos	Filter pack lenght (ft):		Depth to Water (ft):	6.43
		Casing Diameter (in):	2"	Total depth of Well (ft):	17.00
					WC = 10.57

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.
Well Volume (gallons) = Water Column (ft) x Gal/ft = 10.57 ft x .164 gal/ft = 1.73 gallons

Volume of Water in Filter Pack:
Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2-(2)^2) = 1.312 gal/ft.
Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (~~4.46~~ 10.57)ft x (1.312) gal/ft x 0.3 = 4.16 gal ~~3.54~~ 4.16

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 4.16 gal + 1.73 gal = 5.89 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
5.89	11.78	17.67	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	Comments RATE
1015	initial	6.43	20	Silty-semi clear	16.5	8.10	.617	1.86	
1025	2	8.30	255	clear	16.6	7.72	.595	5.09	.25 GPM
1045	8	8.75	20	"	19.5	7.66	.606	5.76	"
1110	16	8.90	11	"	19.4	7.51	.600	5.89	

Redevelopment

Well ~~Development~~ Log

Project Number:	771481	OU No:	
Project Name:	PIBOW	Site No.:	
Form Completed by:	B. Bunch	Well No.:	MK-MW-14
Well Developed by/firm:	IT	Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Bailer	Filter pack lenght (ft):		Depth to Water (ft):	8.40
		Casing Diameter (in):	2"	Total depth of Well (ft):	12.00
				WC = 3.6	

Monitoring Well Purge Calculations

Volume of Water In Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 3.6 ft x .164 gal/ft = .59 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (3.6)ft x (1.312) gal/ft x 0.3 = 1.42 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 1.42 gal + .59 gal = 2 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
2	4	6	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.
1500	INITIAL	8.40	458	clear	17.6	7.06	.328	2.31 Top of water Column
1510	4	10.50	>999	mud BROWN	16.1	6.73	.894	3.78 Bottom of " "
1515	6	10.50	7999	"	16.2	6.75	.791	3.89 " " " "

Redevelopment

Well ~~Development~~ Log

Project Number:	771481	OU No:	
Project Name:	PBOW	Site No.:	
Form Completed by:	B. Bundt	Well No.:	MK MW-15
Well Developed by/firm:		Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Bailer	Filter pack lenght (ft):		Depth to Water (ft):	8.55
		Casing Diameter (in):	2"	Total depth of Well (ft):	11.55
				WC=3'	

Monitoring Well Purge Calculations

Volume of Water In Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 3 ft x .164 gal/ft = .492 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (3)ft x (1.312) gal/ft x 0.3 = 1.18 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = .492 gal + 1.18 gal = 1.67 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
1.67	3.35	5.02	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.
1430	initial	9.00	969	Rusty Brown to Dark Brown	~~22.2~~ 12.4	8.43	.273	3.62
1450	4	≈10.5	>999	"	17.2	7.90	.125	4.51
1457	6	≈10.5	>999	"	17.1	7.91	.165	4.61

well maintained a 1' recharge level throughout duration of Bailing.

FROM: ECONOMY COPIER SERVICE FAX: 205-852-0724 Oct-03-97 Fri 12:11 PAGE: 04

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	CBOW	Site No.:	
Form Completed by:	B Bunt	Well No.:	MK-MW-19
Well Developed by/firm:	IT	Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Pump + Bail	Filter pack lenght (ft):		Depth to Water (ft):	6.10
		Casing Diameter (in):	2"	Total depth of Well (ft):	16.22
				WC =	10.12

Monitoring Well Purge Calculations

Volume of Water In Casing:

Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 10.12 ft x .164 gal/ft = 1.66 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (10.12)ft x (1.312) gal/ft x 0.3 = 3.98 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 3.98 gal + 1.66 gal = 5.64 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
5.64	11.28	16.92	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.	Comments Rate
1540	initial	6.10	985	Brown silty	23.6	8.37	.357	7.44	.75 / GPM
1550	8	13.40	>999	clearer "	19	7.67	.917	4.55	
1655	9	dry		"				10	
1630	16	dry	>999	clearer	20.5	7.82	.881	10.64	

FROM: ELLUMAN COPIER SERVICE FAX: 205-852-0724 OCT-03-97 Fri 12:11 PAGE: 04

22

Redevelopment

Well ~~Development~~ Log

Page 1 of 1

Project Number:	771481	OU No:	
Project Name:	PBW	Site No.:	
Form Completed by:	B. Bennett	Well No.:	MK MW 20
Well Developed by/firm:	IT	Date Started:	10-8-97

Monitoring Well Information

Development Method:		Screen Height (ft):		Begining Measurements	
Development Equipment:	Grundfos	Filter pack lenght (ft):		Depth to Water (ft):	4.13
		Casing Diameter (in):	2"	Total depth of Well (ft):	22.70
				WC = 18.57	

Monitoring Well Purge Calculations

Volume of Water In Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (2)^2) = .164 gal/ft.

Well Volume (gallons) = Water Column (ft) x Gal/ft = 18.57 ft x .164 gal/ft = 3.05 gallons

Volume of Water In Filter Pack:

Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((6)^2 - (2)^2) = 1.312 gal/ft.

Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (18.57)ft x (1.312) gal/ft x 0.3 = 7.31 gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = 7.31 gal + 3.05 gal = 10.36 gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
10.36	20.72	31.08	-	

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments D.O.
1150	initial	4.13		Grey-Black Tint → brown				
1202	5	11.00	347	↓	19.2	7.42	2.27	~~6.67~~ 4.21 dried out
1330	* 10→12	17.00	682	↓	22.1	7.81	2.72	3.91 dried out
1710	15	21.00	>999	"	21.1	7.67	2.54	4.19 Bailed by hand; dried out.

well dried out, @ 22' - after 1½ hrs of recharge - need ...ranged ≈ 1.5' @ 1330 DTW @ 17.00. 7 gals pumped = dry well.

FROM: ECOLOGY LOPIER SERVICE FAX: 206-352-0724 06-03-97 Fri 12:11 PAGE: 04

Cl: tion
Pl. .99
Con 4.45
Turb 0
0.0997

TEMP 20.3

(0.02) 56 [(0.26)(14) - (0.02)(11.56).25]
0.23 3.64 0.23

Redevelopment
Well ~~Development~~ Log

Page 1 of

Project Number:	771481	OU No:	
Project Name:	Plum Brook Ordnance Works	Site No.:	RA
Form Completed by:	Greg Brockman	Well No.:	EB-RA-01
Well Developed by/firm:	J.T.-D Corp.	Date Started:	10-9-97

Monitoring Well Information

Development Method:	Pump (Grundfos)	Screen Height (ft):	10	Begining Measurements	
Development Equipment:	2" Grundfos Pump	Filter pack lenght (ft):	14	Depth to Water (ft):	7.40
		Casing Diameter (in):	8.25	Total depth of Well (ft):	18.96

2" well. Stainless Steel.

Monitoring Well Purge Calculations

Volume of Water in Casing: Gallons/foot = 0.041 x d^2, where casing diameter in inches = (0.041 x (_____)^2) = _____ gal/ft.
Well Volume (gallons) = Water Column (ft) x Gal/ft = _____ ft x _____ gal/ft = _____ gallons

Volume of Water in Filter Pack:
Gallons/foot = 0.041 x (D^2 - d^2), where D is total borehole diameter in inches & d is casing diameter in inches = 0.041 x ((_____)^2 - (_____)^2) = _____ gal/ft.
Filter Pack Volume (gal) = (the less of the filter pack lenght or water column) x gal/ft x porosity (0.3) = (_____)ft x (_____) gal/ft x 0.3 = _____ gal

Purge Well Volume: Purge well Volume = Filter pack volume + Well Volume = _____ gal + _____ gal = _____ gal.

1 x Purge Well Volume	2 x Purge Well Volume	3 x Purge Well Volume	4 x Purge Well Volume	5 x Purge Well Volume
8.1	16.2	24.3		

Development Record

Time (24 hrs)	Purge Volume (gal)	Water Level (ft) (TOC)	Turbidity (NTU)	Clarity (color)	Temp. (C)	pH (Std Units)	Conductivity (mS/cm)	Comments
13:00	2		3	Clear	19.8	6.86	0.967	D.O - 0.97
13:05	5	Well went Dry.						~~3.85~~
13:30	6		999		22.8	7.14	0.966	D.O - 3.95
13:33	7		125		21.6	7.12	0.988	D.O 4.54
13:40	10		296		22.2	7.07	0.985	D.O - 3.08
13:50	14		75		23.3	7.05	0.988	D.O. - 4.07
14:08	19		10		24.1	7.07	0.891	D.O 3.44
14:22	25		0		24.0	7.8	0.896	D.O 4.21

First Daily Data 8/27

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
IT-MW-05	27AUG	1423	9.88		36 3/4"	0.0		BA	
IT-MW-06	27AUG	1510	8.34	MP	36 1/2"	0.0		BA	NEEDS LOCK
PB-PR-MW07	27AUG	1451	5.35	MP	24 1/2"	0.0		BA	
PB-PR-MW08	27AUG	1442	6.66	MP	25"	0.0		BA	
PB-PR-MW09	27AUG	1435	6.50	MP	25 1/2"			BA	
MK-MW22	27AUG	1327	8.20	MP	30"			BA	
MK-MW23	27AUG	1334	8.49		29"			BA	WON'T LOCK
MK-MW24	27AUG	1349	7.08	MP	30 3/4"			BA	
~~TNTA-MW10~~	~~27AUG~~	~~1342~~	~~4.32~~ BA	~~MP~~				~~BA~~	
TNTA-MW11	27AUG	1342	5.49	MP	28"			BA	
MK-MW16	27AUG	0933	5.97	MP	34" (inches)			BA	
MK-MW17	27AUG	1541	4.32	MP	41"	60ppm		BA	BUGSPRAY IN Protective CASING 60 PPM PID
IT-MW01	BA ~~27AUG~~	0904 BA ~~0836~~	5.45	MP	41 3/4"			BA	BAILER NOT REMOVED PRE MEASURE
GCL-MW~~01~~03	27AUG	1223	6.00	MP	34 1/4"			BA	~~LOCK~~ BA NO LOCK
GCL-MW02A	27AUG	1207	7.57	MP	35"			BA	

FIELD FORM

PBOWLEL.XLS

~~Removed @ 0836~~ BA

~~Measured~~.

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMEBERS: Scott Martin and Bill Hudson

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

	Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
Locked	MK - MW19	8/27/97	0910	7.99	from mark on N	2.55	0	—	JL	
	~~MK - MW18~~	scott								
Locked	EB - GM - 01	8/27/97	0918	8.77	from mark on N	2.5	0	—	JL	
Locked	EB - GM - 02	8/27/97	0840	10.76	from mark on N	2.37	0	—	JL	N. of Building 7131
Locked	EB - GM - 03	8/27/97	0835	6.28	from mark on N	2.59	0	—	JL	Behind " 7131
Locked	EB - GM - 04	8/27/97	0924	5.56	from mark on N	2.40	0	—	JL	SW of Bldg 7122
Locked	EB - GM - 05	8/27/97	08:25	6.24	from mark on N	2.47	0	—	JL	NE corner of Bldg 7121
Locked	EB - GM - 06	8/27/97	08:16	6.08	from mark	2.3	0	—	JL	SE Corner of Bldg 7121
	EB - PS - 02	8/27/97	1426	5.97	from N	2.32	0	—	JL	stick-up from TOC to top of the concrete pad.
	EB - PS - 03	8/27/97	1422	5.65	from N	2.4	0	—	JL	stick-up was measured from TOC to top of concrete pad
	EB - PS - 04	8/27/97	1448	8.87	from N	2.25	0	—	JL	
	MK - MW - 20	8/27/97	1438	4.97	from mark	2.42	0.2	—	JL	
	BED - MW 15	8/27/97	1550	29.95	from mark	2.15	0 background 8.2 (HS)	0.12	JL	
	MK - MW - 15	8/27/97	1645	8.22	from mark	2.95	0	—	JL	
	TNTA - MW - 10	8/27/97	1908	4.16	from mark	2.2	0	—	JL	

FIELD FORM

rust on the bailer

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMEBERS: Jane Li David Shineman

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

	Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
	IT-MW2	8/27/97	1143	8.09	from mark	2.85	0	—	JL	
	~~IT-MW7~~	8/26/97	1420	dry					JL	
Locked	IT-MW8	8/27/97	0957	8.22	from mark	2.36	0	—	JL	
Locked	IT-MW9	8/27/97	1030	6.00	from mark	1.71	0	—	JL	
Locked	IT-MW10	8/27/97	1130	11.25	from mark	2.59	0	—	JL	
Locked	MK-MW10	8/27/97	0930	7.13	from mark	2.7	0	—	JL	
Locked	MK-MW11	8/27/97	0948	7.13	from mark	2.77	0	—	JL	no cap.
Locked	PB-WA-MW1	8/27/97	1138	14.00	from mark	2.25	0	—	JL	
	WA-MW2	8/27/97	1148	3.89	from mark	2.08	0	—	JL	
need lock	TNTC-MW3	8/27/97	1005	8.07	from mark	2.3	0	—	JL	
Locked	TNTC-MW4	8/27/97	1112	6.15	from mark	2.12	0	—	JL	
Locked	TNTC-MW5	8/27/97	1105	5.62	from mark	2.29	0	—	JL	
Locked	TNTC-MW6	8/27/97	1040	4.46	from mark	2.25	0	—	JL	
Locked	MK-MW09	8/27/97	0940	6.09	from mark	2.5	0	—	JL	
	MK-MW12 ✓	scott								

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMEBERS: Jane Li and David Stineman

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments	
GCL-MW02B	27AUG	1212	8.32	MP	37 3/4"			BH		
GCL-MW~~03~~ BH 01	27AUG	1000	8.32	MP	BH ~~3.35~~ 37"			BH	NO LOCK	BLACK STUFF
~~GCL-MW16~~	Jane									
MK-MW14	8/27	~~0843~~ 0919 BH	8.17	MP	31"			BH	0830 - BALER REMOVED - POURED DOWN WELL - LAID ASIDE	
MK-MW20	27AUG	Jane			29 1/4"				BALER REMOVED	Measured @0919
~~EB-PS-01~~	Jane								Building 8133	
~~" 03~~	↓								" 8133	
~~" 04~~									" 8133	
EB-~~PS~~ SP BH-01	27AUG	1305	6.43	MP	30"			BH	Building 9115	NEED LOCK
" SP-03	27AUG	1240	5.26	MP 27 1/4" →				BH	Building 1411	NEED LOCK
" SP-04	27AUG	1246	7.20	30" →				BH	" 1411	"
" SP-05	27AUG	1253	5.08	27 1/4" →				BH	" 1411	"
" SP-06	27AUG	1257	6.80	31" →				BH	" 1411	"
MK-MW12	27AUG	1700	9.86	30 1/2" →				BH	NEED LOCK	

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMEBERS: Scott Martin and Bill Hudson

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments	
									PID BACKGROUND (ppm)	
* PB-BED-MW13 ✓	08-27-97	0837	27.80	ORIGINAL MARK	3.25	0.4	0.0	JP	0.3	LITTLE ODOR FROM WELL
PB-BED-MW14 ✓	08-27-97	0909	18.51	ORIGINAL MARK	2.35	8.89 ~~0.3~~ 08-27-97	0.0	JP	0.3	NO ODOR
~~PB-BED-MW15~~	Jane									
PB-BED-MW16 ✓	08-27-97	1445	PRODUCT 5.80 / H2O ~~4.00~~ 11.30 08-27-97	ORIGINAL MARK	1.70	2200	0.0	JP	0.4	H2S ODOR
PB-BED-MW17 ✓	08-27-97	1521	26.48	ORIGINAL MARK	2.30	17.2	0.0	JP	0.5	H2S ODOR
PB-BED-MW18 ✓	08-27-97	1420	30.58	ORIGINAL MARK	2.11	4.2	0.0	JP	0.3	NO ODOR
PB-BED-MW19 ✓	08-27-97	0858	19.85	ORIGINAL MARK	2.05	9.6	0.0	JP	0.3	NO ODOR
PB-BED-MW20 ✓	08-27-97	1402	14.28	ORIGINAL MARK	2.06	0.3	0.0	JP	0.3	NO ODOR
~~REACTOR 1~~ ✓										
~~REACTOR 2~~ ✓										
~~REACTOR 3~~ ✓										
~~REACTOR 4~~ ✓										
EB-RA-01	08-27-97	1321	6.61	NEW MARK	3.40	0.4	0.0	JP	1.0	NO ODOR 18.95 FT TO BOTTOM

FIELD FORM PBOWLEL.XLS

PB-BED-MW13 / 6:33 WENT BACK TO RECHECK PID. BACKGROUND 0.6 ppm WELL 5.8 ppm. MOISTURE IN MORNING FROM DEW. RECHECKED

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMEBERS: Jeff Parks and George Yu

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments PID BACKGROUND (ppm)	
EB-RA -02	08-27-97	1004	8.10	PUT NEW MARK	3.88	0.4	0.0	[illegible]	0.4	NO ODOR 19.901 BOTTOM OF WELL
EB-RA -03	08-27-97	0953	DRY	PUT NEW MARK	3.04	0.4	0.0	[illegible]	0.3	NO ODOR 13.4FT. BOTTOM OF WELL
EB-RA -04	08-27-97	1050	8.07	PUT NEW MARK	3.20	0.4	0.0	[illegible]	04	NO ODOR 13.57FT BOTTOM OF WELL
EB-RA -05	08-27-97	1042	7.95	PUT NEW MARK	2.11	4.2	0.0	[illegible]	0.4	NO ODOR 12.58FT BOTTOM OF WELL
EB-RA -06	08-27-97	1028	8.65	PUT NEW MARK	4.28	0.4	0.0	[illegible]	0.4	NO ODOR 19.9FT BOTTOM OF WELL
PB- MW0~~1~~3 JL	8-27-97	1350	6.27	from N	2.15	0	—	JL		
PB - MW0~~1~~4 JL	8-27-97	1355	3.50	from N	1.42	0.1	—	JL		
PB - MW0~~1~~2 JL	8-27-97	1343	6.27	from mark	1.6	0	—	JL		
PB - MW0~~1~~1 JL	8-27-97	1345	5.05	from N	2.27	0	—	JL		
Reactor-3 HOT LAB ~~EAST~~ WEST (3)	08-27-97	1130	14.60	NO MARK FLUSH MOUNT	N/A	0.4	0.0	[illegible]	0.4	NO ODOR 7in I.D. STEEL PIPE
Reactor 1 HEALTH SAFETY (1)	08-27-97	1138	15.32	NO MARK FLUSH MOUNT	N/A	0.4	0.0	[illegible]	0.4	NO ODOR 7in I.D. STEEL PIPE
Reactor-2 HOT LAB EAST (2)	08-27-97	1147	15.40	NO MARK FLUSH MOUNT	N/A	3.2	0.0	[illegible]	6.8	COMPANY [illegible] 7IN O.D.
Reactor-4 DEEP WELL -25FT (4)	08-27-97	1157	5.99	NO MARK	1.37	0.4	0.0	[illegible]	0.4	NO ODOR HAS ODOR
Reactor-5 DEEP WELL -15FT (5)	08-27-97	1202	14.61	NO MARK	1.00	1.0	0.0	[illegible]	1.0	HAS ODOR

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMEBERS: Jeff Parks George Yu

Second Qu 'ly
11/97 Data

11/97

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference [b]	Height of Stick-Out [c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
AA1-BED-GW001	11/12	10:14	30.52	TOC	2.20		~~34~~ 1	TF	
AA2-BED-GW001	11/12	839	~~13.06~~ 13.11	TOC	2.15		Ø	TF	~~top of product~~
AA3-BED-GW001	11/12	824	23.22	TOC	2.00		0.04	TF	
ABG-BED-GW001	11/12	9:53	6.09	TOC	2.25		Ø	TF	
BG8-BED-GW001	11/12	913	6.38	TOC	2.21		Ø	TF	
TNTB-EDB-GW001	11/12	934	4.11	TOC	2.37		Ø	TF	
TNTB-EDB-GW002	11/12	925	6.91	TOC	2.0		Ø	TF	
MNTA-BED-GW001	11/12	10:10	28.04	TOC	2.11		1516	TF	no well cap. H_2S
BED-MW13	11/12	907	27.08	TOC	3.25		6	TF	H_2S
BED-MW14	11/12	853	19.72	TOC	2.35		Ø	TF	
BED-MW15	11/12	810	21.12	TOC	2.15		122	TF	needs lock H_2S
BED-MW16	11/12	1341	*~~19.51~~ 17.41	TOC	1.70	260	Ø	TF	free product
BED-MW17	11/12	830	27.75	TOC	2.30		Ø	TF	H_2S
BED-MW18	11/12	8:00	30.22	TOC	2.11		Ø	TF	
BED-MW19	11/12	830	20.55	TOC	2.05		Ø	TF	

FIELD FORM

* depth to product

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: G. Yu, T. Fitzgerald
R. Wallace

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
BED-MW20	11/12	9:46	14.42	TOC	2.24		Ø	TF	
REACTOR 1	11/12	10:55	22.06	flush w/ ground	—		Ø	TF	
REACTOR 2	11/12	10:50	4.31	flush w/ ground	—		Ø	TF	
REACTOR 3	11/12	11:00	22.17	" "	—		Ø	TF	
EB-RA01	11/12	8:18	7.38	TOC			Ø	TF	
EB-RA02	11/12	11:12	~~20.97~~ 8.32	—	—		Ø	TF	~~bottom of well~~
EB-RA03	11/12	11:03	dry	—	—		Ø	TF	
EB-RA04	11/12	11:05	10.36	—	—		Ø	TF	
EB-RA05	11/12	11:07	8.37	—	—		Ø	TF	
EB-RA06	11/12	11:10	7.86	—	—		Ø	TF	

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: _____ _____

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
AA3-GW-002	11-12	0850	6.30	2" TOC	1.45	.02	NA	TWM	
AA1-GW-002	11-12	0923	6.22	2" TOC	1.90	.02	NA	TWM	
PR-MW-7	11-12	1440	5.06	2" TOC	2.04	0.0	NA	GMM	REDDISH/BROWN OILY SUBSTANCE - NO ODOR
PR-MW-8	11-12	1440	7.72	2" TOC	2.08	0.00	NA	GMM	"
PR-MW-9	11-12	1430	7.85	2" TOC	2.12	0.08	NA	GMM	"
IT-MW05	11-12	1031	10.45	2" TOC	3.06	.02	NA	TWM	
IT-MW06	11-12	0835	9.21	TOC 2"	3.04	.02	NA	TWM	TREES NEED REMOVED TO GET TO WELL
EB-GM-01	11-12	1233	9.29	2" TOC	2.50	.02	NA	TWM	
EB-GM-02	11-12	0915	9.46	2" TOC	2.37	.02	NA	TWM	
EB-GM-03	11-12	0912	7.38	2" TOC	2.59	.02	NA	TWM	
EB-GM-04	11-12	0910	5.55	2" TOC	2.40	.02	NA	TWM	
EB-GM-05	11-12	0903	7.57	2" TOC	2.47	.02	NA	TWM	
EB-GM-06	11-12	0905	7.36	2" TOC	2.30	.02	NA	TWM	
MK-MW-19	11-12	0855	6.83	TOC 2"	2.55	.02	NA	TWM	
MK-MW-20	11-12	0943	4.78	2" TOC	2.42	3.0	NA	TWM	STRONG ODOR POSSIBLE PRODUCT

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: Tim Mathes Dave Spatta

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference [b]	Height of Stick-Out [c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
MK-MW22	11-12	1156	8.24	2" TOC	2.50	.02	NA	TWM	
MK-MW23	11-12	1153	8.02	2" TOC	2.42	.02	NA	TWM	
MK-MW24	11-12	1200	7.22	2" TOC	2.56	.02	NA	TWM	
EB-PS02	11-12	0936	5.87	2" TOC	2.32	.02	NA	TWM	NO LOCK
EB-PS03	11-12	0933	6.35	2" TOC	2.40	.02	NA	TWM	NO LOCK
EB-PS04	11-12	0930	9.00	2" TOC	2.25	.02	NA	TWM	NO LOCK
TNTA-MW10	11-12	1130	4.67	2" TOC	2.20	.02	NA	TWM	
TNTA-MW11	11-12	1116	5.16	2" TOC	2.33	.02	NA	TWM	
EB-SP01	11-12	1214	7.55	2" TOC	2.50	.02	NA	TWM	NO LOCK
EB-SP03	11-12	1207	6.94	2" TOC	2.27	.02	NA	TWM	NO LOCK
EB-SP04	11-12	1208	8.18	2" TOC	2.50	.02	NA	TWM	NO LOCK
EB-SP05	11-12	1210	6.17	2" TOC	2.27	.02	NA	TWM	NO LOCK
EB-SP06	11-12	1212	8.10	2" TOC	2.58	.02	NA	TWM	NO LOCK

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: TIM MATHEY DAVE SPATTA

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference [b]	Height of Stick-Out [c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
AA2-GW-002	11/12/97	0758	NA	TOC			0		Piezometer
ABG-GW-002	11/12/97	0950	6.55			0		NH	
IT-MW-01	11/12/97	1030	7.00		3.48	0		NH	
IT-MW-02	11/12/97	0810	9.78		2.85	0.3		NH	
IT-MW-07	11/12/97	0812	NA		NM				Piezometer
IT-MW-08	11/12/97	0827	10.72		2.36	1.1		NH	
IT-MW-09	11/12/97	0840	7.24		1.71	0.2		NH	
IT-MW-10	11/12/97	0759	12.12		2.59	0.3		NH	
MK-MW09	11/12/97	7:51	6.49		2.50	0.3		NH	
MK-MW10	11/12/97	7:48	8.49		2.70	0.3		NH	
MK-MW11	11/12/97	7:40	8.14		2.77	0		NH	
MK-MW12	11/12/97	1045	10.78		2.54	0		NH	
MK-MW14	11/12/97	1035	8.72		2.58	0		NH	
MK-MW15	11/12/97	1038	8.80		2.95	0		NH	
MK-MW16	11/12/97	1035	7.75		2.83	0		NH	

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*
NM---Not Measured.

FIELD CREW MEMBERS: _____ _____

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
MK-MW17	11/12/97	1019	4.75	TOC	3.42	0.0	0	NH	
TNTC-MW03	11/12/97	0835	9.27		2.30	0.6		NH	
TNTC-MW04	11/12/97	0922	7.62		2.12	0.0		NH	
TNTC-MW05	11/12/97	0845	5.6		2.29	0		NH	
TNTC-MW06	11/12/97	0930 ~~0900~~	5.71		2.25	0.2		NH	
GCL-MW01	11/12/97	0002	8.81		2.58	0.2		NH	4" casing
GCL-MW02A	11/12/97	0959	7.79		2.92	0.3		NH	4" casing
GCL-MW02B	11/12/97	0957	8.41		3.14	0.0		NH	4"
GCL-MW03	11/12/97	1007	6.61		2.85	0.2		NH	4"
WA-MW01	11/12/97	0804	16.15		2.25	0.2		NH	
WA-MW02	11/12/97	0814	4.46		2.08	0.2		NH	

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: _____ _____

3rd Quarterly Data 2/98

Well Details

Well ID	Date	Time	Well Depth TOC (feet)	Water Level TOC (feet)	Hnu Readings (ppm)	H_2S Readings (ppm)	Well condition
IT-MNTA-BEDGW-001	2/24/98	0925	64/	27.05	0.0	>1,900	No well cap
IT-AA1-BEDGW-001	2/24/98	0920	65	30.50	0.0	1,600	Good
IT-AA3-BEDGW-001	2/24/98	0835	53	21.53	9.0	5	No cap
IT-ABG-BEDGW-001	2/24/98	1130	21	3.55	0.6	0.0	Good
IT-AA1-GW-002	2/24/98	0920	22	3.05	4.8	~~4.5~~ NM	Good
IT-AA3-GW-002	2/24/98	0835	16	3.88	0.8	NM	Good
IT-ABG-GW-002		1130	7	3.95	0.7	NM	Good
EB-GM-01		0910	27	7.35	0.0	NM	Good
EB-GM-02		0900	29	4.91	0.0	NM	Good
EB-GM-03		0900	18	5.81	0.0	NM	Good
EB-GM-04		0850	16	3.27	0.5	NM	Good
EB-GM-05		0905	18	5.80	0.0	NM	Good
EB-GM-06		0907	18	5.92	1.0	NM	Good
EB-PS-02		1323	18	4.81	0.0	NM	Good
EB-PS-03		1315	~~18~~ 21.05	5.02	1.7	NM	Good
EB-PS-04		1320	16	7.30	7.6	NM	Good
EB-RA-01		0937	16	5.63	0.0	NM	Good
EB-RA-02		1020	20	6.52	13.8	NM	Good
EB-RA-03		1017	22	9.09	0.6	NM	~~Good~~ well stickup bent by vehicle, well cover damaged, concrete is a broken, stickup is
EB-RA-04		1015	10	7.12	0.0	NM	Good
EB-RA-05		1013	10	6.87	0.0	NM	Good
EB-RA-06		1010	10	5.20	0.0	NM	Good
IT-MW05		1345	21	4.42	20.0	NM	~~Good~~ (Dead) Hornets nest inside stick.
IT-MW06		0945	18.5	4.01	0.0	NM	Good
MK-MW19		0845	13	3.67	0.5	NM	Good
MK-MW20		1300	23	6.61	50	NM	Good
MK-MW22		1110	9.5	6.94	42	NM	Good
MK-MW23		1115	16	5.61	4.7	NM	Good
MK-MW24		1127	9.5	6.25	52	NM	Good
PR-MW07		1405	22.3	2.21	43	NM	Good } Red/brownish colored water
PR-MW08		1358	27.5	4.90	26	NM	Good }
PR-MW09		1353	19	3.36	24.5	NM	Good
TNTA-MW10		1145	11	3.10	52	NM	Good
TNTA-MW11		1150	11.4	4.78	0.3	NM	Good
PB-BED-MW15		1045	74.4	20.34	22	203	Not Locked (Unlock)
PB-BED-MW16		1305	74 Product: ∅	2.28	14	0.0	Good
PB-BED-MW17		1335	64.4	26.85	54	828	Good
PB-BED-MW18		1120	75.4	30.55	5.4	0.0	Good
REACTOR1		1030	75.35	33.25	0.2	0.0	Flush, Not Locked (not possible)
REACTOR2		1035	39.8	28.53	0.5	0.0	Flush
REACTOR3	↓	1025	39.5	37.45	1.5	0.0	Flush

HNu Background = 0.0 ppm

Temperature = 38°F - 4 a.m.

Well Details

Well ID	date	time	Well Depth TOC (feet)	Water Level TOC (feet)	Hnu Readings (ppm)	H_2S Readings (ppm)	Well condition
IT-BG8-BEDGW-001	2/24/98	0917	20	8.11	0	NA	Good
IT-TNTB-BEDGW-001	2/24/98	0934	24	5.60	0	NA	Good
IT-TNTB-BEDGW-002	2/24/98	0946	24.2	2.89	0	NA	Good
IT-AA2-BEDGW-001	2/24/98	0844	43	11.58	5	NA	Good
IT-AA2-GW-002	—	—	NONE	NOT MEAS.	-	NA	Good
EB-SP-01	2/24/98	1023	9.5	5.54	0	NA	Good
EB-SP-03	2/24/98	1034	9.5	4.26	0	NA	Good
EB-SP-04	2/24/98	1032	9.5	4.21	0	NA	Good
EB-SP-05	2/24/98	1027	9.5	4.92	0	NA	Good
EB-SP-06	2/24/98	1026	9	7.04	0	NA	Good
GCL-MW01	2/24/98	0958	11.03	4.57	0		
GCL-MW02A	2/24/98	0953	22.15	4.65	0	Ø NA	Good
GCL-MW02B	2/24/98	0954	9.83	4.59	0	Ø NA	Good
GCL-MW03	2/24/98	1001	10.6	4.20	0	NA	Good
IT-MW01	2/24/98	0929	9.5	4.66	0	Ø NA	Good
IT-MW02	2/24/98	0858	18.3	5.68	0	NA	Good
IT-MW07	2/24/98	2 —	5.5	~~DRY~~ (NOT MEAS)	0	NA	Good
IT-MW08	2/24/98	1056	13.4	2.91	0	NA	Good
MK ~~IT~~-MW09	~~2/24~~/98	0909	14.5	5.00	0	NA	Good
IT-MW10	2/24/98	0846	19.8	8.20	0	NA	Good
IT ~~MK~~-MW09	2/24/98	1006	15	4.72	0	NA	Good
MK-MW10	2/24/98	0834	14	7.15	0	NA	Good
MK-MW11	2/24/98	0830	13	5.92	0	NA	Good
MK-MW12	2/24/98	0913	13	7.45	0	NA	Good
MK-MW14	2/24/98	0922	11.5	4.62	0	NA	Good
MK-MW15	2/24/98	0924	9	4.92	0	NA	Good
MK-MW16	2/24/98	0932	8	5.14	0	NA	Good
MK-MW17	2/24/98	0944	6	3.68	0	NA	Good
TNTC-MW03	2/24/98	1101	14	3.80	0	NA	Good
TNTC-MW04	2/24/98	1127	18.8	3.32	0	NA	Good
TNTC-MW05	2/24/98	1011	29.7	3.02	0	NA	Good
TNTC-MW06	2/24/98	1020	12.2	3.72	0	NA	Good
WA-MW01	2/24/98	0856	22.3	4.09	0	NA	Good
WA-MW02	2/24/98	0859	13	1.53	0	NA	Good
PB-BED-MW13	2/24/98	1115	75.5	48.47	14.0	NA	Good
PB-BED-MW14	2/24/98	0854	52.2	16.44	0.2	NA	Good
PB-BED-MW19	2/24/98	0836	49.5	19.00	6	NA	Good
PB-BED-MW20	2/24/98	1015	49.5	13.98	0	NA	Good

NA = Not Analyzed

Fourth Quarterly
5/98

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
AA1-BED-GW001		1245	29.10'	top of casing	2.24	6.0 ppm		JMV	Strong H_2S odor
AA1-GW-002		1250	3.42	top of casing	2.25	0 ppm		JMV	
AA2-BED-GW001		0815	9.89	top of casing	2.46	5 ppm	~~5 ppm~~ 0	EL	
AA2-GW-002			dry	top of casing	2.45			EL	
AA3-BED-GW001		0730	~~3.97~~ 21.62	top of casing	2.33	9 ppm	10 ppm	EL	
AA3-GW-002		0732	3.97	top of casing	2.01	2 ppm		EL	
ABG-BED-GW001		1252	~~4.39~~ 3.6	top of casing	2.39	0.5		EL	
ABG-GW-002		1254	4.92	top of casing	2.86	0		EL	
BG8-BED-GW001		0827	5.86	top of casing	2.86	0		EL	
TNTB-BED-GW001		1005	2.91	top of casing	2.63	0		EL	
TNTB-BED-GW002		1055	7.67	top of casing	3.25	0		EL	
MNTA-BED-GW001		1400	25.6	top of casing	2.35	0	1500	EL	strong H_2S fume
BED-MW13	0830	~~0830~~	41.4	top of casing	3.25	10		EL	H_2S
BED-MW14		0805	15.99	top of casing	2.35	1		EL	
BED-MW15		1250	19.79	top of casing	2.15	30	150	EL	strong H_2S fume
BED-MW16		1300	2.74	top of casing	1.70	40 ppm	0	JMV	free product
BED-MW17		1336	26.40	top of casing	2.30	45 ppm	324	JMV	H_2S
BED-MW18		1315	30.72	top of casing	2.11	2.0 ppm		JMV	
BED-MW19		0817	18.45	top of casing	2.05	2 ppm	0	EL	
BED-MW20		1000	13.29	top of casing	2.76	0		EL	

20 FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*
[b] - *Measured from the mark on top of the riser.*
[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: _____ _____

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
IT-MW-01		1030	4.60	top of casing	3.48	4 ppm		EK	
IT-MW-02		0800	5.79	top of casing	2.85	3 ppm	0	EK	
IT-MW-07			dry	top of casing	NM	—		EK	
IT-MW-08		0906	3.12	top of casing	2.36	0		EK	
IT-MW-09		0948	5.02	top of casing	1.71	0		EK	
IT-MW-10		0810	8.19	top of casing	2.59	2		EK	
EB-SP01		1047	5.78	top of casing	2.50	0		EK	
EB-SP03		1040	4.21	top of casing	2.27	0 ppm		EK	
EB-SP04		1042	7.20	top of casing	2.50	0 ppm		EK	
EB-SP05		1044	4.96	top of casing	2.27	0		EK	
EB-SP06		1046	7.24	top of casing	2.58	0		EK	
MK-MW09		0820	4.99	top of casing	2.50	0		EK	
MK-MW10		0743	5.21	top of casing	2.70	3 ppm	0	EK	
MK-MW11		0740	6.51	top of casing	2.77	2 ppm	0	EK	
MK-MW12		0825	8.38	top of casing	2.54	2 ppm	0	EK	
MK-MW14		1022	4.81	top of casing	2.58	0 ppm		EK	
MK-MW15		1025	4.86	top of casing	2.95	0 ppm	0	EK	
MK-MW16		1050	5.10	top of casing	2.83	0 ppm		EK	
MK-MW17		1100	3.9	top of casing	3.42	0 ppm		EK	
MK-MW22		1325	7.42	top of casing	2.50	0 ppm		EK	

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

NM---Not Measured.

FIELD CREW MEMBERS: _____ _____

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference[b]	Height of Stick-Out[c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
REACTOR 1		1320	32.30	top of casing	flush w/ground	0		EL	
REACTOR 2		1322	~~[illegible]~~ 37.08	top of casing	flush w/ground	0		EL	
REACTOR 3		1317	27.50	top of casing	flush w/ground	0		EL	
EB-RA01		1345	5.75	top of casing	2.58	0		EL	
EB-RA02		1325	6.72	top of casing	2.70	4.3		EL	
EB-RA03		1327	9.70	top of casing	2.62	0		EL	
EB-RA04		1328	7.53	top of casing	2.75	0		EL	
EB-RA05		1330	7.07	top of casing	2.59	0		EL	
EB-RA06		1332	4.49	top of casing	2.75	0		EL	
PR-MW-7		1412	2.17	top of casing	2.04	0 ppm		DRV	
PR-MW-8		1417	4.37	top of casing	2.08	0 ppm		DRV	
PR-MW-9		1350	3.40	top of casing	2.12	0 ppm		DRV	
MK-MW-19		1440	4.56	top of casing	2.55	0 ppm		DRV	
MK-MW-20		1455	5.85	top of casing	2.42	50.0 ppm		DRV	
EB-GM-01		1448	7.97	top of casing	2.50	0 ppm		DRV	
EB-GM-02		1430	5.14	top of casing	2.37	0 ppm		DRV	
EB-GM-03		1425	5.99	top of casing	2.59	0 ppm		DRV	
EB-GM-04		1435	3.91	top of casing	2.40	0 ppm		DRV	
EB-GM-05		1433	Dry	top of casing	2.47	0 ppm		DRV	
EB-GM-06		1445	6.00	top of casing	2.30	0 ppm		DRV	

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: _____ _____

Groundwater Level Measurement Record
Site-Wide Groundwater Investigation
Plum Brook Ordnance Works
Sandusky, Ohio

IT Project Number: 771481

Well Identification	Date	Time	Depth to Water Table (feet) [a]	Point of Reference [b]	Height of Stick-Out [c] (feet)	PID Reading (ppm)	H_2S Reading (ppm)	Initials	Comments
MK-MW23		1320	6.54	top of casing	2.42	0 ppm		JMV	
MK-MW24		1330	6.18	top of casing	2.56	0 ppm		JMV	
TNTC-MW03	0902	~~[illegible]~~	4.95	top of casing	2.30	0			
TNTC-MW04		0835	3.21	top of casing	2.12	0			
TNTC-MW05		0846	3.60	top of casing	2.29	0			
TNTC-MW06		0900	3.81	top of casing	2.25	0			
GCL-MW01		1245	4.98	top of casing	2.58	0			
GCL-MW02A		1240	4.85	top of casing	2.92	0			
GCL-MW02B		1242	5.00	top of casing	3.14	0			
GCL-MW03		1247	4.50	top of casing	2.85	0			
WA-MW01		0802	4.7	top of casing	2.25	0 ppm			
WA-MW02		0750	1.54	top of casing	2.08	0 ppm			
EB-PS02		1400	4.90	top of casing	2.32	0 ppm		JMV	
EB-PS03		1355	5.52	top of casing	2.40	0 ppm		JMV	
EB-PS04		1605	5.26	top of casing	2.25	0 ppm			
TNTA-MW10		1305	3.24	top of casing	2.20	1.0 ppm		JMV	
TNTA-MW11		1310	4.34	top of casing	2.33	0 ppm		JMV	
IT-MW-05		1345	4.76	top of casing	3.06	0 ppm		JMV	
IT-MW-06		1340	4.02	top of casing	3.04	0			

FIELD FORM

PBOWLEL.XLS

[a] - *Depth to water table should be measured to the nearest 0.01 foot.*

[b] - *Measured from the mark on top of the riser.*

[c] - *Height from the top of the riser to the protective concrete pad.*

FIELD CREW MEMBERS: _____ _____

APPENDIX C

GEOTECHNICAL TESTING DATA

H. C. NUTTING COMPANY

EMPLOYEE OWNED

GEOTECHNICAL, ENVIRONMENTAL AND TESTING ENGINEERS
SINCE 1921

CENTRAL OHIO REGION
GAHANNA COMMERCE CENTER
790 MORRISON ROAD
COLUMBUS, OHIO 43230-6642
(614) 863-3113

November 12, 1997
W.O. 60364.002

Mr. Alan Belasco
Belasco Drilling Services, Inc.
1519 Alum Creek Drive
Columbus, Ohio 43209

RE: Results of Laboratory Testing
NASA - Plum Brook Station
Sandusky, Ohio

Dear Mr. Belasco:

Enclosed herewith are results of the laboratory testing requested for the referenced project. This testing was performed in accordance with our unit rate proposal dated June 23, 1997, and per Belasco Drilling Services, Inc. authorizations of scope as defined by Mr. Alan Belasco. We have also included Table I - "Classification Test Data", which summarizes pertinent data regarding water content, Atterberg limits, sieve and hydrometer and USCS classification.

We believe this completes all of the testing requested per the work request noted above. Please feel free to call if there are any questions regarding this information, or if additional testing is required.

We appreciate this opportunity to provide our services to you. Thank you for your consideration.

Respectfully yours,
H. C. Nutting Company

Gregory C. Butcher, P.E.
Columbus Operations Manager

GCB/ljh

H. C. Nutting Company
790 Morrison Road
Columbus, Ohio 43230

Belasco Drilling Services Inc.
NASA - Plum Brook Station
Sandusky, OH
HCN W.O. # 60364.002

10/30/97smo

TABLE I

CLASSIFICATION TEST DATA

Boring No.	Sample No.	Depth (Ft.)	Mechanical Analysis				Moisture Content (%)	Atterberg Limits			U.S.C.S Classification
			% Gravel	% Sand	% Silt	% Clay		Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	
IT-AA1-BEDGW-001	1	10-12	0	7	72	21	21.1	25	20	5	CL-ML
"	2	18-20	0	14	44	42	32.6	26	19	7	CL-ML
IT-AA2-GW-002	1	6-8	0	2	62	36	24.3	31	22	9	CL
"	2	10-12	0	2	48	50	25.7	31	21	10	CL
"	3	16-18	0	17	34	49	27.8	30	18	12	CL
IT-MNTA-BEDGW-001	1	12-14	0	1	34	65	27.6	37	24	13	CL
"	2	18-20	1	39	29	31	9.1	27	19	8	CL
IT-AA3-BEDGW-001	1	8-10	0	3	60	37	23.4	27	19	8	CL
"	2	22-24	4	30	35	31	15.7	24	17	7	CL-ML
IT-TNTB-BEDGW-001	1	0-2	6	30	27	37	37.0	46	31	15	ML
IT-TNTB-BEDGW-002	1	2-4	3	25	32	40	27.2	45	25	19	CL

H. C. Nutting Company
790 Morrison Road
Columbus, Ohio 43230

Belasco Drilling Services Inc.
NASA - Plum Brook Station
Sandusky, OH
HCN W.O. # 60364.002

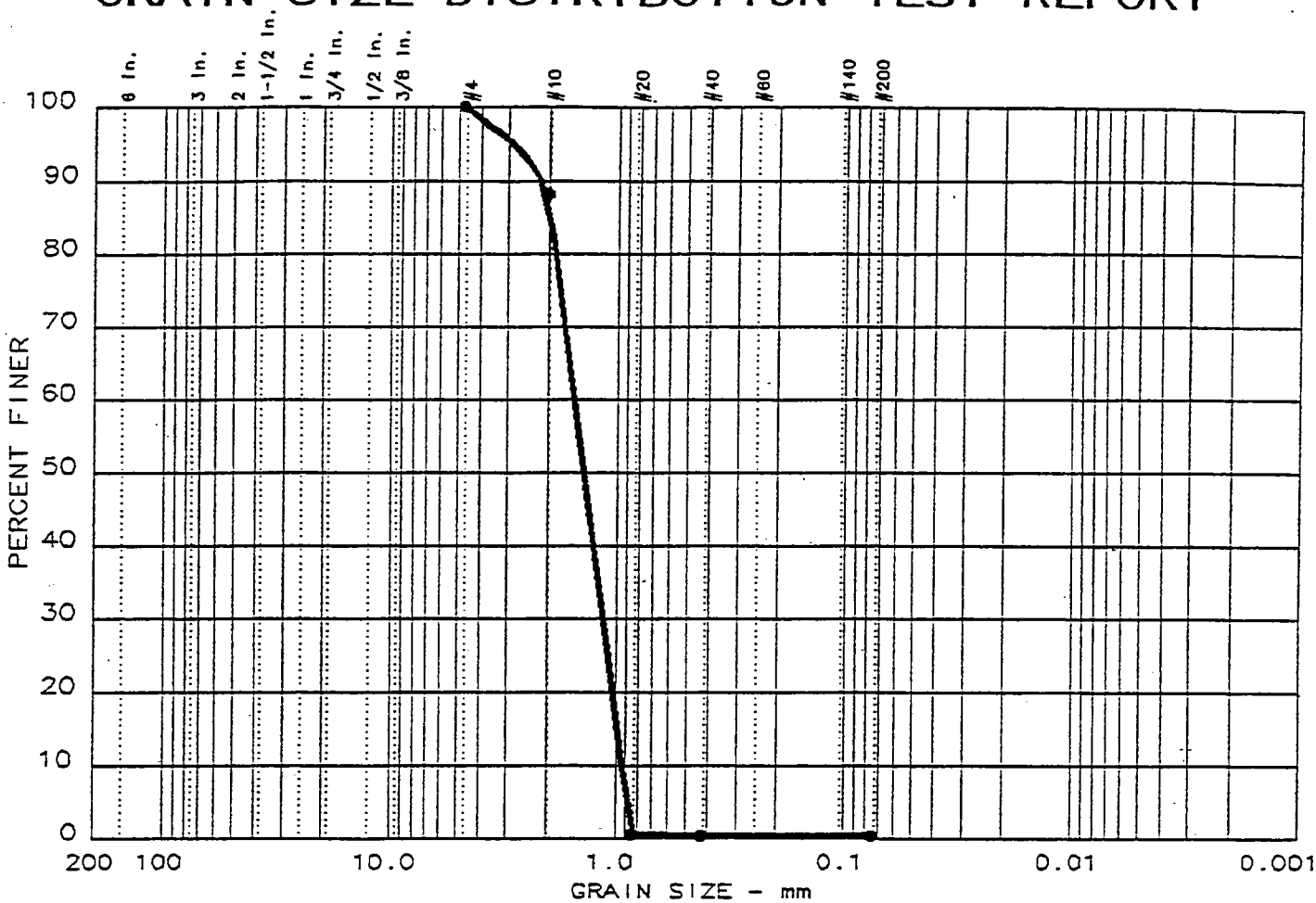
10/30/97smo

TABLE I

CLASSIFICATION TEST DATA

Boring No.	Sample No.	Depth (Ft.)	Mechanical Analysis				Moisture Content (%)	Atterberg Limits			U.S.C.S Classification
			% Gravel	% Sand	% Silt	% Clay		Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	
IT-SCREEN SAMPLE	1	FILTER PACK SAND	0	100	- 0 -		0.11				SP
IT-AAI-GW-002	1	6-8	0	8	57	35	28.7	33	20	13	CL
"	2	14-16	0	2	55	43	23.0	27	20	7	CL-ML
"	3	20-22	0	18	56	26	14.7	NP	NP	NP	ML
IT-AB6-GW-002	1	0-2	0	78	17	5	16.0	NP	NP	NP	SM
"	2	2-4	0	79	15	6	20.6	NP	NP	NP	SM
IT-AA3-GW-002	1	4-6	0	16	51	33	21.5	36	20	16	CL
"	2	8-10	0	3	61	36	27.0	29	22	7	CL-ML
"	3	12-14	0	1	60	40	24.7	25	20	5	CL-ML
IT-AB6-BEDGW-001	1	2-4	1	68	20	11	27.9	NP	NP	NP	SM
"	2	4-6	0	82	14	4	20.9	NP	NP	NP	SM
IT-AA2-BEDGW-001	1	10-12	0	82	14	4	22.4	26	18	8	CL
"	2	16-18	0	23	32	45	17.3	29	19	10	CL
IT-BG8-BEDGW-001	1	0-2	0	67	14	19	21.7	26	24	4	SM

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	1	0.0	0.0	99.6	0.4	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			1.94	1.52	1.38	1.132	0.9784	0.9311	0.91	1.6

MATERIAL DESCRIPTION	USCS	AASHTO
● POORLY GRADED SAND	SP	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring:IT Screen Sample Sample:1 *

Date: 11/3/97

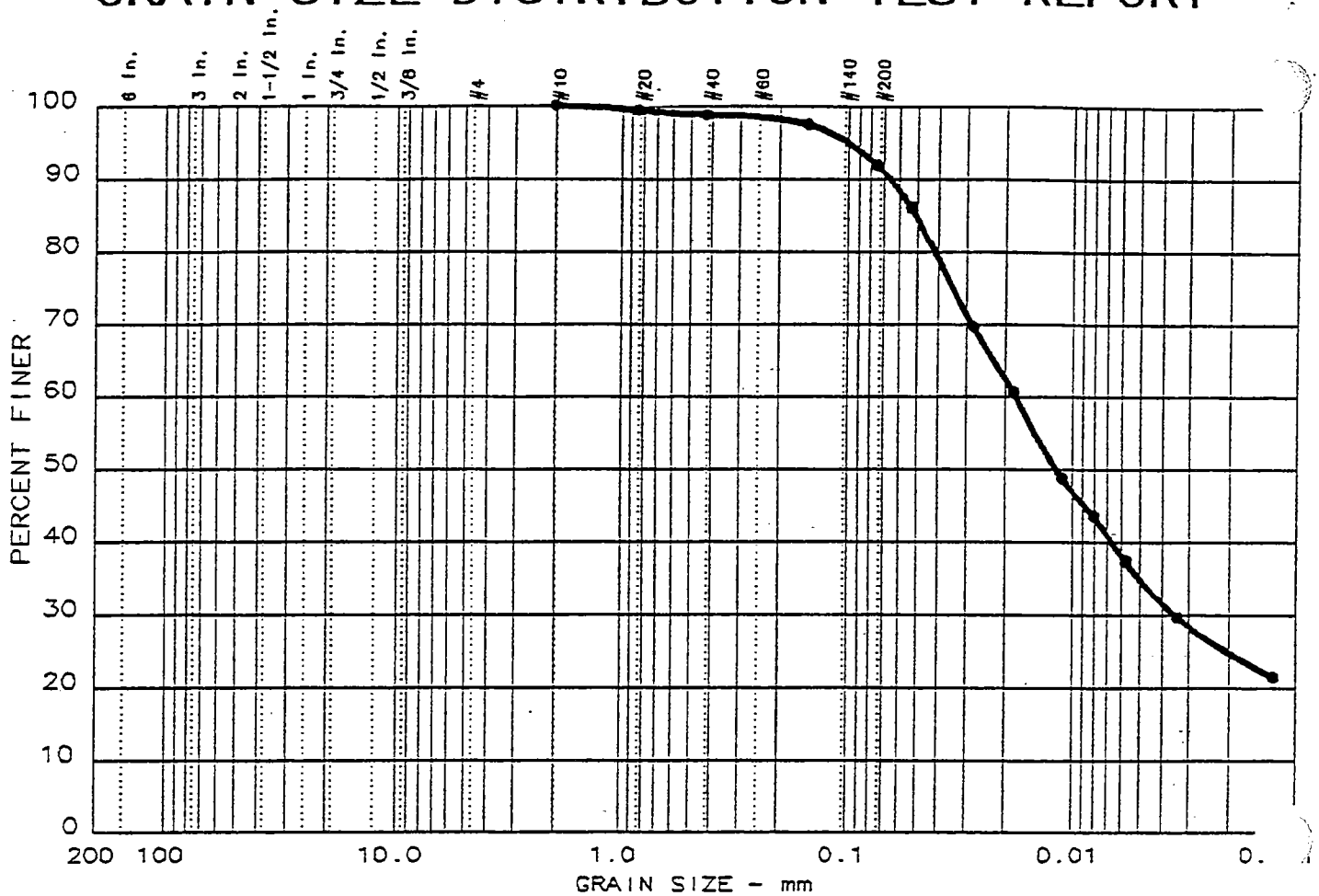
Remarks:
Client: Belasco Drilling Services Inc.
* Depth:Filter Pack Sand
Lab No. 8641

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	2	0.0	0.0	8.1	57.0	34.9

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	33	13	0.05	0.02	0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AAI-GW-002 Depth: 6-8' */

Date: 11/3/97

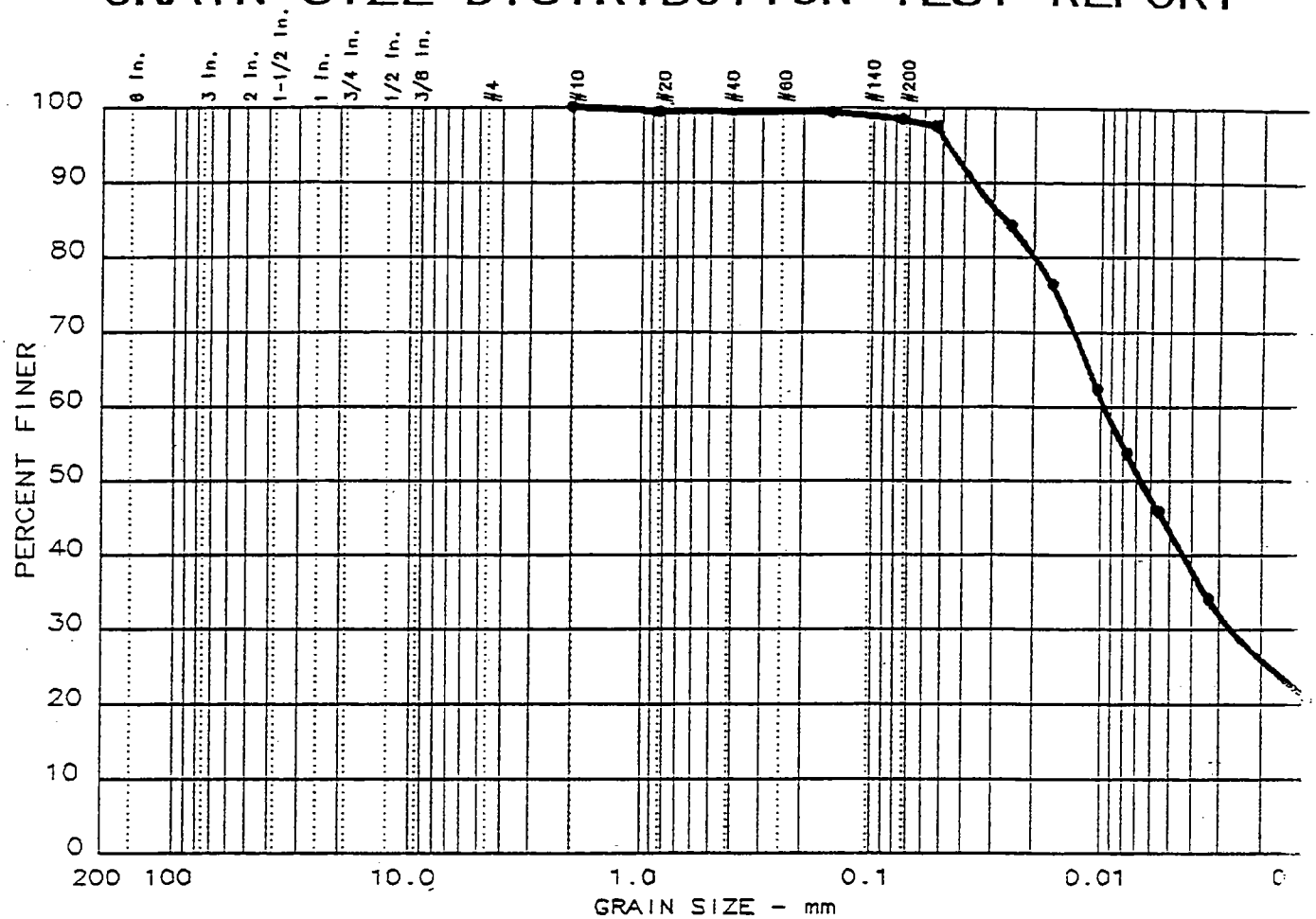
GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 1
Lab No. 8642

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	0.0	1.6	55.1	43.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C
●	27	7	0.03		0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY CLAY	CL-ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AAI-GW-002 Depth: 14-16'*/

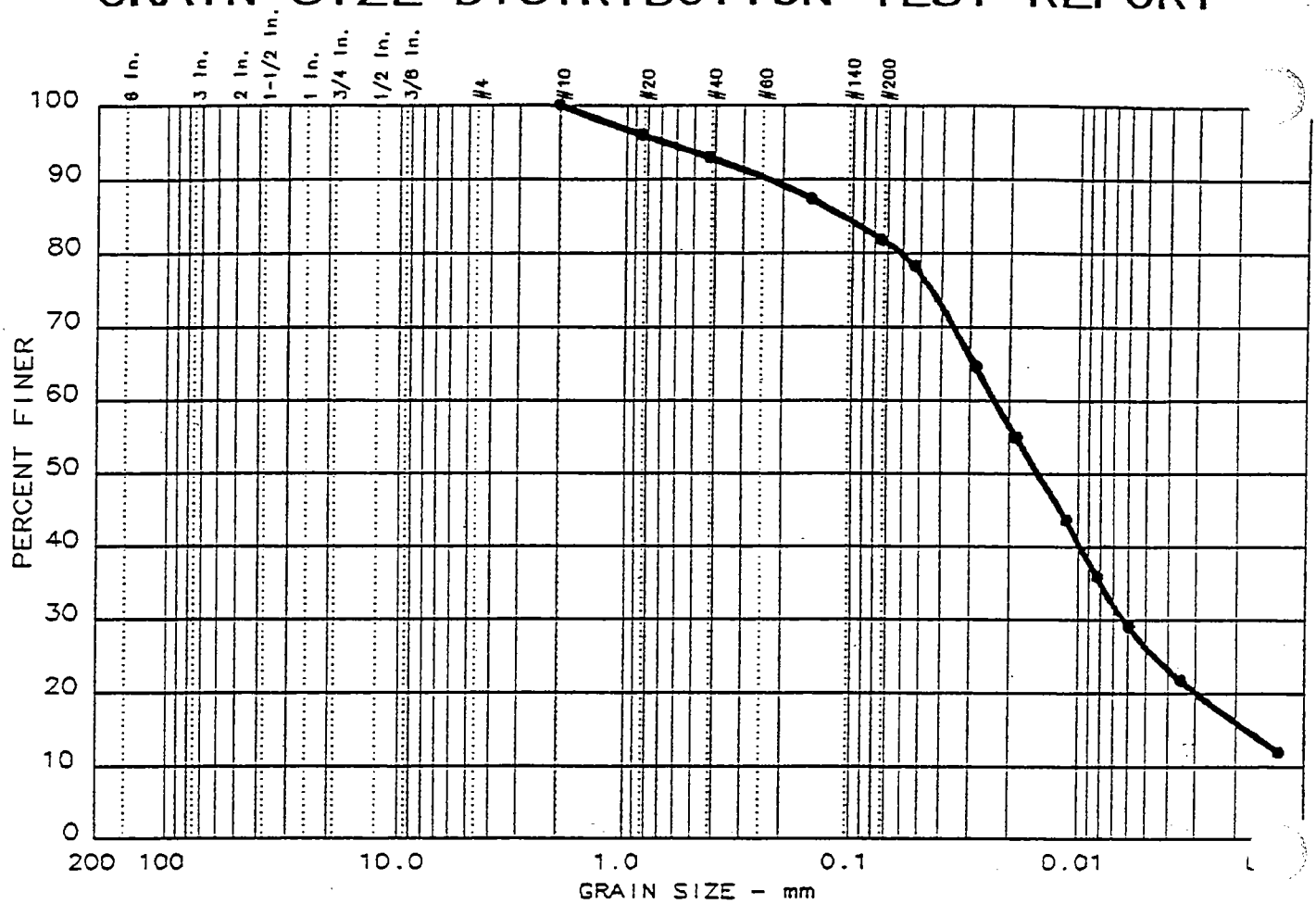
Date: 11/3/97

Remarks:
Client: Belasco Drillin
Services Inc.
*/ Sample: 2
Lab No. 8643

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	0.0	18.2	55.5	26.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	0.11	0.02	0.01	0.006	0.0018			

MATERIAL DESCRIPTION	USCS	AASHTO
● SILT WITH SAND	ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring:IT-AAI-GW-002 Depth:20-22' */

Date: 11/3/97

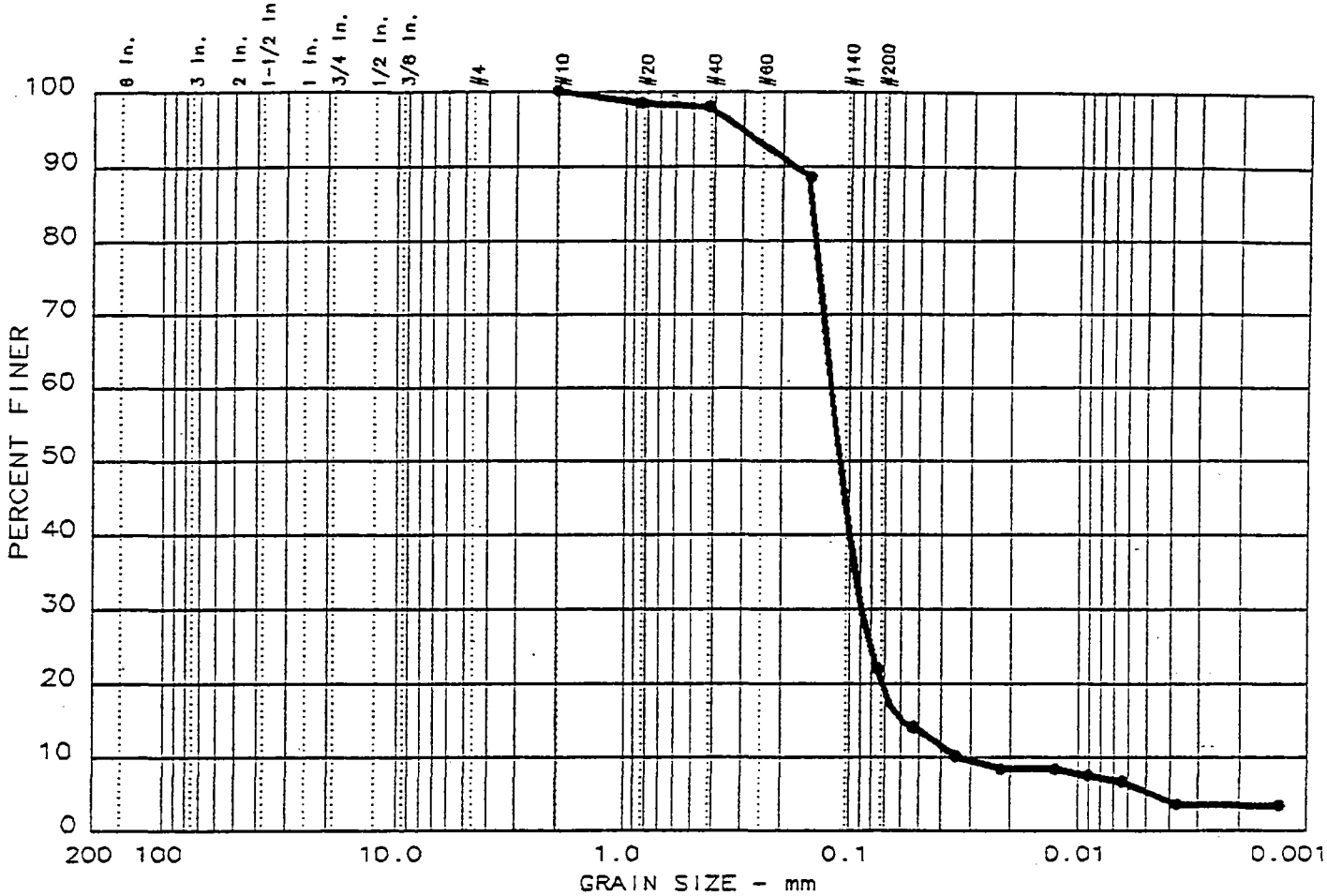
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 3
Lab No. 8644

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	5	0.0	0.0	78.1	16.6	5.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	0.15	0.12	0.11	0.088	0.0588	0.0331	1.96	3.6

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY SAND	SM	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AB6-GW-002 Depth: 0-2' */

Date: 11/3/97

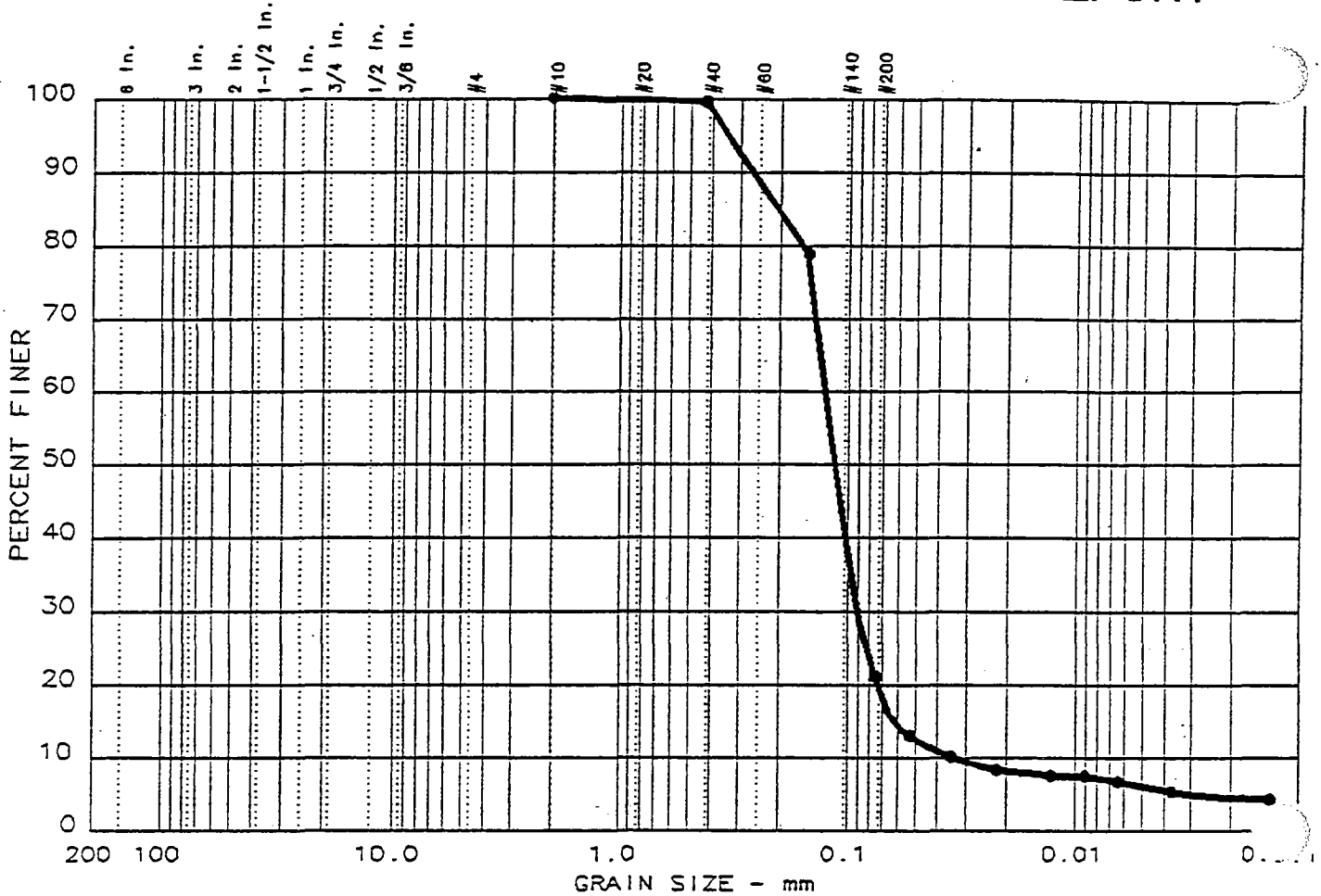
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 1
Lab No. 8645

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	5	0.0	0.0	78.9	15.0	6.1

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	0.20	0.13	0.11	0.090	0.0619	0.0337	1.89	3.7

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY SAND	SM	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AB6-GW-002 Depth: 2-4' */

Date: 11/3/97

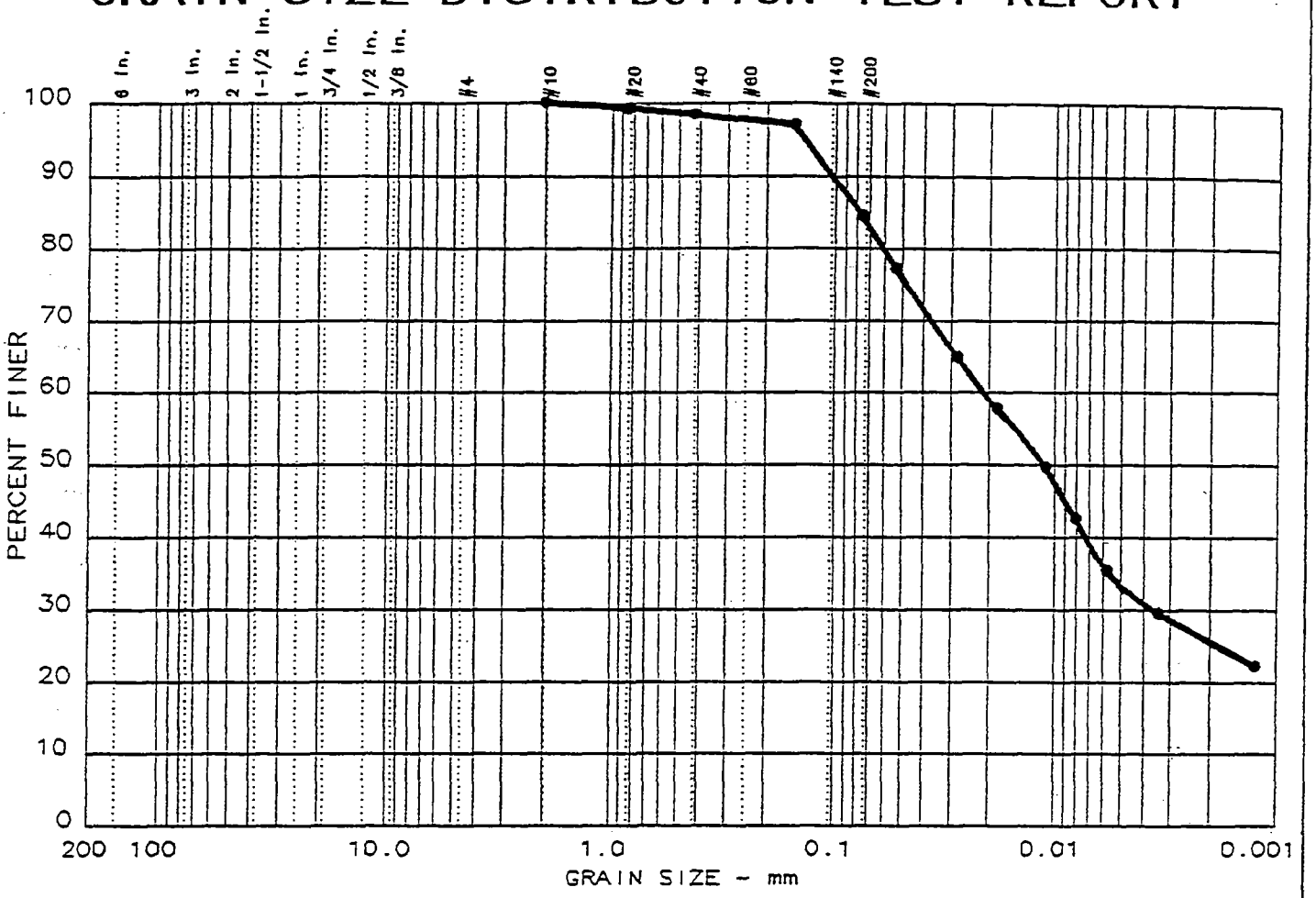
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 2
Lab No. 8646

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	7	0.0	0.0	15.5	51.2	33.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	36	16	0.08	0.02	0.01	0.004				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY WITH SAND	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA3-GW-002 Depth: 4-6' */

Date: 11/3/97

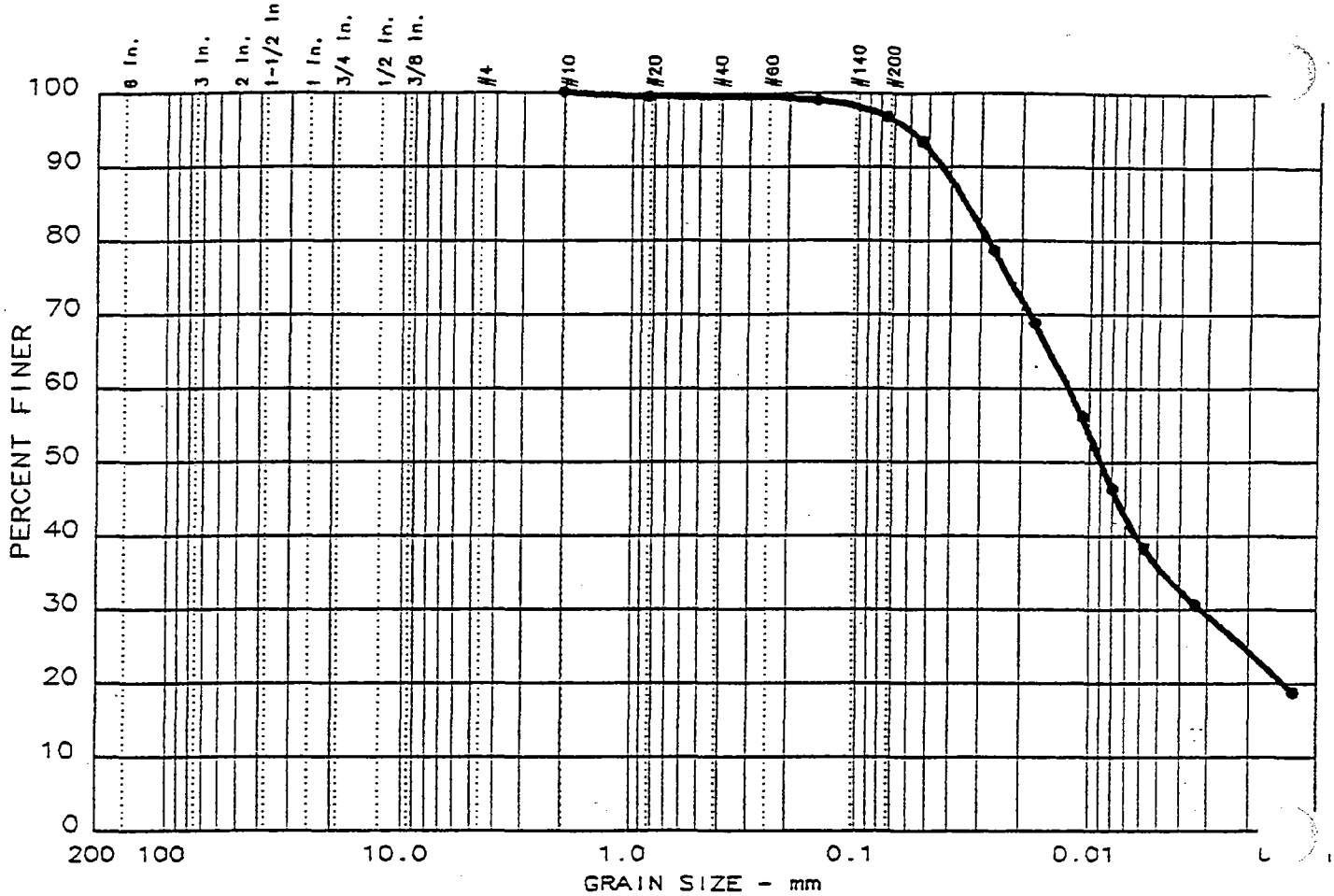
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 1
Lab No. 8647

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	8	0.0	0.0	3.3	60.9	35.8

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	29	7	0.03	0.01	0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY CLAY	CL-ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA3-GW-002 Depth: 8-10' */

Date: 11/3/97

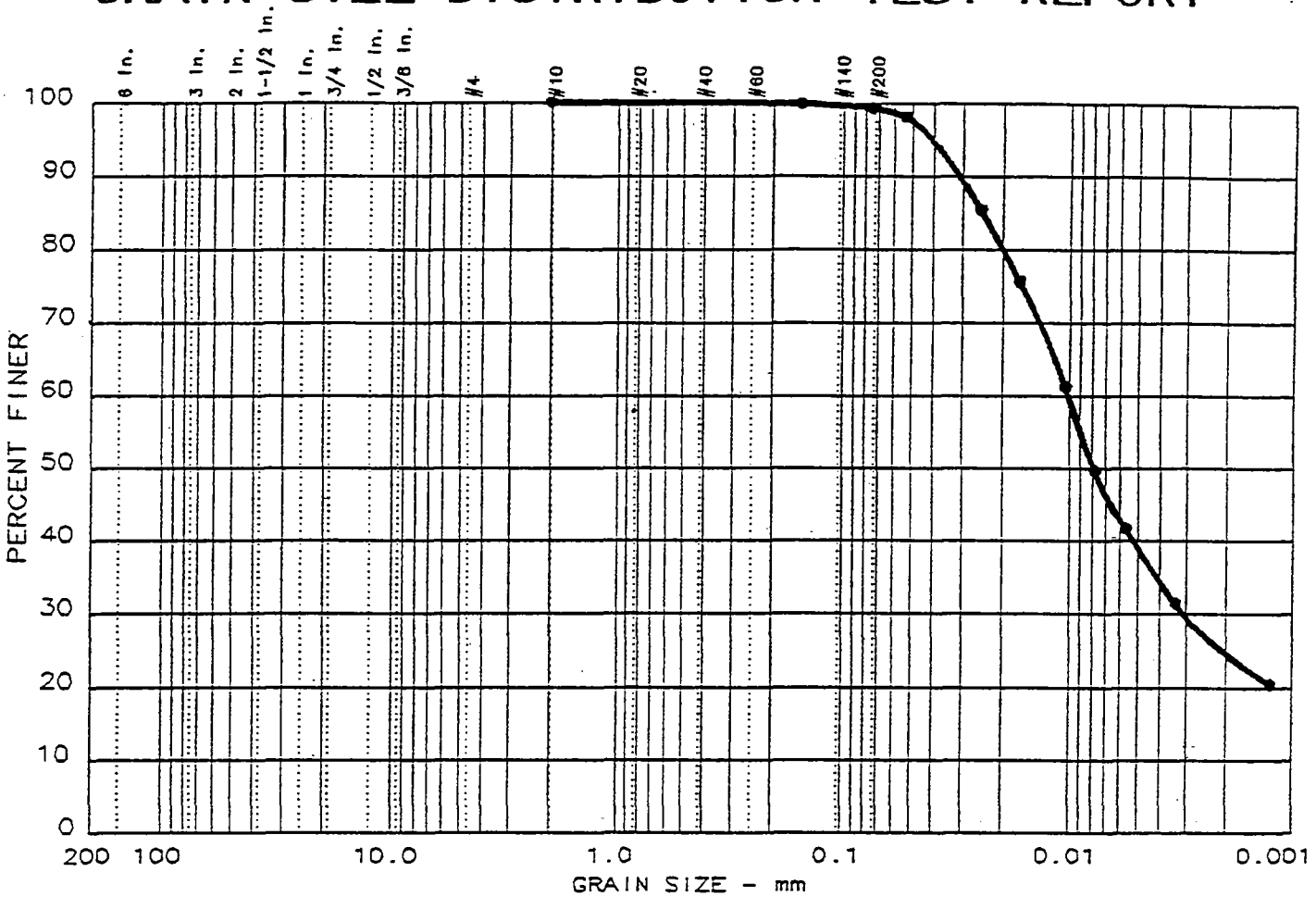
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 2
Lab No.. 8648

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	9	0.0	0.0	0.7	60.2	39.1

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	25	5	0.02	0.01	0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY CLAY	CL-ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA3-GW-002 Depth: 12-14' */

Date: 11/3/97

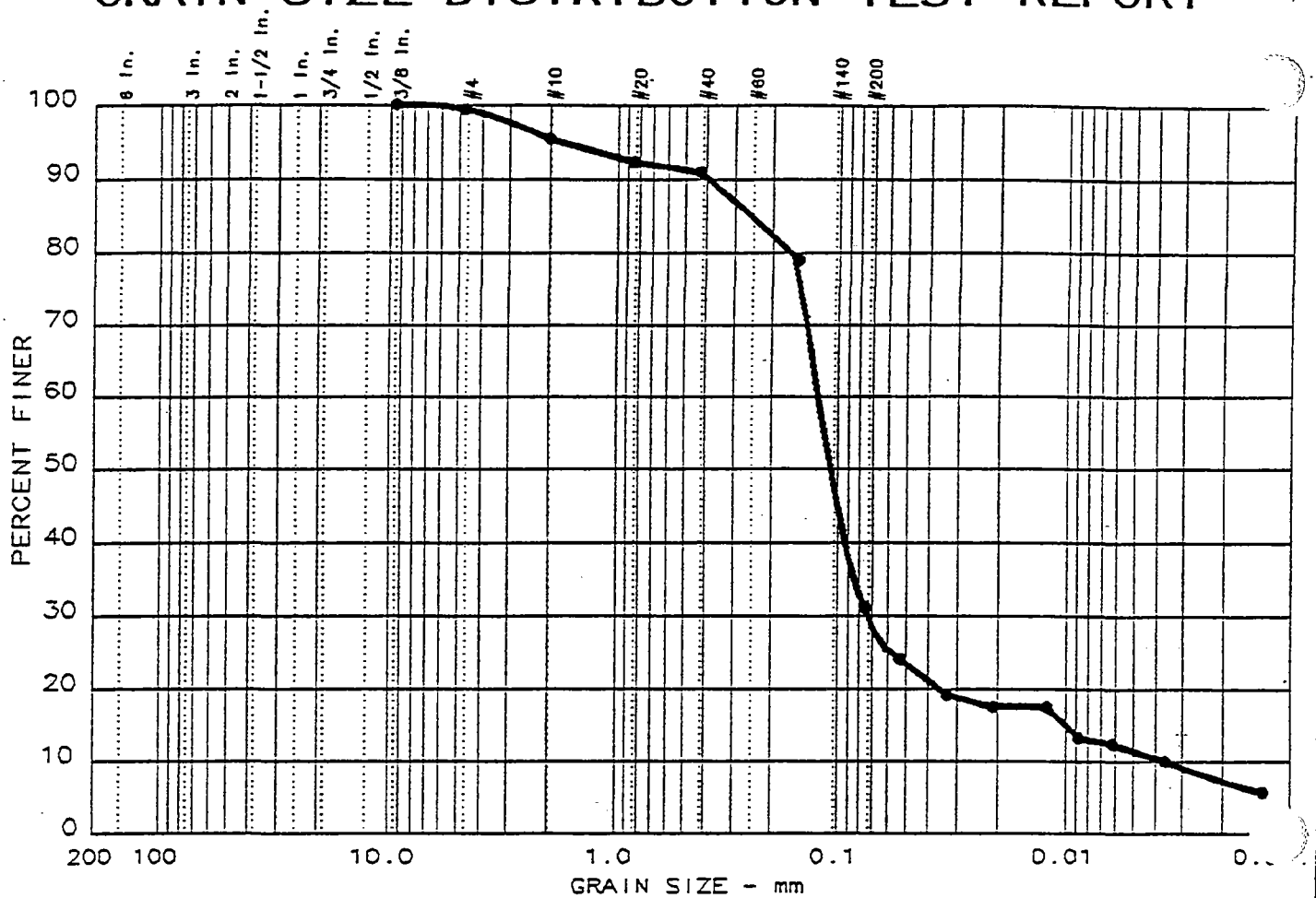
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 3
Lab No. 8649

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	10	0.0	0.7	68.3	19.6	11.4

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	0.25	0.12	0.11	0.073	0.0100	0.0036	12.30	33.9

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY SAND	SM	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AB6-BEDGW-001 Depth: 2-4'*/

Date: 11/3/97

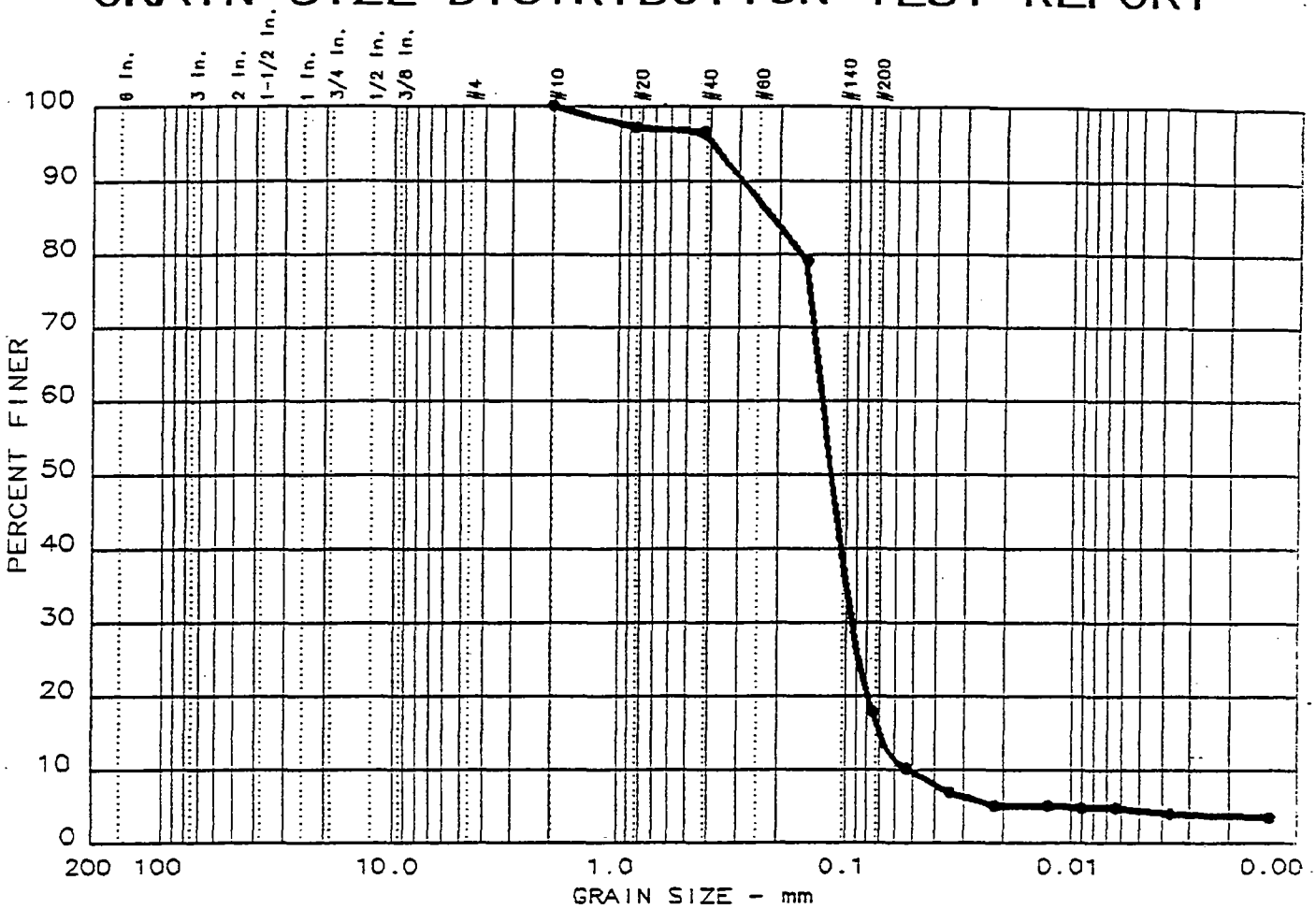
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 1
Lab No. 8650

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	11	0.0	0.0	82.1	13.5	4.4

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	0.21	0.13	0.12	0.093	0.0701	0.0519	1.32	2.4

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY SAND	SM	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AB6-BEDGW-D01 Depth: 4-6'*/

Date: 11/3/97

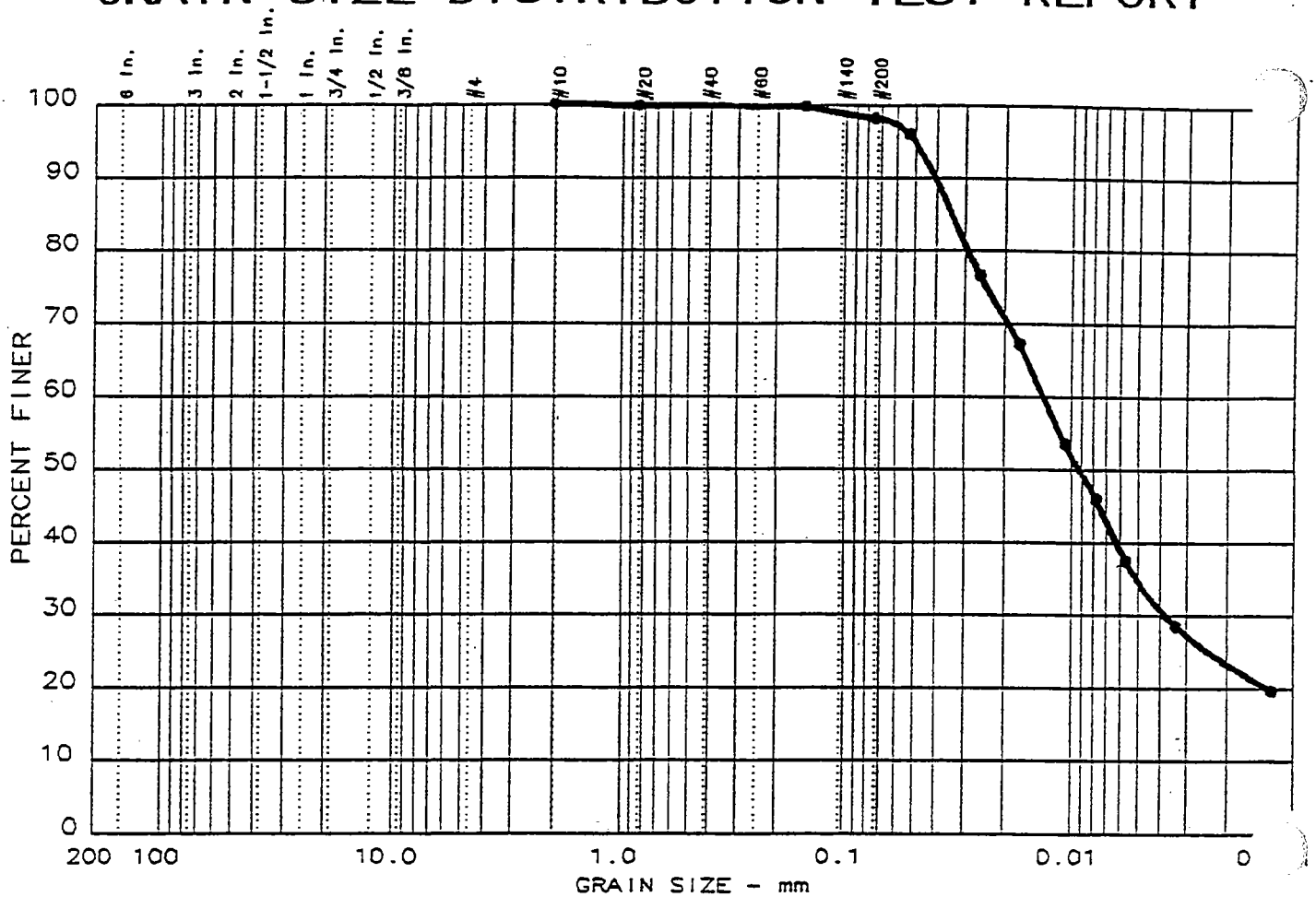
Remarks:
Client: Belasco Drilling Services Inc.
*/ Sample: 2
Lab No. 8651

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	2	0.0	0.0	1.9	63.5	34.6

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	26	8	0.03	0.01	0.01	0.004				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA2-BEDGW-001 Sample: 1 *

Date: 11/3/97

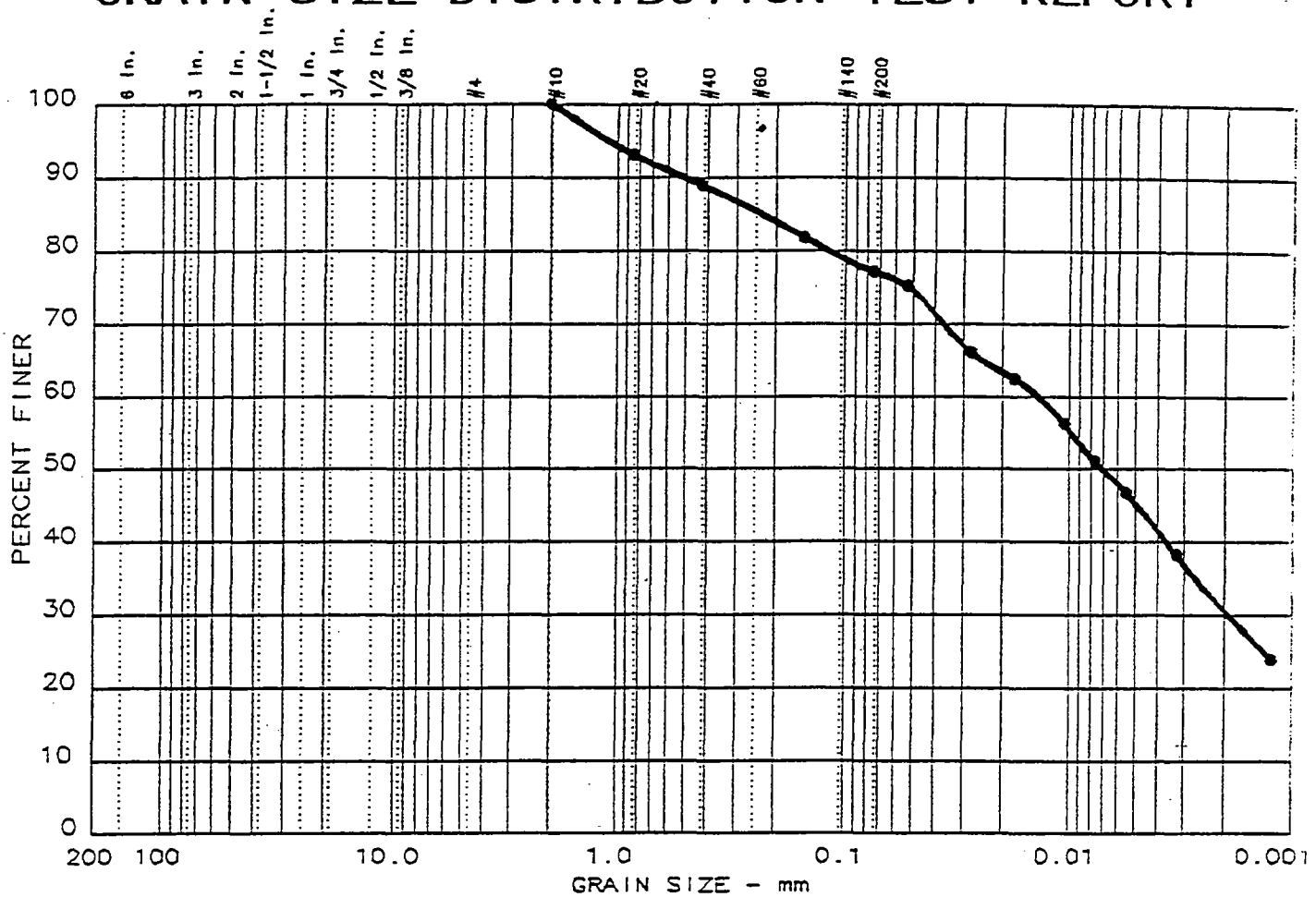
Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 10-12'
Lab No. 8652

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	0.0	22.9	31.7	45.4

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	29	10	0.23	0.01	0.01	0.002				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY WITH SAND	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA2-BEDGW-001 Sample:2 *

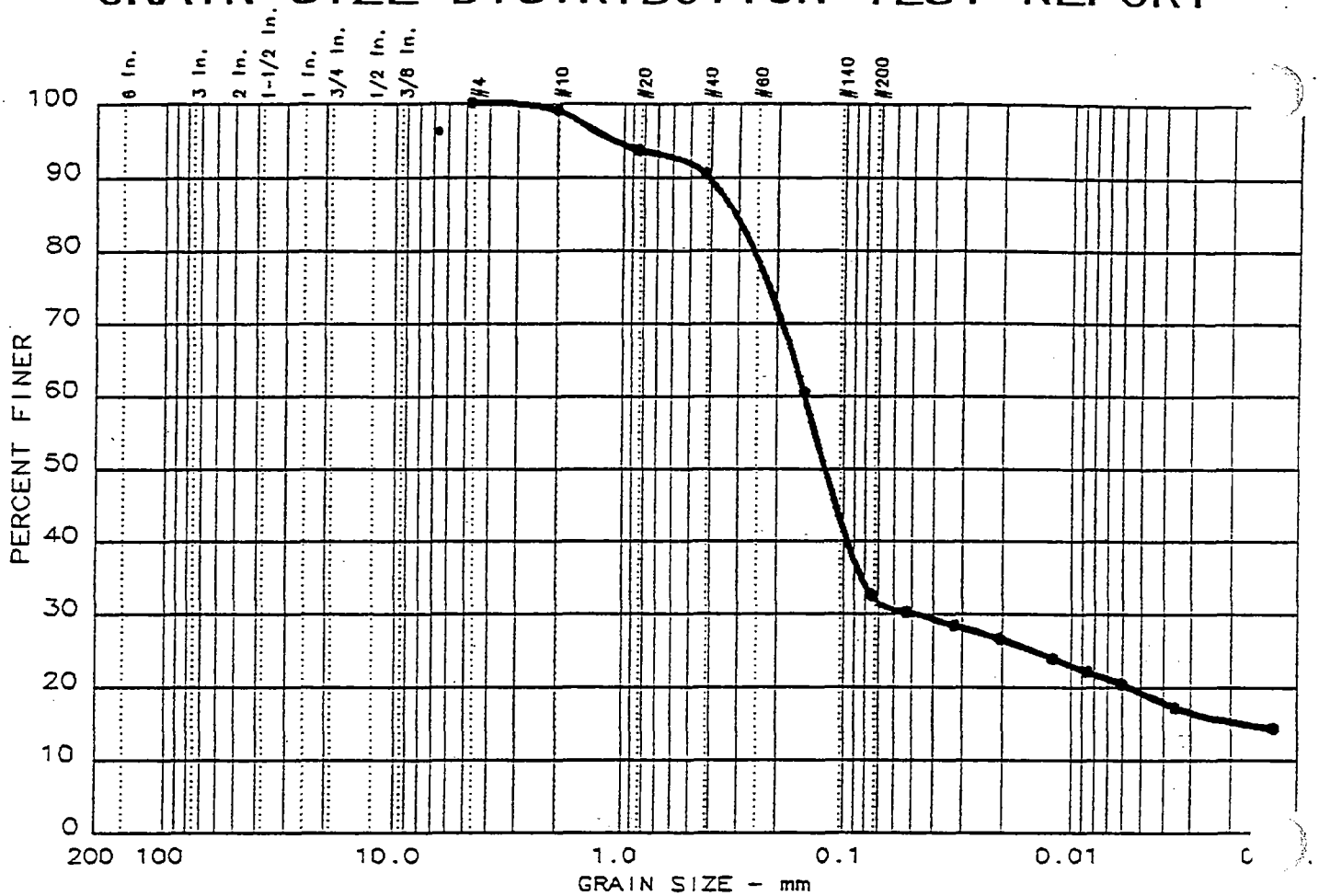
Date: 11/3/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth:16-18'
Lab No. 8653

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	1	0.0	0.0	67.4	13.3	19.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	26	4	0.31	0.15	0.12	0.047	0.0018			

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY SAND	SM	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-BG8-BEDGW-001 Sample: 1 *

Date: 11/6/97

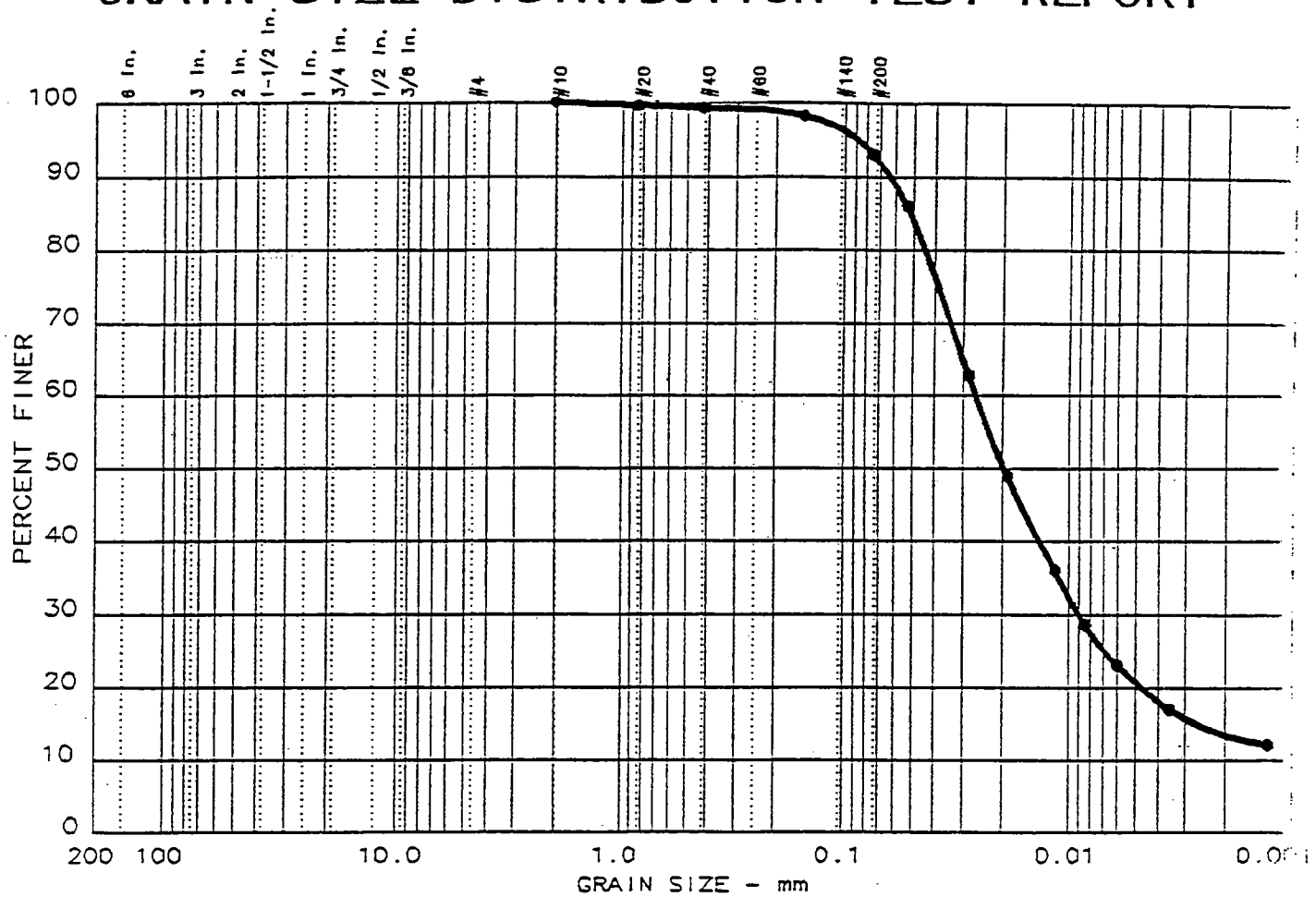
Remarks:
Client: Belasco Drilling Services Inc.
Depth: 0-2'
Lab No. 8654

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	0.0	6.9	72.4	20.7

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	25	5	0.05	0.03	0.02	0.009	0.0027			

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY CLAY	CL-ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA1-BEDGW-001 Sample: 1 *

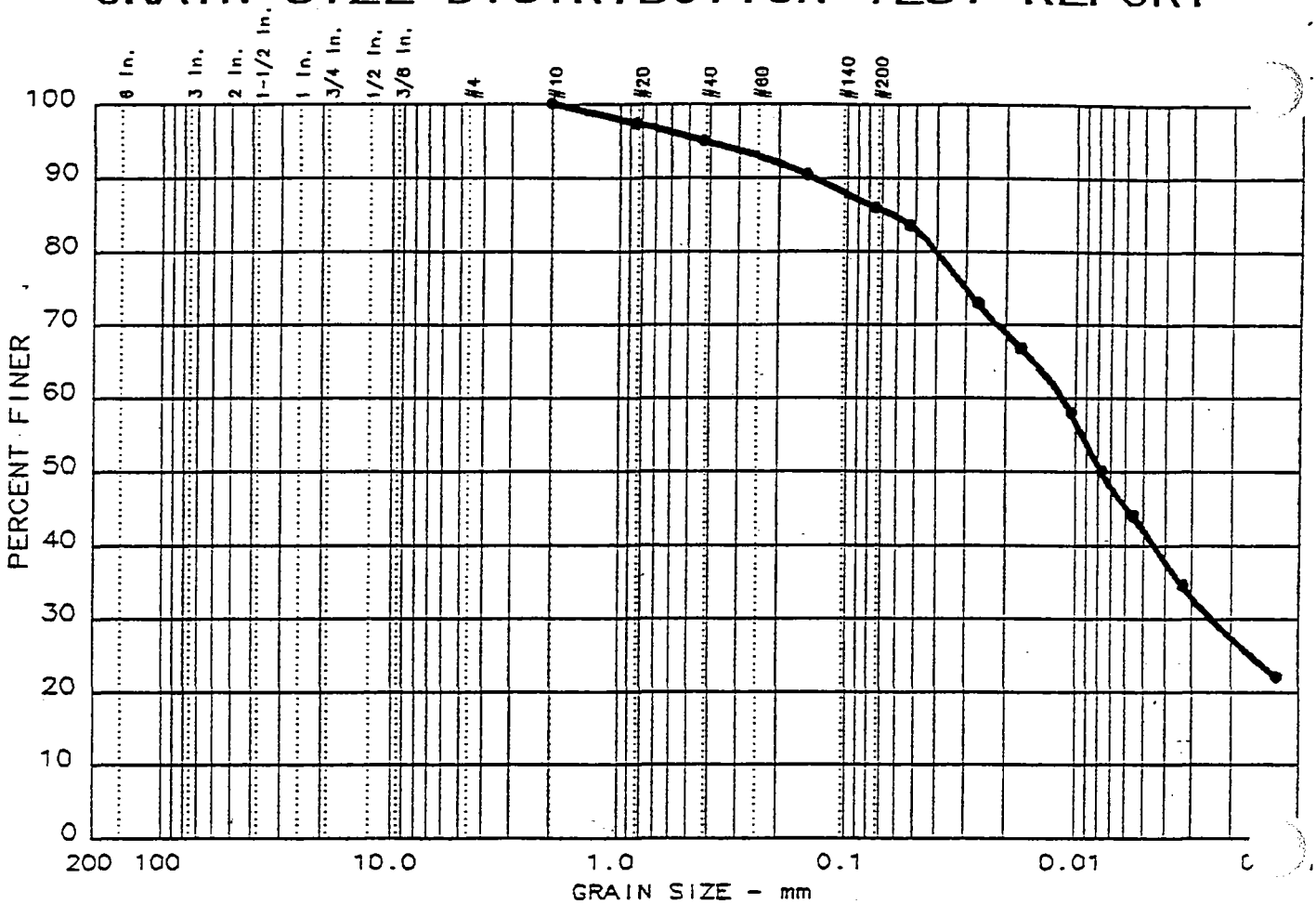
Date: 11/3/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 10-12'
Lab No. 8655

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	5	0.0	0.0	14.1	43.7	42.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	26	7	0.06	0.01	0.01	0.002				

MATERIAL DESCRIPTION	USCS	AASHTO
● SILTY CLAY	CL-ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA1-BEDGW-001 Sample:2 *

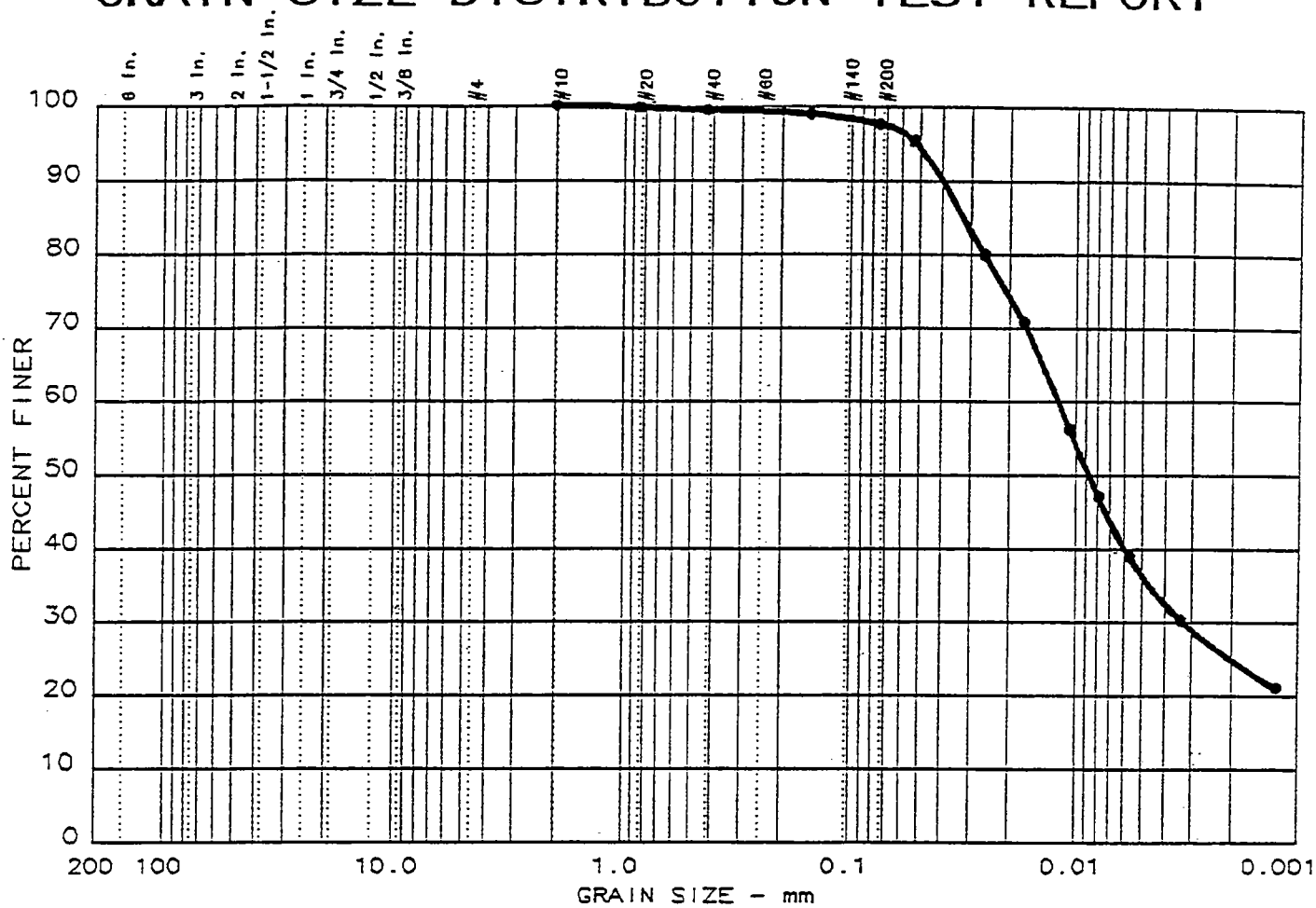
Date: 11/3/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth:18-20'
Lab No. 8656

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	2	0.0	0.0	2.4	61.3	36.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	31	9	0.03	0.01	0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA2GW-002 Sample: 1 *

Date: 11/4/97

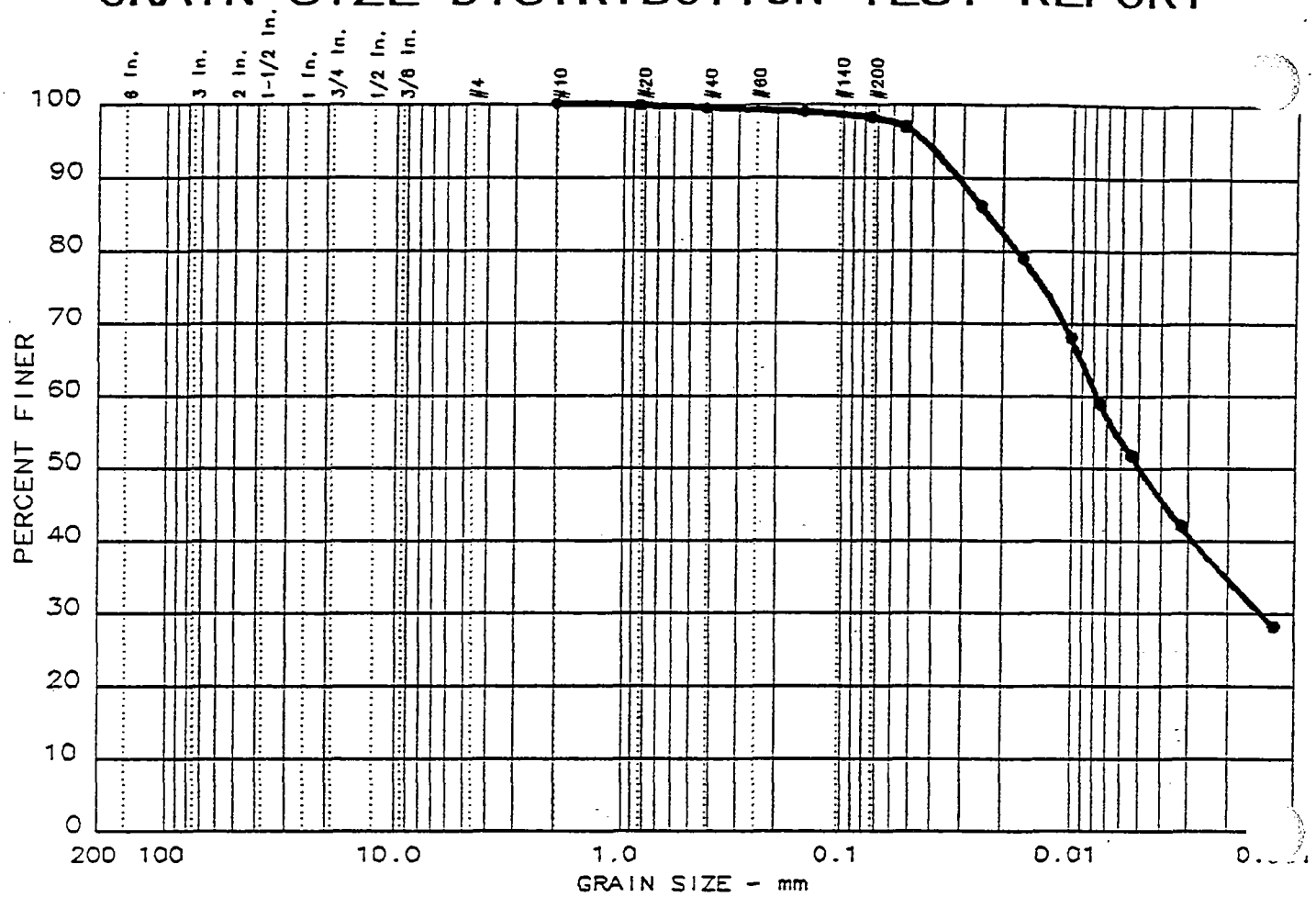
Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 6-8'
Lab No. 8657

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	6	0.0	0.0	1.8	48.0	50.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	31	10	0.02		0.00	0.001				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA2-BEDGW-002 Sample:2 *

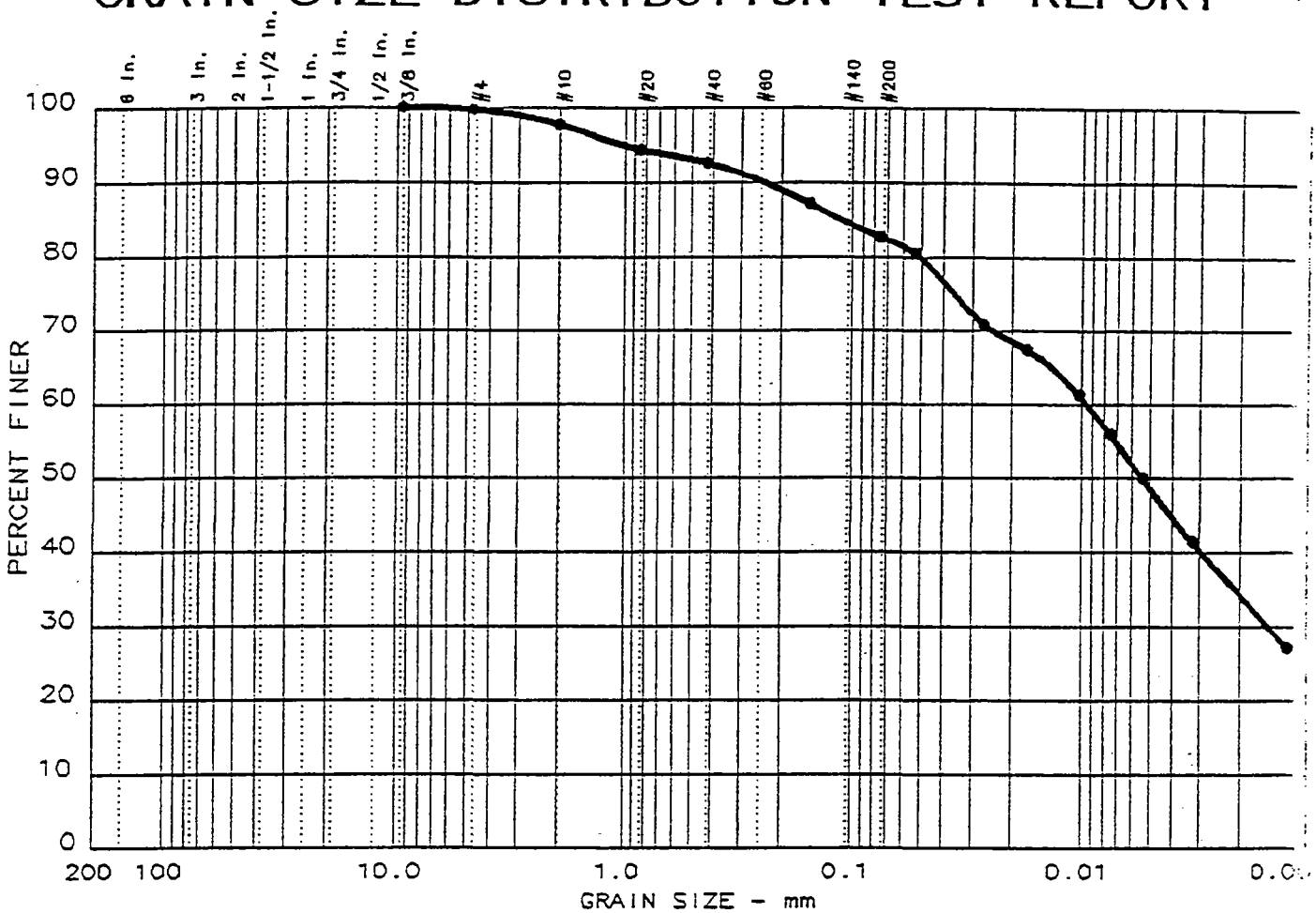
Date: 11/3/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth:10-12'
Lab No. 8658

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	0.3	17.1	34.1	48.5

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	30	12	0.11		0.01	0.001				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY WITH SAND	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA2GW-002 Sample: 3 *

Date: 11/4/97

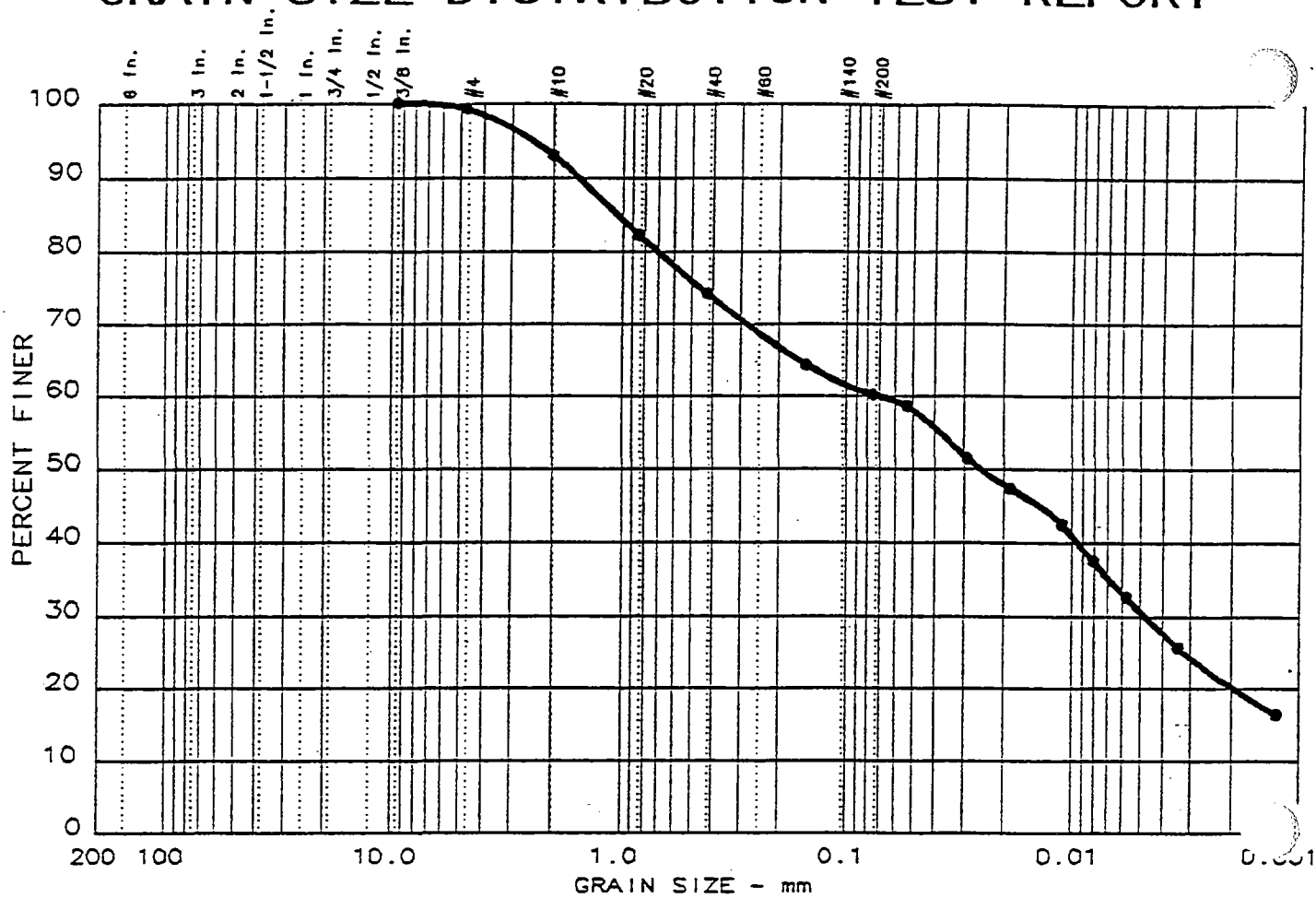
Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 16-18'
Lab No. 8659

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	0.7	39.2	29.4	30.7

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	27	8	1.05	0.07	0.03	0.005				

MATERIAL DESCRIPTION	USCS	AASHTO
● SANDY LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-MNTA-BEDG2-001 Sample: 23 *

Date: 11/4/97

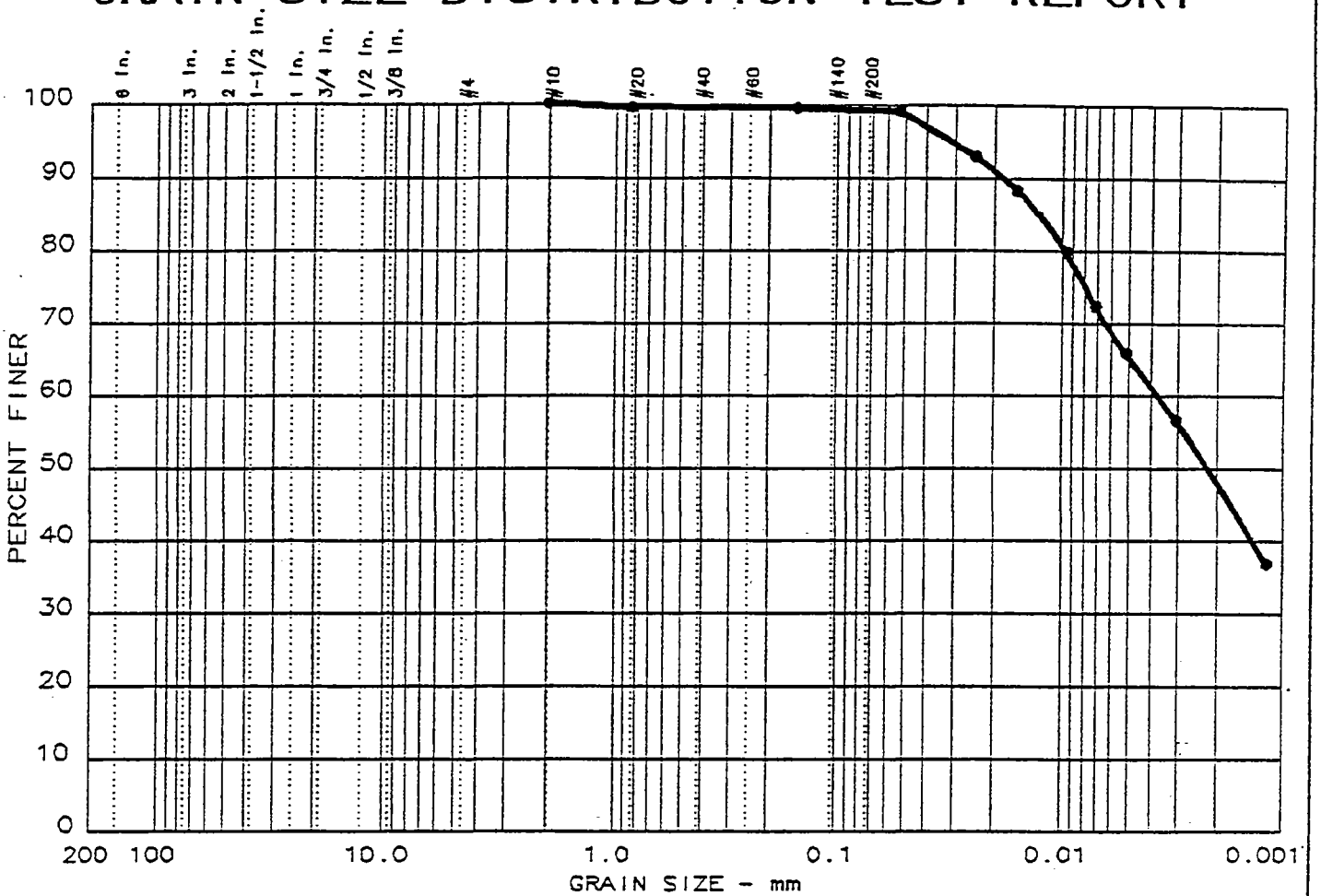
Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 18-20'
Lab No. 8661

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	2	0.0	0.0	0.8	33.9	65.3

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	37	13	0.01		0.00					

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-MNTA-BEDGW-001 Sample: 1 *

Date: 11/6/97

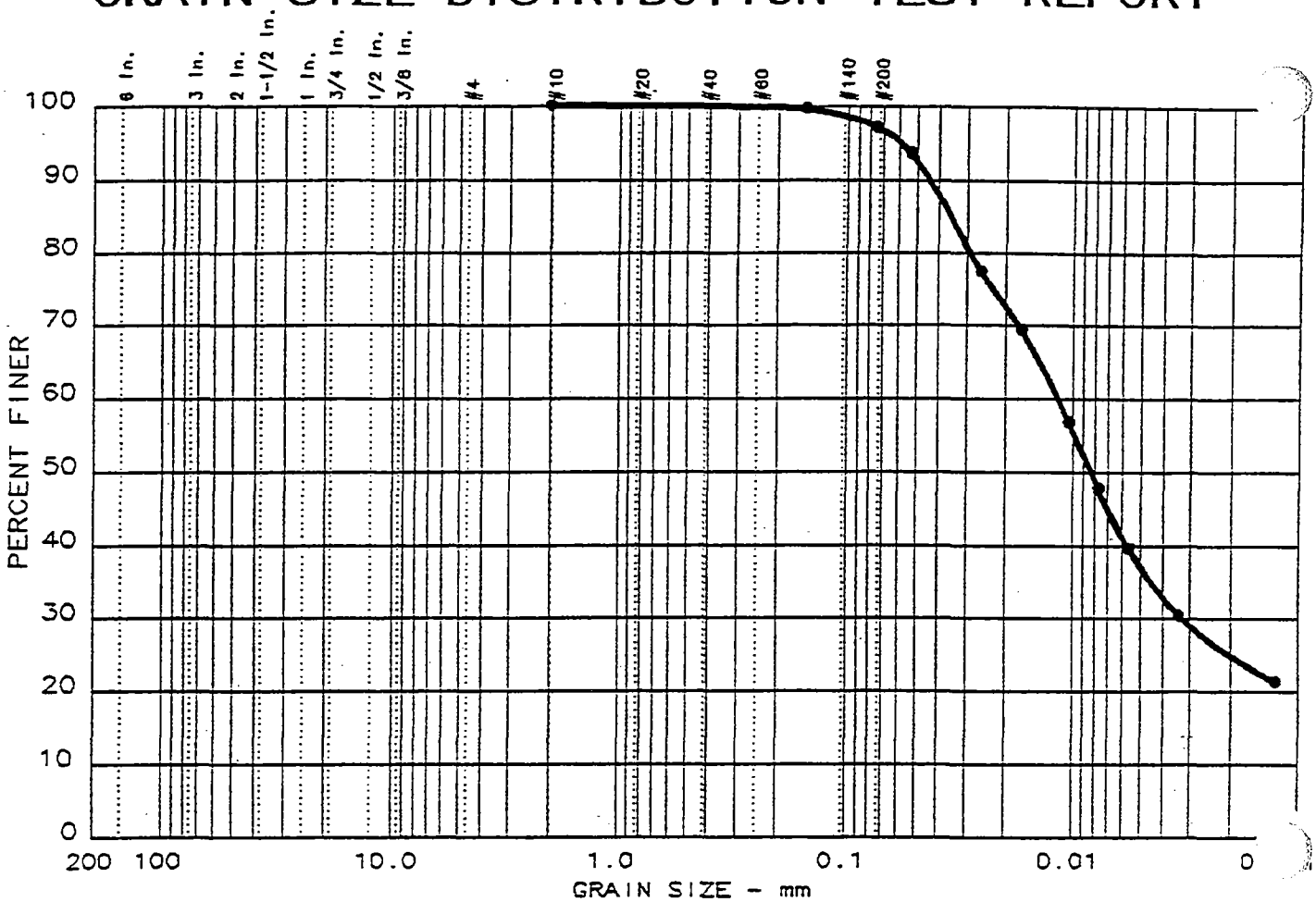
Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 12-14'
Lab No. 8660

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	0.0	2.9	59.9	37.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	27	8	0.04	0.01	0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● LEAN CLAY	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA3-BEDGW-001 Sample: 1 *

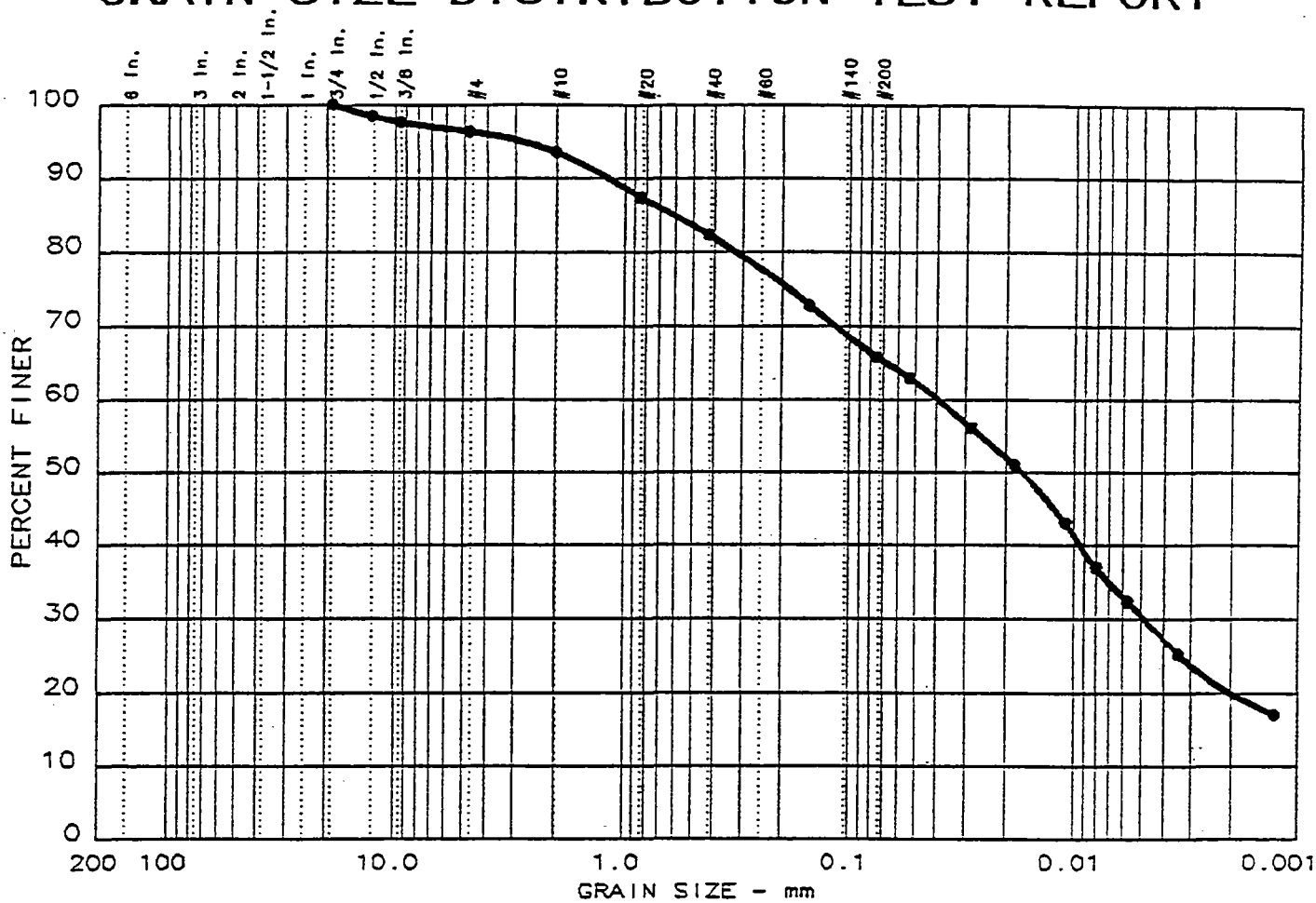
Date: 11/6/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 8-10'
Lab No. 8662

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	3.6	30.6	35.2	30.6

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	24	7	0.62	0.04	0.02	0.005				

MATERIAL DESCRIPTION	USCS	AASHTO
● SANDY SILTY CLAY	CL-ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-AA3-BEDGW-D01 Sample: 2 *

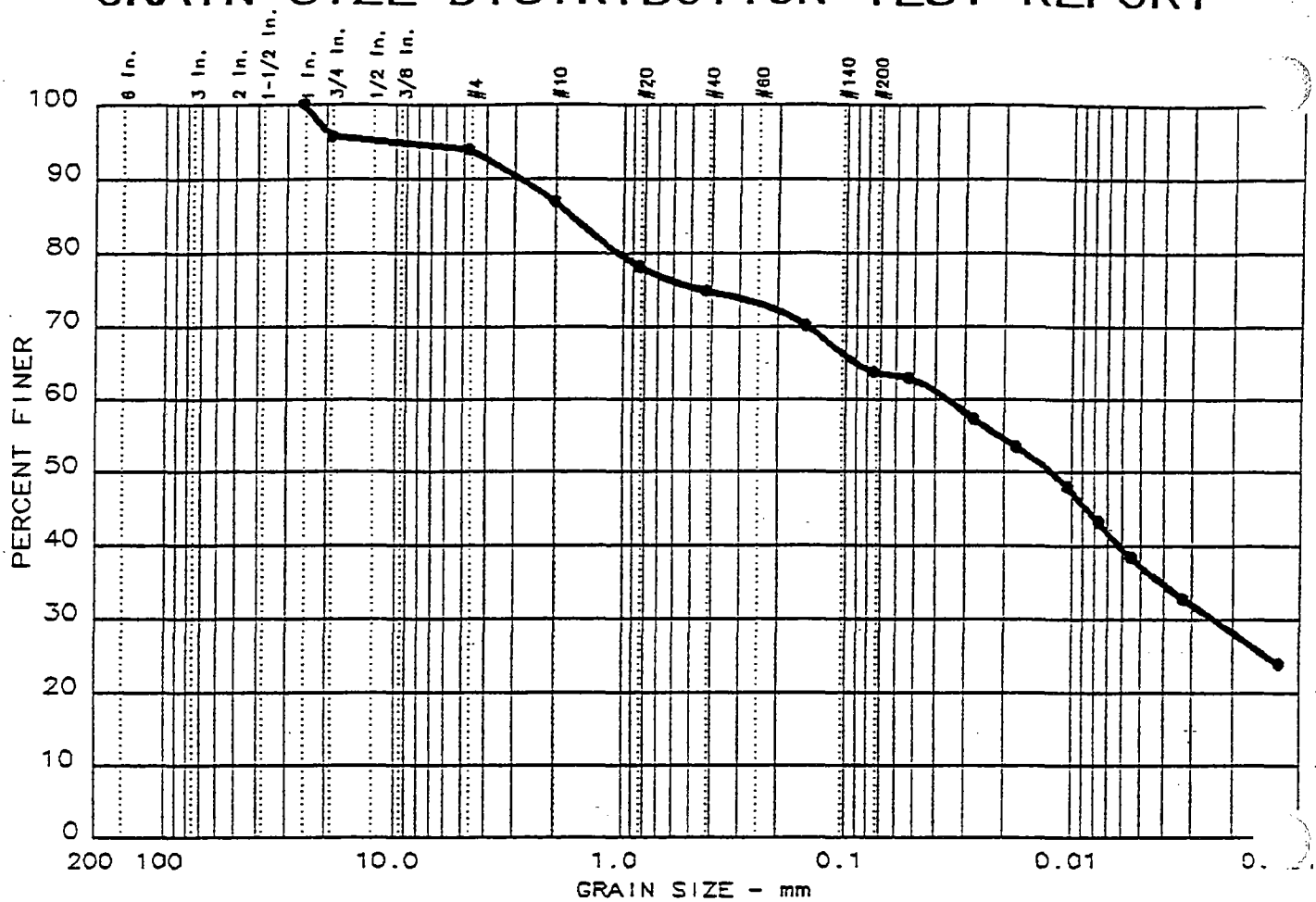
Date: 11/6/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 22-24'
Lab No. 8663

GRAIN SIZE DISTRIBUTION TEST REPORT
H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	5	0.0	6.0	30.4	26.5	37.1

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	46	15	1.68	0.04	0.01	0.002				

MATERIAL DESCRIPTION	USCS	AASHTO
● SANDY SILT	ML	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-TNTB-BEDGW-001 Sample: 1 *

Date: 11/6/97

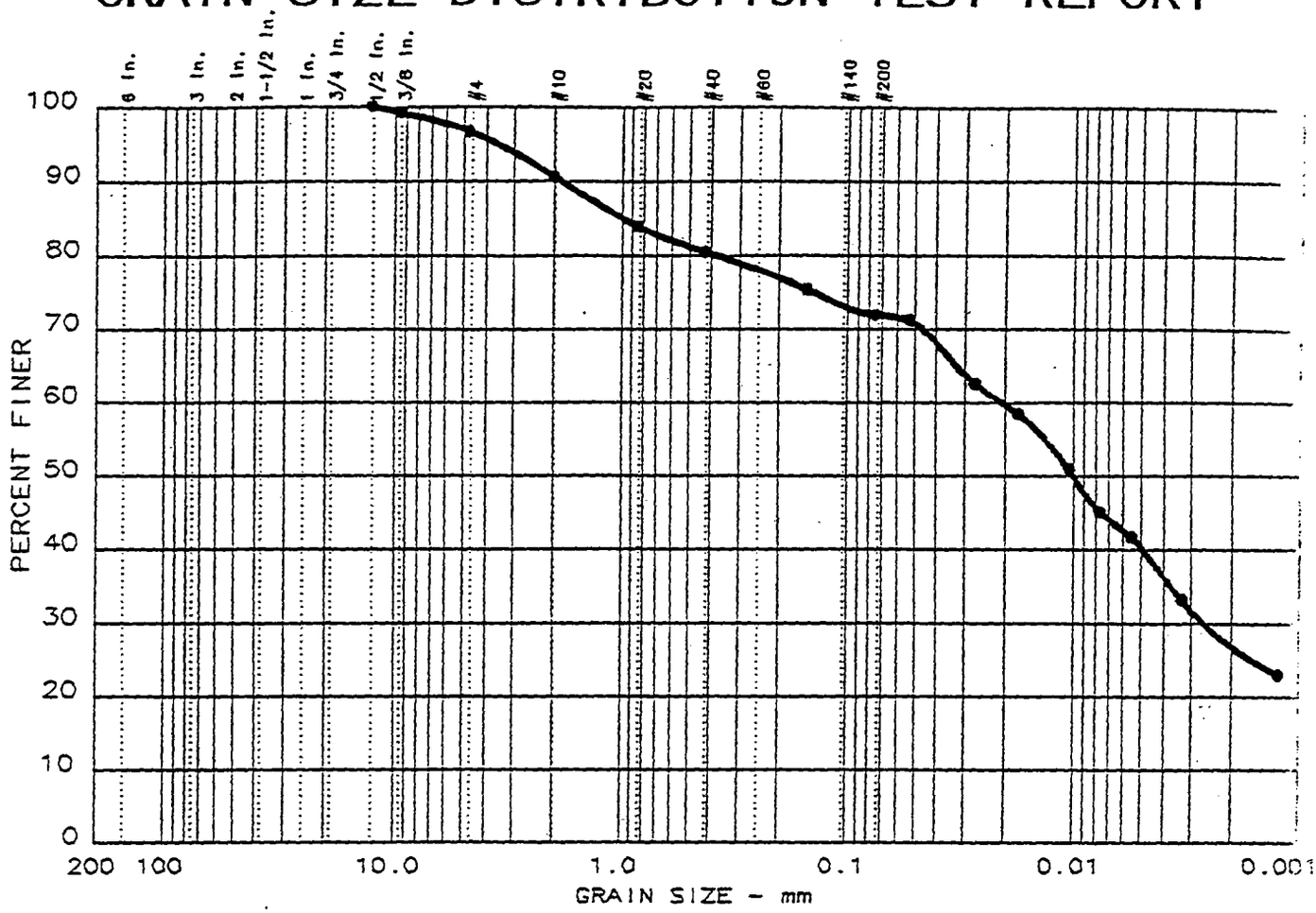
Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 0-2'
Lab No. 8664

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	6	0.0	3.4	24.8	31.6	40.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	45	19	0.99	0.02	0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● CLAY WITH SAND	CL	

Project No.: 60364.002
Project: NASA - Plum Brook Station
● Location: Boring: IT-TNTB-BEDGW-002 Sample: 1 *

ate: 11/6/97

Remarks:
Client: Belasco Drilling Services Inc.
* Depth: 2-4'
Lab No. 8665

GRAIN SIZE DISTRIBUTION TEST REPORT

H. C. NUTTING COMPANY

Figure No. _____

Elapsed Time	AA1-GW-002

Elapsed Time	AA1-BEDGW-001
68	48.761
70	48.758
72	48.727
74	48.752

Elapsed Time	AA1-GW-002
6.4	20.665
6.6	20.653
6.8	20.64
7	20.628
7.2	20.615
7.4	20.605
7.6	20.593
7.8	20.583
8	20.574
8.2	20.565
8.4	20.555
8.6	20.549
8.8	20.539
9	20.533
9.2	20.523
9.4	20.517
9.6	20.511
9.8	20.505
10	20.498
12	20.451
14	20.419
16	20.394
18	20.381
20	20.369
22	20.363
24	20.353
26	20.35
28	20.344
30	20.34
32	20.337
34	20.334
36	20.331
38	20.328
40	20.328
42	20.321

Elapsed Time	AA1-BEDGW-001
6.4	49.254
6.6	49.242
6.8	49.232
7	49.223
7.2	49.213
7.4	49.204
7.6	49.194
7.8	49.188
8	49.179
8.2	49.169
8.4	49.163
8.6	49.157
8.8	49.147
9	49.141
9.2	49.134
9.4	49.128
9.6	49.125
9.8	49.119
10	49.112
12	49.059
14	49.024
16	48.989
18	48.964
20	48.942
22	48.923
24	48.904
26	48.891
28	48.875
30	48.863
32	48.85
34	48.844
36	48.834
38	48.828
40	48.821
42	48.812
44	48.809
46	48.803
48	48.803
50	48.799
52	48.796
54	48.79
56	48.787
58	48.783
60	48.777
62	48.774
64	48.768
66	48.765

Elapsed Time	AA1-GW-002	Elapsed Time	AA1-BEDGW-001
0.6666	21.584	0.6666	50.13
0.6833	21.578	0.6833	50.114
0.7	21.571	0.7	50.111
0.7166	21.568	0.7166	50.102
0.7333	21.562	0.7333	50.089
0.75	21.555	0.75	50.079
0.7666	21.552	0.7666	50.076
0.7833	21.546	0.7833	50.076
0.8	21.543	0.8	50.057
0.8166	21.537	0.8166	50.064
0.8333	21.53	0.8333	50.048
0.85	21.527	0.85	50.048
0.8666	21.521	0.8666	50.045
0.8833	21.518	0.8833	50.032
0.9	21.511	0.9	50.026
0.9166	21.508	0.9166	50.023
0.9333	21.502	0.9333	50.019
0.95	21.496	0.95	50.016
0.9666	21.492	0.9666	50.007
0.9833	21.486	0.9833	50.007
1	21.483	1	49.997
1.2	21.407	1.2	49.947
1.4	21.357	1.4	49.899
1.6	21.309	1.6	49.846
1.8	21.262	1.8	49.798
2	21.218	2	49.751
2.2	21.177	2.2	49.71
2.4	21.139	2.4	49.669
2.6	21.101	2.6	49.634
2.8	21.066	2.8	49.599
3	21.035	3	49.571
3.2	21.003	3.2	49.539
3.4	20.972	3.4	49.514
3.6	20.943	3.6	49.488
3.8	20.915	3.8	49.466
4	20.89	4	49.444
4.2	20.867	4.2	49.422
4.4	20.842	4.4	49.403
4.6	20.82	4.6	49.384
4.8	20.801	4.8	49.365
5	20.779	5	49.349
5.2	20.76	5.2	49.333
5.4	20.744	5.4	49.321
5.6	20.725	5.6	49.305
5.8	20.71	5.8	49.292
6	20.694	6	49.28
6.2	20.678	6.2	49.267

Elapsed Time	AA1-GW-002	Elapsed Time	AA1-BEDGW-001
0.2433	21.739	0.2433	50.37
0.2466	21.739	0.2466	50.351
0.25	21.735	0.25	50.354
0.2533	21.729	0.2533	50.361
0.2566	21.726	0.2566	50.342
0.26	21.726	0.26	50.357
0.2633	21.726	0.2633	50.348
0.2666	21.729	0.2666	50.351
0.27	21.726	0.27	50.332
0.2733	21.726	0.2733	50.339
0.2766	21.723	0.2766	50.339
0.28	21.716	0.28	50.335
0.2833	21.716	0.2833	50.339
0.2866	21.716	0.2866	50.326
0.29	21.72	0.29	50.329
0.2933	21.72	0.2933	50.326
0.2966	21.716	0.2966	50.326
0.3	21.713	0.3	50.326
0.3033	21.71	0.3033	50.31
0.3066	21.707	0.3066	50.307
0.31	21.71	0.31	50.32
0.3133	21.71	0.3133	50.316
0.3166	21.71	0.3166	50.297
0.32	21.707	0.32	50.301
0.3233	21.704	0.3233	50.301
0.3266	21.701	0.3266	50.294
0.33	21.701	0.33	50.297
0.3333	21.701	0.3333	50.294
0.35	21.694	0.35	50.31
0.3666	21.688	0.3666	50.307
0.3833	21.682	0.3833	50.282
0.4	21.675	0.4	50.269
0.4166	21.669	0.4166	50.247
0.4333	21.663	0.4333	50.244
0.45	21.656	0.45	50.234
0.4666	21.653	0.4666	50.225
0.4833	21.647	0.4833	50.209
0.5	21.638	0.5	50.203
0.5166	21.631	0.5166	50.209
0.5333	21.628	0.5333	50.2
0.55	21.622	0.55	50.177
0.5666	21.615	0.5666	50.174
0.5833	21.609	0.5833	50.168
0.6	21.606	0.6	50.162
0.6166	21.6	0.6166	50.149
0.6333	21.593	0.6333	50.136
0.65	21.587	0.65	50.127

Elapsed Time	AA1-GW-002	Elapsed Time	AA1-BEDGW-001
0.0866	21.843	0.0866	50.2
0.09	21.767	0.09	50.225
0.0933	21.732	0.0933	50.225
0.0966	21.754	0.0966	50.282
0.1	21.811	0.1	50.354
0.1033	21.858	0.1033	50.395
0.1066	21.862	0.1066	50.386
0.11	21.824	0.11	50.405
0.1133	21.773	0.1133	50.392
0.1166	21.742	0.1166	50.357
0.12	21.754	0.12	50.361
0.1233	21.789	0.1233	50.364
0.1266	21.824	0.1266	50.37
0.13	21.827	0.13	50.37
0.1333	21.805	0.1333	50.386
0.1366	21.77	0.1366	50.392
0.14	21.748	0.14	50.408
0.1433	21.751	0.1433	50.414
0.1466	21.776	0.1466	50.43
0.15	21.798	0.15	50.443
0.1533	21.802	0.1533	50.452
0.1566	21.789	0.1566	50.459
0.16	21.764	0.16	50.456
0.1633	21.748	0.1633	50.446
0.1666	21.748	0.1666	50.449
0.17	21.764	0.17	50.43
0.1733	21.78	0.1733	50.418
0.1766	21.783	0.1766	50.414
0.18	21.773	0.18	50.405
0.1833	21.757	0.1833	50.395
0.1866	21.745	0.1866	50.395
0.19	21.745	0.19	50.399
0.1933	21.754	0.1933	50.395
0.1966	21.764	0.1966	50.395
0.2	21.764	0.2	50.389
0.2033	21.757	0.2033	50.386
0.2066	21.748	0.2066	50.399
0.21	21.742	0.21	50.373
0.2133	21.739	0.2133	50.37
0.2166	21.745	0.2166	50.377
0.22	21.748	0.22	50.354
0.2233	21.751	0.2233	50.351
0.2266	21.745	0.2266	50.351
0.23	21.739	0.23	50.351
0.2333	21.735	0.2333	50.351
0.2366	21.732	0.2366	50.351
0.24	21.735	0.24	50.364

SE1000 C
Environmental Logger
10/10 12::48

Unit# 00000	Test 0
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	20
Linearity	0
Scale factor	10
Offset	-0.06
Delay mSEC	50
Step 0 10/07	9:57:04

Elapsed Time	AA1-GW-002
0	21.568
0.0033	21.795
0.0066	22.07
0.01	22.25
0.0133	22.117
0.0166	21.852
0.02	21.66
0.0233	21.622
0.0266	21.751
0.03	21.969
0.0333	22.076
0.0366	22.045
0.04	21.893
0.0433	21.729
0.0466	21.669
0.05	21.748
0.0533	21.877
0.0566	21.969
0.06	21.959
0.0633	21.862
0.0666	21.751
0.07	21.707
0.0733	21.751
0.0766	21.84
0.08	21.906
0.0833	21.906

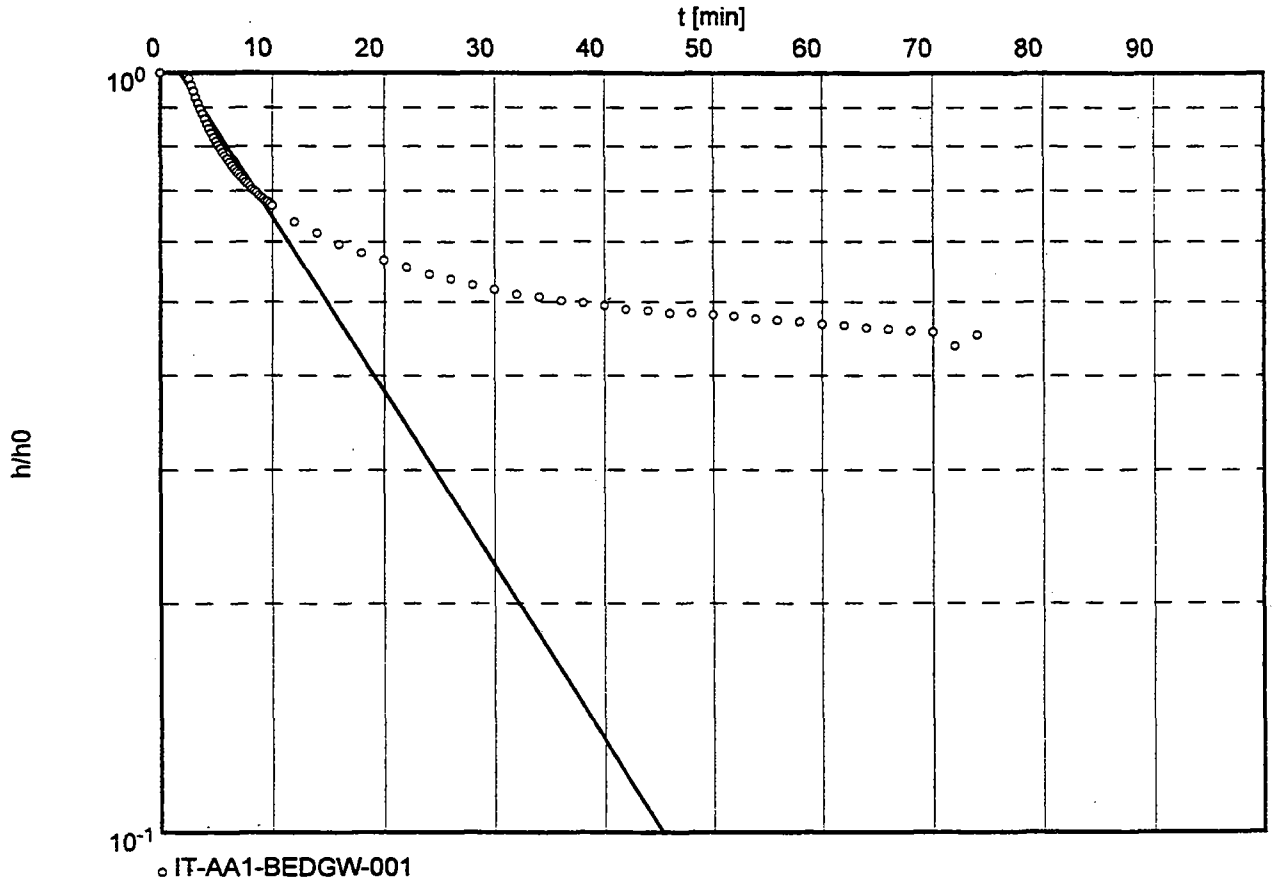
SE1000 C
Environmental Logger
10/10 12::51

Unit# 00000	Test 1
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	48
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/07	12:46:08

Elapsed Time	AA1-BEDGW-001
0	49.662
0.0033	49.937
0.0066	50.177
0.01	50.313
0.0133	50.357
0.0166	50.373
0.02	50.269
0.0233	50.143
0.0266	49.997
0.03	49.877
0.0333	49.814
0.0366	49.846
0.04	49.959
0.0433	50.114
0.0466	50.196
0.05	50.272
0.0533	50.285
0.0566	50.345
0.06	50.335
0.0633	50.361
0.0666	50.32
0.07	50.272
0.0733	50.231
0.0766	50.203
0.08	50.18
0.0833	50.136

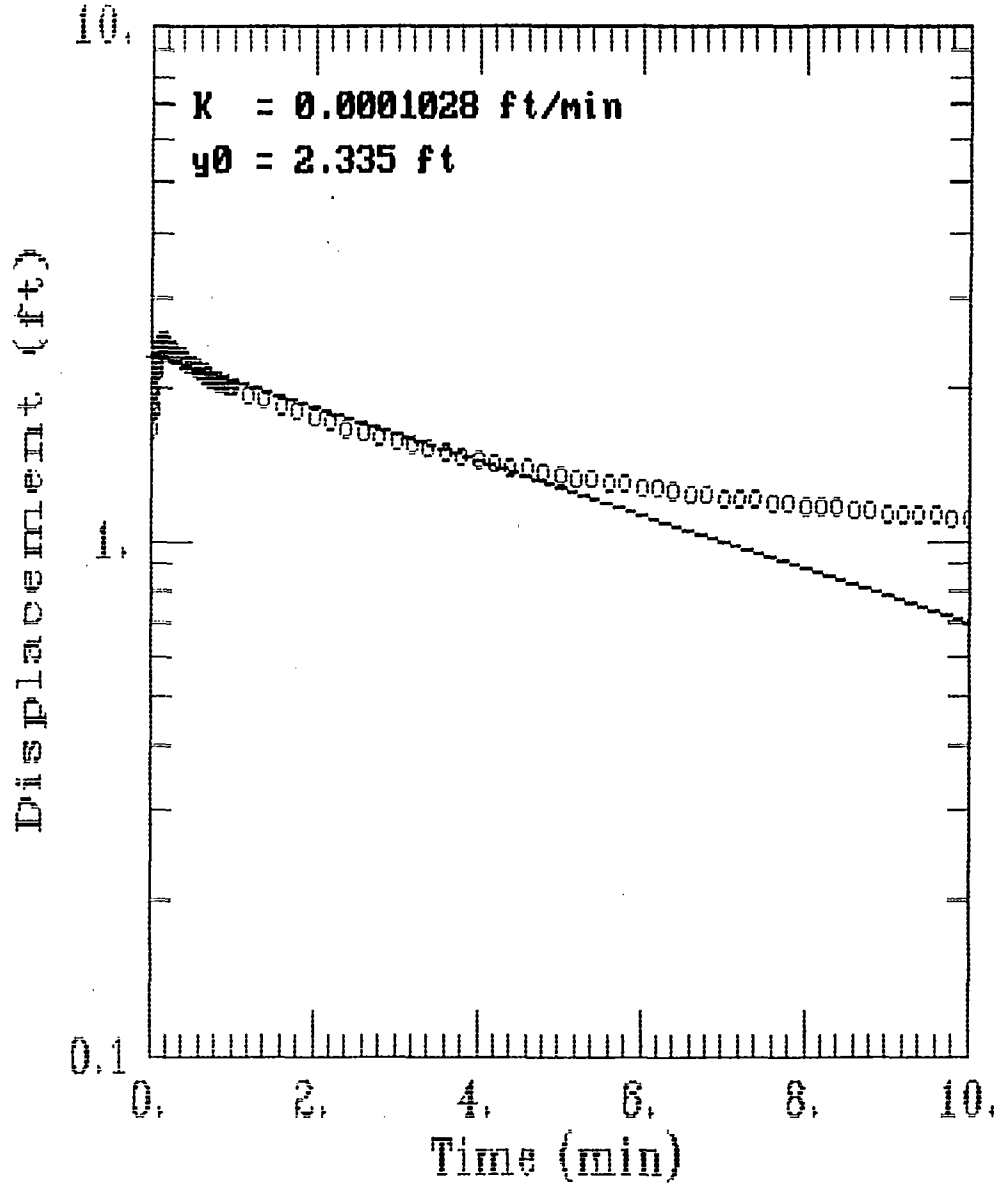
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: Jane Li

Slug Test No. 1	Test conducted on: 10/7/97
IT-AA1-BEDGW-001	



Hydraulic conductivity [ft/min]: 5.17×10^{-5}

PBOW-IT-AA1-BEDGW-001 Rising Test



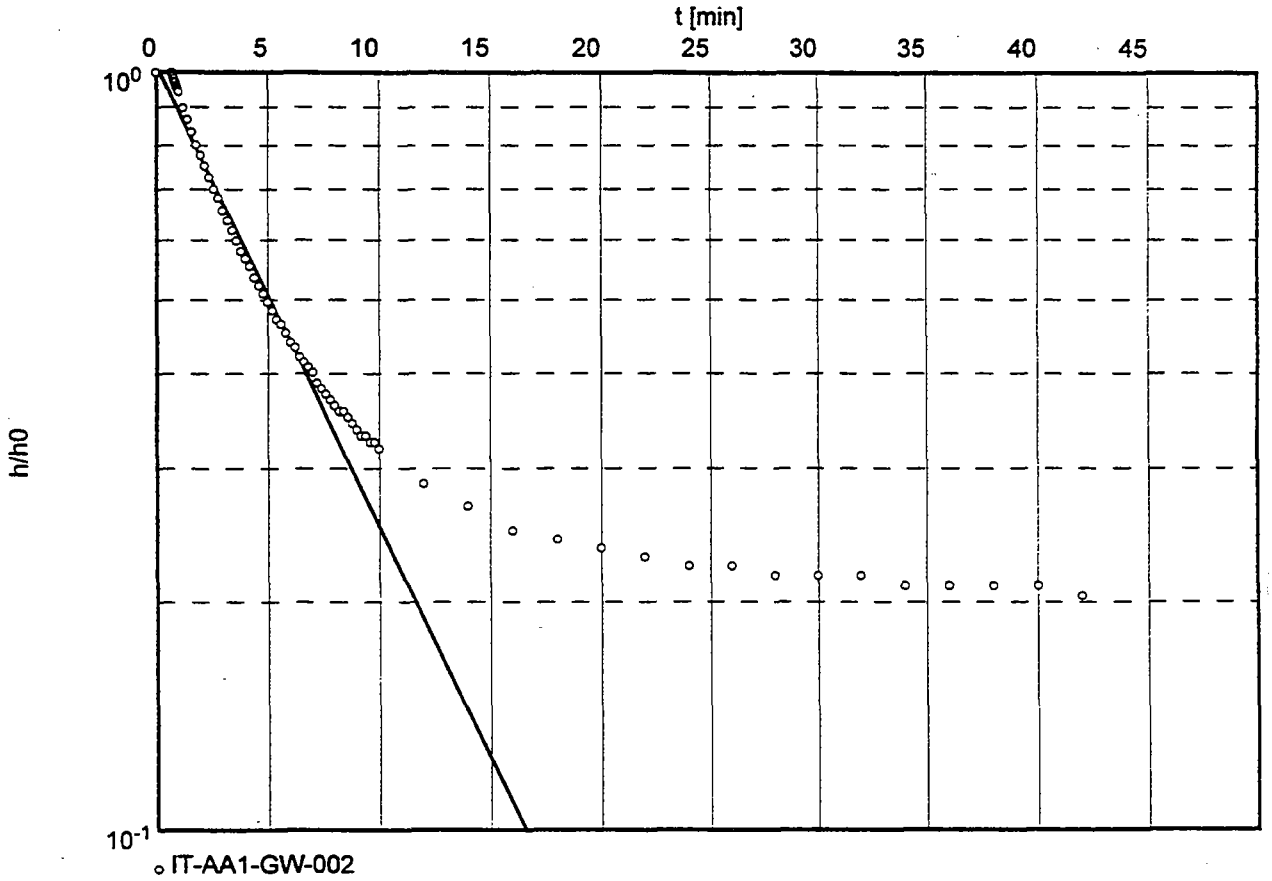
AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

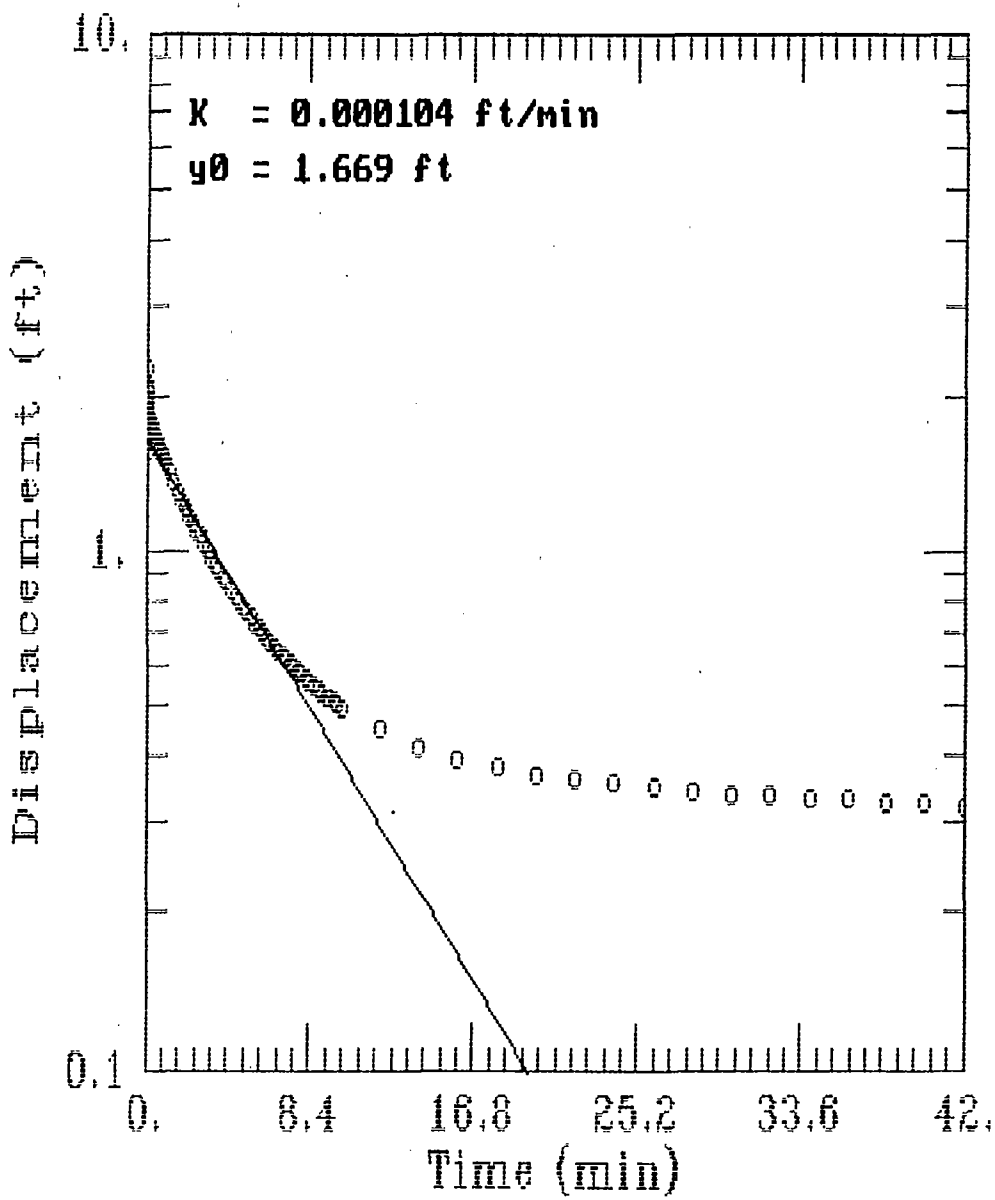
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 14.10.1997 Page 1 Project: PBOW Evaluated by: Jane Li

Slug Test No. 0	Test conducted on: 10/10/97
IT-AA1-GW-002	



Hydraulic conductivity [ft/min]: 5.13×10^{-4}

PBOW IT-AA1-GW-002 Rising Test



AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

Elapsed Time	TNTB-BEDGW-002
6.4	20.47
6.6	20.477
6.8	20.483
7	20.492
7.2	20.499
7.4	20.505
7.6	20.511
7.8	20.518
8	20.524
8.2	20.53
8.4	20.534
8.6	20.54
8.8	20.546
9	20.549
9.2	20.559
9.4	20.565
9.6	20.571
9.8	20.575
10	20.581

Elapsed Time	ABG-BEDGW-001
6.4	19.892
6.6	19.886
6.8	19.876
7	19.857
7.2	19.81
7.4	19.699
7.6	19.662
7.8	19.662
8	19.674
8.2	19.658
8.4	19.658
8.6	19.665
8.8	19.668
9	19.668
9.2	19.665
9.4	19.668
9.6	19.671
9.8	19.665
10	19.652
12	19.387
14	19.336
16	19.352
18	19.137
20	19.248

Elapsed Time	TNTB-BEDGW-001
6.4	47.43
6.6	47.43
6.8	47.433
7	47.436
7.2	47.439
7.4	47.443
7.6	47.446
7.8	47.449
8	47.452
8.2	47.455
8.4	47.458
8.6	47.458
8.8	47.462
9	47.465
9.2	47.468
9.4	47.471
9.6	47.471
9.8	47.474
10	47.474
12	47.465
14	47.458
16	47.455
18	47.443
20	47.452
22	47.458
24	47.458
26	47.455
28	47.449
30	47.452
32	47.481
34	47.506
36	47.537
38	47.56

Elapsed Time	TNTB-BEDGW-002	Elapsed Time	ABG-BEDGW-001	Elapsed Time	TNTB-BEDGW-001
0.6666	20.341	0.6666	19.936	0.6666	47.36
0.6833	20.341	0.6833	19.93	0.6833	47.36
0.7	20.341	0.7	19.924	0.7	47.364
0.7166	20.341	0.7166	19.921	0.7166	47.364
0.7333	20.341	0.7333	19.917	0.7333	47.364
0.75	20.341	0.75	19.911	0.75	47.364
0.7666	20.341	0.7666	19.908	0.7666	47.367
0.7833	20.341	0.7833	19.905	0.7833	47.367
0.8	20.341	0.8	19.902	0.8	47.367
0.8166	20.341	0.8166	19.899	0.8166	47.367
0.8333	20.341	0.8333	19.902	0.8333	47.37
0.85	20.341	0.85	19.917	0.85	47.37
0.8666	20.341	0.8666	19.908	0.8666	47.37
0.8833	20.341	0.8833	19.902	0.8833	47.373
0.9	20.341	0.9	19.899	0.9	47.373
0.9166	20.341	0.9166	19.895	0.9166	47.373
0.9333	20.341	0.9333	19.892	0.9333	47.373
0.95	20.344	0.95	19.892	0.95	47.376
0.9666	20.344	0.9666	19.886	0.9666	47.376
0.9833	20.341	0.9833	19.883	0.9833	47.376
1	20.341	1	19.88	1	47.376
1.2	20.341	1.2	19.854	1.2	47.367
1.4	20.344	1.4	19.845	1.4	47.367
1.6	20.347	1.6	19.845	1.6	47.367
1.8	20.35	1.8	19.845	1.8	47.367
2	20.353	2	19.848	2	47.367
2.2	20.357	2.2	19.842	2.2	47.37
2.4	20.36	2.4	19.842	2.4	47.37
2.6	20.366	2.6	19.848	2.6	47.373
2.8	20.369	2.8	19.854	2.8	47.373
3	20.376	3	19.861	3	47.376
3.2	20.379	3.2	19.845	3.2	47.38
3.4	20.385	3.4	19.851	3.4	47.383
3.6	20.388	3.6	19.861	3.6	47.386
3.8	20.395	3.8	19.87	3.8	47.389
4	20.398	4	19.88	4	47.392
4.2	20.404	4.2	19.886	4.2	47.395
4.4	20.41	4.4	19.889	4.4	47.398
4.6	20.413	4.6	19.889	4.6	47.402
4.8	20.417	4.8	19.892	4.8	47.405
5	20.42	5	19.902	5	47.408
5.2	20.426	5.2	19.902	5.2	47.411
5.4	20.432	5.4	19.917	5.4	47.452
5.6	20.439	5.6	19.895	5.6	47.421
5.8	20.448	5.8	19.895	5.8	47.424
6	20.455	6	19.895	6	47.424
6.2	20.464	6.2	19.892	6.2	47.427

Elapsed Time	TNTB-BEDGW-002	Elapsed Time	ABG-BEDGW-001	Elapsed Time	TNTB-BEDGW-001
0.2433	20.458	0.2433	20.139	0.2433	47.373
0.2466	20.455	0.2466	20.132	0.2466	47.37
0.25	20.451	0.25	20.126	0.25	47.373
0.2533	20.445	0.2533	20.123	0.2533	47.373
0.2566	20.442	0.2566	20.117	0.2566	47.373
0.26	20.439	0.26	20.113	0.26	47.373
0.2633	20.432	0.2633	20.107	0.2633	47.37
0.2666	20.429	0.2666	20.104	0.2666	47.37
0.27	20.426	0.27	20.101	0.27	47.373
0.2733	20.423	0.2733	20.094	0.2733	47.37
0.2766	20.42	0.2766	20.091	0.2766	47.37
0.28	20.417	0.28	20.088	0.28	47.373
0.2833	20.417	0.2833	20.085	0.2833	47.37
0.2866	20.413	0.2866	20.082	0.2866	47.37
0.29	20.41	0.29	20.079	0.29	47.37
0.2933	20.407	0.2933	20.075	0.2933	47.37
0.2966	20.404	0.2966	20.072	0.2966	47.37
0.3	20.404	0.3	20.069	0.3	47.37
0.3033	20.401	0.3033	20.066	0.3033	47.37
0.3066	20.398	0.3066	20.063	0.3066	47.373
0.31	20.395	0.31	20.06	0.31	47.37
0.3133	20.395	0.3133	20.056	0.3133	47.373
0.3166	20.391	0.3166	20.053	0.3166	47.373
0.32	20.391	0.32	20.05	0.32	47.373
0.3233	20.388	0.3233	20.05	0.3233	47.37
0.3266	20.388	0.3266	20.047	0.3266	47.37
0.33	20.385	0.33	20.044	0.33	47.373
0.3333	20.385	0.3333	20.041	0.3333	47.373
0.35	20.372	0.35	20.031	0.35	47.36
0.3666	20.366	0.3666	20.022	0.3666	47.357
0.3833	20.363	0.3833	20.012	0.3833	47.357
0.4	20.36	0.4	20.006	0.4	47.357
0.4166	20.357	0.4166	20	0.4166	47.357
0.4333	20.353	0.4333	19.996	0.4333	47.357
0.45	20.353	0.45	19.99	0.45	47.357
0.4666	20.35	0.4666	19.984	0.4666	47.357
0.4833	20.347	0.4833	19.981	0.4833	47.357
0.5	20.347	0.5	19.977	0.5	47.357
0.5166	20.347	0.5166	19.974	0.5166	47.357
0.5333	20.344	0.5333	19.968	0.5333	47.357
0.55	20.344	0.55	19.965	0.55	47.357
0.5666	20.344	0.5666	19.962	0.5666	47.357
0.5833	20.344	0.5833	19.959	0.5833	47.357
0.6	20.344	0.6	19.952	0.6	47.357
0.6166	20.344	0.6166	19.949	0.6166	47.36
0.6333	20.341	0.6333	19.946	0.6333	47.36
0.65	20.341	0.65	19.94	0.65	47.36

Elapsed Time	TNTB-BEDGW-002	Elapsed Time	ABG-BEDGW-001	Elapsed Time	TNTB-BEDGW-001
0.0866	21.001	0.0866	20.808	0.0866	47.449
0.09	20.982	0.09	20.777	0.09	47.436
0.0933	20.957	0.0933	20.751	0.0933	47.427
0.0966	20.935	0.0966	20.726	0.0966	47.417
0.1	20.919	0.1	20.698	0.1	47.411
0.1033	20.9	0.1033	20.676	0.1033	47.402
0.1066	20.881	0.1066	20.65	0.1066	47.395
0.11	20.862	0.11	20.628	0.11	47.392
0.1133	20.846	0.1133	20.606	0.1133	47.389
0.1166	20.827	0.1166	20.584	0.1166	47.389
0.12	20.812	0.12	20.562	0.12	47.386
0.1233	20.796	0.1233	20.543	0.1233	47.383
0.1266	20.78	0.1266	20.524	0.1266	47.383
0.13	20.767	0.13	20.505	0.13	47.383
0.1333	20.752	0.1333	20.486	0.1333	47.383
0.1366	20.739	0.1366	20.467	0.1366	47.386
0.14	20.723	0.14	20.451	0.14	47.383
0.1433	20.71	0.1433	20.436	0.1433	47.383
0.1466	20.698	0.1466	20.42	0.1466	47.383
0.15	20.685	0.15	20.404	0.15	47.383
0.1533	20.673	0.1533	20.388	0.1533	47.383
0.1566	20.66	0.1566	20.376	0.1566	47.383
0.16	20.65	0.16	20.363	0.16	47.38
0.1633	20.638	0.1633	20.347	0.1633	47.38
0.1666	20.628	0.1666	20.334	0.1666	47.376
0.17	20.616	0.17	20.325	0.17	47.376
0.1733	20.606	0.1733	20.312	0.1733	47.376
0.1766	20.597	0.1766	20.3	0.1766	47.376
0.18	20.587	0.18	20.287	0.18	47.376
0.1833	20.578	0.1833	20.278	0.1833	47.376
0.1866	20.568	0.1866	20.268	0.1866	47.376
0.19	20.559	0.19	20.259	0.19	47.373
0.1933	20.552	0.1933	20.249	0.1933	47.373
0.1966	20.543	0.1966	20.24	0.1966	47.373
0.2	20.537	0.2	20.23	0.2	47.376
0.2033	20.53	0.2033	20.221	0.2033	47.376
0.2066	20.524	0.2066	20.211	0.2066	47.373
0.21	20.515	0.21	20.205	0.21	47.373
0.2133	20.508	0.2133	20.195	0.2133	47.376
0.2166	20.502	0.2166	20.189	0.2166	47.373
0.22	20.496	0.22	20.183	0.22	47.373
0.2233	20.489	0.2233	20.173	0.2233	47.373
0.2266	20.486	0.2266	20.167	0.2266	47.373
0.23	20.477	0.23	20.161	0.23	47.373
0.2333	20.47	0.2333	20.154	0.2333	47.373
0.2366	20.467	0.2366	20.151	0.2366	47.37
0.24	20.464	0.24	20.142	0.24	47.373

SE1000 C
Environmental Logger
10/10 13::06

Unit# 00000	Test 6
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	20
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	11:44:57

Elapsed Time	TNTB-BEDGW-002
0	25.404
0.0033	25.208
0.0066	22.95
0.01	20.96
0.0133	20.985
0.0166	21.424
0.02	21.74
0.0233	21.74
0.0266	21.507
0.03	21.475
0.0333	21.386
0.0366	21.326
0.04	21.358
0.0433	21.339
0.0466	21.33
0.05	21.282
0.0533	21.254
0.0566	21.219
0.06	21.203
0.0633	21.175
0.0666	21.143
0.07	21.118
0.0733	21.09
0.0766	21.071
0.08	21.048
0.0833	21.023

SE1000 C
Environmental Logger
10/10 13::08

Unit# 00000	Test 7
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	20
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	13:21:00

Elapsed Time	ABG-BEDGW-001
0	25.379
0.0033	26.958
0.0066	24.488
0.01	23.91
0.0133	21.942
0.0166	21.655
0.02	21.677
0.0233	21.538
0.0266	21.522
0.03	21.469
0.0333	21.405
0.0366	21.361
0.04	21.323
0.0433	21.285
0.0466	21.203
0.05	21.184
0.0533	21.14
0.0566	21.108
0.06	21.074
0.0633	21.036
0.0666	21.001
0.07	20.966
0.0733	20.932
0.0766	20.9
0.08	20.865
0.0833	20.837

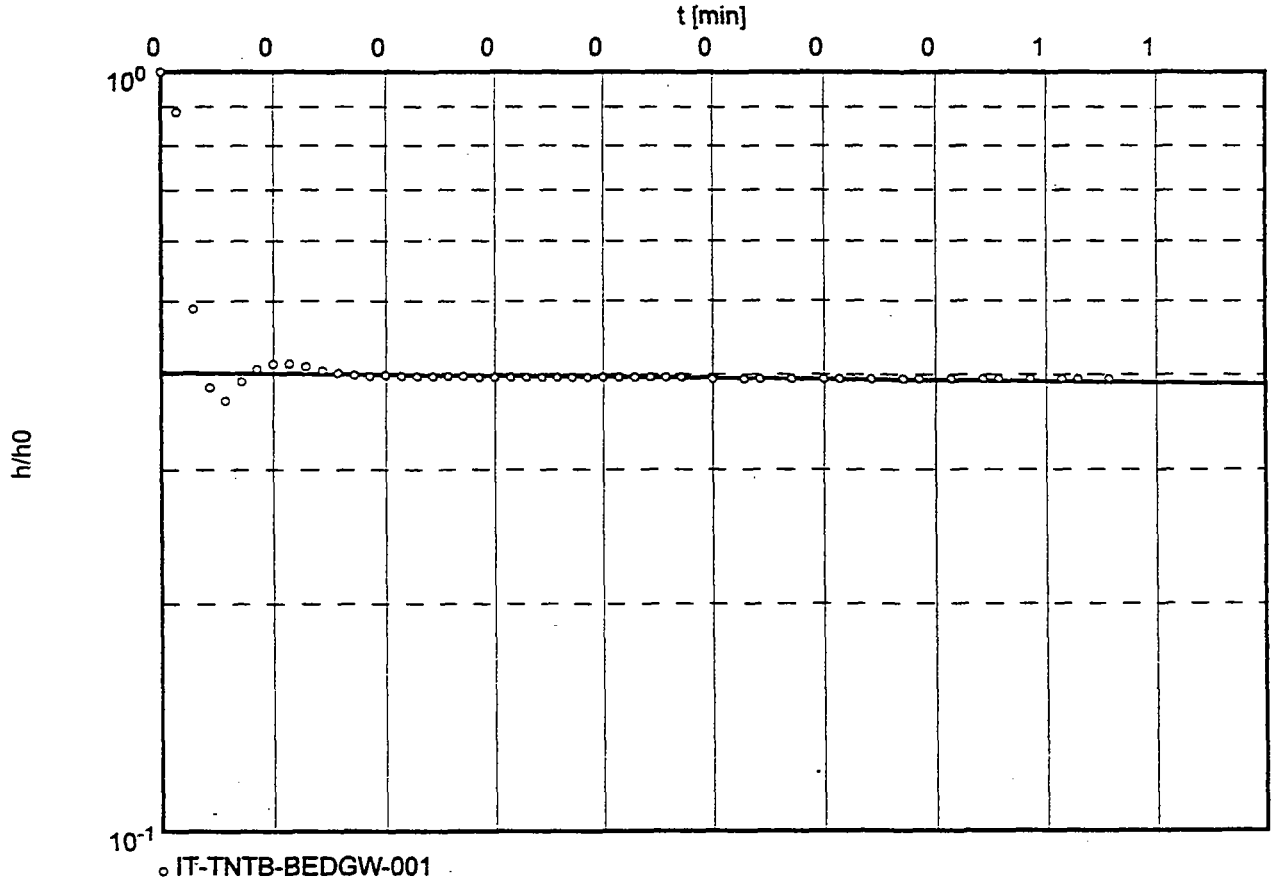
SE1000 C
Environmental Logger
10/10 13::11

Unit# 00000	Test 8
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	45
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	14:20:52

Elapsed Time	TNTB-BEDGW-001
0	50.978
0.0033	51.253
0.0066	50.287
0.01	50.113
0.0133	48.887
0.0166	47.917
0.02	47.455
0.0233	47.389
0.0266	47.297
0.03	47.199
0.0333	47.168
0.0366	47.209
0.04	47.259
0.0433	47.3
0.0466	47.342
0.05	47.37
0.0533	47.405
0.0566	47.433
0.06	47.443
0.0633	47.462
0.0666	47.474
0.07	47.477
0.0733	47.477
0.0766	47.471
0.08	47.468
0.0833	47.462

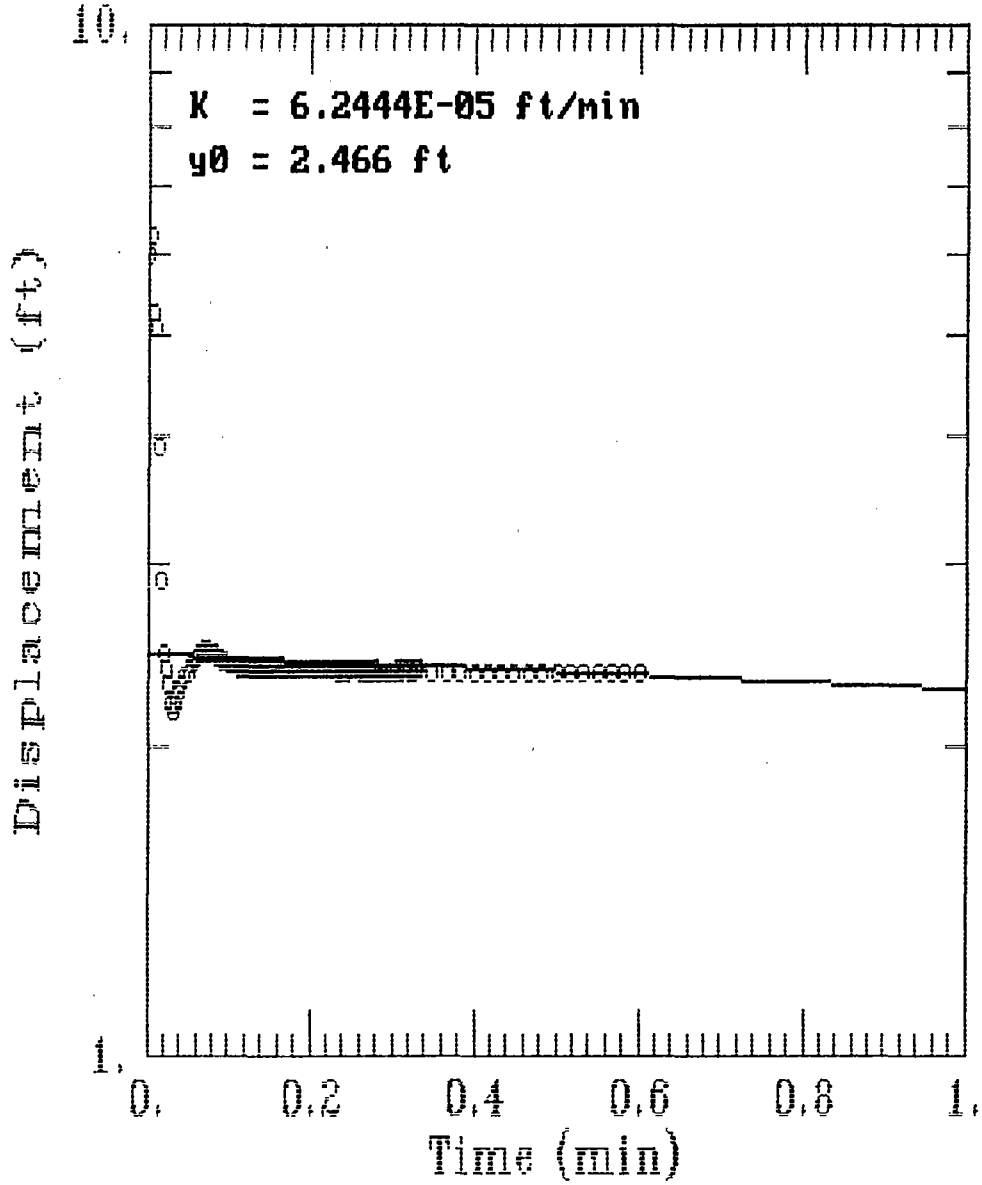
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 8	Test conducted on: 10/8/97
IT-TNTB-BEDGW-001	



Hydraulic conductivity [ft/min]: 4.07×10^{-5}

PBOW IT-TNTB-BEDGW-001 Rising Test



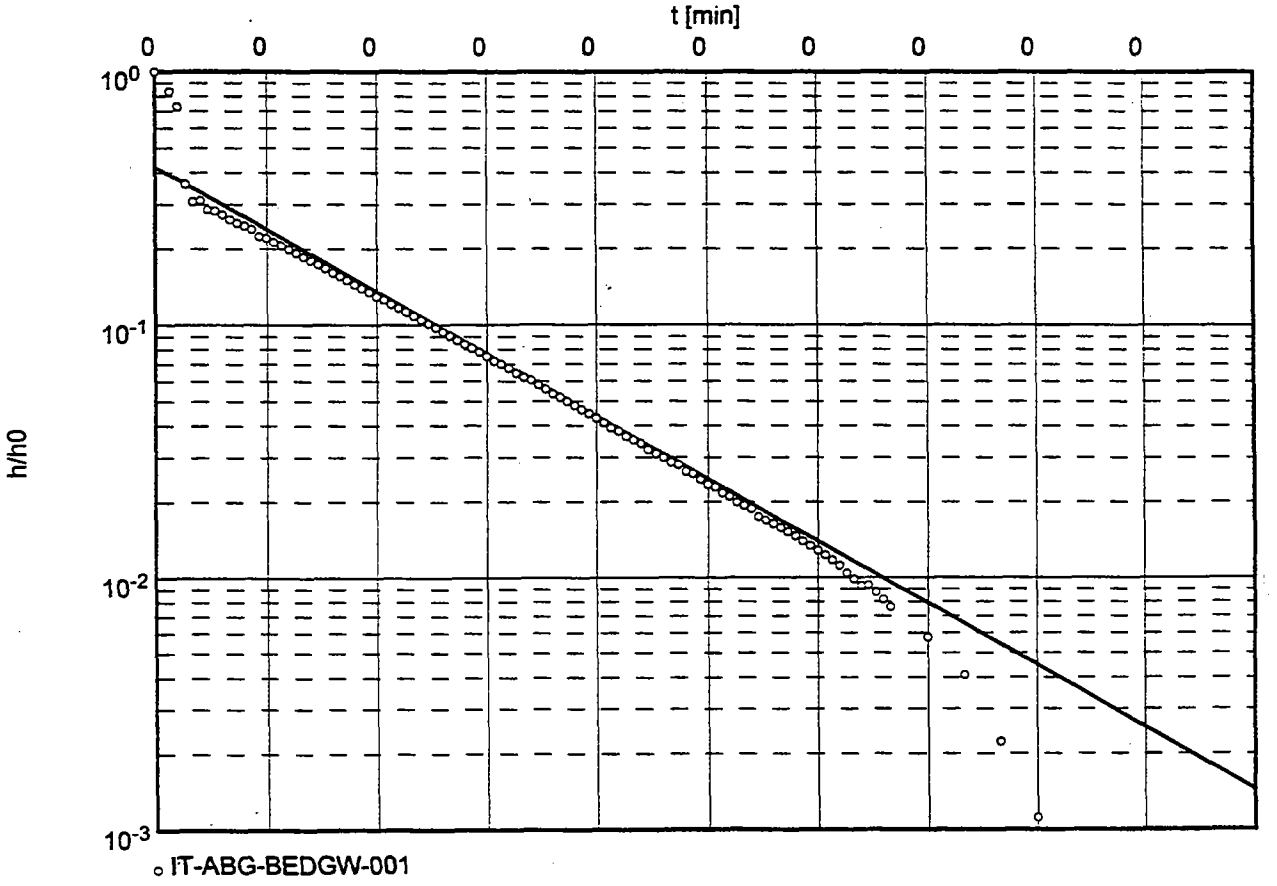
AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

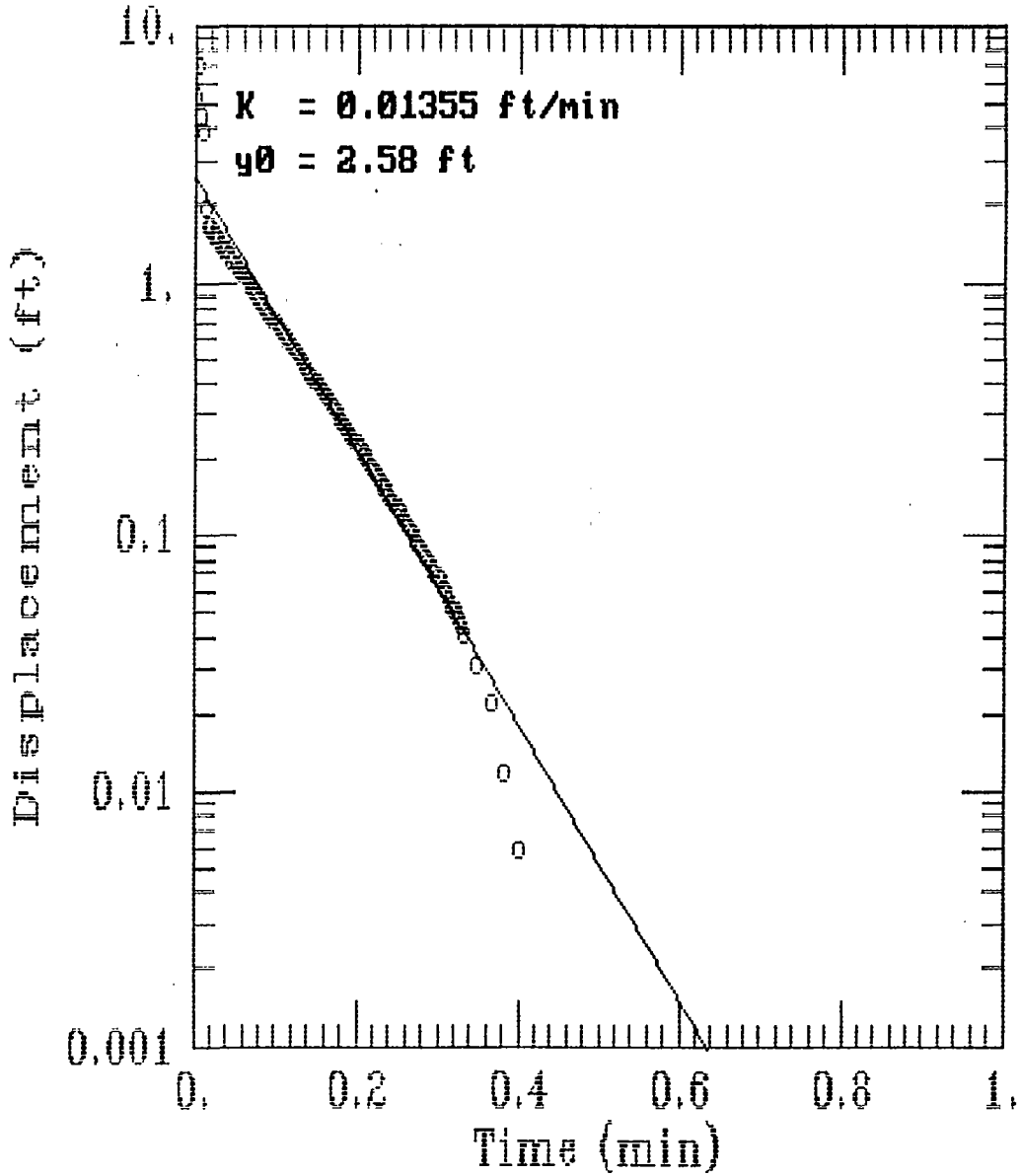
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 7	Test conducted on: 10/8/97
IT-ABG-BEDGW-001	



Hydraulic conductivity [ft/min]: 1.54×10^{-2}

PBOW IT-ABG-BEDGW-001 Rising Test



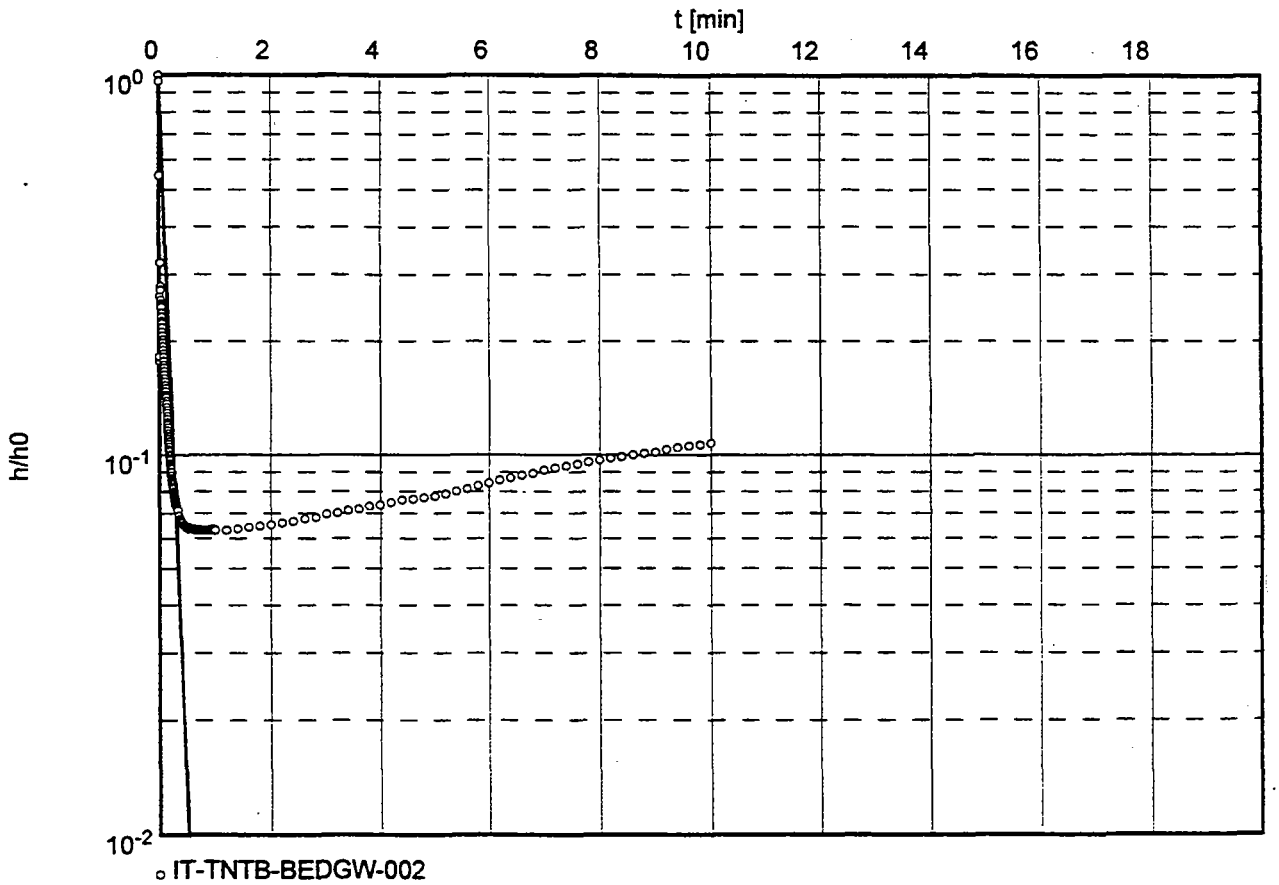
AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

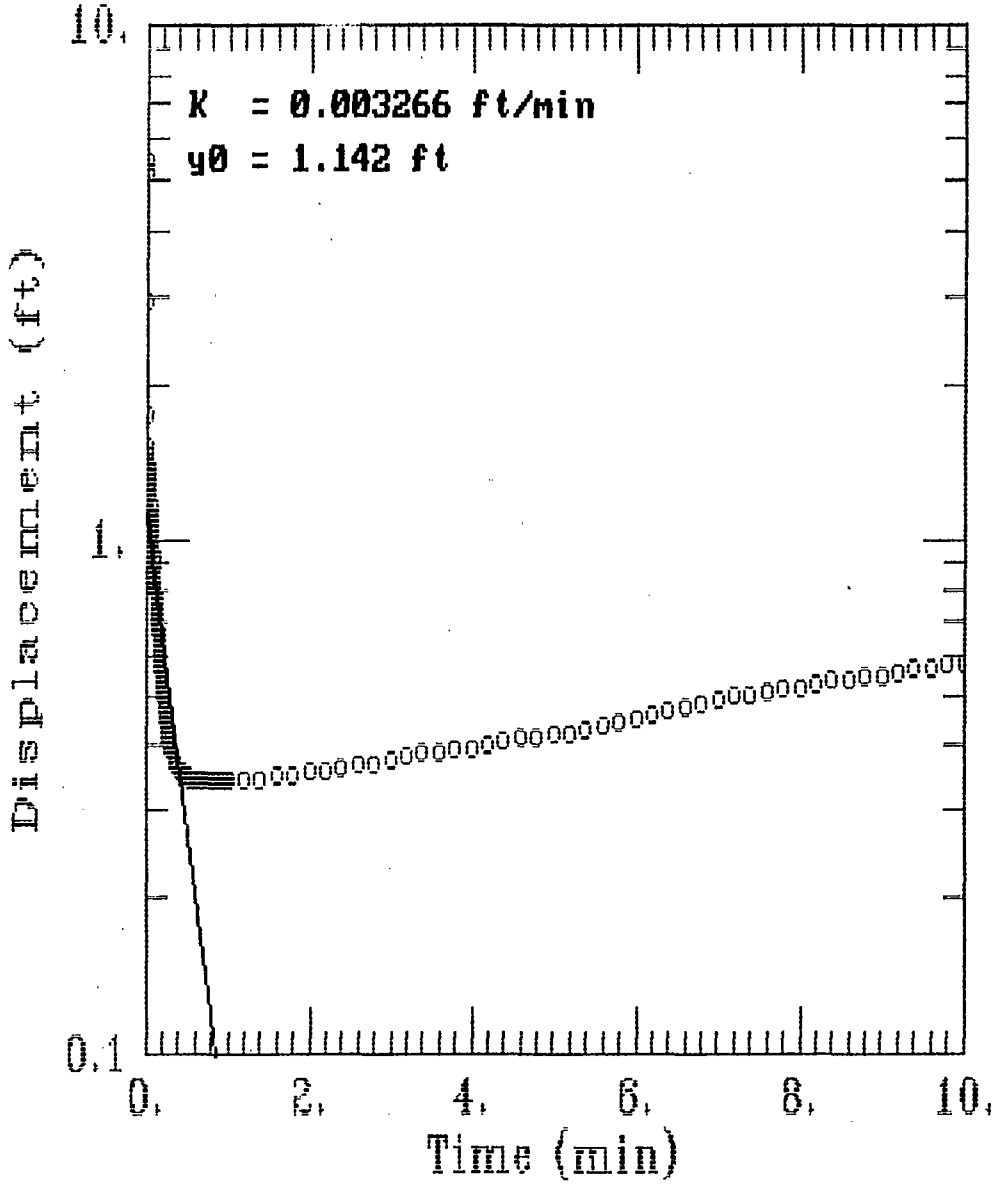
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997	Page 1
		Project: PBOW	
		Evaluated by: J.Li	

Slug Test No. 6	Test conducted on: 10/8/97
IT-TNTB-BEDGW-002	



Hydraulic conductivity [ft/min]: 1.24×10^{-2}

PBOW IT-TNTB-BEDGW-002 Rising Test



AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

Elapsed Time	MNTA-BEDGW-001	Elapsed Time	ABG-GW-002	Elapsed Time	AA3-BEDGW-001
6.4	-4.992	6.4	9.343	6.4	37.423
6.6	-5.002	6.6	9.34	6.6	37.41
6.8	-5.008	6.8	9.346	6.8	37.401
7	-5.011	7	9.349	7	37.395
7.2	-5.021	7.2	9.349	7.2	37.388
7.4	-5.024	7.4	9.346	7.4	37.379
7.6	-5.03	7.6	9.346	7.6	37.376
7.8	-5.036	7.8	9.343	7.8	37.366
8	-5.04	8	9.343	8	37.36
8.2	-5.043	8.2	9.343	8.2	37.357
8.4	-5.043	8.4	9.34	8.4	37.353
8.6	-5.043	8.6	9.34	8.6	37.347
8.8	-5.043	8.8	9.34	8.8	37.344
9	-5.04	9	9.34	9	37.341
9.2	-5.036	9.2	9.336	9.2	37.338
9.4	-5.036	9.4	9.336	9.4	37.335
9.6	-5.036	9.6	9.336	9.6	37.331
9.8	-5.04	9.8	9.336	9.8	37.328
10	-5.04	10	9.333	10	37.325
12	-5.027	12	9.311	12	37.3
14	-5.008	14	9.302	14	37.284
16	-4.989	16	9.286	16	37.259
18	-5.011	18	9.276	18	37.249
20	-4.995	20	9.261	20	37.23
22	-5.008	22	9.242	22	37.218
24	-4.986	24	9.223	24	37.205
26	-4.951	26	9.204	26	37.189
28	-4.926	28	9.194	28	37.177
30	-4.907	30	9.191	30	37.164
32	-4.875	32	9.185	32	37.158
34	-4.856	34	9.175	34	37.164
36	-4.856	36	9.169	36	37.18
38	-4.85	38	9.16	38	37.183
40	-4.85	40	9.15	40	37.183
42	-4.853	42	9.131	42	37.177
44	-4.844	44	9.122	44	37.173
46	-4.878	46	9.109	46	37.177
48	-4.885	48	9.096	48	37.173
50	-4.894	50	9.087	50	37.18
52	-4.894	52	9.065	52	37.183
54	-4.91	54	9.049	54	37.195
56	-4.919	56	9.033	56	37.205
		58	9.021	58	37.211
		60	9.005	60	37.221
		62	8.992		

Elapsed Time	MNTA-BEDGW-001	Elapsed Time	ABG-GW-002	Elapsed Time	AA3-BEDGW-001
0.6666	-4.373	0.6666	9.412	0.6666	38.567
0.6833	-4.382	0.6833	9.412	0.6833	38.554
0.7	-4.376	0.7	9.412	0.7	38.545
0.7166	-4.369	0.7166	9.412	0.7166	38.532
0.7333	-4.423	0.7333	9.412	0.7333	38.523
0.75	-4.395	0.75	9.412	0.75	38.513
0.7666	-4.414	0.7666	9.412	0.7666	38.5
0.7833	-4.407	0.7833	9.412	0.7833	38.491
0.8	-4.414	0.8	9.412	0.8	38.481
0.8166	-4.414	0.8166	9.412	0.8166	38.472
0.8333	-4.414	0.8333	9.409	0.8333	38.459
0.85	-4.41	0.85	9.409	0.85	38.45
0.8666	-4.414	0.8666	9.409	0.8666	38.44
0.8833	-4.417	0.8833	9.409	0.8833	38.431
0.9	-4.42	0.9	9.409	0.9	38.421
0.9166	-4.417	0.9166	9.409	0.9166	38.412
0.9333	-4.417	0.9333	9.409	0.9333	38.403
0.95	-4.42	0.95	9.409	0.95	38.393
0.9666	-4.42	0.9666	9.409	0.9666	38.387
0.9833	-4.42	0.9833	9.409	0.9833	38.377
1	-4.426	1	9.409	1	38.368
1.2	-4.48	1.2	9.403	1.2	38.235
1.4	-4.531	1.4	9.396	1.4	38.15
1.6	-4.575	1.6	9.39	1.6	38.074
1.8	-4.616	1.8	9.384	1.8	38.007
2	-4.651	2	9.377	2	37.947
2.2	-4.689	2.2	9.374	2.2	37.897
2.4	-4.72	2.4	9.371	2.4	37.846
2.6	-4.746	2.6	9.368	2.6	37.805
2.8	-4.771	2.8	9.368	2.8	37.767
3	-4.796	3	9.365	3	37.733
3.2	-4.815	3.2	9.365	3.2	37.701
3.4	-4.837	3.4	9.362	3.4	37.673
3.6	-4.856	3.6	9.362	3.6	37.644
3.8	-4.869	3.8	9.365	3.8	37.619
4	-4.881	4	9.352	4	37.597
4.2	-4.894	4.2	9.352	4.2	37.575
4.4	-4.904	4.4	9.352	4.4	37.556
4.6	-4.916	4.6	9.349	4.6	37.54
4.8	-4.926	4.8	9.349	4.8	37.524
5	-4.935	5	9.346	5	37.508
5.2	-4.945	5.2	9.346	5.2	37.492
5.4	-4.951	5.4	9.346	5.4	37.48
5.6	-4.96	5.6	9.346	5.6	37.467
5.8	-4.97	5.8	9.346	5.8	37.455
6	-4.98	6	9.343	6	37.445
6.2	-4.986	6.2	9.343	6.2	37.432

Elapsed Time	MNTA-BEDGW-001	Elapsed Time	ABG-GW-002	Elapsed Time	AA3-BEDGW-001
0.2433	-3.75	0.2433	9.4	0.2433	38.892
0.2466	-4.025	0.2466	9.4	0.2466	38.917
0.25	-3.734	0.25	9.4	0.25	38.902
0.2533	-3.74	0.2533	9.4	0.2533	38.899
0.2566	-3.769	0.2566	9.4	0.2566	38.861
0.26	-3.981	0.26	9.4	0.26	38.851
0.2633	-4.085	0.2633	9.4	0.2633	38.905
0.2666	-3.962	0.2666	9.4	0.2666	38.88
0.27	-4.003	0.27	9.4	0.27	38.873
0.2733	-3.949	0.2733	9.4	0.2733	38.88
0.2766	-3.959	0.2766	9.4	0.2766	38.873
0.28	-4.063	0.28	9.4	0.28	38.873
0.2833	-3.823	0.2833	9.4	0.2833	38.864
0.2866	-3.775	0.2866	9.4	0.2866	38.857
0.29	-4.063	0.29	9.4	0.29	38.857
0.2933	-3.952	0.2933	9.4	0.2933	38.857
0.2966	-4.142	0.2966	9.4	0.2966	38.845
0.3	-4.145	0.3	9.4	0.3	38.851
0.3033	-4.126	0.3033	9.4	0.3033	38.848
0.3066	-4.063	0.3066	9.4	0.3066	38.839
0.31	-4.031	0.31	9.4	0.31	38.848
0.3133	-4.101	0.3133	9.4	0.3133	38.839
0.3166	-4.053	0.3166	9.4	0.3166	38.832
0.32	-3.911	0.32	9.4	0.32	38.839
0.3233	-4.205	0.3233	9.4	0.3233	38.829
0.3266	-4.031	0.3266	9.4	0.3266	38.826
0.33	-4.281	0.33	9.4	0.33	38.826
0.3333	-4.082	0.3333	9.4	0.3333	38.823
0.35	-4.129	0.35	9.4	0.35	38.807
0.3666	-4.237	0.3666	9.406	0.3666	38.791
0.3833	-4.129	0.3833	9.409	0.3833	38.778
0.4	-4.309	0.4	9.409	0.4	38.763
0.4166	-4.167	0.4166	9.412	0.4166	38.75
0.4333	-4.192	0.4333	9.412	0.4333	38.737
0.45	-4.208	0.45	9.415	0.45	38.725
0.4666	-4.331	0.4666	9.415	0.4666	38.709
0.4833	-4.271	0.4833	9.415	0.4833	38.696
0.5	-4.192	0.5	9.415	0.5	38.684
0.5166	-4.341	0.5166	9.415	0.5166	38.671
0.5333	-4.341	0.5333	9.415	0.5333	38.658
0.55	-4.297	0.55	9.415	0.55	38.649
0.5666	-4.268	0.5666	9.415	0.5666	38.636
0.5833	-4.43	0.5833	9.415	0.5833	38.624
0.6	-4.347	0.6	9.415	0.6	38.611
0.6166	-4.392	0.6166	9.415	0.6166	38.602
0.6333	-4.325	0.6333	9.415	0.6333	38.589
0.65	-4.357	0.65	9.415	0.65	38.579

Elapsed Time	MNTA-BEDGW-001	Elapsed Time	ABG-GW-002	Elapsed Time	AA3-BEDGW-001
0.0866	-3.506	0.0866	9.4	0.0866	39.094
0.09	-3.374	0.09	9.403	0.09	39.041
0.0933	-3.342	0.0933	9.403	0.0933	39.063
0.0966	-3.326	0.0966	9.403	0.0966	39.091
0.1	-3.276	0.1	9.403	0.1	39.05
0.1033	-3.108	0.1033	9.403	0.1033	39.034
0.1066	-2.783	0.1066	9.403	0.1066	39.044
0.11	-2.89	0.11	9.406	0.11	39.038
0.1133	-2.704	0.1133	9.406	0.1133	39.034
0.1166	-2.966	0.1166	9.406	0.1166	39.028
0.12	-2.811	0.12	9.406	0.12	39.028
0.1233	-2.991	0.1233	9.403	0.1233	39.015
0.1266	-2.893	0.1266	9.406	0.1266	39.009
0.13	-2.976	0.13	9.406	0.13	39.015
0.1333	-3.096	0.1333	9.406	0.1333	39.012
0.1366	-3.01	0.1366	9.403	0.1366	39.009
0.14	-3.017	0.14	9.403	0.14	39.003
0.1433	-3.067	0.1433	9.403	0.1433	39.003
0.1466	-3.074	0.1466	9.403	0.1466	38.996
0.15	-3.203	0.15	9.403	0.15	38.996
0.1533	-3.26	0.1533	9.403	0.1533	38.99
0.1566	-3.156	0.1566	9.403	0.1566	38.984
0.16	-3.194	0.16	9.403	0.16	38.981
0.1633	-3.355	0.1633	9.403	0.1633	38.974
0.1666	-3.219	0.1666	9.403	0.1666	38.974
0.17	-3.339	0.17	9.4	0.17	38.968
0.1733	-3.535	0.1733	9.4	0.1733	38.974
0.1766	-3.304	0.1766	9.4	0.1766	38.962
0.18	-3.181	0.18	9.4	0.18	38.952
0.1833	-3.317	0.1833	9.4	0.1833	38.955
0.1866	-3.276	0.1866	9.4	0.1866	38.962
0.19	-3.323	0.19	9.4	0.19	38.959
0.1933	-3.336	0.1933	9.4	0.1933	38.952
0.1966	-3.459	0.1966	9.4	0.1966	38.949
0.2	-3.478	0.2	9.4	0.2	38.946
0.2033	-3.579	0.2033	9.4	0.2033	38.943
0.2066	-3.598	0.2066	9.4	0.2066	38.943
0.21	-3.687	0.21	9.4	0.21	38.946
0.2133	-3.693	0.2133	9.4	0.2133	38.933
0.2166	-3.522	0.2166	9.4	0.2166	38.927
0.22	-3.383	0.22	9.4	0.22	38.927
0.2233	-3.674	0.2233	9.4	0.2233	38.93
0.2266	-3.769	0.2266	9.4	0.2266	38.905
0.23	-3.737	0.23	9.4	0.23	38.924
0.2333	-3.74	0.2333	9.4	0.2333	38.914
0.2366	-3.737	0.2366	9.4	0.2366	38.917
0.24	-3.639	0.24	9.4	0.24	38.921

SE1000 C
Environmental Logger
10/10 13::13

Unit# 00000	Test 9
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	9.4
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	16:01:08

Elapsed Time	MNTA-BEDGW-001
0	-1.541
0.0033	-0.605
0.0066	-1.623
0.01	-1.098
0.0133	-0.988
0.0166	-1.775
0.02	-2.441
0.0233	-3.715
0.0266	-4.49
0.03	-5.596
0.0333	-5.688
0.0366	-5.182
0.04	-4.872
0.0433	-4.297
0.0466	-4.107
0.05	-3.623
0.0533	-3.197
0.0566	-3.428
0.06	-2.84
0.0633	-2.704
0.0666	-2.536
0.07	-2.786
0.0733	-3.077
0.0766	-3.156
0.08	-3.349
0.0833	-3.349

SE1000 C
Environmental Logger
10/10 13::16

Unit# 00000	Test 10
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	9.4
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	17:23:13

Elapsed Time	ABG-GW-002
0	10.066
0.0033	10.056
0.0066	9.974
0.01	9.927
0.0133	9.876
0.0166	9.819
0.02	9.75
0.0233	9.715
0.0266	9.665
0.03	9.621
0.0333	9.583
0.0366	9.551
0.04	9.523
0.0433	9.497
0.0466	9.478
0.05	9.46
0.0533	9.447
0.0566	9.434
0.06	9.425
0.0633	9.415
0.0666	9.412
0.07	9.409
0.0733	9.403
0.0766	9.403
0.08	9.4
0.0833	9.4

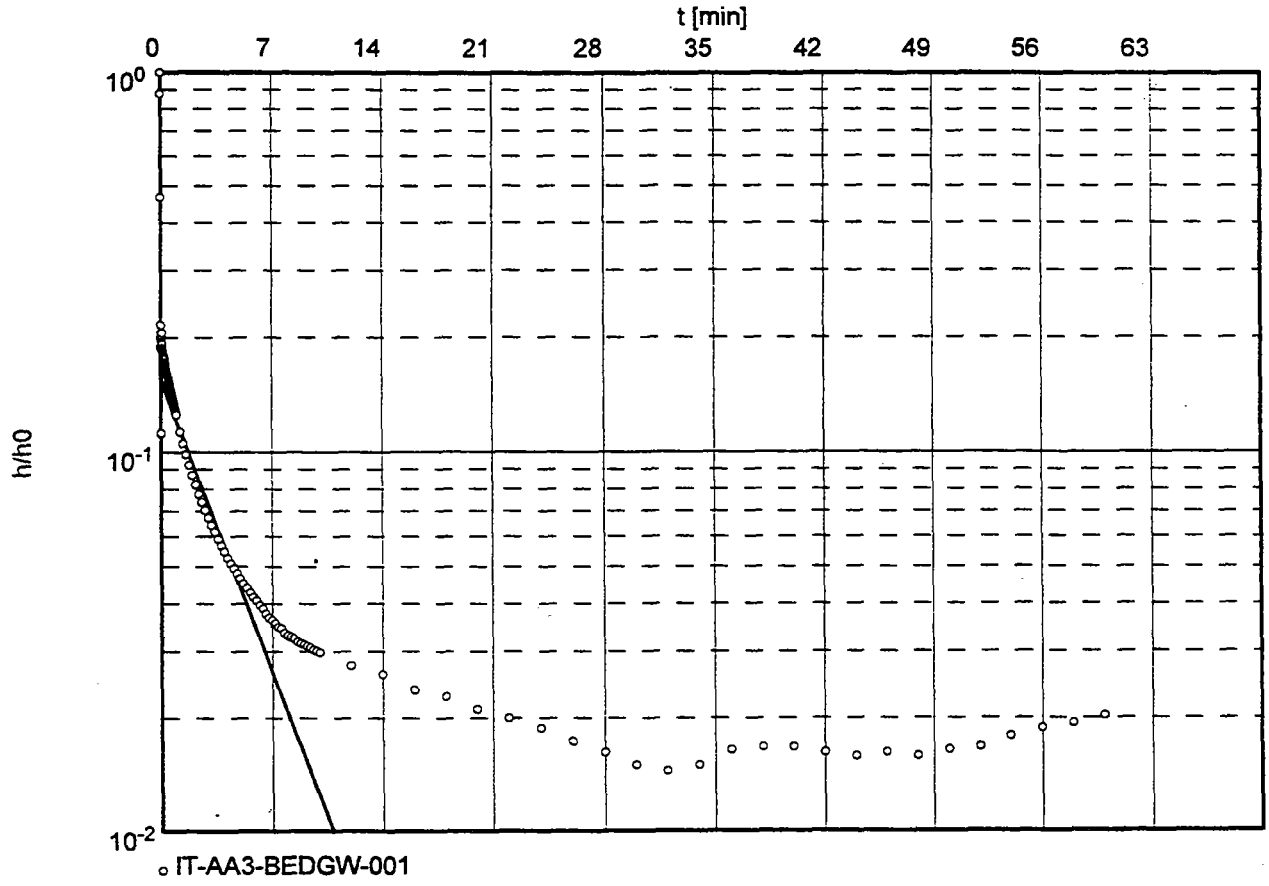
SE1000 C
Environmental Logger
10/10 13::19

Unit# 00000	Test 11
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	37
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/09	8:29:43

Elapsed Time	AA3-BEDGW-001
0	47.903
0.0033	46.567
0.0066	42.099
0.01	38.219
0.0133	38.226
0.0166	39.243
0.02	39.35
0.0233	39.063
0.0266	39.053
0.03	39.17
0.0333	39.221
0.0366	39.164
0.04	39.154
0.0433	39.186
0.0466	39.205
0.05	39.177
0.0533	39.158
0.0566	39.164
0.06	39.173
0.0633	39.126
0.0666	39.151
0.07	39.196
0.0733	39.243
0.0766	39.053
0.08	39.098
0.0833	39.117

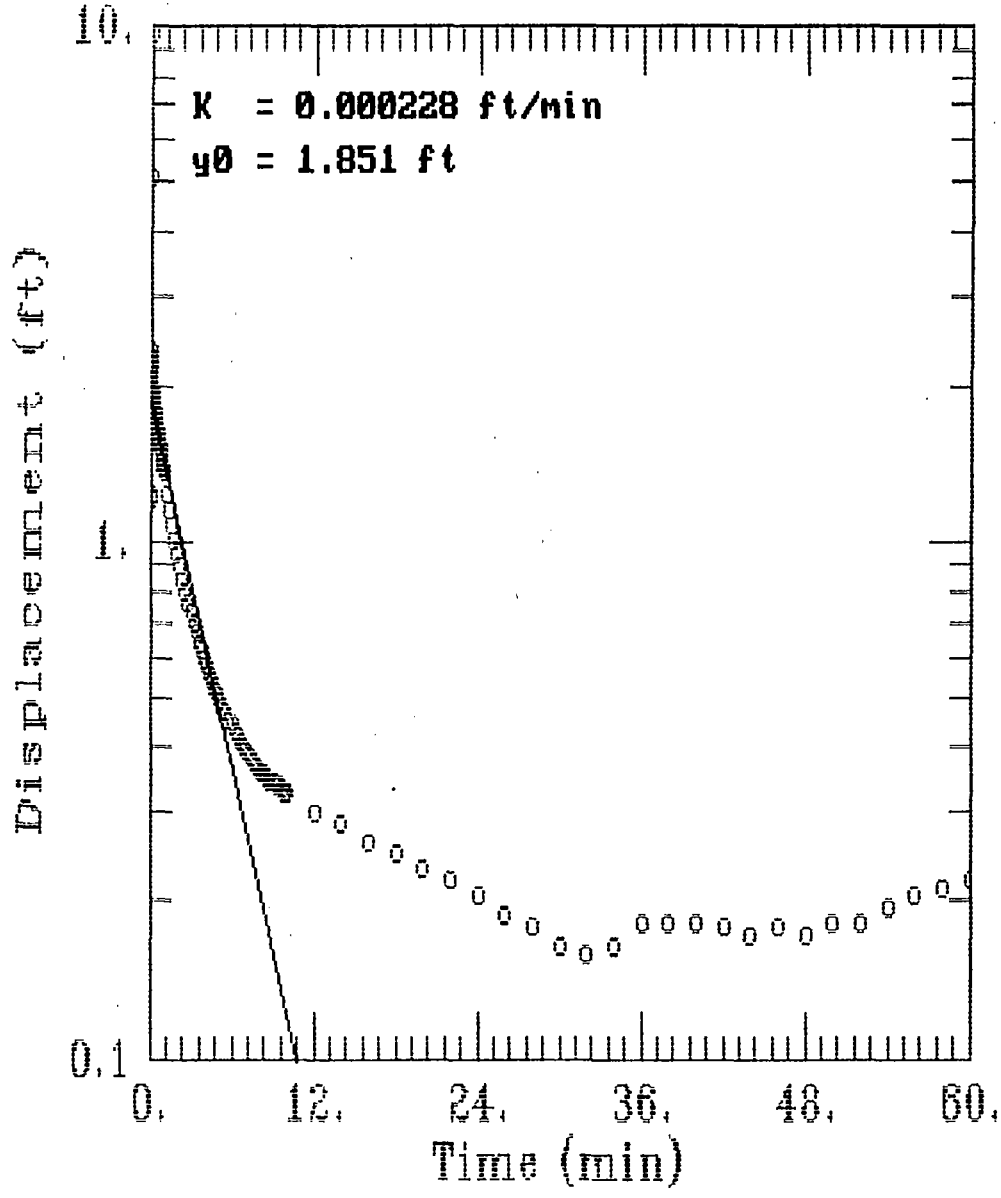
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 11	Test conducted on: 10/8/97
IT-AA3-BEDGW-001	



Hydraulic conductivity [ft/min]: 2.58×10^{-4}

PBOW IT-AA3-BEDGW-001 Rising Test



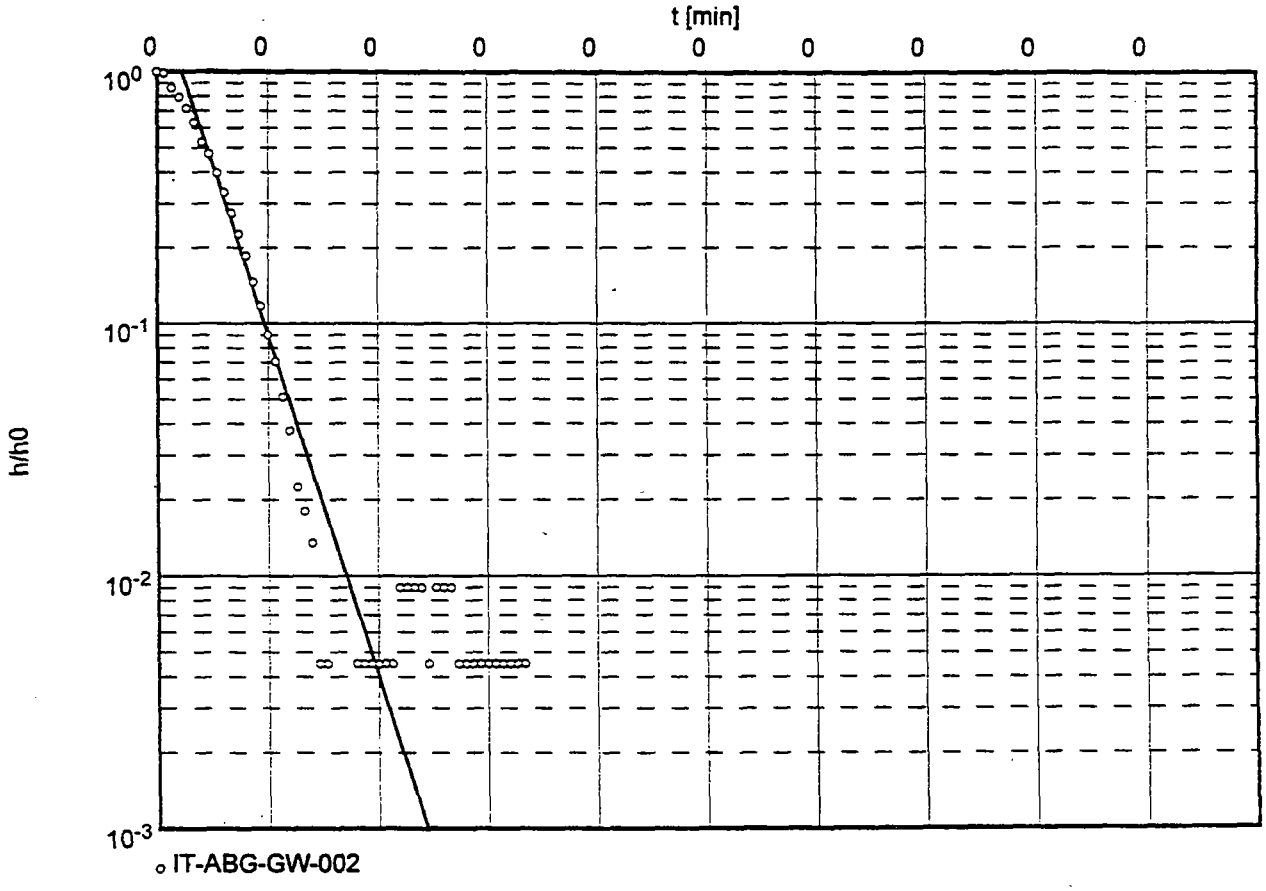
AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

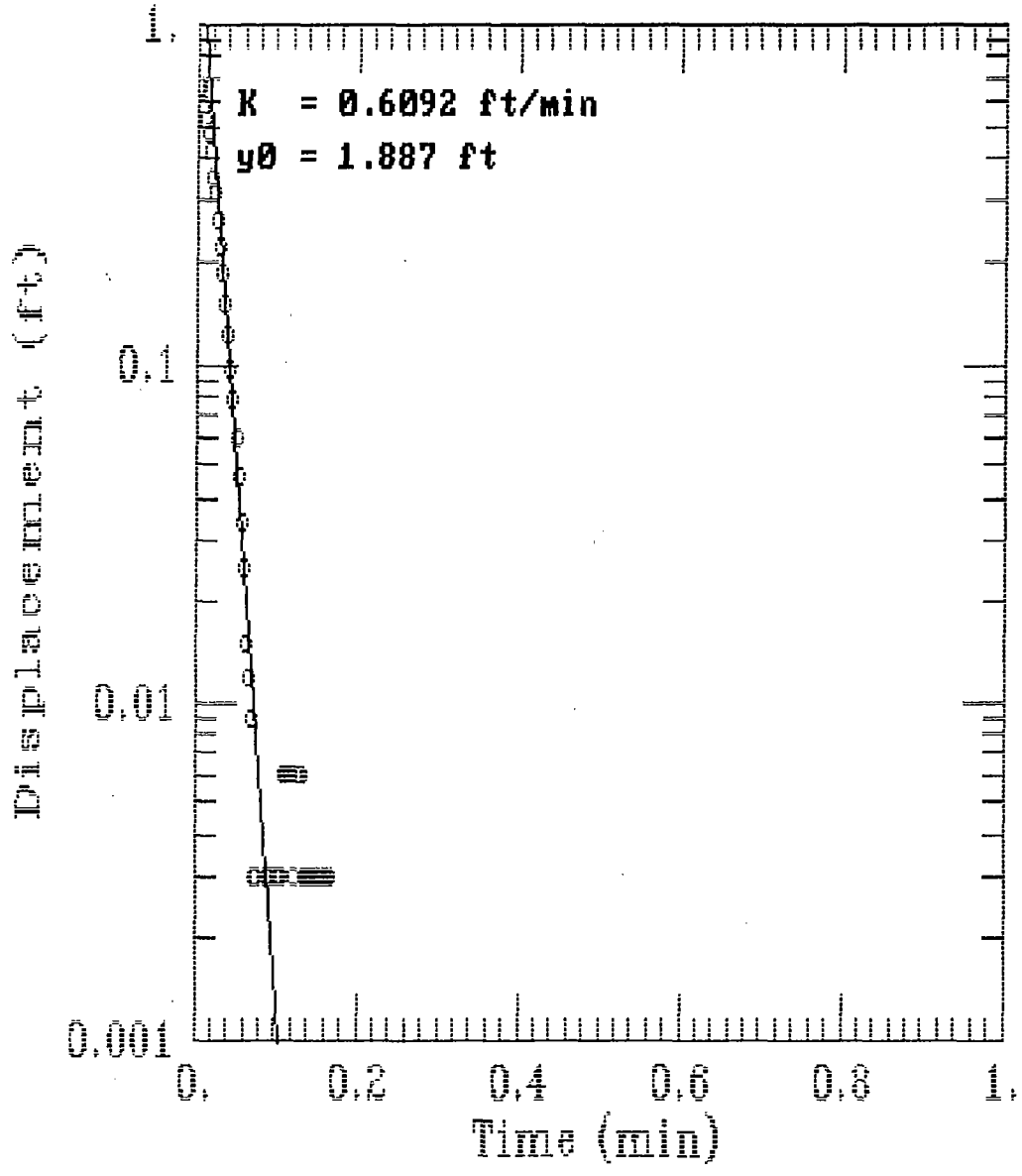
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 10	Test conducted on: 10/8/97
IT-ABG-GW-002	



Hydraulic conductivity [ft/min]: 1.47×10^{-1}

PBOW IT-ABG-GW-002 Rising Test



AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

APPENDIX D

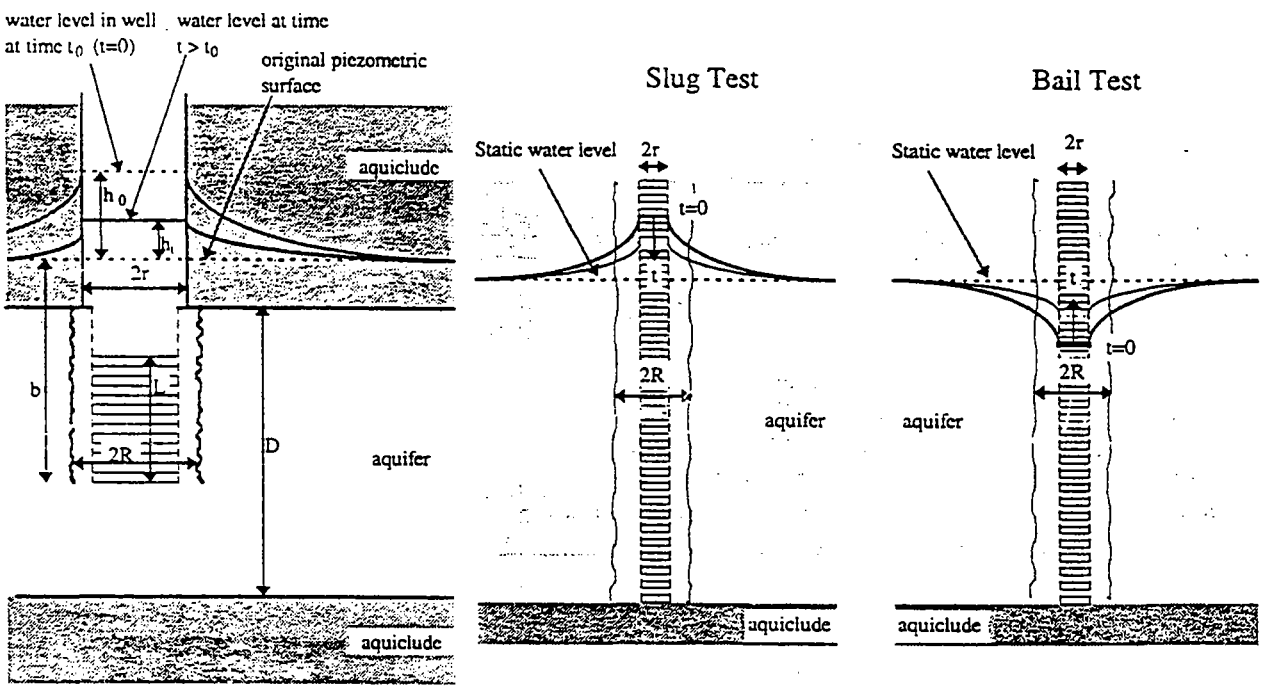
HYDRAULIC CONDUCTIVITY DATA AND HORIZONTAL GRADIENT CALCULATIONS

Equations and Assumptions used in Evaluating the Hydraulic Conductivity Testing Data
Site-Wide Groundwater Investigation
Former Plum Brook Ordnance Works
Sandusky, Ohio

Bouwer & Rice Equation for Slug Test Analysis

The Bouwer and Rice (1976) slug test is designed to estimate the hydraulic conductivity of the aquifer material surrounding the screen of a piezometer or a well. In a slug test, a solid "slug" is lowered into the piezometer instantaneously raising the water level in the casing (commonly known as falling head test). The test can also be conducted in the opposite manner by instantaneously removing a "slug" or volume of water (known as bail test).

The analytical solution is appropriate for the conditions shown in the following figures.



Bouwer and Rice (1976) developed an equation for hydraulic conductivity as follows:

$$K = \{[r^2 \ln(R_{cont}/R)]/2L\} \times (1/t) \times \ln(h_t/h_0)$$

where:

- r = well radius (or r_{eff} if water level change is within the screened interval)
- R= radius measured from center of well to undisturbed aquifer material
- R_{cont} = contributing radial distance over which the difference in head, h_0, is dissipated in the aquifer
- L = the length of the screen
- b = height of stagnant water column in the well
- D = saturated thickness of aquifer
- h_t = displacement as a function of time
- h_0 = initial displacement

Since the contributing radius of aquifer is seldom known before test is completed, Bouwer and Rice developed some empirical curves to account for this radius by three coefficients (A, B,C) which are all functions of the ratio of L/R. Coefficients A and B are used for partially penetrating wells whereas coefficient C is used for fully penetrating wells.

The data are plotted with time on a logarithmic x-axis and h_t / h_0 on a linear y-axis.

The effective well radius, r, should be specified as the radius of the well unless the water level falls within the screened portion of the aquifer during the slug test.

In this case, the effective radius may be calculated as follows:

$$r_{eff} = [r^2(1-n)+nR^2]^{1/2}$$

where: n is the porosity of the filter material.

In cases where the water level drops within the screened interval, the plot of H/H_0 vs. t will often produce a plot which seems to have an initial slope and a smaller slope at later time. In this case the fit should be obtained for the second straight line portion (Bouwer, 1989) because the initial slope only represents the effect of the filter pack materials.

Assumptions in the application of the Bouwer and rice equation are:

- unconfined aquifer of "apparently" infinite extent
- homogeneous, isotropic aquifer of uniform thickness
- water table is horizontal prior to the test
- instantaneous change in head
- well losses are negligible
- fully or partially penetrating well
- the well storage is not negligible, thus it is taken into account
- the flow to the well is in a steady state.

The data that are required for the Bouwer& Rice solution are:

- drawdown/recovery vs. Time data at a pumping well
- observation beginning from time zero onward (the value recorded at t=0 is used as the initial displacement value, H_0, by ***AquiferTest*** and thus it must be a non-zero value).

References:

Bouwer, H. And R.C.Rice. 1976. A slug test for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells. Water resource Research, Vol.12, No.3, pp.423-428

Bouwer, H. 1989. The Bouwer and rice Slug Test - An Update. Ground Water Vol. 27, No.3, June 1989.

Table
Summary of Monitoring Well Geometry Data
Plum Brook Ordnace Work
Erie County, Sandusky, Ohio

Well ID	Water Level (TOC) (ft)	Total Depth (TOC) (ft)	D (ft)	r_c (ft)	r_w (ft)	r_c^* (ft)	L_e (ft)	L_w (ft)	Y_0 (ft)
IT-AA1-GW-002	5.72	27.85	22.13	0.083	0.34	----	15	22.13	1.568
IT-AA2-GW-002	Dry	18.5	----	0.083	0.34	----	10	0	----
IT-AA3-GW-002	6.78	18.02	11.24	0.083	0.34	----	10	11.24	1.866
IT-ABG-GW-002	6.41	9.58	3.17	0.083	0.34	0.2	4	3.17	0.666
IT-AA1-BEDGW-001	30.18	66.00	35.82	0.083	0.25	----	15	35.82	1.662
IT-AA2-BEDGW-001	13.90	45.30	31.4	0.083	0.25	----	15	31.4	3.681
IT-BG8-BEDGW-001	5.88	22.52	16.64	0.083	0.25	----	15	16.64	2.012
IT-ABG-BEDGW-001	5.94	23.59	17.65	0.083	0.25	----	10	17.65	5.379
IT-TNTB-BEDGW-001	4.16	26.89	22.73	0.083	0.25	----	15	22.73	5.978
IT-TNTB-BEDGW-002	6.80	26.48	19.68	0.083	0.25	----	10	19.68	5.404
IT-MNTA-BEDGW-001	27.86	66.00	38.14	0.083	0.25	----	15	38.14	7.859
IT-AA3-BEDGW-001	21.49	52.30	30.81	0.083	0.25	----	15	30.81	10.903

Note :

D ---- Aquifer saturated thickness (assumed)

r_c ---- Radius of well casing

r_c^* ---- Effective radius of well casing when $L_e \geq L_w$. Water level fluctuations occurred in the screened section of the well. Modify r to account for filter pack storage according to: $r_c^* = [\, r_c^2 + \Phi\,(r_w^2 - r_c^2)\,]^{1/2}$

r_w ---- Radius of boring

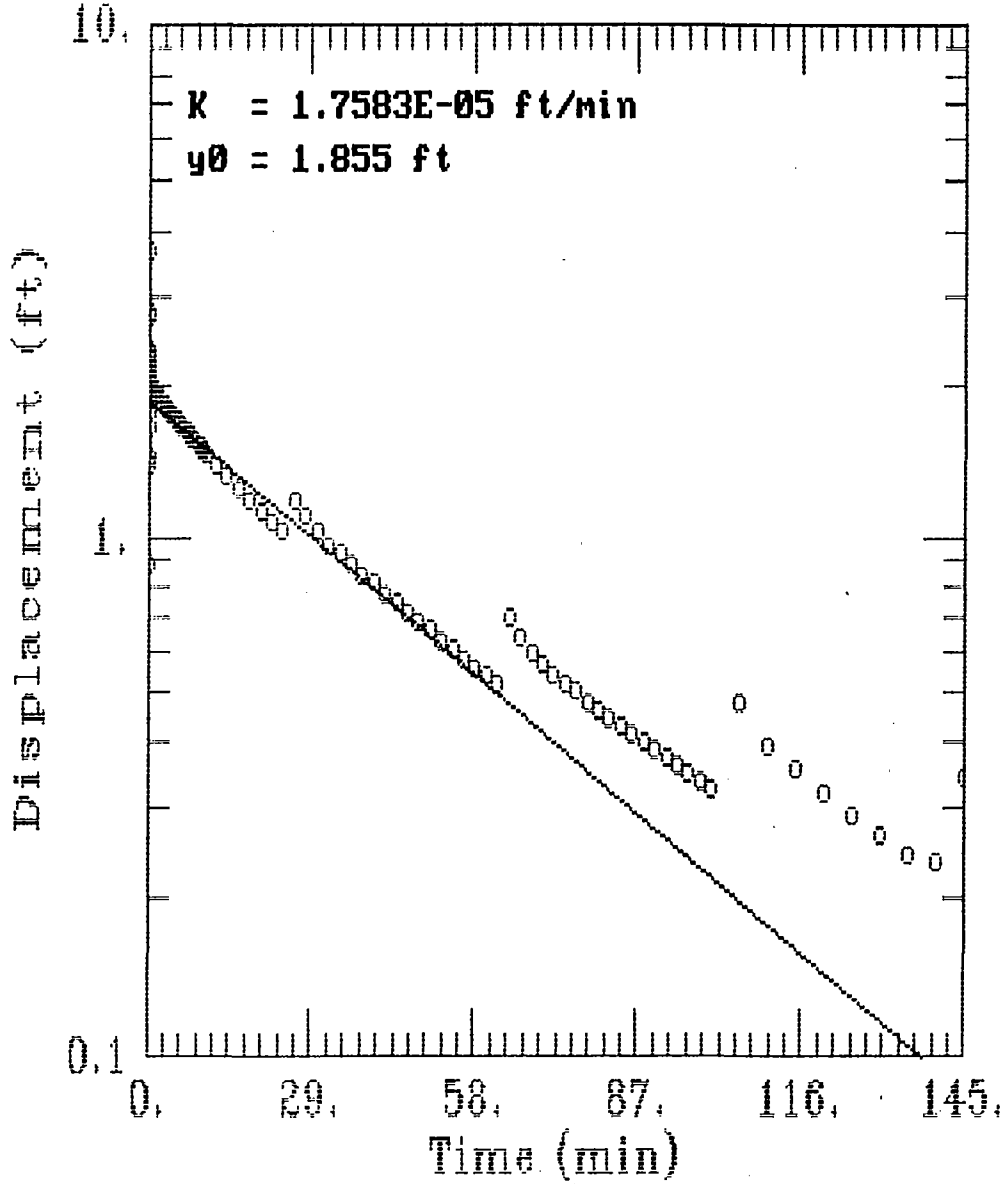
L_e ---- Length of saturated well screen

L_w ---- Static height of water in well

y_0 ---- Initial change in water level

Φ ---- Porosity of filter pack (Assumed to be 25 percent. Porosities of unconsolidated sand range from 25 to 50 percent [Freeze and Cherry, 1979])

PBOW IT-AA2-BEDGW-001 Rising Test



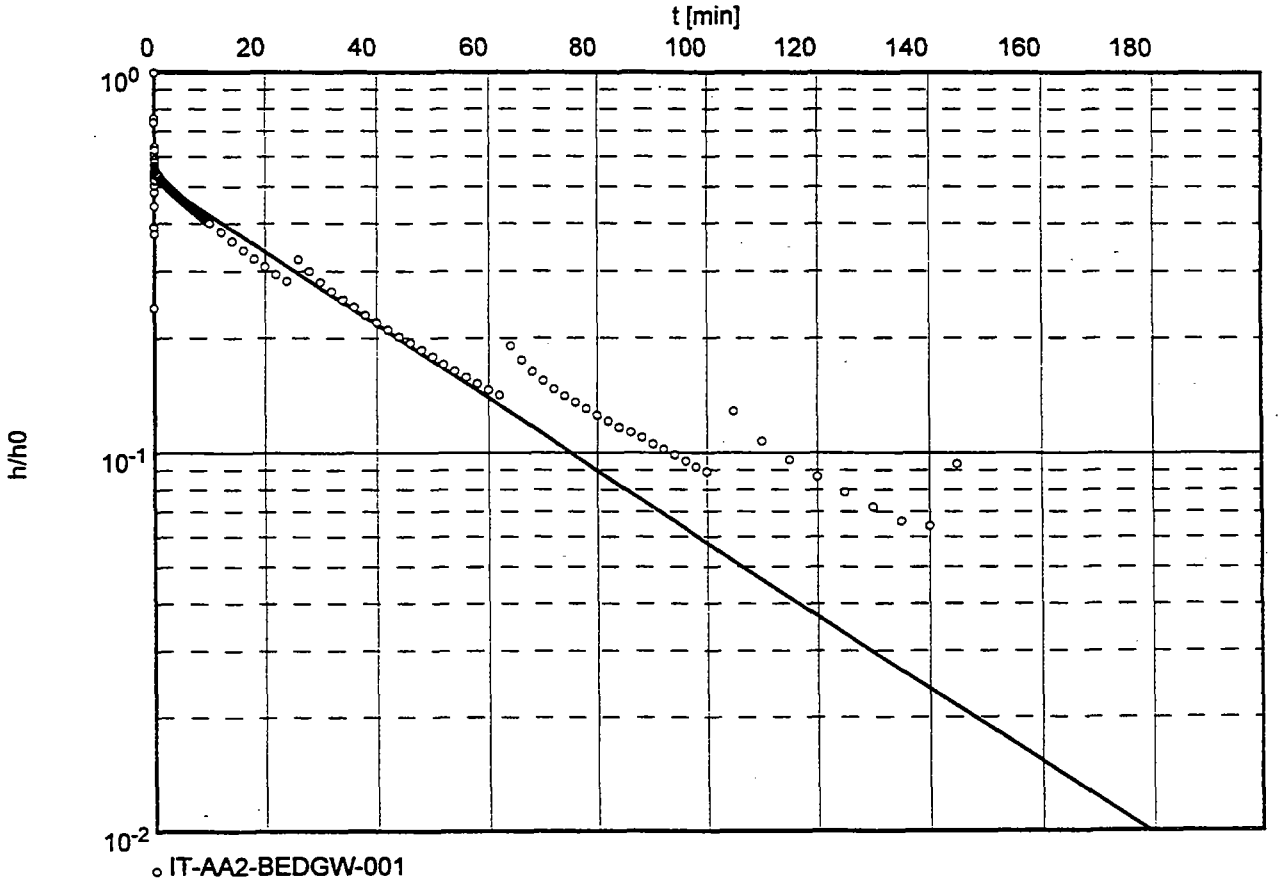
AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

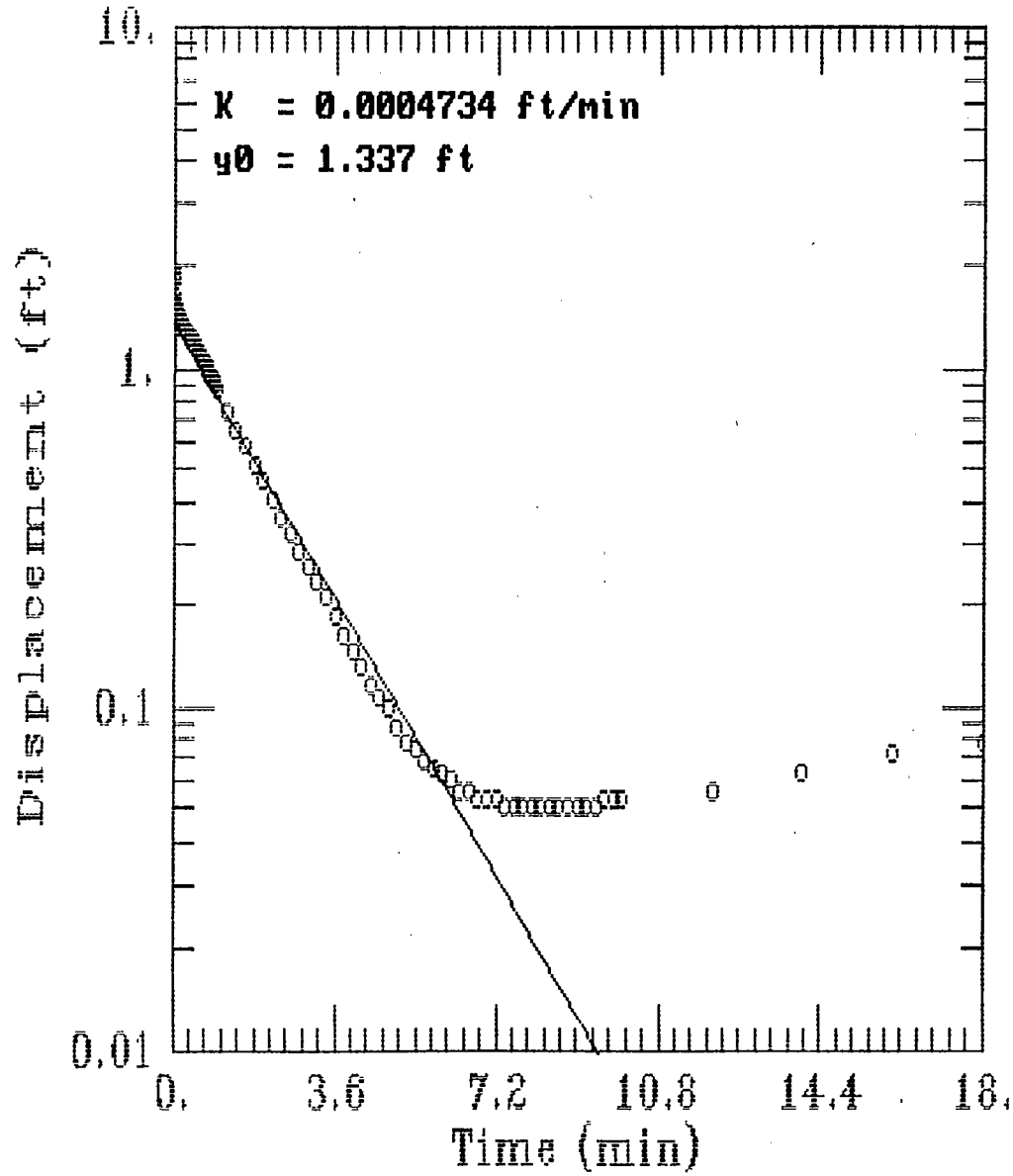
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 3	Test conducted on: 10/7/97
IT-AA2-BEDGW-001	



Hydraulic conductivity [ft/min]: 2.26×10^{-5}

PBOW-IT-AA3-GW-002 Rising Test



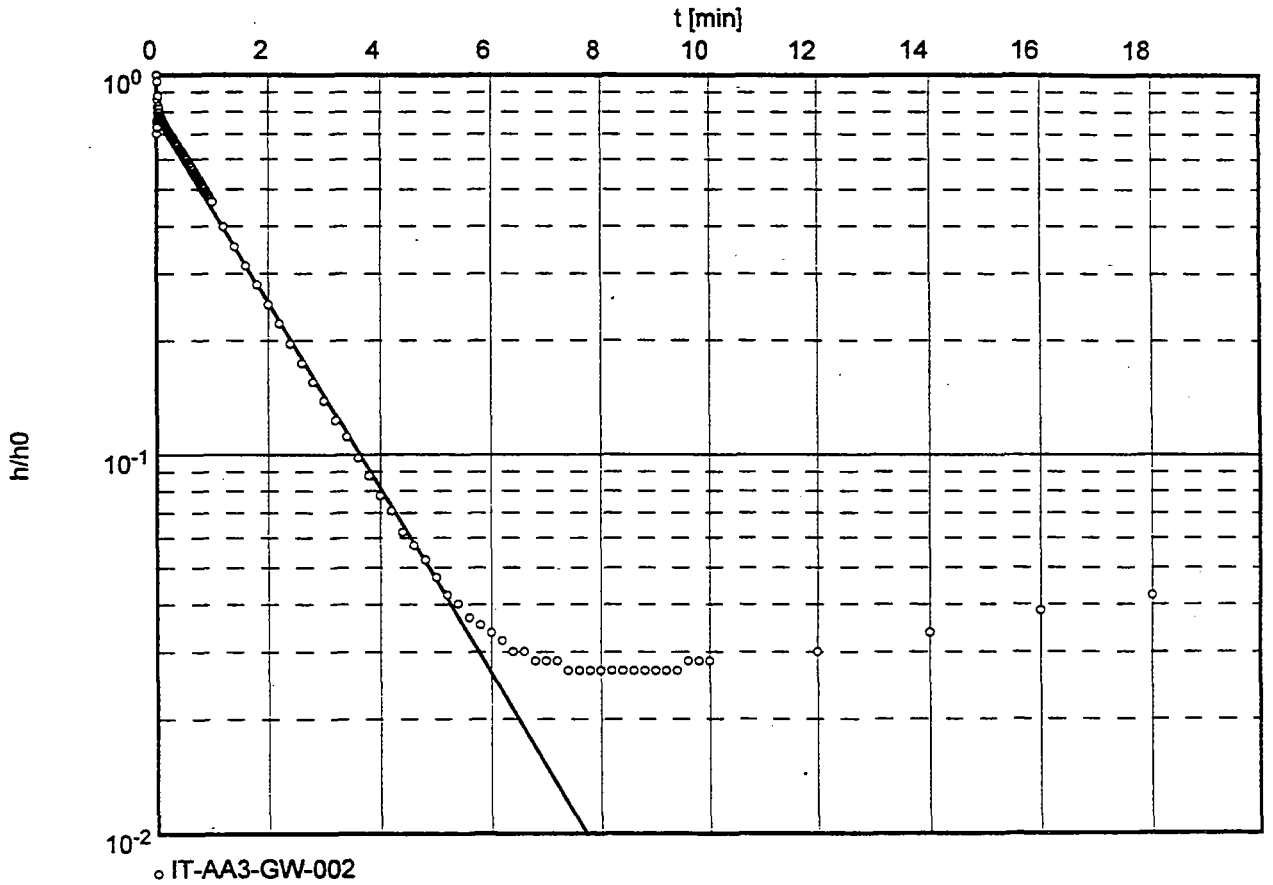
AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

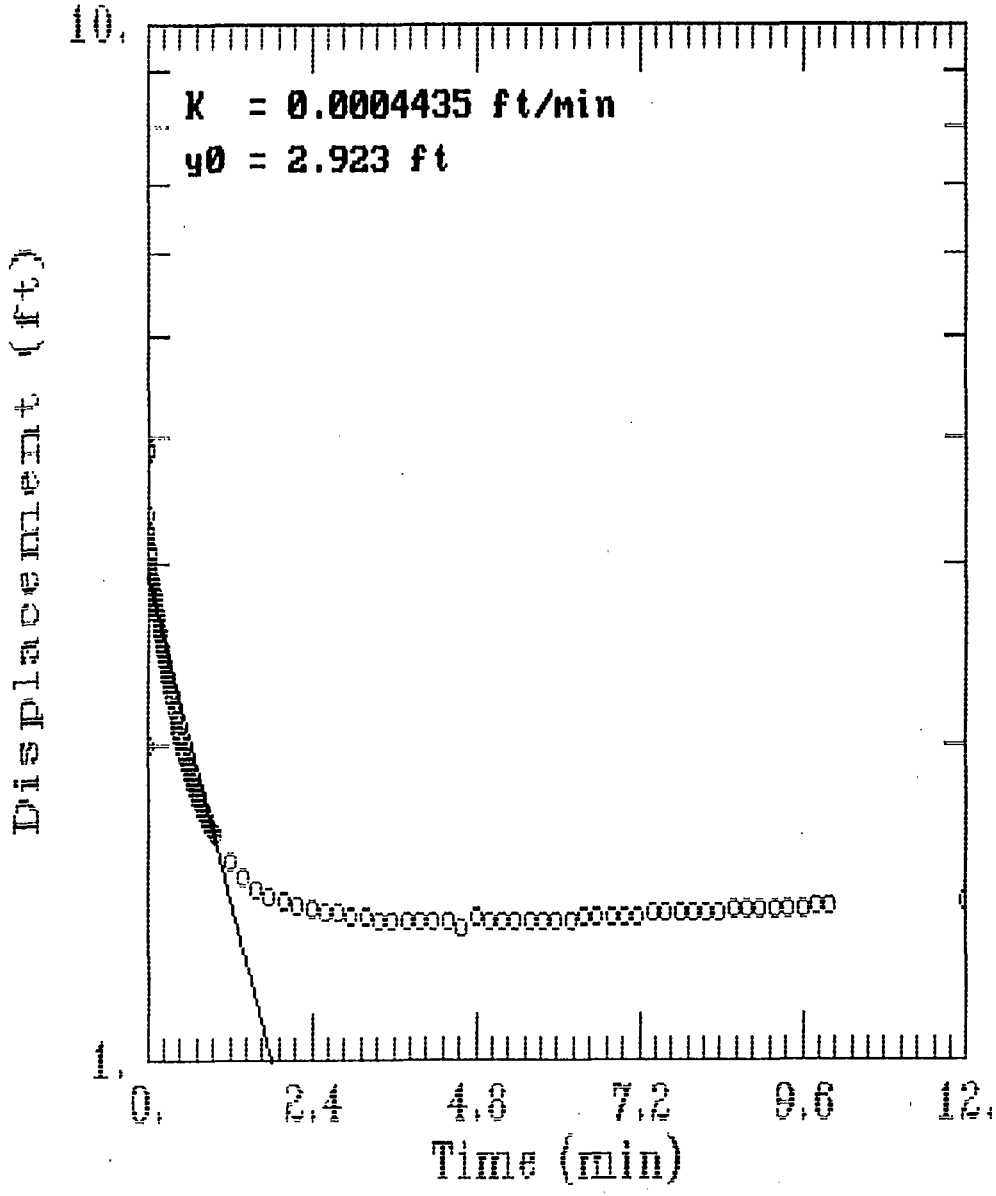
Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 4	Test conducted on: 10/8/97
IT-AA3-GW-002	



Hydraulic conductivity [ft/min]: 2.94×10^{-3}

PBOW IT-BG8-BEDGW-001 Rising Test



AQTESOLV

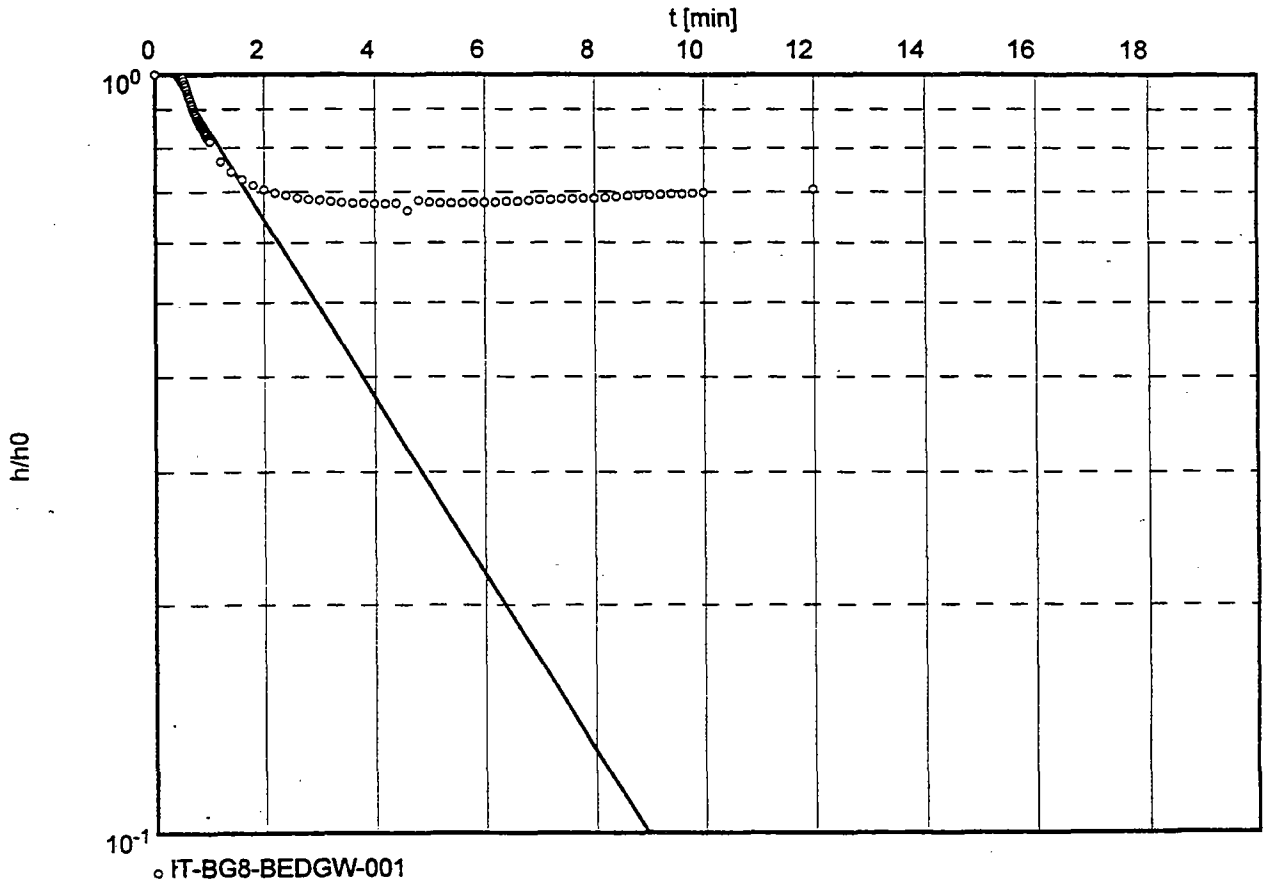
GERAGHTY & MILLER, INC.

Modeling Group

= "MSJOB 36"

Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 5	Test conducted on: 10/8/97
IT-BG8-BEDGW-001	



Hydraulic conductivity [ft/min]: 2.39×10^{-4}

SE1000 C
Environmental Logger
10/10 12::56

Unit# 00000	Test 3
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	30
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/07	16:01:11

Elapsed Time	AA2-BEDGW-001
0	33.681
0.0033	32.752
0.0066	31.441
0.01	30.884
0.0133	31.387
0.0166	32.253
0.02	32.787
0.0233	32.727
0.0266	32.262
0.03	31.785
0.0333	31.643
0.0366	31.858
0.04	32.174
0.0433	32.348
0.0466	32.307
0.05	32.117
0.0533	31.959
0.0566	31.921
0.06	31.991
0.0633	32.12
0.0666	32.177
0.07	32.142
0.0733	32.073
0.0766	32.006
0.08	32.003
0.0833	32.047

SE1000 C
Environmental Logger
10/10 12::59

Unit# 00000	Test 4
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	17.5
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	9:43:52

Elapsed Time	AA3-GW-002
0	19.366
0.0033	19.42
0.0066	18.81
0.01	18.912
0.0133	19.294
0.0166	19.111
0.02	18.864
0.0233	19.038
0.0266	19.145
0.03	18.987
0.0333	18.937
0.0366	19.051
0.04	19.047
0.0433	18.959
0.0466	18.972
0.05	19.022
0.0533	18.99
0.0566	18.956
0.06	18.978
0.0633	18.987
0.0666	18.962
0.07	18.949
0.0733	18.965
0.0766	18.962
0.08	18.943
0.0833	18.943

SE1000 C
Environmental Logger
10/10 13::01

Unit# 00000	Test 5
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1
Reference	20
Linearity	0.01
Scale factor	10
Offset	-0.07
Delay mSEC	50
Step 0 10/08	10:50:19

Elapsed Time	BG8-BEDGW-001
0	22.012
0.0033	22.928
0.0066	23.91
0.01	23.85
0.0133	23.219
0.0166	22.767
0.02	22.925
0.0233	23.256
0.0266	23.361
0.03	23.171
0.0333	22.978
0.0366	22.966
0.04	23.064
0.0433	23.117
0.0466	23.076
0.05	23.001
0.0533	22.963
0.0566	22.975
0.06	22.994
0.0633	22.991
0.0666	22.956
0.07	22.928
0.0733	22.928
0.0766	22.915
0.08	22.912
0.0833	22.906

Elapsed Time	AA2-BEDGW-001	Elapsed Time	AA3-GW-002	Elapsed Time	BG8-BEDGW-001
0.0866	32.089	0.0866	18.949	0.0866	22.874
0.09	32.101	0.09	18.94	0.09	22.865
0.0933	32.079	0.0933	18.93	0.0933	22.846
0.0966	32.047	0.0966	18.93	0.0966	22.852
0.1	32.025	0.1	18.934	0.1	22.84
0.1033	32.028	0.1033	18.924	0.1033	22.817
0.1066	32.044	0.1066	18.921	0.1066	22.817
0.11	32.06	0.11	18.921	0.11	22.802
0.1133	32.063	0.1133	18.918	0.1133	22.798
0.1166	32.054	0.1166	18.912	0.1166	22.786
0.12	32.038	0.12	18.912	0.12	22.776
0.1233	32.032	0.1233	18.908	0.1233	22.764
0.1266	32.035	0.1266	18.902	0.1266	22.754
0.13	32.041	0.13	18.902	0.13	22.742
0.1333	32.047	0.1333	18.899	0.1333	22.729
0.1366	32.044	0.1366	18.896	0.1366	22.723
0.14	32.041	0.14	18.893	0.14	22.713
0.1433	32.035	0.1433	18.889	0.1433	22.704
0.1466	32.032	0.1466	18.886	0.1466	22.691
0.15	32.035	0.15	18.883	0.15	22.682
0.1533	32.035	0.1533	18.88	0.1533	22.672
0.1566	32.038	0.1566	18.877	0.1566	22.663
0.16	32.038	0.16	18.877	0.16	22.653
0.1633	32.035	0.1633	18.874	0.1633	22.644
0.1666	32.032	0.1666	18.87	0.1666	22.634
0.17	32.028	0.17	18.867	0.17	22.625
0.1733	32.032	0.1733	18.864	0.1733	22.615
0.1766	32.032	0.1766	18.861	0.1766	22.606
0.18	32.032	0.18	18.861	0.18	22.599
0.1833	32.032	0.1833	18.858	0.1833	22.59
0.1866	32.032	0.1866	18.855	0.1866	22.581
0.19	32.028	0.19	18.852	0.19	22.571
0.1933	32.025	0.1933	18.848	0.1933	22.565
0.1966	32.025	0.1966	18.848	0.1966	22.555
0.2	32.028	0.2	18.845	0.2	22.546
0.2033	32.028	0.2033	18.842	0.2033	22.539
0.2066	32.028	0.2066	18.839	0.2066	22.53
0.21	32.025	0.21	18.839	0.21	22.524
0.2133	32.025	0.2133	18.836	0.2133	22.514
0.2166	32.025	0.2166	18.833	0.2166	22.508
0.22	32.022	0.22	18.829	0.22	22.498
0.2233	32.022	0.2233	18.829	0.2233	22.492
0.2266	32.025	0.2266	18.826	0.2266	22.483
0.23	32.022	0.23	18.823	0.23	22.476
0.2333	32.022	0.2333	18.82	0.2333	22.47
0.2366	32.022	0.2366	18.82	0.2366	22.464
0.24	32.022	0.24	18.817	0.24	22.454

Elapsed Time	AA2-BEDGW-001	Elapsed Time	AA3-GW-002	Elapsed Time	BG8-BEDGW-001
0.2433	32.022	0.2433	18.814	0.2433	22.448
0.2466	32.022	0.2466	18.814	0.2466	22.442
0.25	32.022	0.25	18.81	0.25	22.432
0.2533	32.022	0.2533	18.807	0.2533	22.426
0.2566	32.022	0.2566	18.804	0.2566	22.419
0.26	32.019	0.26	18.804	0.26	22.413
0.2633	32.019	0.2633	18.801	0.2633	22.407
0.2666	32.019	0.2666	18.798	0.2666	22.4
0.27	32.019	0.27	18.798	0.27	22.394
0.2733	32.019	0.2733	18.795	0.2733	22.388
0.2766	32.019	0.2766	18.792	0.2766	22.382
0.28	32.019	0.28	18.792	0.28	22.375
0.2833	32.019	0.2833	18.788	0.2833	22.366
0.2866	32.019	0.2866	18.785	0.2866	22.363
0.29	32.019	0.29	18.785	0.29	22.356
0.2933	32.019	0.2933	18.782	0.2933	22.35
0.2966	32.019	0.2966	18.779	0.2966	22.344
0.3	32.016	0.3	18.779	0.3	22.337
0.3033	32.016	0.3033	18.776	0.3033	22.331
0.3066	32.016	0.3066	18.773	0.3066	22.325
0.31	32.016	0.31	18.773	0.31	22.322
0.3133	32.016	0.3133	18.769	0.3133	22.315
0.3166	32.016	0.3166	18.766	0.3166	22.309
0.32	32.016	0.32	18.766	0.32	22.303
0.3233	32.016	0.3233	18.763	0.3233	22.296
0.3266	32.016	0.3266	18.76	0.3266	22.29
0.33	32.016	0.33	18.76	0.33	22.284
0.3333	32.016	0.3333	18.757	0.3333	22.28
0.35	32.013	0.35	18.744	0.35	22.246
0.3666	32.006	0.3666	18.735	0.3666	22.214
0.3833	32.006	0.3833	18.722	0.3833	22.186
0.4	32.006	0.4	18.713	0.4	22.157
0.4166	32.003	0.4166	18.7	0.4166	22.132
0.4333	32	0.4333	18.69	0.4333	22.107
0.45	32	0.45	18.678	0.45	22.081
0.4666	31.997	0.4666	18.668	0.4666	22.059
0.4833	31.997	0.4833	18.659	0.4833	22.037
0.5	31.994	0.5	18.646	0.5	22.015
0.5166	31.994	0.5166	18.637	0.5166	21.993
0.5333	31.991	0.5333	18.627	0.5333	21.974
0.55	31.991	0.55	18.618	0.55	21.955
0.5666	31.987	0.5666	18.605	0.5666	21.939
0.5833	31.987	0.5833	18.596	0.5833	21.92
0.6	31.984	0.6	18.586	0.6	21.901
0.6166	31.984	0.6166	18.577	0.6166	21.886
0.6333	31.981	0.6333	18.567	0.6333	21.873
0.65	31.981	0.65	18.555	0.65	21.857

Elapsed Time	AA2-BEDGW-001	Elapsed Time	AA3-GW-002	Elapsed Time	BG8-BEDGW-001
0.6666	31.978	0.6666	18.548	0.6666	21.841
0.6833	31.978	0.6833	18.536	0.6833	21.829
0.7	31.975	0.7	18.526	0.7	21.813
0.7166	31.975	0.7166	18.517	0.7166	21.8
0.7333	31.975	0.7333	18.507	0.7333	21.788
0.75	31.972	0.75	18.498	0.75	21.778
0.7666	31.972	0.7666	18.488	0.7666	21.766
0.7833	31.968	0.7833	18.479	0.7833	21.753
0.8	31.968	0.8	18.469	0.8	21.743
0.8166	31.968	0.8166	18.46	0.8166	21.734
0.8333	31.965	0.8333	18.454	0.8333	21.724
0.85	31.965	0.85	18.444	0.85	21.715
0.8666	31.962	0.8666	18.435	0.8666	21.706
0.8833	31.962	0.8833	18.425	0.8833	21.696
0.9	31.962	0.9	18.416	0.9	21.687
0.9166	31.959	0.9166	18.406	0.9166	21.677
0.9333	31.959	0.9333	18.4	0.9333	21.671
0.95	31.956	0.95	18.39	0.95	21.661
0.9666	31.956	0.9666	18.381	0.9666	21.655
0.9833	31.956	0.9833	18.371	0.9833	21.649
1	31.953	1	18.365	1	21.642
1.2	31.93	1.2	18.245	1.2	21.544
1.4	31.918	1.4	18.16	1.4	21.497
1.6	31.902	1.6	18.087	1.6	21.462
1.8	31.889	1.8	18.024	1.8	21.437
2	31.874	2	17.964	2	21.418
2.2	31.861	2.2	17.913	2.2	21.402
2.4	31.848	2.4	17.866	2.4	21.393
2.6	31.836	2.6	17.825	2.6	21.383
2.8	31.823	2.8	17.79	2.8	21.377
3	31.814	3	17.759	3	21.374
3.2	31.801	3.2	17.73	3.2	21.368
3.4	31.788	3.4	17.708	3.4	21.364
3.6	31.779	3.6	17.683	3.6	21.361
3.8	31.766	3.8	17.664	3.8	21.361
4	31.757	4	17.645	4	21.358
4.2	31.747	4.2	17.632	4.2	21.358
4.4	31.735	4.4	17.616	4.4	21.361
4.6	31.725	4.6	17.607	4.6	21.33
4.8	31.716	4.8	17.598	4.8	21.371
5	31.703	5	17.588	5	21.364
5.2	31.693	5.2	17.579	5.2	21.361
5.4	31.684	5.4	17.575	5.4	21.361
5.6	31.675	5.6	17.569	5.6	21.361
5.8	31.665	5.8	17.566	5.8	21.364
6	31.656	6	17.563	6	21.364
6.2	31.646	6.2	17.56	6.2	21.364

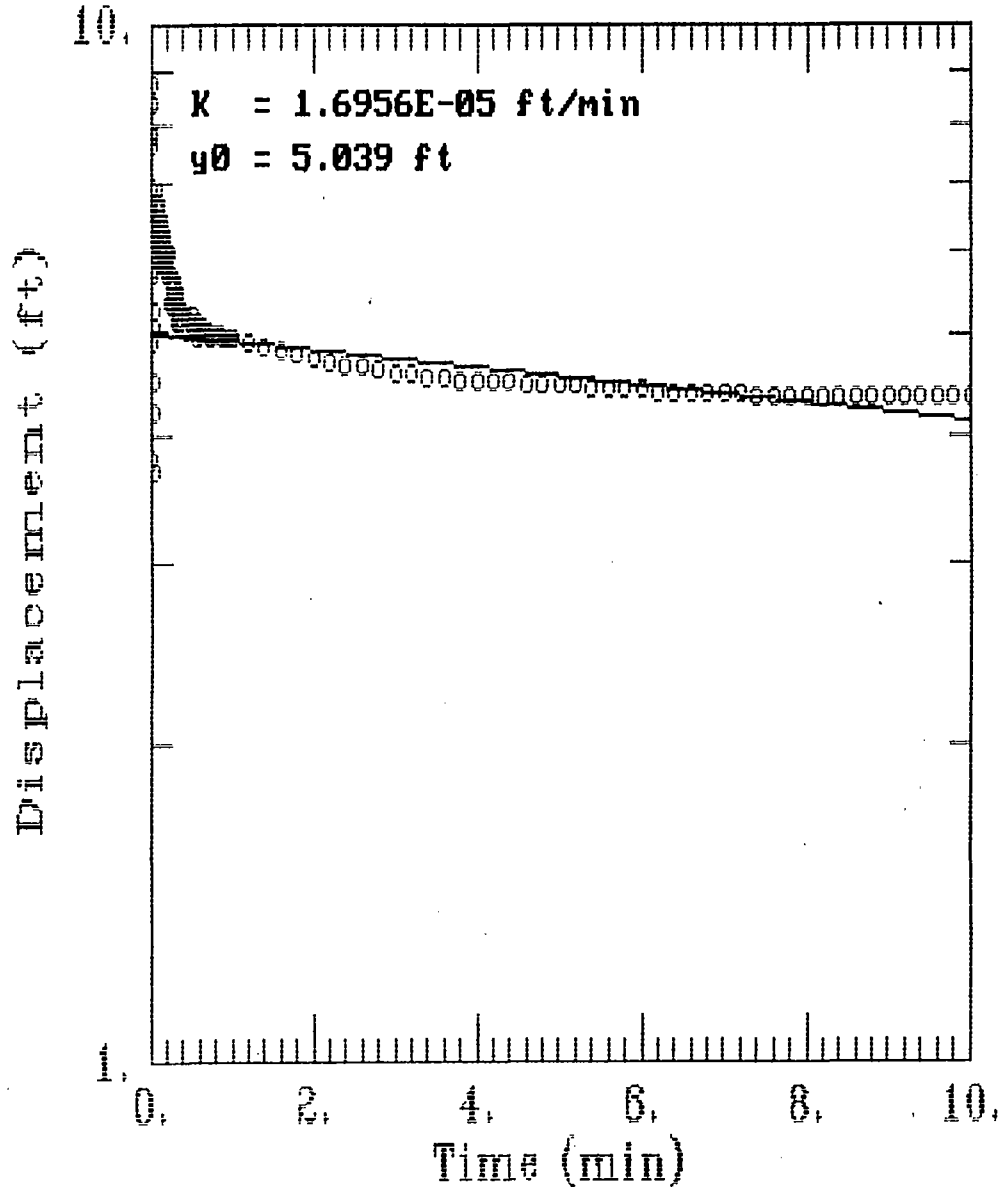
Elapsed Time	AA2-BEDGW-001
6.4	31.637
6.6	31.627
6.8	31.618
7	31.608
7.2	31.599
7.4	31.589
7.6	31.58
7.8	31.57
8	31.561
8.2	31.554
8.4	31.545
8.6	31.536
8.8	31.526
9	31.516
9.2	31.51
9.4	31.501
9.6	31.491
9.8	31.485
10	31.475
12	31.4
14	31.324
16	31.254
18	31.191
20	31.137
22	31.083
24	31.039
26	31.185
28	31.103
30	31.033
32	30.976
34	30.929
36	30.888
38	30.846
40	30.809
42	30.774
44	30.742
46	30.714
48	30.685
50	30.657
52	30.628
54	30.603
56	30.581
58	30.559
60	30.537
62	30.521
64	30.701
66	30.644

Elapsed Time	AA3-GW-002
6.4	17.556
6.6	17.556
6.8	17.553
7	17.553
7.2	17.553
7.4	17.55
7.6	17.55
7.8	17.55
8	17.55
8.2	17.55
8.4	17.55
8.6	17.55
8.8	17.55
9	17.55
9.2	17.55
9.4	17.55
9.6	17.553
9.8	17.553
10	17.553
12	17.556
14	17.563
16	17.572
18	17.579

Elapsed Time	BG8-BEDGW-001
6.4	21.368
6.6	21.368
6.8	21.371
7	21.374
7.2	21.374
7.4	21.377
7.6	21.377
7.8	21.38
8	21.38
8.2	21.383
8.4	21.386
8.6	21.39
8.8	21.393
9	21.393
9.2	21.396
9.4	21.399
9.6	21.399
9.8	21.402
10	21.405
12	21.421

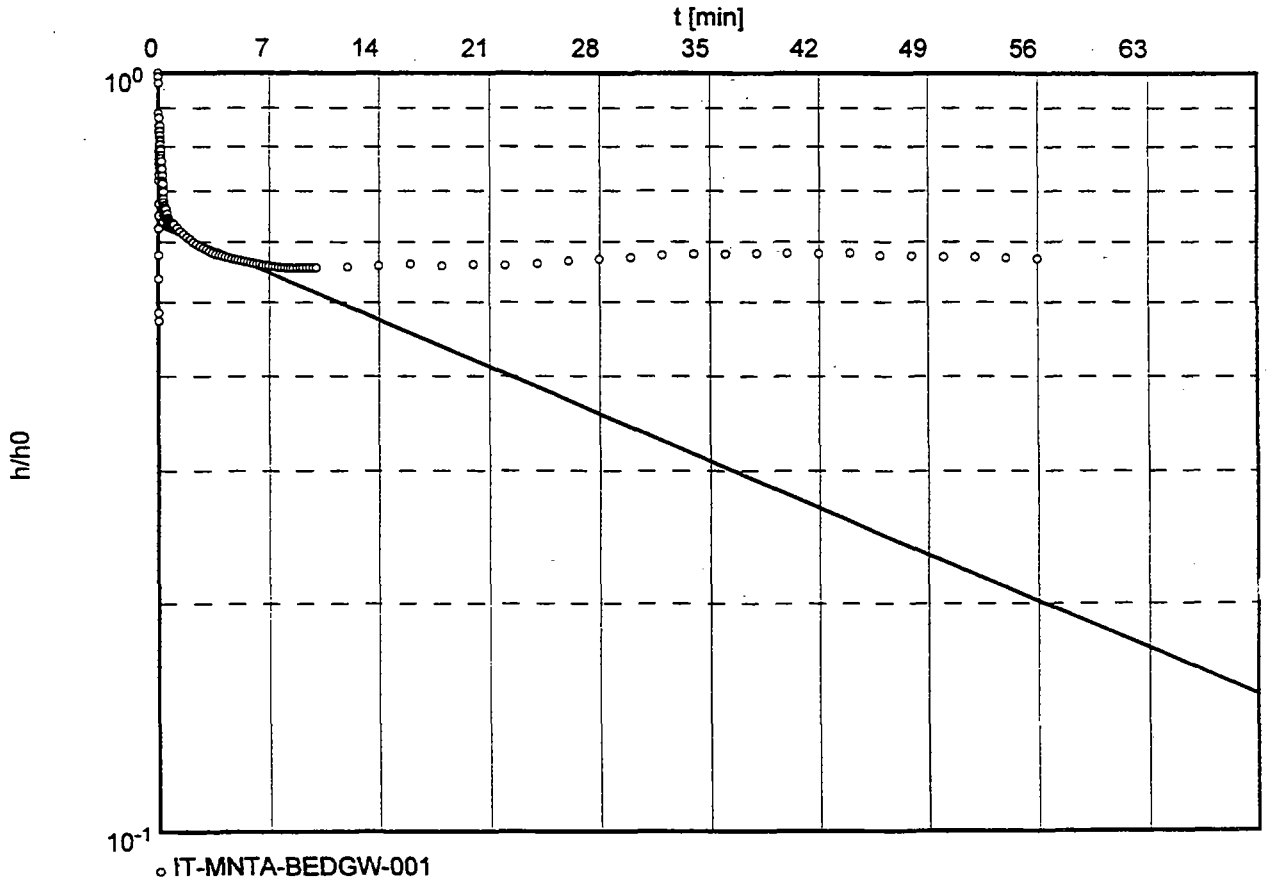
Elapsed Time	AA2-BEDGW-001	Elapsed Time	AA3-GW-002	Elapsed Time	BG8-BEDGW-001
68	30.6				
70	30.568				
72	30.54				
74	30.518				
76	30.499				
78	30.48				
80	30.461				
82	30.445				
84	30.429				
86	30.417				
88	30.404				
90	30.388				
92	30.376				
94	30.363				
96	30.35				
98	30.338				
100	30.328				
105	30.474				
110	30.395				
115	30.353				
120	30.319				
125	30.29				
130	30.265				
135	30.243				
140	30.236				
145	30.344				

PBOW IT-MNTA-BEDGW-001 Rising Test



Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis BOUWER-RICE's method	Date: 16.10.1997 Page 1 Project: PBOW Evaluated by: J.Li

Slug Test No. 9	Test conducted on: 10/8/97
IT-MNTA-BEDGW-001	



Hydraulic conductivity [ft/min]: 2.17×10^{-5}

INTERNATIONAL TECHNOLOGY CORPORATION

By DKK Date 1/18/99 Subject Calculation of Horizontal Sheet No. 1 of 6
Chkd. By MJD Date 1/20/99 Hydraulic Gradients Proj. No. 771481

1) Purpose:
To calculate the groundwater hydraulic gradient at PBOW during the months of May and February 1998 and November and August 1997 in overburden and bedrock monitoring wells.

2) Calculations:
Three transects will be created on groundwater contour maps from the respective dates. Measurements from the transects will be used in the gradient calculation $i = \frac{K}{L}$, where i = groundwater gradient, K = change in groundwater elevation, and L = distance between applicable contour lines. Transect points A, B, C, will be averaged to determine hydraulic gradients.

A) May 1998 - Overburden

Transect A: Perpendicular from contour line 670, 660 Ft northwest of MK-MW15 to contour line 630. Length of transect = 3580 Ft. Change in elevation 40 Ft.

$$i = \frac{K}{L} \quad \text{so} \quad i = \frac{40\ Ft}{3580\ Ft} = 0.0112\ Ft/Ft \quad \text{North/Northwest}$$

Transect B: Perpendicular from contour line 670, at MK-MW16 due north to contour line 630. Length of transect = 8640 Ft. Changed in elevation 40 Ft.

$$i = \frac{K}{L} \quad \text{so} \quad i = \frac{40\ Ft}{8640\ Ft} = 0.0046\ Ft/Ft \quad \text{North}$$

Transect C: Perpendicular from contour line 670, 1000 Ft southwest of GCL-MW01, to contour line 650. Length of transect 3675 Ft. Change in elevation 20 Ft.

$$i = \frac{K}{L} \quad \text{so} \quad i = \frac{20\ Ft}{3675\ Ft} = 0.0054 \quad \text{Northeast}$$

INTERNATIONAL TECHNOLOGY CORPORATION

By DKK Date 1/18/99 Subject Calculation of Hydraulic Gradients Sheet No. 2 of 6
Chkd. By MJB Date 1/20/99 Proj. No. 77/481

A) cont' May 1998 - Bedrock

Transect A: Perpendicular from contour line 670, 3000 ft east of BGS-BED-GW001 to contour line 610. Length of transect = 2600 Ft. Change in elevation 60 Ft.

$i = \frac{K}{L}$ so $i = \frac{60 \text{ ft}}{2600 \text{ Ft}}$ = $i = 0.0231$ Ft/Ft North/Northeast

Transect B: Perpendicular from contour line 660, 3460 ft northeast of TNTB-BED-GW001 to contour line 610. Length of transect 6960 Ft. Change in elevation 50 Ft.

$i = \frac{K}{L}$ so $i = \frac{50 \text{ Ft}}{6960 \text{ Ft}}$ ~ $i = 0.0072$ Ft/Ft North/Northeast

Transect C: Perpendicular from contour line 670, 1600 Ft west of BED-MW20, to contour line 650. Length of transect 6200 Ft. Change in elevation 20 Ft.

$i = \frac{K}{L}$ so $i = \frac{20 \text{ Ft}}{6200 \text{ Ft}}$ = $i = 0.0032$ Ft/Ft Northeast

B) February 1998 - Overburden

Transect A: Perpendicular from contour line line 670, at MK-MW15, to contour line 640. Length of transect 3480 Ft. Change in elevation 30 Ft.

$i = \frac{K}{L}$ so $i = \frac{30 \text{ Ft}}{3480 \text{ Ft}}$ = 0.0086 Ft/Ft North

Transect B: Perpendicular from contour line 670, at MK-MW16, to contour line 630. Length of transect 9000 Ft. Change in elevation 40 Ft.

$i = \frac{K}{L}$ so $i = \frac{40 \text{ Ft}}{9000 \text{ Ft}}$ = 0.0044 Ft/Ft North

Transect C: Perpendicular from contour line 670, 1240 Ft southwest of GCL-MW01, to contour line 650. Length of transect 3340 Ft. Change in elevation 20 Ft.

$i = \frac{K}{L}$ so $i = \frac{20 \text{ Ft}}{3340 \text{ Ft}}$ = 0.0060 Ft/Ft Northeast

INTERNATIONAL TECHNOLOGY CORPORATION

By DKK Date 1/18/99 Subject Calculation of Horizontal Sheet No. 3 of 6
Chkd. By MJD Date 1/20/99 Hydraulic Gradients Proj. No. 771481

B) Con't. February 1998 - Bedrock

Transect A: Perpendicular from contour line 670, 2140 ft east of BGS-BED-GW001, to contour line 610. Length of transect 2100 ft. Change in elevation 60 ft.

$i = \frac{K}{L}$ so $i = \frac{60 \text{ ft}}{2100 \text{ ft}} = 0.0286$ ft/ft North

Transect B: Perpendicular from contour line 660, 640 ft southeast of ABG-BED-GW001, to contour line 610. Length of transect 4560 ft. Change in elevation 50 ft.

$i = \frac{K}{L}$ so $i = \frac{50 \text{ ft}}{4560 \text{ ft}} = 0.0110$ ft/ft North/Northeast

Transect C: Perpendicular from contour line 670, 2520 ft west of BED-MW20, to contour line 650. Length of transect 8860 ft. Change in elevation 20 ft

$i = \frac{K}{L}$ so $i = \frac{20 \text{ ft}}{8860 \text{ ft}} = 0.0023$ ft/ft Northeast

C) November 1997 - Overburden

Transect A: Perpendicular from contour line 670, 120 ft east of MK-MW14, to contour line 630. Length of transect 3940 ft. Change in elevation 40 ft

$i = \frac{K}{L}$ so $i = \frac{40 \text{ ft}}{3940 \text{ ft}} = 0.0102$ ft/ft North/Northwest

Transect B: Perpendicular from contour line 660, 1000 ft east of MK-MW17, to contour line 630. Length of transect 5960 ft. Change in elevation 30 ft.

$i = \frac{K}{L}$ so $i = \frac{30 \text{ ft}}{5960 \text{ ft}} = 0.0050$ ft/ft North

Transect C: Perpendicular from contour line 660, 2400 east of GCL-MW01, to contour line 650. Length of transect 2060 ft. Change in elevation 10 ft.

$i = \frac{K}{L}$ so $i = \frac{10 \text{ ft}}{2060 \text{ ft}} = 0.0049$ ft/ft Northeast

INTERNATIONAL TECHNOLOGY CORPORATION

By DKK Date 1/18/99 Subject Calculation of Horizontal Sheet No. 4 of 6
Chkd. By MJD Date 1/20/99 Hydraulic Gradient Proj. No. 771481

C) cont November 1997 - Bedrock

Transect A: Perpendicular from contour line 670, 1220 ft from BG8-BED-GW001, to contour line 620. Length of transect 1920 ft. Change in elevation 50 ft.

$i = \frac{K}{L}$ so $\frac{50 \text{ ft}}{1920 \text{ ft}} = 0.0260$ ft/ft North

Transect B: Perpendicular from contour line 660, 4000 ft northeast of TNTB-BED-GW002, to contour line 610. Length of transect 7060 ft. Change in elevation 50 ft.

$i = \frac{K}{L}$ so $\frac{50 \text{ ft}}{7060 \text{ ft}} = 0.0071$ ft/ft North/Northeast

Transect C: Perpendicular from contour line 670, 1700 ft west of BED-MW20, to contour line 660. Length of transect 3760 ft. Change in elevation 10 ft

$i = \frac{K}{L}$ so $\frac{10 \text{ ft}}{3760 \text{ ft}} = 0.0027$ ft/ft Northeast

D) August 1997 - Overburden

Transect A: Perpendicular from contour line 670, 1080 ft from MK-MW15, to contour line 630. Length of transect 5800 ft. Change in elevation 40 ft.

$i = \frac{K}{L}$ so $\frac{40 \text{ ft}}{5800 \text{ ft}} = 0.0069$ ft/ft North

Transect B: Perpendicular from contour line 660, 400 feet east of MK-MW17, to contour line 630. Length of transect 5680 ft. Change in elevation 30 ft.

$i = \frac{K}{L}$ so $\frac{30 \text{ ft}}{5680 \text{ ft}} = 0.0053$ ft/ft North/Northeast

Transect C: Perpendicular from contour line 660, 2200 ft northeast of GCL-MW01, to contour line 640 ft. Length of transect 3480 ft. Change in elevation 20 ft.

$i = \frac{K}{L}$ so $\frac{20 \text{ ft}}{3480 \text{ ft}} = 0.0057$ ft/ft northeast

INTERNATIONAL TECHNOLOGY CORPORATION

By DKK Date 1/18/99 Subject Calculation of Hydraulic Gradients Sheet No. 5 of 6

Chkd. By [illegible] Date 1/20/99 Proj. No. 771481

D) cont'd August 1997 - Bedrock

Transect A: Perpendicular from contour line 630, 200 Ft northeast of MK-MW15, to contour line 620. Length of line 2500 Ft. Change in elevation 10 Ft.

$i = \frac{K}{L} = \frac{10\ Ft}{2500\ Ft} = 0.004$ Ft/Ft North

Transect B: Perpendicular from contour line 645, 2000 Ft west of MK-MW16, to contour line 615. Length of transect 7980 Ft. Change in elevation 30 Ft

$i = \frac{K}{L}$ so $\frac{30\ Ft}{7980\ Ft} = 0.0038$ Ft/Ft North/Northwest

Transect C: Perpendicular from line 650, 3600 Ft North of BES-MW20, to contour line 625. Length of line 6540. Change in elevation 25 Ft.

$i = \frac{K}{L}$ so $\frac{25\ Ft}{6540\ Ft} = 0.0038$ Ft/Ft North/Northeast

3) Average hydraulic gradient at transect Points A, B, and C during May and November 1998 and November and August 1997.

Transect Line A (west central portion of PBOW)

	Overburden			Bedrock		
May 1998:	0.0112	Ft/Ft	North/Northwest	0.0231	Ft/Ft	North/Northeast
February 1998:	0.0086	Ft/Ft	North	0.0286	Ft/Ft	North
November 1997:	0.0102	Ft/Ft	North/Northwest	0.0260	Ft/Ft	North
August 1997:	0.0069	Ft/Ft	North	0.004	Ft/Ft	North
Arithmatic Average:	0.0092	Ft/Ft	North/Northwest	0.0204	Ft/Ft	North

INTERNATIONAL TECHNOLOGY CORPORATION

By DKK Date 1/18/99 Subject Calculation of Groundwater Sheet No. 6 of 6
Chkd. By MJD Date 1/20/99 Hydraulic Gradients Proj. No. 771481

3) Average Hydraulic Gradient (cont.)

Transect Line B (central portion of PBOW)

	Overburden			Bedrock		
May 1998:	0.0046	Ft/Ft	North	0.0072	Ft/Ft	North/Northeast
February 1998:	0.0044	Ft/Ft	North	0.0110	Ft/Ft	North/Northeast
November 1997:	0.0050	Ft/Ft	North	0.0071	Ft/Ft	North/Northeast
August 1997:	0.0053	Ft/Ft	Northeast	0.0038	Ft/Ft	North/Northwest
Arithmatic Average:	0.0048		North	0.0073	Ft/Ft	North/Northeast

Transect Line C (southern/eastern portion of PBOW)

	Overburden			Bedrock		
May 1998:	0.0054	Ft/Ft	Northeast	0.0032	Ft/Ft	Northeast
February 1998:	0.0060	Ft/Ft	Northeast	0.0023	Ft/Ft	Northeast
November 1997:	0.0049	Ft/Ft	Northeast	0.0027	Ft/Ft	Northeast
August 1997:	0.0057	Ft/Ft	Northeast	0.0038	Ft/Ft	North/Northeast
Arithmatic Average:	0.0055	Ft/Ft	Northeast	0.0030	Ft/Ft	Northeast

4) Conclusions:

The average groundwater hydraulic gradients for Transect Lines A, B, and C in the overburden and bedrock monitoring wells during the months of May and February 1998 and November and August 1997 are listed in Section 3.

APPENDIX E

LAND SURVEY DATA

Land Survey Data of 35 Existing Monitoring Wells
Site-Wide Groundwater Investigation
Former Plum Brook Ordnance Works
Sandusky, Ohio

Well ID	Y	X	Ground Elevation (feet)	Top of Casing Elevation (feet)
EB-GM-01	623563.215	1918338.625	637.700	640.450
EB-GM-02	624435.112	1917822.470	634.900	637.520
EB-GM-03	624130.765	1917775.154	636.200	638.900
EB-GM-04	624052.048	1917441.495	633.600	636.340
EB-GM-05	623871.542	1917802.134	637.000	639.700
EB-GM-06	623723.314	1917799.169	637.000	639.610
EB-PS-02	624343.951	1920061.236	635.700	638.530
EB-PS-03	624323.698	1920186.918	634.400	637.150
EB-PS-04	624298.302	1920259.217	635.300	637.870
EB-RA-01	625963.641	1917783.365	631.400	633.970
EB-RA-02	626944.348	1918281.944	631.300	633.950
EB-RA-03	626788.304	1918346.186	630.900	633.630
EB-RA-04	626730.526	1918389.466	630.700	633.540
EB-RA-05	626717.470	1918491.581	630.600	633.340
EB-RA-06	626748.047	1918749.548	630.100	632.640
EB-SP-01	613598.448	1927549.988	652.300	655.070
EB-SP-03	613397.744	1926835.797	655.100	657.730
EB-SP-04	613161.741	1926936.786	655.250	658.020
EB-SP-05	613050.710	1926896.790	654.500	657.000
EB-SP-06	613055.655	1927073.522	655.400	658.250
GCL-MW-01	617559.743	1921255.401	671.400	674.810
GCL-MW-02A	617937.096	1920960.532	669.700	672.960
GCL-MW-02B	617940.838	1920983.807	669.600	673.420
GCL-MW-03	617640.608	1920776.792	669.550	672.570
IT-MW01	616900.738	1915525.461	674.500	678.190
IT-MW06	628642.323	1918767.674	628.500	631.700
MK-MW09	623900.555	1908872.118	642.950	645.610
MK-MW12	621233.056	1908763.800	638.100	640.930
MK-MW14	618310.640	1913325.155	678.500	681.260
MK-MW15	618487.557	1913304.311	677.800	680.630
MK-MW19	623870.997	1917534.913	636.200	639.130
MK-MW20	622911.715	1920539.143	634.300	637.510
REACTOR 1	626773.262	1917983.440	630.450	630.510
REACTOR 2	626660.608	1918003.172	631.000	631.050
REACTOR 3	626684.798	1918148.199	631.100	631.210

Land Survey Data for New Monitoring Wells
Site-Wide Groundwater Investigation
Former Plum Brook Ordnance Works
Sandusky, Ohio

Well ID	Y	X	Ground Elevation (feet)	Top of Casing Elevation (feet)
IT-AA1-GW-002	623068.35	1917727.57	638.60	640.85
IT-AA1-BEDGW-001	623069.04	1917718.26	638.80	641.04
IT-AA2-GW-002	623589.11	1909481.30	641.50	643.95
IT-AA2-BEDGW-001	623599.94	1909552.48	641.60	644.06
IT-AA3-GW-002	625027.71	1914956.35	634.10	636.11
IT-AA3-BEDGW-001	625036.61	1914957.28	634.10	636.43
IT-ABG-GW-002	621578.51	1921515.58	658.20	661.06
IT-ABG-BEDGW-001	621579.50	1921506.02	658.20	660.59
IT-MNTA-BEDGW-001	623808.29	1918699.38	636.05	638.40
IT-BG8-BEDGW-001	618635.28	1909856.87	673.70	676.56
IT-TNTB-BEDGW-001	618737.55	1917218.02	659.80	662.43
IT-TNTB-BEDGW-002	616835.18	1918020.88	670.10	673.35

Note: Survey values were scaled to the Ohio State Plane Coordinate System (North Zone).
Vertical datum is NGVD 1929.

APPENDIX F

DATA VALIDATION SUMMARIES

FIRST SEMI-ANNUAL SAMPLING

E & T Technologies, Inc.

Plum Brook Ordnance Works
Data Validation Summary
January, 1998

Data collected during November, 1998, were 100% validated at Level III according to the EPA National Functional Guidelines for data review.

Volatiles: Acetone, 2-butanone and 2-hexanone were qualified in all samples from SDGs PB-010, PB-011, PB-012 and PB-014 on the basis of low relative response factors (RRFs) in both the initial and continuing calibrations. Detected compounds were qualified as estimated, "J", and nondetected values were rejected "R". Analytes exceeded the calibration range in one sample from each of the SDGs. The values from the original sample were rejected while the results from the dilution reanalysis were accepted.

Methylene chloride was found in the method, trip and field blanks associated with 37 samples across the four SDG's. The compound's values were raised to the detection limit and qualified as nondetected "U". The same is true for toluene and xylene in 6 samples in SDG PB-011 and for carbon disulfide in 2 samples from SDG PB-014.

Carbon disulfide and acetone from 2 samples in SDG PB-011 required "J" qualifiers due to the RPD from the field duplicates exceeding the QC limits.

Semivolatiles: A number of compounds in the four SDGs had percent differences greater than 25%, but less than 50% for the continuing calibration verification, but no qualifiers were required since all values were nondetects.

Three samples from SDG PB-011 had low area counts for the perylene internal standard. The associated compounds were qualified as estimated nondetect, "UJ". One sample in SDG PB-011 had compounds that exceeded the calibration range, resulting in a dilution reanalysis. The original compound values were rejected in favor of the dilution results.

Two low surrogate recoveries in a sample from SDG PB-012 required a reanalysis. The reanalysis results were qualified as "J/UJ" as appropriate.

Explosives: Matrix interference required elevated detection limits in some samples, but no qualifiers were required.

Pesticides/PCBs: No qualifiers were required, data acceptable as presented.

109 Northshore Drive, Suite 400
Knoxville, TN 37919

(423) 450-5156
Fax: (423) 450-9104

Metals: The metals data were acceptable as reviewed and qualified, and no data required rejection. Several samples required qualification due to poor results in associated QC samples, or contamination in associated blank samples.

All four metal SDGs (PB010, PB011, PB013, and PB014) contain samples which required qualification due to contamination in associated laboratory calibration and/or field QC blank samples. Analytes requiring qualification include: aluminum, calcium, copper, iron, lead, magnesium, sodium, and zinc.

Laboratory duplicate results were acceptable for all SDGs, but laboratory matrix spike QC results for calcium in SDGs PB010 and PB011, and aluminum in SDG PB012, were below acceptable limits, resulting in several samples being qualified. In addition, matrix spike recoveries for aluminum, calcium, and sodium in were above acceptable limits in SDG PB014, resulting in qualifications for several samples. ICP serial dilution results in SDG PB014 were also outside of acceptable limits for zinc in the dissolved QC sample and aluminum in the total metals sample, resulting in associated samples being qualified.

Several analytes in SDGs PB010, PB011, and PB012, including aluminum, arsenic, chromium, copper, lead, mercury, potassium, and zinc, were detected in one of the field duplicate pair samples, and not detected in the other field duplicate sample. In addition, relative percent differences between duplicate pairs were above acceptable limits for aluminum, iron, lead, manganese, and zinc in SDG PB011, and manganese, mercury and zinc in SDG PB012. No qualifications were required based on this information. No field duplicate samples were included in SDG PB014.

Wet Chemistry/Cyanide: The cyanide data were of acceptable quality as reviewed. No qualification was required.

One sample in SDG PB010 and three samples in SDG PB013 were qualified as nondetect "U" for chloride due to contamination in associated laboratory calibration blank samples.

Four samples in SDG PB011, eighteen samples in SDG PB013, and twelve samples in SDG 15 were qualified as estimated ("J" for detects, "UJ" for nondetects) for nitrate due to analysis outside of acceptable holding times.

In SDG PB015, one sample was qualified for total organic carbon and one sample was qualified for total dissolved solids and total suspended solids due to analysis outside of acceptable holding time (7 days).

No field QC samples (blanks or duplicates) were included for the samples reviewed.

SECOND SEMI-ANNUAL SAMPLING

Plum Brook Ordnance Works
Data Validation Summary
August , 1998

Data collected from soil samples collected in May, 1998, were 100% validated at Level III according to the EPA National Functional Guidelines for data review. SDGs included PB023, PB024, PB025, and PB026.

Volatiles: Acetone, 2-butanone and 2-hexanone had low RRF's (<0.05) in the initial and continuing calibration standards for all samples in all SDGs. This resulted in these 3 compounds being rejected for nondetects and "J" for detected results in all samples.

Methylene chloride was found in the method, trip and field blanks associated with 30 samples across all SDG's. The compound's values were raised to the detection limit and qualified as nondetected "U". The same is true for toluene in 6 samples, acetone in 2 samples, and chloroform in one sample across the SDGs

One sample from PB024 had a high surrogate recovery with all detects being qualified as "J". Two samples in PB025 were improperly preserved and subsequently analyzed outside the QC holding times. Samples were qualified as "UJ/J".

Semivolatiles: In SDG PB025 samples 5696, 5695, 5715, 5905R and 5705 should be viewed with extreme caution. The laboratory narrative states that "based on historical data, and in order to preserve the integrity of the instrument,"....no reanalyses were performed. Apparently the mc.i column was destroyed by analyzing the samples. 2,4-Dinitrotoluene, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol dibenzofuran all exceed the calibration limit of the instrument and were not reanalyzed. An inspection of the raw data shows very low internal standard areas for these compounds in sample 5695. Also, the perylene internal standard area is zero for all the affected samples. Retention time shifts for the identified compounds are significant, varying widely from the Guidelines 0.06 RRT units for all affected samples. All compounds considered to questionable by the review have been qualified as "NJ", presumed present with the quantity as estimated. The extreme drop-off in area counts for the perylene standard requires a rejection of associated compounds. The method blank run on 6/8, while within QC limits, showed low area counts for the six internal standards.

109 Northshore Drive, Suite 400
Knoxville, TN 37919

(423) 450-5156
Fax: (423) 450-9104

Bis - (2 ethyl hexyl) phthalate was present in the method blank associated with PB023 and PB026. Six samples were qualified as "U". Also; six samples from PB024 and PB025 had a perylene internal standard at zero percent recovery. The associated compounds were qualified as "R" in these samples.

PB024 had 2,4-DNP with a high % D for the continuing calibration standard. One sample was affected and the compound qualified as "J". PB026 had one sample with a low surrogate recovery; compounds were qualified as "UJ/J".

Explosives: One sample from SDG PB026 had a low surrogate recovery and was qualified as "UJ". SDG PB023 had one sample with nitrobenzene qualified as "U" due to a sample compound RT shift and the compound did not show up on the confirmation analysis.

Pesticides/PCBs: One sample from SDG PB026 had a low surrogate recovery with all Aroclors qualified as "UJ".

Metals: Recoveries in the laboratory matrix spike resulted in "UJ/J" qualifiers for aluminum, calcium, iron and manganese in 64 samples across all the SDGs. In addition percent differences in the serial dilution that exceeded 10% resulted in zinc receiving a J qualifier in the 10 samples in PB025 and aluminum in the 13 samples in PB026.

Wet Chemistry/Cyanide: The 17 samples from SDG PB023 had sulfate, chloride and TOC qualified as "UJ/J" due to ms/msd recovery.

APPENDIX G

CHEMICAL ANALYTICAL DATA SUMMARY

B - The analyte was detected in the sample and one of its associated analytical or field blanks.

D - Result obtained from the analysis of a dilution.

U - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified", and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit and the reported quantitation limit is approximate.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

FIRST SEMI-ANNUAL SAMPLING

Quanterra Environmental Services

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-Groundwater Investigation
SDG #: PB010

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

December 22, 1997

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Semivolatiles

Surrogate recoveries for sample 5890 were outside control limits. However, after consultation with Kim Napier of IT Corporation, the results were flagged as estimated and released without further investigation.

Continuing calibration standard component Di-n-octylphthalate was just above percent drift criteria. However, as this analyte was not detected in the associated samples, the sample data is unaffected.

Explosives

The matrix spike duplicate recoveries for sample 5730 were acceptable for all analytes except 1,3,5-trinitrobenzene and 1,3-dinitrobenzene. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

Metals

The matrix spike recoveries for sample 5730 and the batch matrix spike were outside control limits for some analytes. However, the laboratory control samples showed acceptable results indicating that the analysis was in control. The matrix spike results are, therefore, attributed to matrix effects. The affected analytes are flagged appropriately on the matrix spike report.

COMMENTS:

Volatiles

The concentrations of several compounds in samples 5890 exceeded the calibration level of the instrument. The samples were analyzed at appropriate dilutions to bring the concentrations of the compounds into the instrument calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits. In addition, surrogate recoveries for this sample were outside control limits. Since the analysis of this sample at a dilution showed acceptable surrogate recoveries, the results are attributed to sample matrix effects.

This report shall not be reproduced except in full, without the written approval of the laboratory.

PROJECT NARRATIVE

COMMENTS:

Volatiles

Sample 5430 was reported with elevated reporting limits for all analytes due to the presence of non-target compounds. Based on screening results, a dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly.

PCBs

Samples 5890, 5950, and 5430 were reported with elevated reporting limits for Aroclor 1221 due to matrix interferences. The reporting limits have been adjusted accordingly.

Explosives

The following samples were reported with elevated reporting limits for one or more compounds due to chromatographic interferences: 5430, 5501, 5760, 5761, 5770, 5804, 5890.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-Groundwater Investigation
SDG #: PB011

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

January 8, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Volatiles

The concentration of 1,1,1-trichloroethane in sample 5800 exceeded the calibration level of the instrument. The sample was analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The reporting limits have been adjusted accordingly. In addition, the client-assigned matrix spike of this sample had recovery for toluene outside control limits. However, since recoveries for the LCS were acceptable, the data is not adversely affected.

Semivolatiles

Perylene-d12 recoveries were low in samples 5451, 5710, 5700 and 5701. These samples matrix exhibited extremely destructive effects on the instruments column, even though they were run at substantial dilutions. After consultation with IT Corporation, it was decided that in order to maintain instrument integrity, these samples would not be re-analyzed. It should be noted, however, that initial runs for samples 5700 and 5701 outside tune time (12/11/97) showed similar results for perylene-d12 recovery (these chromatograms are included with the reports for the final data). Because of this, matrix can be tentatively cited as the cause of the low recoveries for this internal standard. Additionally, in all cases, no targets were seen that reference perylene-d12.

*Please note that the dilution for sample 5451 did no contain analytes above 20% of the calibration range, and the screening chromatogram has been provided.

Metals

The matrix spike/matrix spike duplicate recoveries for sample 5800F were outside control limits for some analytes. However, the laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects. The affected analytes are flagged appropriately on the matrix spike/matrix spike duplicate report.

Wet Chemistry

Sample 5700 was analyzed for nitrate outside of holding time criteria due to severe matrix interferences, which destroyed the analytical column.

This report shall not be reproduced except in full, without the written approval of the laboratory.

PROJECT NARRATIVE

COMMENTS:

Volatiles

Samples 5810, 5451, 5450, 5910, and 5701were reported with elevated reporting limits for all analytes. Based on screening results, dilutions were necessary prior to analysis; the reporting limits were adjusted accordingly.

Samples 5700 and 5710 were reported with elevated reporting limits for all analytes due to the difficult sample matrix, excessive foaming. Dilutions were necessary prior to analysis, and the reporting limits were adjusted accordingly.

Semivolatiles

The concentration of 2-methylphenol and 4-methylphenol in sample 5810 exceeded the calibration level of the instrument. The sample was analyzed at a dilution to bring the concentration of the compounds into the instrument's calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits.

Pesticides/PCBs

Samples 5450, 5451, 5700 and 5701 were reported with elevated reporting limits for all analytes due to sample matrix interferences.

Explosives

The following samples were reported with elevated reporting limits for one or more compounds due to chromatographic interferences: 5450, 5451, 5700, 5701, 5810, 5910, LOT H012.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-Groundwater Investigation
SDG #: PB012

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

January 7, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Volatiles

The matrix spike/matrix spike duplicate relative percent difference for sample 5550-REG were acceptable for all analytes except 1,1-dichloroethene. However, the laboratory control sample showed acceptable results indicating that the analysis was in control.

Semivolatiles

Sample 5900 was reported with elevated reporting limits for all analytes due to the difficult sample matrix. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly. (*Please note that the dilution did not contain analytes above 20% of the calibration, and the screening chromatogram has been provided).

Surrogate recoveries for sample 5940 were outside control limits. The sample was re-analyzed and the surrogate recoveries were also outside control limits. These results indicate that the surrogate results are due to matrix effects.

Sample 5690 was reported with elevated reporting limits for all analytes due to the difficult sample matrix. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly. In addition, internal standard perylene-d12 was outside control limits. In order to maintain instrument integrity, no re-analysis was performed. The screening results showed similar results for this internal standard, which has been provided.

Pesticides/PCBs

The matrix spike/matrix spike duplicate recoveries and/or RPDs for sample 5550-REG were acceptable for all analytes except Aroclor-1260. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

Explosives

The matrix spike recoveries for sample 5550-REG were acceptable for all analytes except RDX. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

This report shall not be reproduced except in full, without the written approval of the laboratory.

PROJECT NARRATIVE

Metals

The matrix spike/matrix spike duplicate recoveries for samples 5550-REGF and 5550-REG were outside control limits for some analytes. However, the laboratory control samples showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects. The affected analytes are flagged appropriately on the matrix spike/matrix spike duplicate report.

COMMENTS:

Volatiles

Sample 5940 was reported with elevated reporting limits for all analytes. Based on screening results, dilutions were necessary prior to analysis; the reporting limits were adjusted accordingly.

Samples 5690 and 5470 were reported with elevated reporting limits for all analytes due to the difficult sample matrix, excessive foaming. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly.

Pesticides/PCBs

Sample 5690 was reported with elevated reporting limits for all analytes due to sample matrix interferences.

Sample 5940 was reported with elevated reporting limits for Aroclor 1221 due to sample matrix interferences.

Explosives

The following samples were reported with elevated reporting limits for one or more analytes due to sample matrix interferences: 5470, 5490, 5550-REG, 5940,5900. The affected analytes are flagged on the sample report.

Quanterra Environmental Services

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-Groundwater Investigation
SDG #: PB013

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

January 6, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Nitrate

Due to severe matrix problems, the following samples were analyzed outside of holding time criteria, which was due to instrument damage from these samples: 5620, 5610, 5580, 5560, 5550-REG, 5530, 5940, 5470, 5660, 5860, 5520, 5510, 5490, 5460, and 5440. The analyses of these samples resulted in high concentrations of this analyte and no further analyses were attempted.

TOC

The following samples were originally analyzed within holding time criteria: 5470, 5660, 5860, 5520, 5510, 5490, 5460, 5440, 5930, and 5870. However, due to instrument problems, the remaining triplicate analyses and/or dilutions were performed outside of this criteria.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-Groundwater Investigation
SDG #: PB014

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

January 8, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Volatiles

The percent RPD for chlorobenzene and 1,1-dichloroethene in the LCS/LCSD (CECPL102 and CECPL103), were found outside laboratory control limits. However, all samples run against these spikes were found to be free of the analytes in question with the exception of 5590 and 5460, which had levels below reporting limits.

Pesticides/PCBs

The laboratory control sample results were outside control limits for Aroclor 1016. However, the laboratory control sample duplicate recoveries were acceptable, indicating that the problem was confined to the laboratory control sample. Thus, the validity of the sample results is not adversely affected.

Explosives

The batch matrix spike/matrix spike duplicate had recoveries which were acceptable for all analytes except 2,4-DNT. The laboratory control sample showed acceptable results indicating that the analysis was in control. The batch matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

Metals

The serial dilution of samples 5460 and 5460F were outside control limits due to physical or chemical matrix interferences.

The batch matrix spike/matrix spike duplicate recoveries for sample 5460 were outside control limits for some analytes. However, the laboratory control sample showed acceptable results indicating that the analysis was in control. The batch matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects. In addition, results outside of limits do not necessarily reflect poor method performance due to high analyte concentrations in the sample relative to the spike level. The affected analytes are flagged appropriately on the matrix spike/matrix spike duplicate report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra
Environmental Services

PROJECT NARRATIVE

COMMENTS:

Volatiles

Samples 5440,5970, 5460, 5930, and 5920 were reported with elevated reporting limits for all analytes. Based on screening results, dilutions were necessary prior to analysis; the reporting limits were adjusted accordingly.

Semivolatiles

Sample 5920, 5680, 5970, and 5930, were reported with elevated reporting limits for all analytes due to the difficult sample matrix and screening results. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly.

Explosives

The following samples were reported with elevated reporting limits for one or more analytes due to sample matrix interferences: 5460, 5680, 5790, 5920, 5930, 5970.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-Groundwater Investigation
SDG #: PB015

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

January 9, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Wet Chemistry

Nitrate analysis for sample 5970 was canceled by Kim Napier of IT Corporation. The TDS and TSS analyses for this sample were analyzed outside of holding time per client request.

Samples 5790, 5850, and 5780 were analyzed for TDS and TSS outside of holding time due to laboratory error.

The batch matrix spike/matrix spike recoveries and/or RPDs for Chloride and Sulfate analyses were outside control limits. However, the associated laboratory control samples showed acceptable results indicating that the analyses were in control. The results are, therefore, attributed to matrix effects.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Curtis & Tompkins, Ltd.

Laboratory Numbers: 131462
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 771481

Sampled Date:11/18-19/97
Received Date: 11/20/97

CASE NARRATIVE

This hardcopy data package contains sample and QC results for three water samples which were received from the site referenced above on November 20, 1997. The samples were received cold and intact.

Volatiles (EPA 8260): No analytical problems were encountered.

Semi-volatiles (EPA 8270): A high spike recovery was observed for 4-nitrophenol in the blank spike (CT#QC59374). This should not affect the quality of the data as the recovery was below 100% and the samples were all non-detect. No other analytical problems were encountered.

PCBs (EPA 8080): High response was observed for Aroclor 1016 in the continuing calibration verifications which were analyzed on November 24-25, 1997. This should not affect the quality of the data as this Aroclor was not detected in the samples. No other analytical problems were encountered.

Metals (EPA 6010A/7470): Relative percent differences (%RPDs) outside QC limits was observed for aluminum in batch 37797 and for potassium in batch 37796. Low recovery was observed for silver in the matrix spike of 5562 (CT#131462-001) in batch 37796. The spike recoveries for calcium in batch 37796 and for calcium and iron in batch 37797 are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No analytical problems were encountered.

Nitroaromatics and Nitramines (EPA 8330): Two samples were subcontracted to Quanterra Environmental Services for analysis.

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 096226

There were no anomalies associated with this report.

Curtis & Tompkins, Ltd.

Laboratory Numbers: 131460
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 771481

Sampled Date:11/16-17/97
Received Date: 11/18/97

CASE NARRATIVE

This hardcopy data package contains sample and QC results for four water samples which were received from the site referenced above on November 18, 1997. The samples were received cold and intact.

Volatiles (EPA 8260): Sample 5763 (CT#131460-002) had a detected result for methylene chloride at 7.4 ug/L. The associated method blank (CT#QC59343) had a detected value below the reporting limit of 2.2 ug/L. No other analytical problems were encountered.

Semi-volatiles (EPA 8270): Sample 5452 (CT#131460-004) was diluted due to high levels of non-target compounds. A high spike recovery was observed for 4-nitrophenol in the blank spike (CT#QC59374). This should not affect the quality of the data as the recovery was below 100% and the samples were all non-detect. 2,4-dinitrophenol, di-n-butylphthalate, bis(2-ethylhexyl)phthalate, and di-n-octylphthalate did not meet %RSD or correlation coefficient criteria in the initial calibration for BNA1. Benzyl alcohol, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene met minimum response criteria but did not meet the %D criteria in the continuing calibration verification which was analyzed on BNA1 on November 25, 1997. This should not affect the quality of the data as only sample 5452 (CT#131460-004) was analyzed on this instrument and none of these compounds were detected. No other analytical problems were encountered.

PCBs (EPA 8080): A low surrogate recovery was observed for decachlorobiphenyl for 5412 (CT#131460-003). This outlier should not affect the quality of the data as the surrogate recovery for TCMX was within QC limits. High response was observed for Aroclor 1016 in the continuing calibration verifications which were analyzed on November 24-25, 1997. This should not affect the quality of the data as this Aroclor was not detected in the samples. No other analytical problems were encountered.

Metals (EPA 6010A/7470): Relative percent differences (%RPDs) outside QC limits was observed for aluminum in batch 37797 and for potassium in batch 37796. Low recovery was observed for silver in the matrix spike of 5562 (CT#131462-001). The spike recoveries for calcium in batch 37796 and for calcium and iron in batch 37797 are considered not meaningful (NM) as the sample

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 096224

Please note that due to time lost in transit, your samples were extracted outside of the holding time. The holding time expired on 11/23/97 and 11/24/97. The extraction was performed on 11/25/97.

Samples "5412" and "5452" had no quantitatable surrogate recovery. This was confirmed by reinjection on both the analytical and confirmation columns.

Curtis & Tompkins, Ltd.

Laboratory Numbers: 131461
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 771481

Sampled Date: 11/17/97
Received Date: 11/19/97

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on November 17, 1997. The samples were received cold and intact.

Volatiles (EPA 8260): Sample 5702 (CT#131461-001) was diluted due to the dark nature of the matrix. When it was analyzed with no dilution it caused the mass spectrometer to shut off. No other analytical problems were encountered.

Semi-volatiles (EPA 8270): Sample 5702 (CT#131461-001) was diluted due to high levels of non-target compounds causing the surrogates to be diluted out. A high spike recovery was observed for 4-nitrophenol in the blank spike (CT#QC59374). This should not affect the quality of the data as the recovery was below 100% and the sample was non-detect for this compound. No other analytical problems were encountered.

PCBs (EPA 8080): Sample 5702 (CT#131461-001) had a high surrogate recovery for TCMX due to interference with non-target compounds and low surrogate recovery for decachlorobiphenyl. High response was observed for Aroclor 1016 in the continuing calibration verifications which were analyzed on November 24-27, 1997. This should not affect the quality of the data as this Aroclor was not detected in the samples. No other analytical problems were encountered.

Metals (EPA 6010A/7470): Relative percent differences (%RPDs) outside QC limits was observed for aluminum in batch 37797 and for potassium in batch 37796. Low recovery was observed for silver in the matrix spike of 5562 (CT#131462-001) in batch 37796. The spike recoveries for calcium in batch 37796 and for calcium and iron in batch 37797 are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines (EPA 8330): One sample was subcontracted to Quanterra Environmental Services for analysis.

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 096225

Please note that due to time lost in transit, your sample was extracted outside of the holding time. The holding time expired on 11/24/97. The extraction was performed on 11/25/97.

Your sample had no quantitatable surrogate recovery due to required dilution. This was confirmed by reinjection on both the analytical and confirmation columns.

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	150000		270000		190000		190000		350000	
Chloride		ug/L	3000	B	13000		240000		3000	B	9000	
Hardness		ug/L	540000		580000		380000		200000		2100000	
Nitrate		ug/L	5000	UJ	5000	UJ	5000	UJ	5000	UJ	5000	UJ
Sulfate		ug/L	130000		31000		130000		29000		1700000	
Total dissolved solids		ug/L	500000		330000		440000		250000		3100000	
Total organic carbon		ug/L	5400		4500		2700		4200		6900	
Total suspended solids		ug/L	4000	U	27000		4000	U	8000		5000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	370000		300000		360000		550000		350000	
Chloride		ug/L	4000		4000		4000		97000		3000	
Hardness		ug/L	400000		1200000		420000		1500000		760000	
Nitrate		ug/L	5000	UJ	5000	UJ	5000	UJ	5000	UJ	5000	UJ
Sulfate		ug/L	18000		710000		79000		270000		48000	
Total dissolved solids		ug/L	460000		1400000		310000		1300000		420000	
Total organic carbon		ug/L	4500		13000		8600		41000		4700	
Total suspended solids		ug/L	290000		17000		84000		4000	U	6000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	320000		470000		340000		45000		300000	
Chloride		ug/L	1000		14000		28000		17000		5000	
Hardness		ug/L	740000		1600000		2200000		760000		370000	
Nitrate		ug/L	5000	UJ	5000	UJ	17000	J	100		200	
Sulfate		ug/L	47000		780000		1500000		300000		32000	
Total dissolved solids		ug/L	420000		1700000		3100000		930000		350000	
Total organic carbon		ug/L	3800		4400		2900		2700		1500	
Total suspended solids		ug/L	4000	U	4000	U	15000		37000		5000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	450000		590000		340000		120000		110000	
Chloride		ug/L	14000		21000		6000		8000		3000	
Hardness		ug/L	370000		860000		540000		560000		300000	
Nitrate		ug/L	100	U	600		100	UJ	100	U	100	U
Sulfate		ug/L	270000		54000		54000		280000		160000	
Total dissolved solids		ug/L	350000		500000		410000		670000		350000	
Total organic carbon		ug/L	1400		3100		2000		6100		2600	
Total suspended solids		ug/L	35000		4000	U	5000		190000		5000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	36000		38000		400000		430000		280000	
Chloride		ug/L	3000	B	4000	B	6000		410000		7000	
Hardness		ug/L	490000		440000		540000		900000		420000	
Nitrate		ug/L	5000	UJ	5000	UJ	100	U	100	U	100	U
Sulfate		ug/L	470000		300000		110000		240000		36000	
Total dissolved solids		ug/L	290000		660000		600000		1700000		360000	
Total organic carbon		ug/L	2500		3400		2900		12000		11000	
Total suspended solids		ug/L	4000	U	5000		12000		250000		150000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5840		5690		5700		5710		5610	
Sample Date:			13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97		18-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	370000		820000		990000		860000		490000	
Chloride		ug/L	6000		1000	U	6500000		7200000		47000	
Hardness		ug/L	1900000		5000000		13000000		2200000		1100000	
Nitrate		ug/L	100	U	400	J	1600000	J	200	J	5000	UJ
Sulfate		ug/L	1200000		8000000		12000000		3000000		160000	
Total dissolved solids		ug/L	2400000		17000000		50000000		8700000		780000	
Total organic carbon		ug/L	21000		2700000		14000000		1300000		4200	
Total suspended solids		ug/L	400000		25000		73000		8000		7000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5620		5630		5640		5650		5660	
Sample Date:			18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97		20-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	450000		270000		330000		320000		610000	
Chloride		ug/L	140000		17000		23000		50000		3000	
Hardness		ug/L	940000		13000000		9200000		500000		920000	
Nitrate		ug/L	5000	UJ	5000	UJ	91000	J	5000	UJ	5000	UJ
Sulfate		ug/L	150000		2000000		1100000		430000		5000	U
Total dissolved solids		ug/L	1000000		3000000		2100000		1000000		640000	
Total organic carbon		ug/L	4500		2400		2600		3000		10000	
Total suspended solids		ug/L	140000		4000	U	5000		7000		130000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5670		5680	
Sample Date:			21-NOV-97		23-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	380000		520000	
Chloride		ug/L	7000		2000	
Hardness		ug/L	4900000		3300000	
Nitrate		ug/L	5000	UJ	80000	J
Sulfate		ug/L	170000		2300000	
Total dissolved solids		ug/L	650000		7700000	
Total organic carbon		ug/L	2100		970000	
Total suspended solids		ug/L	4000	U	40000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	0.64	J	1.0	U	1.0	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	0.39	B	1.0	U	0.27	B	0.40	B	0.31	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	10	R	22	J
Benzene		ug/L	1.0	U	0.53	J	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	0.24	J	1.0	U	1.0	U	0.21	J
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	1.0	U	1.0	U	0.33	B	0.41	B	0.27	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	0.35	J	0.31	B	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	0.17	J	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	0.17	J	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	0.30	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	0.20	B	1.0	U	1.0	U	1.0	U	0.13	B
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	0.13	B

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	0.31	J	1.0	U	0.32	J	0.38	J
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	1.0	U	0.27	B	1.0	U	0.79	B	0.76	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	170	D	500	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	17		500	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	3.4		500	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	2500	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	2500	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	2500	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	5000	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	1000	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.5		1000	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	71	B	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	1000	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Methylene chloride		ug/L	0.40	B	0.39	B	1.0	U	500	U	1.0	U
Styrene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	6.1		13000		1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	100	B	1.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
2-Butanone		ug/L	5.0	R	5.0	R	25	R	25	R	10	R
2-Hexanone		ug/L	5.0	R	5.0	R	25	R	25	R	10	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	25	U	25	U	10	U
Acetone		ug/L	68	J	10	R	50	R	50	R	20	R
Benzene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Bromoform		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Bromomethane		ug/L	2.0	U	2.0	U	10	U	10	U	4.0	U
Carbon disulfide		ug/L	0.37	J	1.0	U	5.0	U	5.0	U	2.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Chloroethane		ug/L	2.0	U	2.0	U	10	U	10	U	4.0	U
Chloroform		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Chloromethane		ug/L	2.0	U	2.0	U	10	U	10	U	4.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Methylene chloride		ug/L	0.27	B	1.0	U	3.0	B	5.7	B	0.54	B
Styrene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Toluene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Total xylenes		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	35	J	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	0.51	B
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	0.43	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	0.33	B	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	0.32	B	0.33	B	1.0	U
Styrene		ug/L	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	0.17	B

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	1000	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	500	U	1.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	10	U	10	U	4.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	5.0	U	5.0	U	2.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	15	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	15	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	15	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	15	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	15	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	15	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	15	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	15	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	73	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	15	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	15	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	15	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	15	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	15	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	15	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	73	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	15	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	73	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	73	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	73	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	15	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	15	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	15	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	15	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	15	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	73	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	73	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	15	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	15	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	43		10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	7.1	J	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	1.5	J	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	12	J	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	1300	D	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	1200	D	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	1000	U	1000	U	100	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	1000	U	1000	U	100	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	1000	U	1000	U	100	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	1000	U	1000	U	100	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
2,4-Dichlorophenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
2,4-Dimethylphenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
2,4-Dinitrophenol		ug/L	50	U	50	U	5000	U	6000		48	J
2,4-Dinitrotoluene		ug/L	10	U	10	U	1800		1500		110	
2,6-Dinitrotoluene		ug/L	10	U	10	U	140	J	190	J	100	U
2-Chloronaphthalene		ug/L	10	U	10	U	1000	U	1000	U	100	U
2-Chlorophenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
2-Methylnaphthalene		ug/L	10	U	10	U	1000	U	1000	U	100	U
2-Methylphenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
2-Nitroaniline		ug/L	50	U	50	U	5000	U	5000	U	500	U
2-Nitrophenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	5000	U	5000	U	500	U
3-Nitroaniline		ug/L	50	U	50	U	5000	U	160	J	450	J
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	660	J	2300	J	500	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	1000	U	1000	U	100	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
4-Chloroaniline		ug/L	10	U	10	U	1000	U	1000	U	100	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	1000	U	1000	U	100	U
4-Methylphenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
4-Nitroaniline		ug/L	50	U	50	U	5000	U	5000	U	500	U
4-Nitrophenol		ug/L	50	U	50	U	5000	U	5000	U	500	U
Acenaphthene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Acenaphthylene		ug/L	10	U	10	U	1000	U	1000	U	100	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	1000	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	1000	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	1000	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	1000	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	1000	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	1000	U
2,4-Dichlorophenol		ug/L	10	U	10	U	1000	U
2,4-Dimethylphenol		ug/L	10	U	10	U	1000	U
2,4-Dinitrophenol		ug/L	50	U	50	U	5000	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	1000	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	1000	U
2-Chloronaphthalene		ug/L	10	U	10	U	1000	U
2-Chlorophenol		ug/L	10	U	10	U	1000	U
2-Methylnaphthalene		ug/L	10	U	10	U	1000	U
2-Methylphenol		ug/L	10	U	10	U	1000	U
2-Nitroaniline		ug/L	50	U	50	U	5000	U
2-Nitrophenol		ug/L	10	U	10	U	1000	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	5000	U
3-Nitroaniline		ug/L	50	U	50	U	5000	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	5000	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	1000	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	1000	U
4-Chloroaniline		ug/L	10	U	10	U	1000	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	1000	U
4-Methylphenol		ug/L	10	U	10	U	1000	U
4-Nitroaniline		ug/L	50	U	50	U	5000	U
4-Nitrophenol		ug/L	50	U	50	U	5000	U
Acenaphthene		ug/L	10	U	10	U	1000	U
Acenaphthylene		ug/L	10	U	10	U	1000	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	15	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	15	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	15	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	15	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	15	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	15	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	15	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	15	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	15	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	15	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	15	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	15	U	10	U	2.7	J	10	U	10	U
Dimethyl phthalate		ug/L	15	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	15	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	15	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	15	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	15	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	73	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	15	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	15	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	15	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	15	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	15	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	73	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	15	U	10	U	10	U	10	U	10	U
Phenol		ug/L	15	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	15	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	15	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	15	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	6.8	J	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Benzo(a)anthracene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Benzo(a)pyrene		ug/L	10	U	10	U	1000	UJ	1000	UJ	100	UJ
Benzo(b)fluoranthene		ug/L	10	U	10	U	1000	UJ	1000	UJ	100	UJ
Benzo(ghi)perylene		ug/L	10	U	10	U	1000	UJ	1000	UJ	100	UJ
Benzo(k)fluoranthene		ug/L	10	U	10	U	1000	UJ	1000	UJ	100	UJ
Butyl benzyl phthalate		ug/L	10	U	10	U	1000	U	1000	U	100	U
Carbazole		ug/L	10	U	10	U	1000	U	1000	U	100	U
Chrysene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	1000	UJ	1000	UJ	100	UJ
Dibenzofuran		ug/L	10	U	10	U	1000	U	1000	U	100	U
Diethyl phthalate		ug/L	10	U	10	U	1000	U	1000	U	100	U
Dimethyl phthalate		ug/L	10	U	10	U	1000	U	1000	U	100	U
Fluoranthene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Fluorene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Hexachlorobenzene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Hexachlorobutadiene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	5000	U	5000	U	500	U
Hexachloroethane		ug/L	10	U	10	U	1000	U	1000	U	100	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	1000	UJ	1000	UJ	100	UJ
Isophorone		ug/L	10	U	10	U	1000	U	1000	U	100	U
Naphthalene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Nitrobenzene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Pentachlorophenol		ug/L	50	U	50	U	5000	U	5000	U	500	U
Phenanthrene		ug/L	10	U	10	U	1000	U	1000	U	100	U
Phenol		ug/L	10	U	10	U	1000	U	1000	U	100	U
Pyrene		ug/L	10	U	10	U	1000	U	1000	U	100	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	1000	U	1000	U	100	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	1000	U	1000	U	100	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	1000	U
Benzo(a)anthracene		ug/L	10	U	10	U	1000	U
Benzo(a)pyrene		ug/L	10	U	10	U	1000	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	1000	U
Benzo(ghi)perylene		ug/L	10	U	10	U	1000	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	1000	U
Butyl benzyl phthalate		ug/L	10	U	10	U	1000	U
Carbazole		ug/L	10	U	10	U	1000	U
Chrysene		ug/L	10	U	10	U	1000	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	1000	U
Dibenzofuran		ug/L	10	U	10	U	1000	U
Diethyl phthalate		ug/L	10	U	10	U	1000	U
Dimethyl phthalate		ug/L	10	U	10	U	1000	U
Fluoranthene		ug/L	10	U	10	U	1000	U
Fluorene		ug/L	10	U	10	U	1000	U
Hexachlorobenzene		ug/L	10	U	10	U	1000	U
Hexachlorobutadiene		ug/L	10	U	10	U	1000	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	5000	U
Hexachloroethane		ug/L	10	U	10	U	1000	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	1000	U
Isophorone		ug/L	10	U	10	U	1000	U
Naphthalene		ug/L	10	U	10	U	1000	U
Nitrobenzene		ug/L	10	U	10	U	1000	U
Pentachlorophenol		ug/L	50	U	50	U	5000	U
Phenanthrene		ug/L	10	U	10	U	1000	U
Phenol		ug/L	10	U	10	U	1000	U
Pyrene		ug/L	10	U	10	U	1000	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	1000	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	1000	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	15	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	100		10	U	10	U	10	U	10	U
di-n-Butyl phthalate		ug/L	15	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	15	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	15	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	15	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	10	U	5.1	J	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	11		10	U	28		1.7	J	6.0	J
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	2.4	J	10	U	10	U	5.0	J	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	1000	U	1000	U	100	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	1000	U	1000	U	100	U
di-n-Butyl phthalate		ug/L	10	U	10	U	1000	U	1000	U	100	U
di-n-Octyl phthalate		ug/L	9.3	J	10	U	1000	UJ	1000	UJ	100	UJ
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	1000	U	1000	U	100	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	1000	U	1000	U	100	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	1000	U
bis(2-Ethylhexyl)phthalate		ug/L	7.3	J	10	U	1000	U
di-n-Butyl phthalate		ug/L	10	U	10	U	1000	U
di-n-Octyl phthalate		ug/L	10	U	2.7	J	1000	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	1000	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	1000	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5840		5690		5700		5710		5610	
Sample Date:			13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97		18-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	50	U	50	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5620		5630		5640		5650		5660	
Sample Date:			18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97		20-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5670		5680	
Sample Date:			21-NOV-97		23-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	9410	J	878	J	451	J	2390	J	2020	J
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	36.3		10.0	U	10.0	U	40.2		20.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	20.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	75500	J	95200		101000	J	70700	J	601000	
Calcium	Y	ug/L	75400		94400		111000		64100		549000	
Chromium		ug/L	44.9		22.7		11.9		10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	48.0		25.0	U	25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	76600		3130		3750		26300		32900	
Iron	Y	ug/L	4350		806		1130		892		14400	
Lead		ug/L	17.7		3.0	U	3.0	U	3.0	U	6.0	U
Lead	Y	ug/L	3.0	U	3.0	U	3.2		3.0	U	6.0	U
Magnesium		ug/L	31500		19300		23000		20000		199000	
Magnesium	Y	ug/L	30000		19200		24900		17800		305000	
Manganese		ug/L	432		434		475		493		5410	
Manganese	Y	ug/L	350		421		507		369		4740	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	11600	J	34500	J	200	U	200	UJ	3970	J
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.3		66.2		10.0	U	10.0	U	11.5	
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	12.5	
Barium		ug/L	200	U	314		200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	205000		491000		46400		150000	J	116000	
Calcium	Y	ug/L	131000		393000		44900		147000		99500	
Chromium		ug/L	22.8		69.8		10.0	U	10.0	U	10.6	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	72.3		50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	33.6		243		25.0	U	62.6		25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	41.6		25.0	U
Iron		ug/L	27300		103000		1320		100	U	14700	
Iron	Y	ug/L	100	U	4890		1090		100	U	3050	
Lead		ug/L	16.6		100		3.0	U	3.0	U	6.6	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	52100		113000		17500		70500		38400	
Magnesium	Y	ug/L	29300		85300		17000		68000		36500	
Manganese		ug/L	816		3010		323		896		302	
Manganese	Y	ug/L	78.8		2500		331		877		114	
Mercury		ug/L	0.20	U	0.20	U	0.45		0.20	U	0.30	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	200	U	200	U	1200	J	1040		282	B
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	142000		342000		426000	J	183000	J	103000	
Calcium	Y	ug/L	128000		345000		402000		188000		106000	J
Chromium		ug/L	10.0	U	10.0	U	10.4		10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	1620		498	B	3370		3040		493	B
Iron	Y	ug/L	100	U	443	B	282	B	100	U	329	B
Lead		ug/L	3.0	U	3.0	U	4.7	B	4.5		8.5	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	23500		136000		253000		83700		27600	
Magnesium	Y	ug/L	21400		139000		246000		86300		28100	
Manganese		ug/L	340		361		249		1670		15.0	U
Manganese	Y	ug/L	15.0	U	328		372		1630		15.0	U
Mercury		ug/L	0.30		0.24		0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	1140		5080		310		520		292	
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	99200	J	161000		133000		172000	J	114000	J
Calcium	Y	ug/L	96700		142000	J	131000	J	216000		118000	
Chromium		ug/L	10.0	U	12.6		10.0	U	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	2080		12300		830		19300		12700	
Iron	Y	ug/L	100	U	100	U	173	B	22900		12700	
Lead		ug/L	3.5		9.4		3.0	U	3.0	U	7.1	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	5.0	
Magnesium		ug/L	27600		39400		21900		26500		17600	
Magnesium	Y	ug/L	26200		33300		21600		32300		17800	
Manganese		ug/L	90.9		344		1130		370		608	
Manganese	Y	ug/L	65.4		15.0	U	1060		449		617	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	4990	J	1830	J	200	U	18400		7790	
Aluminum	Y	ug/L	1080		200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	12.6		10.0	U	15.8		10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	146000	J	127000	J	158000		240000		118000	J
Calcium	Y	ug/L	147000		114000		176000	J	167000	J	127000	
Chromium		ug/L	10.0	U	10.0	U	10.0	U	42.7		16.6	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	78.8		50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	72.9		50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	29.7		25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	19800		44300		239	B	46700		10900	
Iron	Y	ug/L	2410		34100		385	B	716		100	U
Lead		ug/L	8.0	B	4.4	B	3.0	U	13.1		6.7	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	53800		29900		34900		96200		17500	
Magnesium	Y	ug/L	52300		26300		38300		108000		17900	
Manganese		ug/L	6970		1410		23.4		994		185	
Manganese	Y	ug/L	6900		1260		29.2		65.3		149	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	27300		6620		8960	J	20000	U	20000	U
Aluminum	Y	ug/L	200	U	200	U	2000	U	20000	U	20000	U
Antimony		ug/L	60.0	U	60.0	U	600	U	6000	U	6000	U
Antimony	Y	ug/L	60.0	U	60.0	U	600	U	6000	U	6000	U
Arsenic		ug/L	59.8		10.0	U	100	U	1000	U	1000	U
Arsenic	Y	ug/L	13.8		10.0	U	100	U	1000	U	1000	U
Barium		ug/L	200	U	200	U	2000	U	20000	U	20000	U
Barium	Y	ug/L	200	U	200	U	2000	U	20000	U	20000	U
Beryllium		ug/L	5.0	U	5.0	U	50.0	U	500	U	500	U
Beryllium	Y	ug/L	5.0	U	5.0	U	50.0	U	500	U	500	U
Cadmium		ug/L	5.0	U	5.0	U	50.0	U	500	U	500	U
Cadmium	Y	ug/L	5.0	U	5.0	U	50.0	U	500	U	500	U
Calcium		ug/L	236000		641000	J	625000		749000		500000	U
Calcium	Y	ug/L	140000	J	984000		582000		753000	J	500000	U
Chromium		ug/L	57.1		25.2		100	U	1000	U	1000	U
Chromium	Y	ug/L	10.0	U	14.2		100	U	1000	U	1000	U
Cobalt		ug/L	50.8		50.0	U	2320		7270		5000	U
Cobalt	Y	ug/L	50.0	U	50.0	U	2330		6770		5000	U
Copper		ug/L	47.3		25.0	U	887		3790		2500	U
Copper	Y	ug/L	25.0	U	25.0	U	911		3390		2500	U
Iron		ug/L	68200		13500		21700		22000		10000	U
Iron	Y	ug/L	139	B	2920		1360		12200		10000	U
Lead		ug/L	29.8		13.1		30.0	U	300	U	300	U
Lead	Y	ug/L	3.0	U	3.0	U	30.0	U	300	U	300	U
Magnesium		ug/L	61400		47400		189000		541000		500000	U
Magnesium	Y	ug/L	49900		41300		184000		500000	U	500000	U
Manganese		ug/L	1370		788		17000		34100		1900	
Manganese	Y	ug/L	265		562		17000		29700		1890	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	1.0	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	877	J	3170	J	200	UJ	3820	J	3490	J
Aluminum	Y	ug/L	200	U	200	U	200	U	432		200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	12.2		10.5		10.0	U	21.5		10.1	
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	373		200	U	200	U	200	U	200	U
Barium	Y	ug/L	338		200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	186000		180000		566000	J	285000	J	146000	J
Calcium	Y	ug/L	191000		167000		529000		386000		138000	
Chromium		ug/L	10.0	U	15.6		10.0	U	25.2		18.4	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	67.5		50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	18200		13300		805		17400		13900	
Iron	Y	ug/L	7610		100	U	132	B	403	B	100	U
Lead		ug/L	3.0	U	10.4		3.0	U	14.5		13.8	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	11.0		4.2	
Magnesium		ug/L	52900		63000		215000		145000		55900	
Magnesium	Y	ug/L	54800		62900		204000		181000		54600	
Manganese		ug/L	1530		1030		2950		800		713	
Manganese	Y	ug/L	1440		865		2900		1120		522	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	496	J	2710	J	3720	J
Aluminum	Y	ug/L	200	U	200	U	2000	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	600	U
Arsenic		ug/L	10.0	U	10.0	U	30.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	100	U
Barium		ug/L	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	2000	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	50.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	50.0	U
Calcium		ug/L	223000		150000	J	497000	J
Calcium	Y	ug/L	243000		136000		472000	
Chromium		ug/L	10.0	U	10.0	U	12.8	
Chromium	Y	ug/L	10.0	U	10.0	U	100	U
Cobalt		ug/L	50.0	U	50.0	U	142	
Cobalt	Y	ug/L	50.0	U	50.0	U	500	U
Copper		ug/L	25.0	U	25.0	U	70.2	
Copper	Y	ug/L	25.0	U	25.0	U	250	U
Iron		ug/L	2460		5600		7930	
Iron	Y	ug/L	1570		150	B	1000	U
Lead		ug/L	3.0	U	4.7	B	9.7	B
Lead	Y	ug/L	3.0	U	3.0	U	30.0	U
Magnesium		ug/L	15600		58100		181000	
Magnesium	Y	ug/L	17500		54600		170000	
Manganese		ug/L	3700		235		1660	
Manganese	Y	ug/L	4020		163		1620	
Mercury		ug/L	0.20	U	0.20	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	71.8		40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Potassium	Y	ug/L	5000	U	5000	U	5000	U	5000	U	6710	
Selenium		ug/L	20.4		5.0	U	5.0	U	5.0	U	10.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	10.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	8350	J	16200		9230	J	5510	J	21400	
Sodium	Y	ug/L	8550		16400		9590		5100		39600	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	20.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	20.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	116		20.0	U	20.0	U	40.0	B	67.4	
Zinc	Y	ug/L	22.0	J	30.6	B	23.7	J	20.0	UJ	33.5	B

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	212		40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	11800		6160		5000	U	5000	U
Potassium	Y	ug/L	5000	U	5220		6180		5000	U	5000	U
Selenium		ug/L	5.0	U	8.2		5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	7800		18300		22800		250000	J	18100	
Sodium	Y	ug/L	7180		20400		22200		244000		19100	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	158		50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	99.9		836		51.6		20.0	U	47.6	
Zinc	Y	ug/L	49.9		20.0	U	46.9		27.2	J	20.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	14900		25600		5000	U	5000	U
Potassium	Y	ug/L	5000	U	15300		26500		5000	U	5000	U
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	5000	U	18900		146000	J	48200		6290	
Sodium	Y	ug/L	5000	U	19500		144000		50200		6470	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	47.4		23.4		27.2		20.0	U	20.0	U
Zinc	Y	ug/L	27.6		33.1		73.3	J	20.0	U	20.0	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.68		0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Potassium	Y	ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	5000	U	8430		5000	U	5960		5000	U
Sodium	Y	ug/L	5000	U	7950		5000	U	7130		5000	U
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	25.5		43.5		25.8		25.8		23.0	
Zinc	Y	ug/L	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.30		0.20	U	0.20	U	0.20	U
Nickel		ug/L	61.8		156		40.0	U	114		40.0	U
Nickel	Y	ug/L	47.2		140		40.0	U	40.0	U	40.0	U
Potassium		ug/L	5460		5000	U	5000	U	33800		5000	U
Potassium	Y	ug/L	5000	U	5000	U	5000	U	40600		5000	U
Selenium		ug/L	5.0		5.1		5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0		5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	6560	J	6090	J	11200		223000		7100	
Sodium	Y	ug/L	6470		5170		12200		296000		8360	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	59.7		50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	75.5		137		20.0	U	105		35.6	
Zinc	Y	ug/L	54.7	J	87.7	J	20.0	U	20.0	U	20.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.76		0.20	U	1.0	U	0.20	U
Nickel		ug/L	125		40.0	U	1710		7600		4000	U
Nickel	Y	ug/L	40.0	U	40.0	U	1710		6820		4000	U
Potassium		ug/L	14400		5640		50000	U	500000	U	500000	U
Potassium	Y	ug/L	8540		5000	U	50000	U	500000	U	500000	U
Selenium		ug/L	5.0	U	5.0	U	50.0	U	500	U	500	U
Selenium	Y	ug/L	5.0	U	5.0	U	50.0	U	500	U	500	U
Silver		ug/L	10.0	U	10.0	U	100	U	1000	U	1000	U
Silver	Y	ug/L	10.0	U	10.0	U	100	U	1000	U	1000	U
Sodium		ug/L	60200		8130		3540000		10800000		1360000	
Sodium	Y	ug/L	68500		8250		3850000		9230000		1450000	
Thallium		ug/L	10.0	U	10.0	U	100	U	1000	U	1000	U
Thallium	Y	ug/L	10.0	U	10.0	U	100	U	1000	U	1000	U
Vanadium		ug/L	75.2		60.9		500	U	5000	U	5000	U
Vanadium	Y	ug/L	50.0	U	53.0		500	U	5000	U	5000	U
Zinc		ug/L	167		127		200	U	2000	U	2000	U
Zinc	Y	ug/L	20.0	U	20.0	U	200	U	2000	U	2000	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	120		52.4		40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	77.1		56.8		40.0	U
Potassium		ug/L	5000	U	17400		26700		28200		15400	
Potassium	Y	ug/L	5000	U	17800		25800		34500		14700	
Selenium		ug/L	5.0	U	5.0	U	5.0	U	7.2		5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	11.4		5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	39300		91400		86100	J	79700	J	161000	J
Sodium	Y	ug/L	41000		96500		79400		94900		163000	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	27.0		47.1		34.5		58.7		53.0	
Zinc	Y	ug/L	25.0		45.4		28.5	J	52.0	J	20.0	UJ

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	228	
Nickel	Y	ug/L	40.0	U	40.0	U	400	U
Potassium		ug/L	12200		5000	U	28000	
Potassium	Y	ug/L	14300		5000	U	50000	U
Selenium		ug/L	5.0	U	5.0	U	16.7	
Selenium	Y	ug/L	5.0	U	5.0	U	50.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	100	U
Sodium		ug/L	17600		14300	J	1010000	J
Sodium	Y	ug/L	21300		13800		1030000	
Thallium		ug/L	10.0	U	10.0	U	30.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	100	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	500	U
Zinc		ug/L	20.0	U	32.5	B	36.7	
Zinc	Y	ug/L	20.0	U	20.0	UJ	200	UJ

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	1.2	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	14		0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	17		0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	4.0	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	47		0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	7.8		0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	4.0	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	4.0	U	0.45	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	4.0	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	10	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	4.0	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	10	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	4.0	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.99	U	0.68	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	2.0	U	0.20	U	13	U	0.24	
1,3-Dinitrobenzene		ug/L	0.20	U	2.0	U	0.20	U	36	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	2.0	U	0.20	U	4.0	U	0.74	
2,4-Dinitrotoluene		ug/L	0.20	U	2.0	U	0.20	U	4.0	U	0.20	
2,6-Dinitrotoluene		ug/L	0.20	U	2.0	U	0.20	U	4.0	U	0.53	
2-Nitrotoluene		ug/L	0.20	U	2.0	U	0.20	U	4.0	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	2.6	U	0.20	U	4.0	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	3.6		0.20	U	4.0	U	0.62	
HMX		ug/L	0.50	U	5.0	U	0.50	U	10	U	0.50	U
Nitrobenzene		ug/L	0.20	U	2.0	U	0.20	U	5.6	U	0.20	U
RDX		ug/L	0.50	U	5.0	U	0.50	U	10	U	0.50	U
Tetryl		ug/L	0.20	U	2.0	U	0.20	U	4.0	U	0.20	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	1.0	U	2000		1500		10	U
1,3-Dinitrobenzene		ug/L	0.20	U	1.0	U	1500		1500		35	
2,4,6-Trinitrotoluene		ug/L	0.20	U	1.0	U	100	U	100	U	10	U
2,4-Dinitrotoluene		ug/L	0.20	U	1.0	U	1200		1300		28	
2,6-Dinitrotoluene		ug/L	0.20	U	1.0	U	100	U	100	U	10	U
2-Nitrotoluene		ug/L	0.20	U	1.0	U	100	U	100	U	10	U
3-Nitrotoluene		ug/L	0.20	U	1.0	U	100	U	100	U	10	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	1.0	U	100	U	100	U	10	U
HMX		ug/L	0.50	U	2.5	U	250	U	250	U	25	U
Nitrobenzene		ug/L	0.20	U	1.0	U	100	U	100	U	10	U
RDX		ug/L	0.50	U	2.5	U	250	U	500	U	25	U
Tetryl		ug/L	0.20	U	1.0	U	100	U	100	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	6.8	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	7.4	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	2.0	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	5.5	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	2.0	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	2.0	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	2.0	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	2.0	U
HMX		ug/L	0.50	U	0.50	U	5.0	U
Nitrobenzene		ug/L	0.20	U	0.20	U	2.0	U
RDX		ug/L	0.50	U	0.50	U	5.0	U
Tetryl		ug/L	0.20	U	0.20	U	4.6	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5840		5690		5700		5710		5610	
Sample Date:			13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97		18-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	120		240		36		10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5620		5630		5640		5650		5660	
Sample Date:			18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97		20-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5670		5680	
Sample Date:			21-NOV-97		23-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	79	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	830000		510000		670000		280000		350000	
Chloride		ug/L	1900000		47000		790000		2000	B	780000	
Hardness		ug/L	1800000		700000		13000000		500000		1000000	
Nitrate		ug/L	100	U	5000	UJ	5000	UJ	100	U	200	
Sulfate		ug/L	7000		48000		5000	U	140000		70000	
Total dissolved solids		ug/L	3600000		750000		1900000		640000		1800000	
Total organic carbon		ug/L	16000		7400		5300	J	3800		5000	U
Total suspended solids		ug/L	6000		4000		38000		11000		10000	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	670000		180000		220000		430000		210000	
Chloride		ug/L	55000		90000		91000		2500000		79000	
Hardness		ug/L	2000000		360000		450000		1600000		640000	
Nitrate		ug/L	5000	UJ	100	U	100	U	100	U	300	
Sulfate		ug/L	62000		140000		90000		13000		610000	
Total dissolved solids		ug/L	5300000		730000		760000		4800000		2500000	
Total organic carbon		ug/L	11000		12000		5000		9600		190000	
Total suspended solids		ug/L	4000		480000		5000		16000		37000	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	85000		1600000		830000		120000		310000	
Chloride		ug/L	1400000		88000		1800000		6900000		330000	
Hardness		ug/L	1500000		5300000		1800000		4000000		1700000	
Nitrate		ug/L	100	U	5000	UJ	5000	UJ	5000	UJ	100	U
Sulfate		ug/L	5000	U	150000		59000		16000		14000	
Total dissolved solids		ug/L	3200000		6400000		3000000		12000000		1200000	
Total organic carbon		ug/L	11000		8400		1200		6500		16000	
Total suspended solids		ug/L	7000		7000		4000	U	61000		41000	

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	240000		487000	
Chloride		ug/L	19000000		56900	
Hardness		ug/L	20000000		484000	
Nitrate		ug/L	100	UJ		
Sulfate		ug/L	5000	U	13900	
Total dissolved solids		ug/L	32000000		570000	J
Total organic carbon		ug/L	1000	U	2500	
Total suspended solids		ug/L	74000		35000	J

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
2-Butanone		ug/L	120	R	120	U	25	R	5.0	R	5.0	R
2-Hexanone		ug/L	120	R	120	U	25	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	120	U	120	U	25	U	5.0	U	5.0	U
Acetone		ug/L	250	R	250	U	36	J	10	R	10	R
Benzene		ug/L	11	J	33		5.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Bromoform		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Bromomethane		ug/L	50	U	50	U	10	U	2.0	U	2.0	U
Carbon disulfide		ug/L	29	J	5.5	J	4.2	J	1.0	U	0.65	J
Carbon tetrachloride		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	25	U	21	J	5.0	U	1.0	U	1.0	U
Chloroethane		ug/L	50	U	50	U	10	U	2.0	U	2.0	U
Chloroform		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Chloromethane		ug/L	50	U	50	U	10	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	7.7	J	23	J	5.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	8.8	B	7.4	B	2.1	B	1.0	U	0.37	B
Styrene		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
Toluene		ug/L	18	B	32	B	5.0	U	1.0	U	1.0	U
Total xylenes		ug/L	150		200		5.0	U	1.0	U	0.38	B

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
2-Butanone		ug/L	50	R	5.0	R	25	R	5.0	R	5.0	R
2-Hexanone		ug/L	50	R	5.0	R	25	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	50	U	5.0	U	25	U	5.0	U	5.0	U
Acetone		ug/L	100	R	10	R	50	R	10	R	10	R
Benzene		ug/L	10	U	0.14	J	0.91	J	130	D	1.1	
Bromodichloromethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Bromoform		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Bromomethane		ug/L	20	U	2.0	U	10	U	2.0	U	2.0	U
Carbon disulfide		ug/L	3.7	J	0.82	J	6.4		5.8		1.3	
Carbon tetrachloride		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Chloroethane		ug/L	20	U	2.0	U	10	U	2.0	U	2.0	U
Chloroform		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Chloromethane		ug/L	20	U	2.0	U	10	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	10	U	1.0	U	0.85	J	73	D	0.59	J
Methylene chloride		ug/L	5.1	B	1.0	U	4.8	B	1.0	U	1.0	U
Styrene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Toluene		ug/L	10	U	0.22	B	5.0	U	170	D	1.7	B
Total xylenes		ug/L	8.2	B	0.44	B	12		520	D	3.9	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,1-Dichloroethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,1-Dichloroethene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,2-Dichloroethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,2-Dichloroethene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
1,2-Dichloropropane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
2-Butanone		ug/L	250	R	120	R	250	R	25	R	5.0	R
2-Hexanone		ug/L	250	R	120	R	250	R	25	R	5.0	R
4-Methyl-2-pentanone		ug/L	250	U	120	U	250	U	25	U	5.0	U
Acetone		ug/L	500	R	250	R	500	R	50	R	68	J
Benzene		ug/L	570		490		10	J	11		11	
Bromodichloromethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Bromoform		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Bromomethane		ug/L	100	U	50	U	100	U	10	U	2.0	U
Carbon disulfide		ug/L	50	U	25	U	40	J	32		2.0	
Carbon tetrachloride		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Chlorobenzene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Chloroethane		ug/L	100	U	50	U	100	U	10	U	2.0	U
Chloroform		ug/L	8.4	B	25	U	50	U	5.0	U	1.0	U
Chloromethane		ug/L	100	U	50	U	100	U	10	U	2.0	U
Dibromochloromethane		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Ethylbenzene		ug/L	130		130		79		32		5.1	
Methylene chloride		ug/L	31	B	8.8	B	18	B	5.0	U	1.0	U
Styrene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Tetrachloroethene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Toluene		ug/L	490		390		140		21		8.9	
Total xylenes		ug/L	920		1100		360		170		38	

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	25	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	25	U
1,1,2-Trichloroethane		ug/L	1.0	U	25	U
1,1-Dichloroethane		ug/L	1.0	U	25	U
1,1-Dichloroethene		ug/L	1.0	U	25	U
1,2-Dichloroethane		ug/L	1.0	U	25	U
1,2-Dichloroethene		ug/L	1.0	U	25	U
1,2-Dichloropropane		ug/L	1.0	U	25	U
2-Butanone		ug/L	5.0	R	120	R
2-Hexanone		ug/L	5.0	R	120	R
4-Methyl-2-pentanone		ug/L	5.0	U	120	U
Acetone		ug/L	10	R	250	R
Benzene		ug/L	0.93	J	8.8	J
Bromodichloromethane		ug/L	1.0	U	25	U
Bromoform		ug/L	1.0	U	25	U
Bromomethane		ug/L	2.0	U	50	U
Carbon disulfide		ug/L	1.0	U	25	U
Carbon tetrachloride		ug/L	1.0	U	25	U
Chlorobenzene		ug/L	1.0	U	25	U
Chloroethane		ug/L	2.0	U	50	U
Chloroform		ug/L	1.0	U	25	U
Chloromethane		ug/L	2.0	U	50	U
Dibromochloromethane		ug/L	1.0	U	25	U
Ethylbenzene		ug/L	0.15	J	25	U
Methylene chloride		ug/L	0.30	B	14	B
Styrene		ug/L	1.0	U	25	U
Tetrachloroethene		ug/L	1.0	U	25	U
Toluene		ug/L	0.73	B	25	U
Total xylenes		ug/L	2.6		4.0	J

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	25	U	25	U	5.0	U	0.25	J	1.0	U
Vinyl chloride		ug/L	50	U	50	U	10	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	25	U	25	U	5.0	U	1.0	U	1.0	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	20	U	2.0	U	10	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	10	U	1.0	U	5.0	U	1.0	U	1.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
Vinyl chloride		ug/L	100	U	50	U	100	U	10	U	2.0	U
cis-1,3-Dichloropropene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	50	U	25	U	50	U	5.0	U	1.0	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	25	U
Vinyl chloride		ug/L	2.0	U	50	U
cis-1,3-Dichloropropene		ug/L	1.0	U	25	U
trans-1,3-Dichloropropene		ug/L	1.0	U	25	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	1.3	J	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	28		1.3	J	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	1000	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	1000	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	1000	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	1000	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	1000	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	1000	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	1000	U
2,4-Dimethylphenol		ug/L	1.7	J	10	U	10	U	16		1000	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	5000	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	1000	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	1000	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	1000	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	1000	U
2-Methylnaphthalene		ug/L	1.9	J	10	U	10	U	20		1000	U
2-Methylphenol		ug/L	10	U	10	U	10	U	4.1	J	1000	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	5000	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	1000	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	5000	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	5000	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	5000	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	1000	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	1000	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	1000	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	1000	U
4-Methylphenol		ug/L	10	U	10	U	10	U	4.7	J	1000	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	5000	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	5000	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	1000	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	1000	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
1,2-Dichlorobenzene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
1,3-Dichlorobenzene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
1,4-Dichlorobenzene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2,4,5-Trichlorophenol		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2,4,6-Trichlorophenol		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2,4-Dichlorophenol		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2,4-Dimethylphenol		ug/L	6.7	J	2000	U	100	U	5.1	J	10	U
2,4-Dinitrophenol		ug/L	50	U	10000	U	500	U	50	UJ	50	U
2,4-Dinitrotoluene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2,6-Dinitrotoluene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2-Chloronaphthalene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2-Chlorophenol		ug/L	10	U	2000	U	100	U	10	UJ	10	U
2-Methylnaphthalene		ug/L	31		2000	U	100	U	2.2	J	3.3	J
2-Methylphenol		ug/L	3.0	J	2000	U	100	U	2.6	J	10	U
2-Nitroaniline		ug/L	50	U	10000	U	500	U	50	UJ	50	U
2-Nitrophenol		ug/L	10	U	2000	U	100	U	10	UJ	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	10000	U	500	U	50	UJ	50	U
3-Nitroaniline		ug/L	50	U	10000	U	500	U	50	UJ	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	10000	U	500	U	50	UJ	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	2000	U	100	U	10	UJ	10	U
4-Chloro-3-methylphenol		ug/L	10	U	2000	U	100	U	10	UJ	10	U
4-Chloroaniline		ug/L	10	U	2000	U	100	U	10	UJ	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	2000	U	100	U	10	UJ	10	U
4-Methylphenol		ug/L	3.9	J	2000	U	100	U	2.8	J	10	U
4-Nitroaniline		ug/L	50	U	10000	U	500	U	50	UJ	50	U
4-Nitrophenol		ug/L	50	U	10000	U	500	U	50	UJ	50	U
Acenaphthene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Acenaphthylene		ug/L	10	U	2000	U	100	U	10	UJ	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	100	U
1,2-Dichlorobenzene		ug/L	10	U	100	U
1,3-Dichlorobenzene		ug/L	10	U	100	U
1,4-Dichlorobenzene		ug/L	10	U	100	U
2,4,5-Trichlorophenol		ug/L	10	U	100	U
2,4,6-Trichlorophenol		ug/L	10	U	100	U
2,4-Dichlorophenol		ug/L	10	U	100	U
2,4-Dimethylphenol		ug/L	10	U	100	U
2,4-Dinitrophenol		ug/L	50	U	500	U
2,4-Dinitrotoluene		ug/L	10	U	100	U
2,6-Dinitrotoluene		ug/L	10	U	100	U
2-Chloronaphthalene		ug/L	10	U	100	U
2-Chlorophenol		ug/L	10	U	100	U
2-Methylnaphthalene		ug/L	1.1	J	100	U
2-Methylphenol		ug/L	10	U	100	U
2-Nitroaniline		ug/L	50	U	500	U
2-Nitrophenol		ug/L	10	U	100	U
3,3'-Dichlorobenzidine		ug/L	50	U	500	U
3-Nitroaniline		ug/L	50	U	500	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	500	U
4-Bromophenyl phenyl ether		ug/L	10	U	100	U
4-Chloro-3-methylphenol		ug/L	10	U	100	U
4-Chloroaniline		ug/L	10	U	100	U
4-Chlorophenyl phenyl ether		ug/L	10	U	100	U
4-Methylphenol		ug/L	10	U	100	U
4-Nitroaniline		ug/L	50	U	500	U
4-Nitrophenol		ug/L	50	U	500	U
Acenaphthene		ug/L	10	U	100	U
Acenaphthylene		ug/L	10	U	100	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	2.9	J	10	U	10	U	10	U	10	U
Naphthalene		ug/L	16		10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	43		10	U	3.1	J	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	1000	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	1000	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	1000	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	1000	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	1000	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	1000	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	1000	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	1000	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	1000	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	1000	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	1000	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	1000	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	1000	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	1000	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	1000	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	1000	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	1000	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	5000	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	1000	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	1000	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	1000	U
Naphthalene		ug/L	2.3	J	10	U	10	U	15		1000	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	1000	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	5000	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	1000	U
Phenol		ug/L	17		10	U	2.3	J	62		1000	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	1000	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	1000	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	1000	U

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Benzo(a)anthracene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Benzo(a)pyrene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Benzo(b)fluoranthene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Benzo(ghi)perylene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Benzo(k)fluoranthene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Butyl benzyl phthalate		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Carbazole		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Chrysene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Dibenz(a,h)anthracene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Dibenzofuran		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Diethyl phthalate		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Dimethyl phthalate		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Fluoranthene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Fluorene		ug/L	1.7	J	2000	U	100	U	10	UJ	10	U
Hexachlorobenzene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Hexachlorobutadiene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Hexachlorocyclopentadiene		ug/L	50	U	10000	U	500	U	50	UJ	50	U
Hexachloroethane		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Isophorone		ug/L	4.2	J	2000	U	100	U	10	UJ	10	U
Naphthalene		ug/L	22		2000	U	100	U	3.8	J	2.1	J
Nitrobenzene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
Pentachlorophenol		ug/L	50	U	10000	U	500	U	50	UJ	50	U
Phenanthrene		ug/L	2.2	J	2000	U	100	U	10	UJ	10	U
Phenol		ug/L	18		2000	U	100	U	21	J	55	
Pyrene		ug/L	10	U	2000	U	100	U	10	UJ	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	2000	U	100	U	10	UJ	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	2000	U	100	U	10	UJ	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	100	U
Benzo(a)anthracene		ug/L	10	U	100	U
Benzo(a)pyrene		ug/L	10	U	100	U
Benzo(b)fluoranthene		ug/L	10	U	100	U
Benzo(ghi)perylene		ug/L	10	U	100	U
Benzo(k)fluoranthene		ug/L	10	U	100	U
Butyl benzyl phthalate		ug/L	10	U	100	U
Carbazole		ug/L	10	U	100	U
Chrysene		ug/L	10	U	100	U
Dibenz(a,h)anthracene		ug/L	10	U	100	U
Dibenzofuran		ug/L	10	U	100	U
Diethyl phthalate		ug/L	10	U	100	U
Dimethyl phthalate		ug/L	10	U	100	U
Fluoranthene		ug/L	10	U	100	U
Fluorene		ug/L	10	U	100	U
Hexachlorobenzene		ug/L	10	U	100	U
Hexachlorobutadiene		ug/L	10	U	100	U
Hexachlorocyclopentadiene		ug/L	50	U	500	U
Hexachloroethane		ug/L	10	U	100	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	100	U
Isophorone		ug/L	10	U	100	U
Naphthalene		ug/L	10	U	100	U
Nitrobenzene		ug/L	10	U	100	U
Pentachlorophenol		ug/L	50	U	500	U
Phenanthrene		ug/L	10	U	100	U
Phenol		ug/L	10	U	100	U
Pyrene		ug/L	10	U	100	U
bis(2-Chloroethoxy)methane		ug/L	10	U	100	U
bis(2-Chloroethyl)ether		ug/L	10	U	100	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	28		10	U	5.8	J	10	U	1.7	J
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	1000	U
bis(2-Ethylhexyl)phthalate		ug/L	3.9	J	3.6	J	3.0	J	39		1000	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	1000	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	1000	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	1000	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	1000	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	2000	U	100	U	10	UJ	10	U
bis(2-Ethylhexyl)phthalate		ug/L	37		920	J	100	U	3.5	J	5.8	J
di-n-Butyl phthalate		ug/L	10	U	2000	U	100	U	10	UJ	10	U
di-n-Octyl phthalate		ug/L	10	U	2000	U	100	U	10	UJ	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	2000	U	100	U	10	UJ	10	U
n-Nitrosodiphenylamine		ug/L	10	U	2000	U	100	U	10	UJ	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	100	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	23	J
di-n-Butyl phthalate		ug/L	10	U	100	U
di-n-Octyl phthalate		ug/L	10	U	100	U
n-Nitroso-di-n-propylamine		ug/L	10	U	100	U
n-Nitrosodiphenylamine		ug/L	10	U	100	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	10	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	10	U	10	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	10	U	10	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	637		1060	J	200	U	522		9020	
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	16.5		10.0	U	10.0	U	11.7		17.6	
Arsenic	Y	ug/L	30.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	1060		220		200	U	200	U	520	
Barium	Y	ug/L	1260		212		200	U	200	U	366	
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	302000		186000	J	189000		176000	J	161000	
Calcium	Y	ug/L	305000	J	88600		160000		179000		121000	J
Chromium		ug/L	12.7		10.0	U	10.0	U	10.0	U	18.2	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	26.2		25.0	U	25.0	U	25.0	U	59.5	
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	1920		5240		168	B	8890		22600	
Iron	Y	ug/L	137	B	106	B	100	U	7260		563	
Lead		ug/L	3.0	U	6.5	B	3.0	U	6.9		26.3	
Lead	Y	ug/L	9.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	218000		56900		108000		34300		79500	
Magnesium	Y	ug/L	237000		54800		96300		34900		72400	
Manganese		ug/L	575		522		74.6		912		2240	
Manganese	Y	ug/L	516		351		57.6		990		1300	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	3.6		0.20	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	249	B	654		317		200	U	374	J
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	50.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Arsenic	Y	ug/L	50.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	424		200	U	326		1550		200	U
Barium	Y	ug/L	449		200	U	384		1680		200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	336000	J	105000		114000	J	248000	J	152000	
Calcium	Y	ug/L	358000		116000	J	130000		270000		120000	
Chromium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.2	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	33.9		25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	6400		41700		1030		244	B	923	
Iron	Y	ug/L	298	B	16300		586		116	B	100	U
Lead		ug/L	15.0	U	3.9		4.8		3.0	U	3.0	U
Lead	Y	ug/L	15.0	U	3.0	U	3.0		3.0	U	3.0	U
Magnesium		ug/L	235000		22800		43800		180000		70700	
Magnesium	Y	ug/L	254000		25600		51100		200000		82500	
Manganese		ug/L	849		677		85.4		17.4		54.0	
Manganese	Y	ug/L	899		694		71.0		15.0	U	29.1	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	200	U	502	J	396	B	283	J	200	U
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	30.0	U	10.0	U	200	U	10.0	U
Arsenic	Y	ug/L	20.0	U	30.0	U	10.0	U	200	U	10.0	U
Barium		ug/L	605		463		948		893		1520	
Barium	Y	ug/L	555		389		1100		1010		1520	
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	280000		875000	J	318000	J	809000		255000	J
Calcium	Y	ug/L	245000	J	915000		263000		1010000		220000	
Chromium		ug/L	10.0	U	24.4		10.0	U	10.0	U	10.0	
Chromium	Y	ug/L	10.0	U	13.6		10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	25.0	U	61.7	
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	930		1140		1580		476	B	376	B
Iron	Y	ug/L	100	U	100	U	100	U	100	U	100	U
Lead		ug/L	3.0	U	9.0	U	3.0	U	60.0	U	6.8	
Lead	Y	ug/L	6.0	U	9.0	U	3.0	U	60.0	U	3.0	U
Magnesium		ug/L	177000		6190		187000		384000		57200	
Magnesium	Y	ug/L	182000		5000	U	213000		572000		65100	
Manganese		ug/L	26.3		133		124		36.8		30.4	
Manganese	Y	ug/L	15.0	U	15.0	U	15.0	U	35.9		15.0	U
Mercury		ug/L	0.20	U	0.20	U	0.20	U	1.0		0.20	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	3290		287	B
Aluminum	Y	ug/L	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U
Arsenic		ug/L	100	U	10.0	U
Arsenic	Y	ug/L	200	U	10.0	U
Barium		ug/L	19000		405	
Barium	Y	ug/L	21000		397	
Beryllium		ug/L	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U
Calcium		ug/L	2140000		131000	J
Calcium	Y	ug/L	2570000	J	128000	
Chromium		ug/L	10.0	U	11.1	
Chromium	Y	ug/L	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U
Copper		ug/L	32.8		25.0	U
Copper	Y	ug/L	25.0	U	25.0	U
Iron		ug/L	13200		8000	
Iron	Y	ug/L	2310		169	B
Lead		ug/L	30.0	U	19.1	
Lead	Y	ug/L	60.0	U	3.5	
Magnesium		ug/L	920000		54000	
Magnesium	Y	ug/L	1090000		54200	
Manganese		ug/L	180		198	
Manganese	Y	ug/L	162		144	
Mercury		ug/L	0.20	U	0.20	U

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	38500		29100		49600		5000	U	32900	
Potassium	Y	ug/L	42400		30000		44700		5000	U	32000	
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	15.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	582000		99100	J	368000		5070		399000	
Sodium	Y	ug/L	644000		104000		331000		5000		398000	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	30.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	32.8		55.0		29.2		27.7		126	
Zinc	Y	ug/L	105		66.2	J	23.0		20.0	U	20.0	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	42.1		40.0	U	40.0	U	42.3	
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.7	
Potassium		ug/L	58800		7240		10400		101000		44700	
Potassium	Y	ug/L	63500		8130		10700		110000		40500	
Selenium		ug/L	25.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	25.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	1140000	J	34900		127000		1330000		311000	
Sodium	Y	ug/L	1190000		36100		153000		1510000		360000	
Thallium		ug/L	50.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	50.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	34.4	B	48.8		73.9		47.2		39.8	
Zinc	Y	ug/L	24.8	J	20.0	U	20.0	U	30.1		32.4	

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	58800		26400		38500		148000		49500	
Potassium	Y	ug/L	61100		24900		45400		172000		46200	
Selenium		ug/L	5.0	U	15.0	U	5.0	U	100	U	5.0	U
Selenium	Y	ug/L	10.0	U	15.0	U	5.0	U	100	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	559000		73200	J	355000	j	2190000		120000	
Sodium	Y	ug/L	582000		68600		419000		3010000		125000	
Thallium		ug/L	10.0	U	30.0	U	10.0	U	200	U	10.0	U
Thallium	Y	ug/L	20.0	U	30.0	U	10.0	U	200	U	10.0	U
Vanadium		ug/L	50.0	U	64.7		50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	58.3		50.0	U	50.0	U	50.0	U
Zinc		ug/L	30.6		30.0		49.9		31.0		62.3	
Zinc	Y	ug/L	30.9		20.0	UJ	33.3	J	20.0	U	57.4	

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U
Potassium		ug/L	92300		9210	
Potassium	Y	ug/L	103000		9180	
Selenium		ug/L	50.0	U	5.0	U
Selenium	Y	ug/L	100	U	5.0	U
Silver		ug/L	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U
Sodium		ug/L	7660000		42000	J
Sodium	Y	ug/L	9110000		42800	
Thallium		ug/L	100	U	10.0	U
Thallium	Y	ug/L	200	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U
Zinc		ug/L	41.6		69.7	
Zinc	Y	ug/L	20.0	U	22.3	J

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.53	U	0.31	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.40	U	0.20	U	0.31	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	1.0	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	1.0	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.40	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.33	U	2.0	U	2.0	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	5.0	U	5.0	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	3.8	U	2.0	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	5.0	U	5.0	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	2.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	2.0	U	1.0	U	0.20	U	1.5		0.20	U
1,3-Dinitrobenzene		ug/L	2.0	U	1.0	U	0.20	U	1.0		0.22	
2,4,6-Trinitrotoluene		ug/L	2.0	U	1.0	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	2.0	U	1.0	U	0.22	U	0.89	U	0.20	U
2,6-Dinitrotoluene		ug/L	2.0	U	1.0	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	2.0	U	1.0	U	0.31	U	0.44	U	0.20	U
3-Nitrotoluene		ug/L	2.0	U	1.0	U	2.2	U	0.21	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	2.0	U	1.0	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	5.0	U	2.5	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	2.0	U	1.0	U	0.34		2.0		0.32	
RDX		ug/L	5.0	U	2.5	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	2.0	U	1.0	U	0.20	U	0.20	U	0.20	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.23	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.27	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	16	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	320		10	U	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U

SECOND SEMI-ANNUAL SAMPLING

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-GW Dry Season Event
SDG #: PB023

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

June 18, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Volatiles

The result for methylene chloride for method blank CHD95101 was greater than the reporting limit, but less than 5 times the reporting limit. Methylene chloride is considered a common laboratory contaminant.

Semivolatiles

The matrix spike/matrix spike duplicate RPD results for sample 5585 were acceptable for all analytes except 4-chloro-3-methylphenol. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results may be attributed to lack of sample homogeneity.

Metals

The matrix spike/matrix spike duplicate recoveries and/or RPDs for sample 5585 (total and dissolved) were outside control limits for some analytes. However, the laboratory control samples showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects. In addition, results outside of limits do not necessarily reflect poor method performance due to high analyte concentrations in the sample relative to the spike level. The affected analytes are flagged appropriately on the matrix spike/matrix spike duplicate report.

Wet Chemistry

The matrix spike/matrix spike duplicate recoveries and/or RPDs for sample 5585 were outside control limits for chloride, sulfate, nitrate, TOC and cyanide. However, the associated laboratory control samples showed acceptable results indicating that the analysis was in control. The results are, therefore, attributed to matrix effects.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE

COMMENTS:

Volatiles

Samples 5475, 5455 and 5465 were reported with elevated reporting limits for all analytes. Based on screening results, a dilution was necessary prior to analysis; the reporting limits were adjusted accordingly.

PCBs

Sample 5455 and 5475 were reported with elevated reporting limits for all analytes due to the difficult sample matrix. The lowest dilution that could be analyzed was performed; the reporting limits were adjusted accordingly.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-GW Dry Season Event
SDG #: PB024

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

June 24, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Volatiles

Surrogate recoveries for method blanks CHGQN101 and CHKFN101, and sample 5875 were outside control limits. Since the recoveries were high, and no analytes were detected in the analyses above the reporting limit, the data was submitted.

Semivolatiles

Recovery for internal standard perylene-d12 was outside control limits in sample 5865 due to hydrogen-deuterium exchange. Based on historical data and in order to preserve the integrity of the instrument, the laboratory did not proceed with re-analyses. The concentration of 3-nitroanaline exceeded the calibration in this sample, and the results are considered as estimated.

Metals

The batch matrix spike recoveries were outside control limits for some analytes. However, the laboratory control samples showed acceptable results indicating that the analysis was in control. The batch matrix spike results are, therefore, attributed to matrix effects. The affected analytes are flagged appropriately on the matrix spike report.

Wet Chemistry

The batch matrix spike/matrix spike duplicate recoveries and/or RPDs were outside control limits for chloride and sulfate. However, the laboratory control samples showed acceptable results indicating that the analyses were in control. The results are, therefore, attributed to matrix effects.

COMMENTS:

Sample Receiving

Sample 9012 was canceled for volatiles (8260A) analyses by IT corporation.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE

COMMENTS:

Samples 5535, 5565 and 5905 were canceled for volatiles (8260A), semivolatiles (8270B), PCBs (8081) and explosives (8330) analyses due to unacceptable cooler temperature receipt.

Volatiles

The result for methylene chloride for method blank CHHRP101 was greater than the reporting limit, but less than 5 times the reporting limit. Methylene chloride is considered a common laboratory contaminant.

Samples 5685, 5435, and 5955 were reported with elevated reporting limits for all analytes. Based on screening results, a dilution was necessary prior to analysis; the reporting limits were adjusted accordingly.

PCBs

Samples 5955 and 5435 were reported with elevated reporting limits for all analytes due to the difficult sample matrix. The lowest dilution that could be analyzed was performed; the reporting limits were adjusted accordingly.

Wet Chemistry

Samples 5905, 5955, 5435, 5865, 5875, 5885 were reported with elevated reporting limits for nitrate/nitrite due to sample matrix.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-GW Dry Season Event
SDG #: PB025

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

June 30, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Volatiles

Some surrogate and control analyte recovery limits may have been exceeded. This was due to the implementation and use of the new Archon autosampler and GCMS systems which are now being used for both soil and water analyses. The historical acceptance limits indicated on the attached report forms were based on data from the discreet purge and trap autosamplers. Please refer to the attached table for a list of default control limits which will be used until sufficient data is available to generate new control limits for the newly acquired instrumentation..

Semivolatiles

Recoveries for internal standards and/or surrogates in samples 5695, 5696, 5715, 5905R, and 5705 were outside control limits due to obvious matrix interferences and/or hydrogen-deuterium exchange . Based on historical data and in order preserve the integrity of instrument, the laboratory did not proceed with re-analyses. Also, the following samples had several analytes over the calibration range that were not diluted to bring within calibration range for the above reason; 5715, 5695, 5696, and 5705. These results should be considered as estimated.

Continuing calibration standard di-n-octylphthalate was above percent drift criteria in standard BCC0531. Since the system was biased towards detection of this analyte, and since this analyte was not detected in any of the associated samples, the validity of the data is unaffected and the data are submitted.

Metals

The batch matrix spike/matrix spike duplicate recoveries and/or RPDs were outside control limits for some analytes. However, the laboratory control samples showed acceptable results indicating that the analysis was in control. The batch matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects. In addition, results outside of limits do not necessarily reflect poor method performance due to high analyte concentrations in the sample relative to the spike level. The affected analytes are flagged appropriately on the matrix spike/matrix spike duplicate report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE

The serial dilution of sample 5425 (total) was outside control limits due to physical or chemical matrix interferences.

Total Dissolved Solids

Samples 5815, 5695, 5705 were re-analyzed outside hold time in order to confirm original results.

Total Organic Carbon

The continuing calibaration check standard referencing samples 5695, 5705 and 5845 was just outside of control limits (due to one of three injection outside of limits by one percent). However, as all other calibration standards and laboratory QC sample results were acceptable, and the average of the other three injection results were acceptable, the data are submitted as is.

Nitrate

The batch matrix spike/matrix spike duplicate recoveries were outside control limits. However, the laboratory control sample showed acceptable results indicating that the analysis was in control. The results are, therefore, attributed to matrix effects.

COMMENTS:

Volatiles

Samples 5535R and 5945 were reported with elevated reporting limits for all analytes. Based on screening results, a dilution was necessary prior to analysis; the reporting limits were adjusted accordingly.

Semivolatiles

The concentration of 2-methylphenol in sample 5815 exceeded the calibration level of the instrument. The sample was analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The reporting limits have been adjusted accordingly.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE

COMMENTS (continued):

PCBs

Samples 5945, 5695, 5696, and 5705 were reported with elevated reporting limits for all analytes due to the difficult sample matrix. The lowest dilutions that could be analyzed were performed; reporting limits were adjusted accordingly.

Explosives

Samples 5425, 5905R, 5815 and 5945 were reported with elevated reporting limits for one or more analytes due to the difficult sample matrix.

Metals

Several samples were diluted due to high analyte concentrations and/or matrix interferences.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Quanterra
Environmental Services

Quanterra Incorporated
Knoxville Laboratory

Default QC Limits for 8260A/B
June 1998

8260A/B LCS/LCSD

Matrix	Spiked Analyte	Lower Limit	Upper Limit	RPD
Soil	1,1-dichloroethene	67	137	30
	Benzene	70	130	30
	Trichloroethene	68	130	30
	Toluene	70	130	30
	Chlorobenzene	70	130	30
	Dibromofluoromethane*	64	135	
	1,2-Dichloroethane-d4	64	135	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	147	
Water	1,1-dichloroethene	70	131	20
(5ml)	Benzene	70	130	20
	Trichloroethene	70	130	20
	Toluene	70	130	20
	Chlorobenzene	70	130	20
	Dibromofluoromethane*	70	130	
	1,2-Dichloroethane-d4	70	130	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	130	

8260A/B MS/MSD

Matrix	Spiked Analyte	Lower Limit	Upper Limit	RPD
Soil	1,1-dichloroethene	64	146	30
	Benzene	70	130	30
	Trichloroethene	41	151	30
	Toluene	69	132	30
	Chlorobenzene	67	130	30
	Dibromofluorormethane*	64	135	
	1,2-Dichloroethane-d4	64	135	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	147	
Water	1,1-dichloroethene	70	131	20
(5ml)	Benzene	70	130	20
	Trichloroethene	70	130	20
	Toluene	70	130	20
	Chlorobenzene	70	130	20
	Dibromofluoromethane*	70	130	
	1,2-Dichloroethane-d4	70	130	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	130	

Default QC Limits for 8260A/B
June 1998

8260A/B 25 ml Purge LCS/LCSD &MS/MSD

Matrix	Spiked Analyte	Lower Limit	Upper Limit	RPD
Water	1,1-dichloroethene	70	137	20
(25ml)	Benzene	70	130	20
	Trichloroethene	70	130	20
	Toluene	70	130	20
	Chlorobenzene	70	130	20
	Dibromofluoromethane*	67	130	
	1,2-Dichloroethane-d4	67	130	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	130	

8260B Methanol LCS/LCSD & MS/MSD

Matrix	Spiked Analyte	Lower Limit	Upper Limit	RPD
Soil	1,1-dichloroethene	43	130	30
	Benzene	57	139	30
	Trichloroethene	62	144	30
	Toluene	45	147	30
	Chlorobenzene	56	147	30
	Dibromofluoromethane*	64	135	
	1,2-Dichloroethane-d4	64	135	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	147	

8260A/B TCLP LCS & MS/MSD**

Matrix	Spiked Analyte	Lower Limit	Upper Limit	RPD
Allr	Vinyl Chloride	62 (51)	141 (142)	30
	1,1-dichloroethylene	70	130 (134)	30
	Chloroform	70	130	30
	1,2-Dichloroethane	70	130	30
	Methyl ethyl ketone	41	135 (147)	30
	Carbon tetrachloride	70 (67)	131	30
	Trichloroethylene	70	130	30
	Benzene	70	130	30
	Tetrachloroethylene	70	130	30
	Chlorobenzene	70	130	30
	Dibromofluoromethane*	70	130	
	1,2-Dichloroethane-d4	70	130	
	Toluene-d8	70	130	
	4-Bromofluorobenzene	70	130	

- * Additional Surrogate for 8260B
- ** MS/MSD limits are in parentheses where different than LCS limits

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

Quanterra
Environmental Services

May 23, 1998
QUANTERRA INCORPORATED PROJECT NUMBER: **099239**
PO/CONTRACT: **Project #133643**

Carol Wortham
Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710

Dear Ms. Wortham:

This report contains the analytical results for the one aqueous sample which was received under chain of custody by Quanterra Incorporated on 19 May 1998.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call.

Sincerely,

Nanny Estrada

Nanny Estrada
Project Manager
Advanced Technology

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 099239

There were no anomalies associated with this report.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Number 133643

IT Corporation
312 Directors Drive
Knoxville, TN 37923

Project#: 773206
Location: Plumbrook Ordinance Wor

Sample ID	Lab ID
5767	133643-001
9011	133643-002

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 6/8/98
Title: Operations Manager

Signature: _____ Date: 6/12/98
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Numbers: 133643 **Received Date: 05/15/98**
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 773206

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on May 15, 1998.

Volatiles: No analytical problems were encountered.

Semi-volatiles: A high relative standard deviation (%RSD) was observed for bis(2-ethylhexyl)phthalate in the initial calibration which was analyzed on May 19, 1998 (uej). The compound met the minimum response criteria and was not detected in the sample or method blank. No other analytical problems were encountered.

PCBs: A high percent difference (%D) was observed for Aroclor 1221 in the continuing calibration verification which was analyzed on May 27, 1998 (146A034). This should not affect the quality of the data as this Aroclor was not detected in the samples. No other analytical problems were encountered.

Metals: A high relative percent difference (%RPDs) was observed for thallium for the sample duplicate of 5497 (CT#133611-001). The spike recoveries for calcium, iron, magnesium, and manganese in the matrix spike of 5497 (CT#133611-001) are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines: One sample was subcontracted to Quanterra Environmental Services for analysis.

Quanterra
Environmental Services

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

May 23, 1998
QUANTERRA INCORPORATED PROJECT NUMBER: **099240**
PO/CONTRACT: **Project #133611**

Carol Wortham
Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710

Dear Ms. Wortham:

This report contains the analytical results for the one aqueous sample which was received under chain of custody by Quanterra Incorporated on 19 May 1998.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call.

Sincerely,

Nanny Estrada

Nanny Estrada
Project Manager
Advanced Technology

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 099240

There were no anomalies associated with this report.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Number 133611

IT Corporation
312 Directors Drive
Knoxville, TN 37923

Project#: 773206
Location: Plumbrook Ordinance Wor

Sample ID	Lab ID
5497	133611-001
9009	133611-002
5497 RE	133611-003

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 6/8/98
Title: Operations Manager

Signature: Carol Worthem Date: 6/16/98
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Numbers: 133611 **Received Date: 05/14/98**
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 773206

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on May 14, 1998.

Volatiles: No analytical problems were encountered.

Semi-volatiles: Low surrogate recoveries were observed for 2-fluorophenol, phenol-d5, and 2,4,6-tribromophenol for 5497 (CT#133611-001). The sample was relogged as 5497 RE (CT#133611-003), re-extracted, and reanalyzed with similar surrogate recoveries. A high relative standard deviation (%RSD) was observed for bis(2-ethylhexyl)phthalate in the initial calibration which was analyzed on May 19, 1998 (uej). The compound met the minimum response criteria and was not detected in the sample or method blank. A high percent difference (%D) was observed for pyridine in the continuing calibration verification which was analyzed on May 28, 1998 (ues). The compound met the minimum response criteria and was not detected in the sample or method blank. No other analytical problems were encountered.

PCBs: A high percent difference (%D) was observed for Aroclor 1221 in the continuing calibration verification which was analyzed on May 20, 1998 (137A095). This should not affect the quality of the data as this Aroclor was not detected in the samples. No other analytical problems were encountered.

Metals: A high relative percent difference (%RPDs) was observed for thallium for the sample duplicate of 5497 (CT#133611-001). The spike recoveries for calcium, iron, magnesium, and manganese in the matrix spike of 5497 (CT#133611-001) are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines: One sample was subcontracted to Quanterra Environmental Services for analysis.

Quanterra
Environmental Services

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

June 3, 1998
QUANTERRA INCORPORATED PROJECT NUMBER: **099327**
PO/CONTRACT: **Project #133702**

Carol Wortham
Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710

Dear Ms. Wortham:

This report contains the analytical results for the one aqueous sample which was received under chain of custody by Quanterra Incorporated on 22 May 1998.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call.

Sincerely,

Nanny Estrada

Nanny Estrada
Project Manager
Advanced Technology

NE/rr

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 099327

Please note that the holding time expired in transit to the laboratory. The sample was collected on 15 May 1998, but not received until 22 May 1998.

There were no other anomalies associated with this report.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Number 133702

IT Corporation
312 Directors Drive
Knoxville, TN 37923

Project#: 773206
Location: Plumbrook Ordinance Wor

Sample ID	Lab ID
5417	133702-001
9013	133702-002

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 6/18/98
Title: Operations Manager

Signature: Carol Worthem Date: 6/17/98
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Numbers: 133702 **Received Date: 05/16/98**
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 773206

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on May 16, 1998.

Volatiles: A high relative standard deviation (%RSD) was observed for acetone in the initial calibration which was analyzed on May 28, 1998 (des). This compound met the minimum response criteria and was not detected in the samples or method blank. No other analytical problems were encountered.

Semi-volatiles: No analytical problems were encountered.

PCBs: A high percent difference (%D) was observed for Aroclor 1221 in the continuing calibration verification which was analyzed on May 27, 1998 (146A034). This should not affect the quality of the data as this Aroclor was not detected in the samples. No other analytical problems were encountered.

Metals: A high relative percent difference (%RPDs) was observed for thallium for the sample duplicate of 5497 (CT#133611-001). The spike recoveries for calcium, iron, magnesium, and manganese in the matrix spike of 5497 (CT#133611-001) are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines: One sample was subcontracted to Quanterra Environmental Services for analysis. The sample was extracted and analyzed past the holding time as per the client's request.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Number 133756

IT Corporation
312 Directors Drive
Knoxville, TN 37923

Project#: 773206
Location: Plumbrook Ordinance Wor

Sample ID	Lab ID
5697	133756-001
9019	133756-002

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 6/18/98
Title: Operations Manager

Signature: _____ Date: 6/18/98
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Numbers: 133756 **Received Date: 05/21/98**
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 773206

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on May 21, 1998.

Volatiles: The voa vial analyzed for sample 5697 (CT#133756-001) had a pH of 4 and was analyzed past the seven day hold requirement. No other analytical problems were encountered.

Semi-volatiles: Sample 5697 (CT#133756-001) was analyzed at a dilution due to high levels of non-target compounds present in the sample which caused the surrogates to be diluted out. A high relative standard deviation (%RSD) was observed for bis(2-ethylhexyl)phthalate in the initial calibration which was analyzed on May 19, 1998 (uej). This compound met the minimum response criteria and was not detected in the sample or method blank. High percent differences (%D) were observed for pyridine and bis(2-chloroisopropyl)ether in the continuing calibration verification which was analyzed on June 1, 1998 (uf103). These compounds met the minimum response criteria and were not detected in the sample or method blank. No other analytical problems were encountered.

PCBs: A high surrogate recovery was observed for TCMX for 5697 (CT#133756-001) due to co-elution with a non-target peak. The recovery for decachlorobiphenyl was within QC criteria. No other analytical problems were encountered.

Metals: A high relative percent difference (%RPDs) was observed for thallium for the sample duplicate of 5497 (CT#133611-001). The spike recoveries for calcium, iron, magnesium, and manganese in the matrix spike of 5497 (CT#133611-001) are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines: One sample was subcontracted to Quanterra Environmental Services for analysis.

Quanterra
Environmental Services

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

June 16, 1998
QUANTERRA INCORPORATED PROJECT NUMBER: **099485**
PO/CONTRACT: **Project #133860**

Carol Wortham
Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710

Dear Ms. Wortham:

This report contains the analytical results for the one aqueous sample which was received under chain of custody by Quanterra Incorporated on 02 June 1998.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call.

Sincerely,

Nanny Estrada

Nanny Estrada
Project Manager
Advanced Technology

NE/rr

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 099485

There were no anomalies associated with this report.

Quanterra
Environmental Services

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

June 12, 1998
QUANTERRA INCORPORATED PROJECT NUMBER: **099484**
PO/CONTRACT: **Project #133881**

Carol Wortham
Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710

Dear Ms. Wortham:

This report contains the analytical results for the one aqueous sample which was received under chain of custody by Quanterra Incorporated on 02 June 1998.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call.

Sincerely,

Nanny Estrada

Nanny Estrada
Project Manager
Advanced Technology

NE/rr

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 099484

There were no anomalies associated with this report.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710; Phone (510) 486-0900

Laboratory Number 133860

IT Corporation
312 Directors Drive
Knoxville, TN 37923

Project#: 773206
Location: Plumbrook Ordinance Wor

Sample ID	Lab ID
5557	133860-001
9022	133860-002
5557 RE	133860-003

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 7/14/98
Title: Operations Manager

Signature: Carol Wortheen Date: 7/13/98
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Numbers: 133860 **Received Date: 05/29/98**
Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 773206

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on May 29, 1998.

Volatiles: No analytical problems were encountered.

Semi-volatiles: During the concentration step, the blank spike for batch 41248 was lost due to breakage. The client was informed and requested that we re-extract the sample past hold for the precision data they require. Sample 5557 (CT#133860-001) was relogged as 5557 RE (CT#133860-003), re-extracted in batch 41398, and reanalyzed. A high relative percent difference (1% high) was observed for 1,4-dichlorobenzene in the blank spike and spike duplicate for the re-extract batch 41398. A high relative standard deviation (%RSD) was observed for bis(2-ethylhexyl)phthalate in the initial calibration which was analyzed on May 19, 1998 (uej) and for di-n-octylphthalate in the initial calibration which was analyzed on June 1, 1998 (tf1). These compounds met the minimum response criteria and were not detected in the sample or method blanks. No other analytical problems were encountered.

PCBs: No analytical problems were encountered.

Metals: High relative percent differences (%RPDs) were observed for aluminum, arsenic, and selenium for the sample duplicate of 5557 (CT#133860-001). Spike recoveries outside the QC limits were observed for aluminum, barium, beryllium, cadmium, chromium, cobalt, iron, lead, manganese, molybdenum, nickel, thallium, and vanadium for the sample spike of CT#133822-002 which was not from this site. The spike recoveries for calcium, magnesium, potassium, and sodium in the sample spike of CT#133822-002 and for calcium in the sample spike of 5557 (CT#133860-001) are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines: One sample was subcontracted to Quanterra Environmental Services for analysis.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Number 133881

IT Corporation
312 Directors Drive
Knoxville, TN 37923

Project#: 773206
Location: Plumbrook Ordinance Wor

Sample ID	Lab ID
5617	133881-001
9024	133881-002
5617 RE	133881-003

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 7/14/98
Title: Operations Manager

Signature: Carol Wortham Date: 7/14/98
Title: Project Manager

Laboratory Numbers: 133881 **Received Date: 06/**

Curtis & Tompkins, Ltd.

Client: IT Corporation
Location: Plumbrook Ordanance Works
Project #: 773206

CASE NARRATIVE

This hardcopy data package contains sample and QC results for two water samples which were received from the site referenced above on June 1, 1998.

Volatiles: Methylene chloride was detected at 7 ug/L in the method blank for batch 41311. Sample 9024 (CT#133881-002) was the only sample analyzed in this batch and methylene chloride was not detected. High spike recoveries were observed for toluene and chlorobenzene in the matrix spike and toluene in the matrix spike duplicate of CT#133921-001. These outliers should not affect the quality of the data as the sample spiked was not from this site. Slightly high relative standard deviation (%RSD) was observed for methylene chloride in the initial calibration analyzed on June 3, 1998 (cf3) due to low level laboratory contamination. Linear regression was not performed for the analyte because it would artificially distort low level results. This compound was not detected in the samples. No other analytical problems were encountered.

Semi-volatiles: During the concentration step, the blank spike for batch 41248 was lost due to breakage. The client was informed and requested that we re-extract the sample past hold for the precision data they require. Sample 5557 (CT#133860-001) was relogged as 5557 RE (CT#133860-003), re-extracted in batch 41398, and reanalyzed. A high relative percent difference (1% high) was observed for 1,4-dichlorobenzene in the blank spike and spike duplicate for the re-extract batch 41398. A high relative standard deviation (%RSD) was observed for bis(2-ethylhexyl)phthalate in the initial calibration which was analyzed on May 19, 1998 (uej) and for di-n-octylphthalate in the initial calibration which was analyzed on June 1, 1998 (tf1). These compounds met the minimum response criteria and were not detected in the sample or method blanks. No other analytical problems were encountered.

PCBs: No analytical problems were encountered.

Metals: High relative percent differences (%RPDs) were observed for aluminum, arsenic, and selenium for the sample duplicate of 5557 (CT#133860-001) and for nickel in the sample spike of CT#133885-008. The spike recoveries for calcium and sodium in the sample spike of CT#133885-008 and for calcium in the sample spike of 5557 (CT#133860-001) are considered not meaningful (NM) as the sample concentrations are four times greater than the spiked levels. No other analytical problems were encountered.

Nitroaromatics and Nitramines: One sample was subcontracted to Quanterra Environmental Services for analysis.

Quanterra Environmental Services

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

June 3, 1998
QUANTERRA INCORPORATED PROJECT NUMBER: **099326**
PO/CONTRACT: **Project #133756**

Carol Wortham
Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710

Dear Ms. Wortham:

This report contains the analytical results for the one aqueous sample which was received under chain of custody by Quanterra Incorporated on 22 May 1998.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call.

Sincerely,

Nanny Estrada

Nanny Estrada
Project Manager
Advanced Technology

NE/rr

Quanterra
Environmental Services

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER 099326

Please note that due to the oily nature of the sample, centrifugation and additional solvent were required to concentrate to final volume.

There was no surrogate recovery due to required sample dilution.

There were no other anomalies associated with this report.

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

Quanterra
Environmental Services

ANALYTICAL REPORT

PROJECT NO. 771481

PBOW-GW Dry Season Event
SDG #: PB026

Kim Napier

IT Corporation - Knoxville

QUANTERRA INCORPORATED

John D. Reynolds
Project Manager

July 8, 1998

PROJECT NARRATIVE

All holding times and QC criteria were met with the following exceptions:

Semivolatiles

Surrogate recoveries for samples 5445 and 5895 were outside control limits Per client request, the samples were re-extracted and re-analyzed outside of holding time criteria. The results for the re-extraction/re-analyses indicated that the original recoveries were wrong; both sets of data are presented for compliance purposes.

Internal standard area recovery for perylene-d12 was outside control limits in the dilution for sample 5835. Since the dilution was performed for bis (2-ethylhexyl) phthalate, which references internal standard chrysene-d12 (which was compliant), the validity of the data is unaffected and the sample is submitted as is.

Explosives

Surrogate recovery for sample 5935 was outside control limits due to the particulate interferences.

The matrix spike/matrix spike duplicate RPDs for sample 5565 were acceptable for all analytes except 3-nitrotolune. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

Metals

The matrix spike/matrix spike duplicate recoveries and/or RPDs for samples 5565 (total and dissolved) and 5805 (total and dissolved) were outside control limits for some analytes. However, the laboratory control samples showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects. In addition, results outside of limits do not necessarily reflect poor method performance due to high analyte concentrations in the sample relative to the spike level. The affected analytes are flagged appropriately on the matrix spike/matrix spike duplicate report.

The serial dilution of sample 5565 (total) was outside control limits for aluminum due to physical or chemical matrix interferences.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE

Wet Chemistry

The matrix spike/matrix spike duplicate recoveries and/or RPDs for sample 5565 were outside control limits for chloride, nitrate and sulfate. However, the laboratory control samples showed acceptable results indicating that the analyses were in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

The matrix spike/matrix spike duplicate recovery and/or RPD for sample 5805 was outside control limits for sulfate. However, the laboratory control sample showed acceptable results indicating that the analysis was in control. The results are, therefore, attributed to matrix effects.

COMMENTS:

Volatiles

Samples 5815R, 5915, 5895, 5935, 5805, 5445, 5925, and 5975 were reported with elevated reporting limits for all analytes. Based on screening results, a dilution was necessary prior to analysis; the reporting limits were adjusted accordingly.

The pH of samples 5625 and 5925 were greater than 2. The sample was analyzed within the normal 14 day holding time. EPA has indicated that some aromatic compounds in wastewater samples, notably benzene, toluene, and ethyl benzene, may be susceptible to biological degradation if samples are not preserved to a pH of 2.

Pesticides/PCBs

Samples 5445, 5915, and 5935 were reported with elevated reporting limits for all analytes due to the difficult sample matrix. The lowest dilutions that could be analyzed were performed; the reporting limits were adjusted accordingly.

Explosives

Samples 5915, 5935, 5895 and 5925 were reported with elevated reporting limits for one or more analytes due to the difficult sample matrix. The lowest dilutions that could be analyzed were performed; the reporting limits were adjusted accordingly.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated. Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE

Metals

Several samples were analyzed at a dilution due to high calcium, magnesium and sodium concentrations.

Wet Chemistry

Samples 5795, 5615, 5895, and 5935 were reported with elevated reporting limits for nitrate due to the difficult sample matrix. The lowest dilutions that could be analyzed were performed; the reporting limits were adjusted accordingly.

Sample 5835 was reported with elevated reporting limits for TOC due to the difficult sample matrix. The lowest dilution that could be analyzed were performed; the reporting limit was adjusted accordingly.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Quanterra Incorporated, Knoxville Laboratory maintains the following certifications, approvals and accreditations: California ELAP Cert. #2100, Florida DOH SDWA Cert. #87293, Florida DOH Environmental Water Cert. #E87177, Florida DEP CompQAP #880566, Hawaii DOH, Kentucky DEP Lab ID #90101, Maryland DHMH Cert. #277, Massachusetts Cert. #M-TN009, New Mexico ED, New York DOH Lab #10781, North Carolina DEHNR Cert. #64, North Dakota DOHCL Cert. #R-134, Oklahoma DEQ ID #9415, South Carolina DHEC Lab ID #84001, Tennessee DOH Lab ID #02014, Tennessee DEC UST, Utah DOH Cust. ID QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, AALA Cert. #486.01, US Army Corps of Engineers, Naval Facilities Engineering Service Center, and USDA Soil Permit #S-3929. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Sample s Reference
Investigation of Groundwater
Former Plum Brook Ordnance Works
Sandusky, Ohio

Sample Number	Location Code	Sample Name	Sample Purpose	Sample Delivery Group
5415	IT-BG8-BEDGW-001	PBOW-98-GW-BG8-BEDGW-001-5415	Regular	PB024
5416	IT-BG8-BEDGW-001	PBOW-98-GW-BG8-BEDGW-001-5416	Field Duplicate	PB024
5417	IT-BG8-BEDGW-001	PBOW-98-GW-BG8-BEDGW-001-5417	Field Split	CT
5425	IT-TNTB-BEDGW-001	PBOW-98-GW-TNTB-BEDGW-001-5425	Regular	PB025
5435	IT-TNTB-BEDGW-002	PBOW-98-GW-TNTB-BEDGW-002-5435	Regular	PB024
5445	IT-MNTA-BEDGW-001	PBOW-98-GW-MNTA-BEDGW-001-5445	Regular	PB026
5455	IT-AA1-BEDGW-001	PBOW-98-GW-AA1-BEDGW-001-5455	Regular	PB023
5465	IT-AA2-BEDGW-001	PBOW-98-GW-AA2-BEDGW-001-5465	Regular	PB023
5475	IT-AA3-BEDGW-001	PBOW-98-GW-AA3-BEDGW-001-5475	Regular	PB023
5485	IT-ABG-BEDGW-01	PBOW-98-GW-ABG-BEDGW-001-5485	Regular	PB023
5495	IT-AA1-GW-002	PBOW-98-GW-AA1-GW-002-5495	Regular	PB023
5496	IT-AA1-GW-002	PBOW-98-GW-AA1-GW-002-5496	Field Duplicate	PB023
5497	IT-AA1-GW-002	PBOW-98-GW-AA1-GW-002-5497	Field Split	CT
5515	IT-AA3-GW-002	PBOW-98-GW-AA3-GW-002-5515	Regular	PB023
5525	IT-ABG-GW-002	PBOW-98-GW-ABG-GW-002-5525	Regular	PB023
5535	IT-MW01	PBOW-98-GW-ITMW01-5535	Regular	PB024
5535R	IT-MW01	PBOW-98-GW-ITMW01-5535	Regular	PB025
5545	IT-MW02	PBOW-98-GW-ITMW02-5545	Regular	PB024
5555	IT-MW05	PBOW-98-WELLS-IT-MW05-5555	Regular	PB026
5556	IT-MW05	PBOW-98-WELLS-IT-MW05-5556	Field Duplicate	PB026
5557	IT-MW05	PBOW-98-WELLS-IT-MW05-5557	Field Split	CT
5565	IT-MW06	PBOW-98-WELLS-IT-MW06-5565	Regular	PB026
5565-MS	IT-MW06	PBOW-98-WELLS-IT-MW06-5565	Matrix Spike	PB026
5565-MSD	IT-MW06	PBOW-98-WELLS-IT-MW06-5565	Matrix Spike Duplicate	PB026
5585	IT-MW08	PBOW-98-GW-ITMW08-5585	Regular	PB023
5585-MS	IT-MW08	PBOW-98-GW-ITMW08-5585	Matrix Spike	PB023
5585-MSD	IT-MW08	PBOW-98-GW-ITMW08-5585	Matrix Spike Duplicate	PB023
5595	IT-MW09	PBOW-98-GW-ITMW09-5595	Regular	PB025
5605	IT-MW10	PBOW-98-GW-ITMW10-5605	Regular	PB023
5615	PB-TNTA-MW10	PBOW-98-GW-TNTAMW10-5615	Regular	PB026
5616	PB-TNTA-MW10	PBOW-98-GW-TNTAMW10-5616	Field Duplicate	PB026
5617	PB-TNTA-MW10	PBOW-98-GW-TNTAMW10-5617	Field Split	CT
5625	PB-TNTA-MW11	PBOW-98-GW-TNTAMW11-5625	Regular	PB026
5635	PB-TNTC-MW3	PBOW-98-GW-TNTCMW3-5635	Regular	PB024
5645	PB-TNTC-MW4	PBOW-98-GW-TNTCMW4-5645	Regular	PB025
5655	PB-TNTC-MW5	PBOW-98-GW-TNTCMW5-5655	Regular	PB024
5665	PB-TNTC-MW6	PBOW-98-GW-TNTCMW6-5665	Regular	PB024
5665R	PB-TNTC-MW6	PBOW-98-GW-TNTCMW6-5665	Regular	PB025
5675	PB-WA-MW1	PBOW-98-GW-WAMW1-5675	Regular	PB024

Sample Cross Reference
Investigation Groundwater
Former Plum Brook Ordnance Works
Sandusky, Ohio

Sample Number	Location Code	Sample Name	Sample Purpose	Sample Delivery Group
5685	PB-WA-MW2	PBOW-98-GW-WAMW2-5685	Regular	PB024
5695	PB-PR-MW7	PBOW-98-GW-PRMW7-5695	Regular	PB025
5696	PB-PR-MW7	PBOW-98-GW-PRMW7-5696	Field Duplicate	PB025
5697	PB-PR-MW7	PBOW-98-GW-PRMW7-5697	Field Split	CT
5705	PB-PR-MW8	PBOW-98-GW-PRMW8-5705	Regular	PB025
5715	PB-PR-MW9	PBOW-98-GW-PRMW9-5715	Regular	PB025
5725	MK-MW09	PBOW-98-GW-MKMW09-5725	Regular	PB023
5735	MK-MW10	PBOW-98-GW-MKMW10-5735	Regular	PB023
5745	MK-MW11	PBOW-98-GW-MKMW11-5745	Regular	PB023
5755	MK-MW12	PBOW-98-GW-MKMW12-5755	Regular	PB023
5765	MK-MW14	PBOW-98-GW-MKMW14-5765	Regular	PB023
5766	MK-MW14	PBOW-98-GW-MKMW14-5766	Field Duplicate	PB023
5767	MK-MW14	PBOW-98-GW-MKMW14-5767	Field Split	CT
5775	MK-MW15	PBOW-98-GW-MKMW15-5775	Regular	PB023
5785	MK-MW16	PBOW-98-GW-MKMW16-5785	Regular	PB024
5795	MK-MW17	PBOW-98-GW-MKMW17-5795	Regular	PB026
5805	MK-MW19	PBOW-98-GW-MKMW19-5805	Regular	PB026
5805-MS	MK-MW19	PBOW-98-GW-MKMW19-5805	Matrix Spike	PB026
5805-MSD	MK-MW19	PBOW-98-GW-MKMW19-5805	Matrix Spike Duplicate	PB026
5815	MK-MW20	PBOW-98-GW-MKMW20-5815	Regular	PB025
5815R	MK-MW20	PBOW-98-GW-MKMW20-5815	Regular	PB026
5825	MK-MW22	PBOW-98-GW-MKMW22-5825	Regular	PB024
5835	MK-MW23	PBOW-98-GW-MKMW23-5835	Regular	PB026
5845	MK-MW24	PBOW-98-GW-MKMW24-5845	Regular	PB025
5855	GCL-MW01	PBOW-98-GW-GCLMW01-5855	Regular	PB024
5865	GCL-MW02A	PBOW-98-GW-GCLMW02A-5865	Regular	PB024
5875	GCL-MW02B	PBOW-98-GW-GCLMW02B-5875	Regular	PB024
5885	GCL-MW03	PBOW-98-GW-GCLMW03-5885	Regular	PB024
5895	PB-BED-MW13	PBOW-98-GW-BEDMW13-5895	Regular	PB026
5905	PB-BED-MW14	PBOW-98-GW-BEDMW14-5905	Regular	PB024
5905R	PB-BED-MW14	PBOW-98-GW-BEDMW14-5905	Regular	PB025
5915	PB-BED-MW15	PBOW-98-GW-BEDMW15-5915	Regular	PB026
5925	PB-BED-MW16	PBOW-98-GW-BEDMW16-5925	Regular	PB026
5935	PB-BED-MW17	PBOW-98-GW-BEDMW17-5935	Regular	PB026
5945	PB-BED-MW18	PBOW-98-GW-BEDMW18-5945	Regular	PB025
5955	PB-BED-MW19	PBOW-98-GW-BEDMW19-5955	Regular	PB024
5965	PB-BED-MW20	PBOW-98-GW-BEDMW20-5965	Regular	PB026
5975	REACTOR1	PBOW-98-GW-REACTOR1-5975	Regular	PB026

PLUMBROOK

Overburden Wells

Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	180000		210000		150000		200000		410000	
Chloride		ug/L	1000		4000		2000		2000		9000	J
Hardness		ug/L	430000		550000		480000		360000		2800000	
Nitrate		ug/L	100	U	10000	U	10000	U	10000	U	100	U
Sulfate		ug/L	93000		150000		200000		23000		1800000	J
Total dissolved solids		ug/L	440000		550000		570000		280000		3800000	
Total organic carbon		ug/L	3000		3000		2000		2000		6000	J
Total suspended solids		ug/L	50000		100000		37000		18000		260000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	320000		330000		110000		650000		680000	
Chloride		ug/L	4000	J	5000	J	3000		23000		11000	
Hardness		ug/L	530000		1500000		200000		660000		570000	
Nitrate		ug/L	100	U	200		100	U	10000	U	100	U
Sulfate		ug/L	37000	J	660000	J	140000		260000		61000	
Total dissolved solids		ug/L	480000		2800000		400000		1100000		650000	
Total organic carbon		ug/L	2000	J	15000	J	7000		28000		6000	
Total suspended solids		ug/L	150000		2200000		5000		370000		15000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	290000		510000		410000		480000		270000	
Chloride		ug/L	3000		18000	J			13000	J	2000	J
Hardness		ug/L	380000		1300000				820000		320000	
Nitrate		ug/L	100	U	100	U	100		200		200	
Sulfate		ug/L	50000	U	920000	J	790000		270000	J	31000	J
Total dissolved solids		ug/L	410000		1900000		1600000		1100000		370000	
Total organic carbon		ug/L	3000		6000	J	2000		3000	J	1000	J
Total suspended solids		ug/L	13000		4000	U	4000	U	400000		4000	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	240000		320000		270000		100000		50000	
Chloride		ug/L	4000	J	18000	J	1000	J	5000	J	1000	J
Hardness		ug/L	290000		580000		450000		370000		380000	
Nitrate		ug/L	3200		4700		100	U	100	U	100	U
Sulfate		ug/L	21000	J	53000	J	51000	J	320000	J	10000	J
Total dissolved solids		ug/L	2700000		430000		400000		560000		92000	
Total organic carbon		ug/L	1000	J	2000	J	2000	J	7000	J	1000	J
Total suspended solids		ug/L	74000		58000		4000	U	43000		140000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	320000		5000	U	370000		410000		370000	
Chloride		ug/L	3000		6000		5000		400000		3000	
Hardness		ug/L	750000		490000		640000		2200000		520000	
Nitrate		ug/L	100	U	10000	U	100	U	100	U	100	U
Sulfate		ug/L	550000		330000		120000		340000		30000	
Total dissolved solids		ug/L	800000		590000		650000		1700000		370000	
Total organic carbon		ug/L	2000		3000		3000		6000		2000	
Total suspended solids		ug/L	9000		120000		10000		4000	U	130000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L			370000		840000		1500000		810000	
Chloride		ug/L			7000		9500000		4700000		3600000	
Hardness		ug/L			1600000		2300000		3100000		1200000	
Nitrate		ug/L			100	U	190000		1500000		110000	
Sulfate		ug/L			1100000		5400000		12000000		1600000	
Total dissolved solids		ug/L			2000000		18000000		49000000		6400000	
Total organic carbon		ug/L	10000	U	9000		2900000		11000000		930000	
Total suspended solids		ug/L			7000		17000		79000		7000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	410000		460000		350000		250000		380000	
Chloride		ug/L	100000		180000		14000		27000		26000	
Hardness		ug/L	730000		680000		1800000		720000		850000	
Nitrate		ug/L	10000	U	100	U	100	U	400		200	
Sulfate		ug/L	100000		93000		1300000		990000		240000	
Total dissolved solids		ug/L	760000		1000000		2900000		1600000		1200000	
Total organic carbon		ug/L	2000		3000		3000		3000		3000	
Total suspended solids		ug/L	4000	U	7000		150000		280000		240000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665		5675		5685	
Sample Date:			16-MAY-98		18-MAY-98		15-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	610000		470000		640000	
Chloride		ug/L	180000		7000		100000	U
Hardness		ug/L	790000		940000		1500000	
Nitrate		ug/L	100	U	100	U	62000	
Sulfate		ug/L	5000	U	200000		2000000	
Total dissolved solids		ug/L	620000		630000		6400000	
Total organic carbon		ug/L	9000		3000		780000	
Total suspended solids		ug/L	4000		8000		160000	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	U	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	U	5.0	R	5.0	U	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	U	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	0.27	J	1.0	U	0.28	J	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	0.20	J	0.26	J	1.0	U	1.2	
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	0.14	J	1.0	U	0.19	J	1.0	U
Methylene chloride		ug/L	0.49	B	0.52	B	1.0	U	1.6	B	0.39	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	0.29	B	0.35	B	0.16	B	0.58	B	1.0	U
Total xylenes		ug/L	0.62	J	0.84	J	0.53	J	1.6		1.0	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	10	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	10	R	5.0	U	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	10	U	5.0	U	5.0	U
Acetone		ug/L	10	R	6.6	J	20	R	2.0	B	45	J
Benzene		ug/L	1.0	U	0.50	J	2.0	U	1.0	U	0.21	J
Bromodichloromethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	4.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	0.35	J	2.0	U	1.0	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	4.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	4.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	0.49	B	0.33	B	0.58	B	1.0	U	2.4	B
Styrene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Toluene		ug/L	1.0	U	1.0	U	22		0.14	B	0.36	B
Total xylenes		ug/L	1.0	U	0.15	J	2.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	0.16	J	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	1.5	B	0.34	B	1.0	U	0.55	B	0.34	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	0.58	B	1.0	U	17		1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	10	R	10	R
Benzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	0.45	J	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	0.69	B	0.34	B	0.62	B	1.0	B	0.95	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	0.34	B	1.0	U	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815R		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		27-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	140		3600	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	17		3600	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	2.2	J	3600	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	25	R	18000	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	25	R	18000	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	25	U	18000	U	5.0	U
Acetone		ug/L	5.2	J	10	R	50	R	36000	R	10	R
Benzene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	10	U	7100	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	1.8	J	7100	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	10	U	7100	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Methylene chloride		ug/L	0.52	B	0.28	B	4.9	B	1400	B	0.52	B
Styrene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Toluene		ug/L	1.0	U	0.21	B	5.0	U	63000		7.8	
Total xylenes		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	14	J	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	2.0	J	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	10	R	10	R	10	R	15	B	10	R
Benzene		ug/L	0.17	J	1.0	U	1.0	U	1.0	U	0.47	J
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	0.23	J	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	0.74	B	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	0.17	J	1.0	U	1.5	
Methylene chloride		ug/L	4.2	B	0.29	B	0.37	B	0.31	B	0.35	B
Styrene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	0.16	B	10		0.31	B	0.38	B	1.5	
Total xylenes		ug/L	1.0	U	1.0	U	0.82	J	0.44	J	8.0	

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
2-Hexanone		ug/L	5.0	R	5.0	R	5.0	R	5.0	R	5.0	R
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone		ug/L	7.6	J	10	R	10	R	2.5	B	10	R
Benzene		ug/L	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene		ug/L	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U
Chloroethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Chloroform		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene		ug/L	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U
Methylene chloride		ug/L	2.1	B	0.95	B	0.47	B	1.0	U	0.51	B
Styrene		ug/L	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene		ug/L	0.25	B	0.26	B	1.0	U	1.0	U	1.0	U
Total xylenes		ug/L	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	1.0	U	2.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	1.0	U	2.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	1.0	U	2.0	U
1,1-Dichloroethane		ug/L	1.0	U	1.0	U	2.0	U
1,1-Dichloroethene		ug/L	1.0	U	1.0	U	2.0	U
1,2-Dichloroethane		ug/L	1.0	U	1.0	U	2.0	U
1,2-Dichloroethene		ug/L	1.0	U	1.0	U	2.0	U
1,2-Dichloropropane		ug/L	1.0	U	1.0	U	2.0	U
2-Butanone		ug/L	5.0	R	5.0	R	10	R
2-Hexanone		ug/L	5.0	R	5.0	R	1.9	B
4-Methyl-2-pentanone		ug/L	5.0	U	5.0	U	10	U
Acetone		ug/L	1.7	B	10	R	6.9	B
Benzene		ug/L	1.0	U	1.0	U	2.0	U
Bromodichloromethane		ug/L	1.0	U	1.0	U	2.0	U
Bromoform		ug/L	1.0	U	1.0	U	2.0	U
Bromomethane		ug/L	2.0	U	2.0	U	4.0	U
Carbon disulfide		ug/L	1.0	U	1.0	U	2.0	U
Carbon tetrachloride		ug/L	1.0	U	1.0	U	2.0	U
Chlorobenzene		ug/L	1.0	U	1.0	U	2.0	U
Chloroethane		ug/L	2.0	U	2.0	U	4.0	U
Chloroform		ug/L	1.0	U	1.0	U	2.0	U
Chloromethane		ug/L	2.0	U	2.0	U	4.0	U
Dibromochloromethane		ug/L	1.0	U	1.0	U	2.0	U
Ethylbenzene		ug/L	1.0	U	1.0	U	2.0	U
Methylene chloride		ug/L	1.0	U	0.52	B	0.64	B
Styrene		ug/L	1.0	U	1.0	U	2.0	U
Tetrachloroethene		ug/L	1.0	U	1.0	U	2.0	U
Toluene		ug/L	22		1.0	U	2.0	U
Total xylenes		ug/L	1.0	U	1.0	U	2.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	4.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	0.32	B	0.31	B	0.19	B
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815R		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		27-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	10	U	7100	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	5.0	U	3600	U	1.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	1.0	U	2.0	U
Vinyl chloride		ug/L	2.0	U	2.0	U	4.0	U
cis-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	2.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	1.0	U	2.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	43		10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	6.7	J	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	1.3	J	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	3.3	J	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	1.8	J	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	240	D	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	120		10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	20	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	20	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	20	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	20	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	20	U	10	U	10	R	10	U	10	U
2,4,6-Trichlorophenol		ug/L	20	U	10	U	10	R	10	U	10	U
2,4-Dichlorophenol		ug/L	20	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	20	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	100	U	50	U	50	R	3800	NJ	50	U
2,4-Dinitrotoluene		ug/L	20	U	10	U	1800	NJ	1700	NJ	120	
2,6-Dinitrotoluene		ug/L	20	U	10	U	10	R	10	U	10	U
2-Chloronaphthalene		ug/L	20	U	10	U	10	R	10	U	10	U
2-Chlorophenol		ug/L	20	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	20	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	20	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	100	U	50	U	50	R	50	U	50	U
2-Nitrophenol		ug/L	20	U	10	U	6.6	NJ	15		10	U
3,3'-Dichlorobenzidine		ug/L	100	U	50	U	50	U	50	R	50	U
3-Nitroaniline		ug/L	100	U	50	U	50	R	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	100	U	50	U	12000	NJ	20000	NJ	280	NJ
4-Bromophenyl phenyl ether		ug/L	20	U	10	U	10	R	10	U	10	U
4-Chloro-3-methylphenol		ug/L	20	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	20	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	20	U	10	U	10	R	10	U	10	U
4-Methylphenol		ug/L	20	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	100	U	50	U	50	R	50	U	50	U
4-Nitrophenol		ug/L	100	U	50	U	50	R	42	NJ	50	U
Acenaphthene		ug/L	20	U	10	U	10	R	10	U	10	U
Acenaphthylene		ug/L	20	U	10	U	10	R	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	7.6	J
2,4-Dinitrotoluene		ug/L	10	U	10	U	55	
2,6-Dinitrotoluene		ug/L	10	U	10	U	1.8	J
2-Chloronaphthalene		ug/L	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	330	J
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	1.6	J
Acenaphthene		ug/L	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10		10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	12		10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	20	U	10	U	10	R	10	U	10	U
Benzo(a)anthracene		ug/L	20	U	10	U	10	U	10	R	10	U
Benzo(a)pyrene		ug/L	20	U	10	U	10	R	10	R	10	R
Benzo(b)fluoranthene		ug/L	20	U	10	U	10	R	10	R	10	R
Benzo(ghi)perylene		ug/L	20	U	10	U	10	R	10	R	10	R
Benzo(k)fluoranthene		ug/L	20	U	10	U	10	R	10	R	10	R
Butyl benzyl phthalate		ug/L	20	U	10	U	10	U	10	R	10	U
Carbazole		ug/L	20	U	10	U	10	R	10	U	10	U
Chrysene		ug/L	20	U	10	U	10	U	10	R	10	U
Dibenz(a,h)anthracene		ug/L	20	U	10	U	10	R	10	R	10	R
Dibenzofuran		ug/L	20	U	10	U	10	R	620	NJ	10	U
Diethyl phthalate		ug/L	20	U	10	U	10	R	10	U	10	U
Dimethyl phthalate		ug/L	20	U	10	U	10	R	10	U	10	U
Fluoranthene		ug/L	20	U	10	U	10	R	10	U	10	U
Fluorene		ug/L	20	U	10	U	10	R	44	NJ	10	U
Hexachlorobenzene		ug/L	20	U	10	U	10	R	10	U	10	U
Hexachlorobutadiene		ug/L	20	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	100	U	50	U	50	R	50	U	50	U
Hexachloroethane		ug/L	20	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	20	U	10	U	10	R	10	R	10	R
Isophorone		ug/L	20	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	20	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	20	U	10	U	13	NJ	14		10	U
Pentachlorophenol		ug/L	100	U	50	U	50	R	50	U	50	U
Phenanthrene		ug/L	20	U	10	U	10	R	10	U	10	U
Phenol		ug/L	20	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	20	U	10	U	10	U	10	R	10	U
bis(2-Chloroethoxy)methane		ug/L	20	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	20	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	R
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	R
Benzo(ghi)perylene		ug/L	10	U	10	U	10	R
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	R
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	R
Diethyl phthalate		ug/L	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	R
Isophorone		ug/L	10	U	10	U	10	U
Naphthalene		ug/L	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	3.7	J
Pentachlorophenol		ug/L	50	U	50	U	50	U
Phenanthrene		ug/L	10	U	10	U	10	U
Phenol		ug/L	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	8.4	B	3.7	B	3.9	B	2.2	B	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	10	U	7.9	B	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	9.6	B	10	U	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	3.4	B	2.5	B	10	B
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	2.8	B	10	U	10	U	10	U	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	20	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	890	D	10	U	20	B	10	R	10	U
di-n-Butyl phthalate		ug/L	20	U	10	U	10	R	10	U	10	U
di-n-Octyl phthalate		ug/L	20	U	10	U	10	R	10	R	10	R
n-Nitroso-di-n-propylamine		ug/L	20	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	20	U	10	U	10	R	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	10	U	3.4	B	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	R
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	50	U	50	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U	1.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	4080		3350		410		1380		200	U
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	13.0		10.0	U	10.0	U	10.0	U	10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	55900		105000		91800		55600		512000	
Calcium	Y	ug/L	58600		96500		107000		59300		545000	
Chromium		ug/L	14.6		33.9		10.0	U	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	27.6		27.9		25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	20300	J	9630	J	3570	J	5140	J	26200	
Iron	Y	ug/L	3080		591		1190		1270		39100	
Lead		ug/L	6.6		6.1		3.0	U	3.0	U	3.0	U
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	23500		24100		26300		17100		283000	
Magnesium	Y	ug/L	23000		21600		25700		17300		257000	
Manganese		ug/L	300		548		515		368		5900	
Manganese	Y	ug/L	301		470		532		386		5550	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	200	U	18600		200	U	200	U	15800	J
Aluminum	Y	ug/L	200	U	200	U	276		200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	55.8		10.0	U	10.0	U	14.3	
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	233		200	U	200	U	312	
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	118000		355000		47900		109000		145000	J
Calcium	Y	ug/L	118000		285000		53100		130000		113000	J
Chromium		ug/L	10.0	U	44.6		10.0	U	10.0	U	22.7	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	68.4		50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	181		25.0	U	30.7		43.7	
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	100	U	91100		2200	J	595	J	26500	
Iron	Y	ug/L	100	U	9240		1970		509		185	
Lead		ug/L	3.0	U	72.2		3.0	U	3.0	U	9.4	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	28000		80400		16300		53000		47200	
Magnesium	Y	ug/L	28100		59800		19500		61900		38300	J
Manganese		ug/L	123		2300		348		754		592	
Manganese	Y	ug/L	139		2010		395		969		223	
Mercury		ug/L	0.20	U	0.22		0.20	U	0.20	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	860	J	200	U	200	U	11500		200	U
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	10.0	U	10.0	U	36.8		10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	372		200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	139000	J	282000		198000		185000		78500	
Calcium	Y	ug/L	111000	J	347000		212000		188000		92700	
Chromium		ug/L	10.0	U	10.0	U	10.0	U	39.8		10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	30.8		25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	50.7	
Iron		ug/L	1810		294		131		41000		100	U
Iron	Y	ug/L	100	U	327		100	U	100	U	100	U
Lead		ug/L	3.0	U	3.0	U	3.0	U	33.6		3.0	U
Lead	Y	ug/L	3.0	U	3.0	U	4.1		3.0	U	3.0	U
Magnesium		ug/L	21700		113000		125000		83500		21100	
Magnesium	Y	ug/L	17300	J	137000		133000		86200		25500	
Manganese		ug/L	215		191		30.7		1460		15.0	U
Manganese	Y	ug/L	20.7		238		36.4		621		15.0	U
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	200	U	6810		200	U	4550		4380	
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	74300		140000		98900		102000		15500	
Calcium	Y	ug/L	84200		117000		113000		146000		15700	
Chromium		ug/L	10.0	U	15.4		10.0	U	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	25.0	U	25.0	U	27.2	
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	100	U	17000		396		19100		10300	
Iron	Y	ug/L	121		100	U	100	U	22400		226	
Lead		ug/L	3.0	U	9.1		3.0	U	3.0	U	7.2	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	20700		35500		17000		16600		5000	U
Magnesium	Y	ug/L	22800		27700		19400		22400		5000	U
Manganese		ug/L	15.0	U	477		1000		283		101	
Manganese	Y	ug/L	15.0	U	15.0	U	1050		373		30.7	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	1180		6920	J	12500		245	J	6200	
Aluminum	Y	ug/L	663		7430		200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	18.7		12.0		10.0	U	10.0	U
Arsenic	Y	ug/L	10.0	U	22.0		10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	133000		104000	J	213000		174000		112000	
Calcium	Y	ug/L	127000		106000	J	152000		193000		114000	
Chromium		ug/L	10.0	U	10.0	U	24.7		10.0	U	13.7	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	69.8		54.9		50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	51.9		56.7		50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	32.9		32.1		25.0	U	25.0	U
Copper	Y	ug/L	39.2		32.2		25.0	U	25.0	U	25.0	U
Iron		ug/L	20700	J	41900		24300		2330		10900	J
Iron	Y	ug/L	5970		41600		100	U	1190		100	U
Lead		ug/L	3.0	U	16.4		30.6		3.0	U	4.3	
Lead	Y	ug/L	7.4		17.0		3.0		3.0	U	3.0	U
Magnesium		ug/L	52700		24300		56800		96200		16200	
Magnesium	Y	ug/L	47900		25100	J	37000		104000		17700	
Manganese		ug/L	13600		1120		418		75.3		142	
Manganese	Y	ug/L	8850		1170		22.4		75.6		114	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	143000	J	242	J	10500	J	4000	U	1000	U
Aluminum	Y	ug/L	200	U	200	U	1000	U	4000	U	2000	U
Antimony		ug/L	82.0		60.0	U	600	U	1200	U	300	U
Antimony	Y	ug/L	60.0	U	60.0	U	300	U	1200	U	600	U
Arsenic		ug/L	113		100	U	100	U	300	U	10.0	U
Arsenic	Y	ug/L	10.0	U	100	U	100	U	300	U	100	U
Barium		ug/L	232		200	U	2000	U	4000	U	1000	U
Barium	Y	ug/L	200	U	200	U	1000	U	4000	U	2000	U
Beryllium		ug/L	6.9		5.0	U	50.0	U	100	U	25.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	25.0	U	100	U	50.0	U
Cadmium		ug/L	25.0	U	5.0	U	50.0	U	100	U	25.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	25.0	U	100	U	50.0	U
Calcium		ug/L	1010000	J	612000		526000		998000		171000	
Calcium	Y	ug/L	152000	J	643000		597000		998000		198000	
Chromium		ug/L	258		10.0	U	100	U	200	U	50.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	50.0	U	200	U	100	U
Cobalt		ug/L	222		50.0	U	2350		7150		480	
Cobalt	Y	ug/L	50.0	U	50.0	U	2610		7450		522	
Copper		ug/L	225		25.0	U	1060		3740		430	
Copper	Y	ug/L	25.0	U	25.0	U	1050		3900		294	
Iron		ug/L	304000		1960		32600		12100		2070	
Iron	Y	ug/L	100	U	1440		2110		9560		1000	U
Lead		ug/L	108		30.0	U	30.0	U	90.0	U	3.0	U
Lead	Y	ug/L	3.0	U	30.0	U	30.0	U	90.0	U	30.0	U
Magnesium		ug/L	172000		29700		184000		574000		62900	
Magnesium	Y	ug/L	57100	J	33900		180000		584000		70100	
Manganese		ug/L	7550		458		13700		43900		2300	
Manganese	Y	ug/L	134		454		17600		45500		2500	
Mercury		ug/L	0.25		0.20	U	0.20	U	2.0	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	2280	J	2990	J	6030		4570	J	5230	
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	14.5		10.0	U	18.6		10.0	U	21.3	
Arsenic	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	200	U	200	U	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	136000	J	162000	J	341000		299000		132000	
Calcium	Y	ug/L	131000	J	183000	J	402000		306000		130000	
Chromium		ug/L	10.0	U	12.2		30.0		11.0		28.0	
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	25.0	U	31.5		25.0	U	31.0	
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	18700		6610		23500	J	8230		22700	J
Iron	Y	ug/L	9330		100	U	100	U	100	U	100	U
Lead		ug/L	5.6		3.2		13.8		3.2		20.1	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	46900		58700		137000		136000		46400	
Magnesium	Y	ug/L	48100	J	67600	J	171000		140000		47700	
Manganese		ug/L	1250		444		973		715		616	
Manganese	Y	ug/L	1370		355		617		582		452	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665		5675		5685	
Sample Date:			16-MAY-98		18-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	200	U	200	U	4220	
Aluminum	Y	ug/L	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	10.0	U	10.0	U	100	U
Arsenic	Y	ug/L	10.0	U	10.0	U	100	U
Barium		ug/L	200	U	200	U	200	U
Barium	Y	ug/L	200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U
Calcium		ug/L	194000		166000		371000	
Calcium	Y	ug/L	213000		168000		400000	
Chromium		ug/L	10.0	U	10.0	U	11.4	
Chromium	Y	ug/L	10.0	U	10.0	U	12.4	
Cobalt		ug/L	50.0	U	50.0	U	118	
Cobalt	Y	ug/L	50.0	U	50.0	U	126	
Copper		ug/L	25.0	U	25.0	U	61.9	
Copper	Y	ug/L	25.0	U	25.0	U	66.9	
Iron		ug/L	2080	J	319	J	9390	J
Iron	Y	ug/L	684		100	U	422	
Lead		ug/L	3.0	U	3.0	U	30.0	U
Lead	Y	ug/L	3.0	U	3.0	U	30.0	U
Magnesium		ug/L	12700		52500		138000	
Magnesium	Y	ug/L	14100		55100		150000	
Manganese		ug/L	3830		303		1510	
Manganese	Y	ug/L	3970		253		2260	
Mercury		ug/L	0.20	U	0.20	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	48.1		40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Potassium	Y	ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	6370		15200		8980		5000	U	24700	
Sodium	Y	ug/L	6460		15700		10000		5000	U	24200	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	55.7	B	30.2	B	59.5	B	25.1	B	41.6	B
Zinc	Y	ug/L	29.6	B	20.0	U	32.4	B	25.8	B	34.2	B

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	142		40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	6950		5560		5000	U	7710	
Potassium	Y	ug/L	5000	U	5000	U	6390		5000	U	5000	U
Selenium		ug/L	5.0	U	6.5		5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	7220		16500		22000		175000		22100	
Sodium	Y	ug/L	12200		14100		25100		206000		22800	
Thallium		ug/L	10.0	U	11.1	B	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	109		50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	20.0	U	685		149		40.2	B	103	B
Zinc	Y	ug/L	48.8	B	27.5	B	47.5	B	41.4	B	20.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.44		0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	10300		11100		5550		5000	U
Potassium	Y	ug/L	5000	U	12600		12300		5000	U	5000	U
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	UJ	10.0	U	10.0	UJ	10.0	UJ
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	5000	U	16700		73200		24700		5000	U
Sodium	Y	ug/L	5000	U	19900		78300		26200		5760	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	54.4		50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	20.9	B	20.0	U	20.0	U	92.6	B	29.0	B
Zinc	Y	ug/L	20.0	U	20.0	U	24.2	B	20.0	U	20.0	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Potassium	Y	ug/L	5000	U	5000	U	5000	U	5000	U	5000	U
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	5000	U	7030		5000	U	5000	U	5000	U
Sodium	Y	ug/L	5000	U	7170		5000	U	5730		5000	U
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	25.0	B	163		25.8	B	29.8	B	56.8	B
Zinc	Y	ug/L	21.5	B	27.3	B	26.0	B	46.0	B	20.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	108		130		40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	81.7		131		40.0	U	40.0	U	40.0	U
Potassium		ug/L	5000	U	5040		5000	U	25300		5000	U
Potassium	Y	ug/L	5000	U	5000	U	5000	U	25700		5000	U
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	10500		6030		11900		208000		5720	
Sodium	Y	ug/L	9070		6010		13400		213000		10100	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.1	B	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	54.0		50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	209		152		83.6	B	20.0	U	36.2	B
Zinc	Y	ug/L	141	B	157		20.0	U	23.1	B	20.0	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	2.0	U	0.20	U
Nickel		ug/L	628		40.0	U	1790		6950		466	
Nickel	Y	ug/L	40.0	U	40.0	U	1900		7310		460	
Potassium		ug/L	35700		5000	U	50000	U	100000	U	25000	U
Potassium	Y	ug/L	12300		5000	U	25000	U	100000	U	50000	U
Selenium		ug/L	25.0	U	50.0	U	50.0	U	150	U	5.0	U
Selenium	Y	ug/L	5.0	U	50.0	U	50.0	U	150	U	50.0	U
Silver		ug/L	10.0	U	10.0	U	100	U	200	U	50.0	U
Silver	Y	ug/L	10.0	U	10.0	U	50.0	U	200	U	100	U
Sodium		ug/L	60000		5530		3680000		11900000		1210000	
Sodium	Y	ug/L	66800		6820		3970000		11900000		1270000	
Thallium		ug/L	50.0	U	100	U	100	U	300	U	10.0	U
Thallium	Y	ug/L	10.0	U	100	U	100	U	300	U	100	U
Vanadium		ug/L	244		52.3	B	500	U	1000	U	250	U
Vanadium	Y	ug/L	50.0	U	57.3	B	250	U	1000	U	500	U
Zinc		ug/L	735		20.0	B	200	U	400	U	100	U
Zinc	Y	ug/L	23.6	B	20.0	U	100	U	400	U	200	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	7500		16500		10100		22100		11700	
Potassium	Y	ug/L	7710		18400		12000		21100		12300	
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	52100		90500		58900		62100		113000	
Sodium	Y	ug/L	55900		107000		74000		60200		127000	
Thallium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	48.1	B	37.5	B	80.8	B	41.2	B	56.3	B
Zinc	Y	ug/L	22.7	B	20.0	U	45.5	B	20.0	U	27.0	B

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665		5675		5685	
Sample Date:			16-MAY-98		18-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	190	
Nickel	Y	ug/L	40.0	U	40.0	U	199	
Potassium		ug/L	9830		5000	U	20900	
Potassium	Y	ug/L	12200		5000	U	22900	
Selenium		ug/L	5.0	U	5.0	U	50.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	50.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U
Sodium		ug/L	9450		12100		914000	
Sodium	Y	ug/L	15400		13500		1140000	
Thallium		ug/L	10.0	U	10.0	U	100	U
Thallium	Y	ug/L	10.0	U	10.0	U	100	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U
Zinc		ug/L	66.7	B	21.3	B	57.7	B
Zinc	Y	ug/L	20.0	U	39.9	B	136	B

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	15		0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	19		0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	47		0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	8.9		0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	36		0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	5.0	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	2.5		0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	6.2		0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	2.0	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.40	U	0.20	U	1.0	U	0.43	
1,3-Dinitrobenzene		ug/L	0.20	U	0.40	U	0.20	U	16	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.68		0.20	U	1.0	U	1.7	
2,4-Dinitrotoluene		ug/L	0.20	U	1.7		0.20	U	1.0	U	0.35	
2,6-Dinitrotoluene		ug/L	0.20	U	0.40	U	0.20	U	1.0	U	1.2	
2-Nitrotoluene		ug/L	0.20	U	0.40	U	0.20	U	1.0	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.40	U	0.20	U	1.0	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	5.7		0.20	U	1.0	U	0.86	
HMX		ug/L	0.50	U	1.0	U	0.50	U	2.5	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.40	U	0.20	U	1.0	U	0.26	
RDX		ug/L	0.50	U	1.0	U	0.50	U	2.5	U	0.50	U
Tetryl		ug/L	0.20	U	0.40	U	0.20	U	1.0	U	0.20	U

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.29	U	0.20	U	2800		2400		71	
1,3-Dinitrobenzene		ug/L	0.29	U	0.20	U	2000		2100		170	
2,4,6-Trinitrotoluene		ug/L	0.29	U	0.20	U	800	U	400	U	40	U
2,4-Dinitrotoluene		ug/L	0.29	U	0.20	U	1600		2400		110	
2,6-Dinitrotoluene		ug/L	0.29	U	0.20	U	800	U	400	U	40	U
2-Nitrotoluene		ug/L	0.29	U	0.20	U	800	U	400	U	40	U
3-Nitrotoluene		ug/L	0.29	U	0.20	U	800	U	400	U	40	U
4-Amino-2,6-dinitrotoluene		ug/L	0.29	U	0.20	U	800	U	400	U	40	U
HMX		ug/L	0.74	U	0.50	U	2000	U	1000	U	100	U
Nitrobenzene		ug/L	0.29	U	0.20	U	800	U	400	U	40	U
RDX		ug/L	0.74	U	0.50	U	2000	U	1000	U	100	U
Tetryl		ug/L	0.29	U	0.20	U	800	U	400	U	40	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	23	
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U	23	
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	4.0	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U	21	
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U	4.1	
2-Nitrotoluene		ug/L	0.20	U	0.20	U	4.0	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	4.0	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	4.0	U
HMX		ug/L	0.50	U	0.50	U	10	U
Nitrobenzene		ug/L	0.20	U	0.20	U	4.0	U
RDX		ug/L	0.50	U	0.50	U	10	U
Tetryl		ug/L	0.20	U	0.20	U	4.0	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	16		10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	38		10	U	11		10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5845		5695		5705		5715		5615	
Sample Date:			20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		29-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	200		1700		72		10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5625		5635		5645		5655		5665	
Sample Date:			29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98		16-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

PLUMBROOK
Overburden Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5675		5685	
Sample Date:			18-MAY-98		15-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	89	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	900000		600000		790000		270000		180000	
Chloride		ug/L	3000000	J	53000	J	860000	J	3000	J	34000	
Hardness		ug/L	2000000		860000		860000		530000		340000	
Nitrate		ug/L	10000	U	10000	U	10000	U	100	U	7300	
Sulfate		ug/L	40000	J	70000	J	8000	J	190000	J	45000	
Total dissolved solids		ug/L	730000		310000		1800000		600000		300000	
Total organic carbon		ug/L	11000	J	6000	J	2000	J	3000	J	1000	
Total suspended solids		ug/L	330000		4000	U	54000		7000		280000	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	5000	U	360000		380000		300000		500000	
Chloride		ug/L	3800000		600000		74000		1000000	U	3000	
Hardness		ug/L	2100000		650000		530000		450000		730000	
Nitrate		ug/L	100	U	10000	U	10000	U	10000	U	24000	
Sulfate		ug/L	64000		120000		140000		5000		630000	
Total dissolved solids		ug/L	7200000		1200000		7600000		510000		2300000	
Total organic carbon		ug/L	7000		5000		4000		2000		160000	
Total suspended solids		ug/L	29000		9000		6000		4000	U	23000	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	500000		1700000		930000		550000		750000	
Chloride		ug/L	2200000		140000		1600000		1200000		280000	
Hardness		ug/L	1800000		2000000		1300000		10000000		750000	
Nitrate		ug/L	100	U	100	U	10000	U	100	U	10000	U
Sulfate		ug/L	82000		37000		80000		18000		49000	
Total dissolved solids		ug/L	3800000		4000000		2900000		33000000		590000	
Total organic carbon		ug/L	13000		14000		3000		3000		9000	
Total suspended solids		ug/L	13000		330000		4000		100000		5000	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	260000		67000	
Chloride		ug/L	21000000		15000	
Hardness		ug/L	10000000		180000	
Nitrate		ug/L	100	U	300	
Sulfate		ug/L	5000	U	22000	
Total dissolved solids		ug/L	24000000		110000	
Total organic carbon		ug/L	1000	U	5000	
Total suspended solids		ug/L	90000		230000	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,1,2-Trichloroethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,1-Dichloroethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,1-Dichloroethene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,2-Dichloroethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,2-Dichloroethene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
1,2-Dichloropropane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
2-Butanone		ug/L	25	R	18	J	1000	R	5.0	R	5.0	R
2-Hexanone		ug/L	25	R	25	R	1000	R	5.0	R	5.0	U
4-Methyl-2-pentanone		ug/L	25	U	25	U	1000	U	5.0	U	5.0	U
Acetone		ug/L	50	R	41	J	2000	R	10	R	10	R
Benzene		ug/L	31		130		200	U	1.0	U	1.0	U
Bromodichloromethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Bromoform		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Bromomethane		ug/L	10	U	10	U	400	U	2.0	U	2.0	U
Carbon disulfide		ug/L	63		1.7	J	200	U	0.97	J	1.0	U
Carbon tetrachloride		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Chlorobenzene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Chloroethane		ug/L	10	U	10	U	400	U	2.0	U	2.0	U
Chloroform		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Chloromethane		ug/L	10	U	10		400	U	2.0	U	2.0	U
Dibromochloromethane		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Ethylbenzene		ug/L	39		43		200	U	1.0	U	1.0	U
Methylene chloride		ug/L	4.4	B	3.2	B	160	B	0.41	B	1.0	U
Styrene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Tetrachloroethene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Toluene		ug/L	50		20		29	B	1.0	U	1.0	U
Total xylenes		ug/L	500		220		200	U	1.0	U	1.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
1,1,2,2-Tetrachloroethane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
1,1,2-Trichloroethane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
1,1-Dichloroethane		ug/L	5.0	U	0.19	J	5.0	U	25	U	1.0	U
1,1-Dichloroethene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
1,2-Dichloroethane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
1,2-Dichloroethene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
1,2-Dichloropropane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
2-Butanone		ug/L	25	R	5.0	R	25	R	120	R	5.0	R
2-Hexanone		ug/L	25	R	5.0	R	25	R	120	R	5.0	R
4-Methyl-2-pentanone		ug/L	25	U	5.0	U	25	U	120	U	5.0	U
Acetone		ug/L	50	R	1.9	B	50	R	250	R	10	R
Benzene		ug/L	19		1.0	U	5.0	U	47		1.0	U
Bromodichloromethane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Bromoform		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Bromomethane		ug/L	10	U	2.0	U	10	U	50	U	2.0	U
Carbon disulfide		ug/L	21		7.2		5.0	U	25	U	0.25	J
Carbon tetrachloride		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Chlorobenzene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Chloroethane		ug/L	10	U	2.0	U	10	U	50	U	2.0	U
Chloroform		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Chloromethane		ug/L	10	U	2.0	U	10	U	50	U	2.0	U
Dibromochloromethane		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Ethylbenzene		ug/L	7.7		1.0	U	5.0	U	57		1.0	U
Methylene chloride		ug/L	2.6	B	1.0	U	3.1	B	51	B	1.0	U
Styrene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Tetrachloroethene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Toluene		ug/L	18		1.0	U	5.0	U	120		1.0	U
Total xylenes		ug/L	150		1.0	U	5.0	U	540		1.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
1,1,2,2-Tetrachloroethane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
1,1,2-Trichloroethane		ug/L	4.9	J	25	U	30	U	5.0	U	5.0	U
1,1-Dichloroethane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
1,1-Dichloroethene		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
1,2-Dichloroethane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
1,2-Dichloroethene		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
1,2-Dichloropropane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
2-Butanone		ug/L	200	R	120	R	150	R	25	R	25	R
2-Hexanone		ug/L	200	R	120	R	150	R	25	R	25	U
4-Methyl-2-pentanone		ug/L	200	U	120	U	150	U	25	U	25	U
Acetone		ug/L	400	R	250	R	300	R	34	J	50	R
Benzene		ug/L	780		450	J	30	U	5.7		1.9	J
Bromodichloromethane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Bromoform		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Bromomethane		ug/L	80	U	50	U	60	U	10	U	10	U
Carbon disulfide		ug/L	40	U	25	U	30	U	7.9		6.9	
Carbon tetrachloride		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Chlorobenzene		ug/L	5.5	J	25	UJ	30	U	5.0	U	5.0	U
Chloroethane		ug/L	80	U	50	U	60	U	10	U	10	U
Chloroform		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Chloromethane		ug/L	80	U	50	U	60	U	10	U	10	U
Dibromochloromethane		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Ethylbenzene		ug/L	140		140	J	9.9	J	88		1.2	J
Methylene chloride		ug/L	83	B	100	B	65	B	2.4	B	2.3	B
Styrene		ug/L	40	U	25	UJ	30	U	5.0	U	5.0	U
Tetrachloroethene		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Toluene		ug/L	550		350	J	20	B	53		1.5	B
Total xylenes		ug/L	880		1000	J	46		420		10	

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	1.0	U	5.0	U
1,1,2,2-Tetrachloroethane		ug/L	1.0	U	5.0	U
1,1,2-Trichloroethane		ug/L	1.0	U	5.0	U
1,1-Dichloroethane		ug/L	1.0	U	5.0	U
1,1-Dichloroethene		ug/L	1.0	U	5.0	U
1,2-Dichloroethane		ug/L	1.0	U	5.0	U
1,2-Dichloroethene		ug/L	1.0	U	5.0	U
1,2-Dichloropropane		ug/L	1.0	U	5.0	U
2-Butanone		ug/L	5.0	R	25	R
2-Hexanone		ug/L	5.0	R	25	R
4-Methyl-2-pentanone		ug/L	5.0	U	25	U
Acetone		ug/L	10	R	45	J
Benzene		ug/L	1.6		4.3	J
Bromodichloromethane		ug/L	1.0	U	5.0	U
Bromoform		ug/L	1.0	U	5.0	U
Bromomethane		ug/L	2.0	U	10	U
Carbon disulfide		ug/L	0.17	J	2.1	J
Carbon tetrachloride		ug/L	1.0	U	5.0	U
Chlorobenzene		ug/L	1.0	U	5.0	U
Chloroethane		ug/L	2.0	U	10	U
Chloroform		ug/L	1.0	U	5.0	U
Chloromethane		ug/L	2.0	U	10	U
Dibromochloromethane		ug/L	1.0	U	5.0	U
Ethylbenzene		ug/L	1.0	U	1.6	J
Methylene chloride		ug/L	0.49	B	2.7	B
Styrene		ug/L	1.0	U	5.0	U
Tetrachloroethene		ug/L	1.0	U	5.0	U
Toluene		ug/L	0.95	B	1.3	J
Total xylenes		ug/L	0.91	J	5.5	

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
Vinyl chloride		ug/L	10	U	10	U	400	U	2.0	U	2.0	U
cis-1,3-Dichloropropene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U
trans-1,3-Dichloropropene		ug/L	5.0	U	5.0	U	200	U	1.0	U	1.0	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
Vinyl chloride		ug/L	10	U	2.0	U	10	U	50	U	2.0	U
cis-1,3-Dichloropropene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U
trans-1,3-Dichloropropene		ug/L	5.0	U	1.0	U	5.0	U	25	U	1.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
Vinyl chloride		ug/L	80	U	50	U	60	U	10	U	10	U
cis-1,3-Dichloropropene		ug/L	40	U	25	U	30	U	5.0	U	5.0	U
trans-1,3-Dichloropropene		ug/L	40	U	25	U	30	U	5.0	U	5.0	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Trichloroethene		ug/L	1.0	U	5.0	U
Vinyl chloride		ug/L	2.0	U	10	U
cis-1,3-Dichloropropene		ug/L	1.0	U	5.0	U
trans-1,3-Dichloropropene		ug/L	1.0	U	5.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	3.6	J	8.6	J	10	U	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	31		5.6	J	10	U	10	U	10	U
2-Methylphenol		ug/L	10	U	1.6	J	10	U	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	10	U	1.6	J	10	U	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U	10	U	10	UJ	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	UJ	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	UJ	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U	10	U	10	UJ	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	UJ	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	UJ	10	U
2,4-Dimethylphenol		ug/L	1.8	J	10	U	10	U	13	J	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	UJ	14	J
2,4-Dinitrotoluene		ug/L	1.3	J	10	U	10	U	10	UJ	16	
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	UJ	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	UJ	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	UJ	10	U
2-Methylnaphthalene		ug/L	1.2	J	10	U	10	U	14	J	10	U
2-Methylphenol		ug/L	10	U	10	U	10	U	3.3	J	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	UJ	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	UJ	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	UJ	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	UJ	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	UJ	28	NJ
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	UJ	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	UJ	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	UJ	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	UJ	10	U
4-Methylphenol		ug/L	10	U	10	U	10	U	3.3	J	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	UJ	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	UJ	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	UJ	10	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	1.6	J	10	U	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	4.4	J	10	U	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	35		10	U	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		ug/L	10		10	U	2.8	J	11		10	U
2,4-Dinitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		ug/L	37		10	U	20		5.0	J	1.5	J
2-Methylphenol		ug/L	6.7	J	10	U	10	U	3.3	J	10	U
2-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U	50	U	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U	50	U	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		ug/L	7.7	J	10	U	10	U	4.0	J	10	U
4-Nitroaniline		ug/L	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Acenaphthene		ug/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	10	U	10	U
1,2-Dichlorobenzene		ug/L	10	U	10	U
1,3-Dichlorobenzene		ug/L	10	U	10	U
1,4-Dichlorobenzene		ug/L	10	U	10	U
2,4,5-Trichlorophenol		ug/L	10	U	10	U
2,4,6-Trichlorophenol		ug/L	10	U	10	U
2,4-Dichlorophenol		ug/L	10	U	10	U
2,4-Dimethylphenol		ug/L	10	U	10	U
2,4-Dinitrophenol		ug/L	50	U	50	U
2,4-Dinitrotoluene		ug/L	10	U	10	U
2,6-Dinitrotoluene		ug/L	10	U	10	U
2-Chloronaphthalene		ug/L	10	U	10	U
2-Chlorophenol		ug/L	10	U	10	U
2-Methylnaphthalene		ug/L	10	U	10	U
2-Methylphenol		ug/L	10	U	10	U
2-Nitroaniline		ug/L	50	U	50	U
2-Nitrophenol		ug/L	10	U	10	U
3,3'-Dichlorobenzidine		ug/L	50	U	50	U
3-Nitroaniline		ug/L	50	U	50	U
4,6-Dinitro-2-methylphenol		ug/L	50	U	50	U
4-Bromophenyl phenyl ether		ug/L	10	U	10	U
4-Chloro-3-methylphenol		ug/L	10	U	10	U
4-Chloroaniline		ug/L	10	U	10	U
4-Chlorophenyl phenyl ether		ug/L	10	U	10	U
4-Methylphenol		ug/L	10	U	10	U
4-Nitroaniline		ug/L	50	U	50	U
4-Nitrophenol		ug/L	50	U	50	U
Acenaphthene		ug/L	10	U	10	U
Acenaphthylene		ug/L	10	U	10	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	10	U	10	U	10	U	10	U	10	U
Naphthalene		ug/L	18		8.1	J	10	U	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	2.3	J	10	U	10	U	10	U	10	U
Phenol		ug/L	15		74		10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	UJ	10	R
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	UJ	10	R
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	UJ	10	R
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	UJ	10	R
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	UJ	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	UJ	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	UJ	10	R
Dibenzofuran		ug/L	10	U	10	U	10	U	10	UJ	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	UJ	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	UJ	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	UJ	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	UJ	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	UJ	10	R
Isophorone		ug/L	10	U	10	U	10	U	2.7	J	10	U
Naphthalene		ug/L	10	U	10	U	10	U	10	J	10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	UJ	5.8	J
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	UJ	50	U
Phenanthrene		ug/L	10	U	10	U	10	U	10	UJ	10	U
Phenol		ug/L	11		10	U	10	U	69	J	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	UJ	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	UJ	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	UJ	10	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Carbazole		ug/L	10	U	10	U	10	U	10	U	10	U
Chrysene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U	10	U	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U	10	U	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
Fluoranthene		ug/L	10	U	10	U	10	U	10	U	10	U
Fluorene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U	50	U	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
Isophorone		ug/L	3.8	J	10	U	10	U	10	U	10	U
Naphthalene		ug/L	31		10	U	18		10		10	U
Nitrobenzene		ug/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U	50	U	50	U	50	U
Phenanthrene		ug/L	2.0	J	10	U	10	U	10	U	10	U
Phenol		ug/L	32		10	U	10	U	10	U	10	U
Pyrene		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Anthracene		ug/L	10	U	10	U
Benzo(a)anthracene		ug/L	10	U	10	U
Benzo(a)pyrene		ug/L	10	U	10	U
Benzo(b)fluoranthene		ug/L	10	U	10	U
Benzo(ghi)perylene		ug/L	10	U	10	U
Benzo(k)fluoranthene		ug/L	10	U	10	U
Butyl benzyl phthalate		ug/L	10	U	10	U
Carbazole		ug/L	10	U	10	U
Chrysene		ug/L	10	U	10	U
Dibenz(a,h)anthracene		ug/L	10	U	10	U
Dibenzofuran		ug/L	10	U	10	U
Diethyl phthalate		ug/L	10	U	10	U
Dimethyl phthalate		ug/L	10	U	10	U
Fluoranthene		ug/L	10	U	10	U
Fluorene		ug/L	10	U	10	U
Hexachlorobenzene		ug/L	10	U	10	U
Hexachlorobutadiene		ug/L	10	U	10	U
Hexachlorocyclopentadiene		ug/L	50	U	50	U
Hexachloroethane		ug/L	10	U	10	U
Indeno(1,2,3-cd)pyrene		ug/L	10	U	10	U
Isophorone		ug/L	10	U	10	U
Naphthalene		ug/L	10	U	10	U
Nitrobenzene		ug/L	10	U	10	U
Pentachlorophenol		ug/L	50	U	50	U
Phenanthrene		ug/L	10	U	10	U
Phenol		ug/L	10	U	10	U
Pyrene		ug/L	10	U	10	U
bis(2-Chloroethoxy)methane		ug/L	10	U	10	U
bis(2-Chloroethyl)ether		ug/L	10	U	10	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	23	B	5.6	B	10	U	10	U	4.0	B
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	UJ	10	U
bis(2-Ethylhexyl)phthalate		ug/L	6.5	B	13	B	3.1	B	55	J	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	UJ	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	UJ	10	R
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	UJ	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	UJ	10	U

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	28	B	4.9	B	6.8	B	16	B	24	B
di-n-Butyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U	10	U	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
bis(2-Chloroisopropyl)ether		ug/L	10	U	10	U
bis(2-Ethylhexyl)phthalate		ug/L	5.4	B	10	U
di-n-Butyl phthalate		ug/L	10	U	10	U
di-n-Octyl phthalate		ug/L	10	U	10	U
n-Nitroso-di-n-propylamine		ug/L	10	U	10	U
n-Nitrosodiphenylamine		ug/L	10	U	10	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U
Aroclor 1221		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U
Aroclor 1232		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U
Aroclor 1242		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U
Aroclor 1248		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U
Aroclor 1254		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U
Aroclor 1260		ug/L	20	U	1.0	U	20	U	1.0	U	1.0	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U
Aroclor 1221		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U
Aroclor 1232		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U
Aroclor 1242		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U
Aroclor 1248		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U
Aroclor 1254		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U
Aroclor 1260		ug/L	5.0	U	1.0	U	5.0	U	1.0	U	1.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U
Aroclor 1221		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U
Aroclor 1232		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U
Aroclor 1242		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U
Aroclor 1248		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U
Aroclor 1254		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U
Aroclor 1260		ug/L	5.0	U	1.0	UJ	5.0	U	10	U	5.0	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aroclor 1016		ug/L	1.0	U	1.0	U
Aroclor 1221		ug/L	1.0	U	1.0	U
Aroclor 1232		ug/L	1.0	U	1.0	U
Aroclor 1242		ug/L	1.0	U	1.0	U
Aroclor 1248		ug/L	1.0	U	1.0	U
Aroclor 1254		ug/L	1.0	U	1.0	U
Aroclor 1260		ug/L	1.0	U	1.0	U

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	468		10200		397		200	U	307	
Aluminum	Y	ug/L	200	U	200	U	200	U	408		200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	21.2		34.2		10.0	U	10.0	U	10.0	U
Arsenic	Y	ug/L	19.6		10.0	U	10.0	U	10.0	U	10.0	U
Barium		ug/L	1330		645		200	U	200	U	200	U
Barium	Y	ug/L	1490		279		200	U	200	U	200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	295000		1970000		131000		153000		57700	
Calcium	Y	ug/L	321000		70400		143000		169000		92100	
Chromium		ug/L	10.0	U	307		10.0	U	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	63.3		50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	25.0	U	62.7		25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	2540		51600		450		5770		1230	J
Iron	Y	ug/L	100	U	100	U	100	U	5580		100	U
Lead		ug/L	3.0	U	38.6		3.0	U	20.2		6.8	
Lead	Y	ug/L	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Magnesium		ug/L	230000		132000		76800		30500		19300	
Magnesium	Y	ug/L	259000		54300		89400		33000		41000	
Manganese		ug/L	732		5130		83.8		745		130	
Manganese	Y	ug/L	696		995		51.3		813		658	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	200	U	1130	J	200	U	200	U	200	U
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	50.0	U	12.9		10.0	U	10.0	U	100	U
Arsenic	Y	ug/L	100	U	10.0	U	10.0	U	10.0	U	100	U
Barium		ug/L	457		1100		406		200	U	200	U
Barium	Y	ug/L	596		1040		414		208		200	U
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	25.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	50.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	441000	J	101000		92600		125000	J	99000	
Calcium	Y	ug/L	483000	J	104000		96800		140000	J	149000	
Chromium		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	65.4	
Copper		ug/L	25.0	U	80.9		25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	481		13000		168	J	207		427	J
Iron	Y	ug/L	100	U	302		100	U	100	U	269	
Lead		ug/L	15.0	U	6.2		7.1		3.0	U	30.0	U
Lead	Y	ug/L	30.0	U	3.0	U	3.0	U	3.0	U	30.0	U
Magnesium		ug/L	317000		57800		37400		9250		59700	
Magnesium	Y	ug/L	345000	J	60400		38600		14600	J	99900	
Manganese		ug/L	181		196		36.6		41.9		32.0	
Manganese	Y	ug/L	183		278		36.5		43.8		32.6	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	513	J	11000		200	U	200	U	200	U
Aluminum	Y	ug/L	200	U	200	U	200	U	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
Arsenic		ug/L	50.0	U	100	U	20.0	U	100	U	10.0	U
Arsenic	Y	ug/L	50.0	U	50.0	U	13.1		100	U	10.0	U
Barium		ug/L	1710		612		800		942		1800	
Barium	Y	ug/L	1390		523		871		994		1740	
Beryllium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cadmium		ug/L	25.0	U	50.0	U	10.0	U	5.0	U	5.0	U
Cadmium	Y	ug/L	25.0	U	25.0	U	5.0	U	5.0	U	5.0	U
Calcium		ug/L	662000	J	2880000		279000	J	1370000		171000	
Calcium	Y	ug/L	390000	J	949000		289000	J	1470000		162000	
Chromium		ug/L	20.6		105		10.0	U	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	14.8		10.0	U	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Copper		ug/L	39.5		84.9		25.0	U	25.0	U	25.0	U
Copper	Y	ug/L	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
Iron		ug/L	4810		45900		456		166		141	J
Iron	Y	ug/L	100	U	100	U	100	U	100	U	100	U
Lead		ug/L	15.0	U	40.4		6.0	U	30.0	U	3.0	U
Lead	Y	ug/L	15.0	U	15.0	U	6.8		30.0	U	3.0	U
Magnesium		ug/L	259000		105000		212000		938000		80000	
Magnesium	Y	ug/L	299000	J	5000	U	231000	J	1020000		77900	
Manganese		ug/L	139		2200		20.4		80.8		15.0	U
Manganese	Y	ug/L	15.0	U	15.0	U	15.0	U	80.9		16.3	
Mercury		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	678	J	298	
Aluminum	Y	ug/L	200	U	200	U
Antimony		ug/L	60.0	U	60.0	U
Antimony	Y	ug/L	60.0	U	60.0	U
Arsenic		ug/L	200	U	10.0	U
Arsenic	Y	ug/L	10.0	U	10.0	U
Barium		ug/L	16400		200	U
Barium	Y	ug/L	4950		200	U
Beryllium		ug/L	5.0	U	5.0	U
Beryllium	Y	ug/L	5.0	U	5.0	U
Cadmium		ug/L	100	U	5.0	U
Cadmium	Y	ug/L	5.0	U	5.0	U
Calcium		ug/L	1960000	J	23400	
Calcium	Y	ug/L	491000	J	25300	
Chromium		ug/L	10.0	U	10.0	U
Chromium	Y	ug/L	10.0	U	10.0	U
Cobalt		ug/L	50.0	U	50.0	U
Cobalt	Y	ug/L	50.0	U	50.0	U
Copper		ug/L	25.0	U	29.3	
Copper	Y	ug/L	25.0	U	25.0	U
Iron		ug/L	6770		11100	
Iron	Y	ug/L	1320		1210	
Lead		ug/L	60.0	U	12.2	
Lead	Y	ug/L	3.0	U	3.0	U
Magnesium		ug/L	861000		5000	U
Magnesium	Y	ug/L	223000	J	5000	U
Manganese		ug/L	153		388	
Manganese	Y	ug/L	47.0		386	
Mercury		ug/L	0.20	U	0.20	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	238		40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	43200		34200		38500		5000	U	5000	U
Potassium	Y	ug/L	47800		31200		43800		5000	U	14400	
Selenium		ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Silver		ug/L	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	682000		124000		282000		5000	U	5000	U
Sodium	Y	ug/L	786000		124000		321000		5000	U	139000	
Thallium		ug/L	10.0	U	10.0	U	10.1	B	10.0	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	108		50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	38.3	B	137	B	67.6	B	37.4	B	49.7	B
Zinc	Y	ug/L	66.3	B	29.1	B	42.8	B	38.9	B	44.9	B

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	40.0	U	40.0	U	40.0	U	45.5	
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	71.3	
Potassium		ug/L	60900		37000		8190		5000	U	49000	
Potassium	Y	ug/L	65800		36700		7990		5000	U	32400	
Selenium		ug/L	25.0	U	5.0	U	5.0	U	5.0	U	50.0	U
Selenium	Y	ug/L	50.0	U	5.0	U	5.0	U	5.0	U	50.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	1320000		415000		109000		29500		269000	
Sodium	Y	ug/L	1520000		419000		112000		53500		365000	
Thallium		ug/L	50.0	U	10.0	U	10.0	U	10.0	U	100	U
Thallium	Y	ug/L	100	U	10.0	U	10.0	U	10.0	U	100	U
Vanadium		ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Zinc		ug/L	68.0	B	150	J	39.6	B	20.0	U	42.2	B
Zinc	Y	ug/L	32.8	B	20.0	U	40.4	B	20.0	U	53.9	B

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel		ug/L	40.0	U	54.7		40.0	U	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Potassium		ug/L	62500		22800		37200		155000		26000	
Potassium	Y	ug/L	74800		23500		43100		163000		24800	
Selenium		ug/L	25.0	U	50.0	U	10.0	U	50.0	U	5.0	U
Selenium	Y	ug/L	25.0	U	25.0	U	5.0	U	50.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Sodium		ug/L	811000		46600		386000		3530000		129000	
Sodium	Y	ug/L	1010000		57200		431000		3820000		127000	
Thallium		ug/L	50.8		101		20.0	U	100	U	10.0	U
Thallium	Y	ug/L	62.2		53.1		10.0	U	100	U	10.0	U
Vanadium		ug/L	50.0	U	126		50.0	U	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.6		50.0	U	50.0	U	50.0	U
Zinc		ug/L	105	B	235		30.8	B	20.0	U	29.5	B
Zinc	Y	ug/L	47.3	B	20.0	U	73.4	B	23.5	B	24.4	B

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Mercury	Y	ug/L	0.24		0.20	U
Nickel		ug/L	40.0	U	40.0	U
Nickel	Y	ug/L	40.0	U	40.0	U
Potassium		ug/L	78600		5000	U
Potassium	Y	ug/L	21600		5000	U
Selenium		ug/L	100	U	5.0	U
Selenium	Y	ug/L	5.0	U	5.0	U
Silver		ug/L	10.0	U	10.0	U
Silver	Y	ug/L	10.0	U	10.0	U
Sodium		ug/L	7300000		5000	U
Sodium	Y	ug/L	1870000		5000	U
Thallium		ug/L	200	U	10.0	U
Thallium	Y	ug/L	10.0	U	10.0	U
Vanadium		ug/L	50.0	U	50.0	U
Vanadium	Y	ug/L	50.0	U	50.0	U
Zinc		ug/L	42.1	B	63.1	B
Zinc	Y	ug/L	20.0	U	28.3	B

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.81		0.20	U	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.23		2.5		0.20	U	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	1.2		0.20	U	0.20	U	0.20	U
2-Nitrotoluene		ug/L	1.1		0.20	U	0.20	U	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.31		0.20	U	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
RDX		ug/L	2.8		0.50	U	0.50	U	0.50	U	0.50	U
Tetryl		ug/L	2.4		0.20	U	0.20	U	0.20	U	0.20	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.62	U	0.20	U	5.1	U	4.0	U
1,3-Dinitrobenzene		ug/L	0.86		3.1	U	0.20	U	5.1	U	4.0	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	5.1	U	4.0	U
2,4-Dinitrotoluene		ug/L	2.0		0.20	U	0.20	U	5.1	U	4.0	U
2,6-Dinitrotoluene		ug/L	0.34		0.20	U	0.20	U	5.1	U	4.0	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	5.1	U	4.0	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	5.1	U	4.0	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U	0.20	U	5.1	U	4.0	U
HMX		ug/L	0.50	U	0.50	U	0.50	U	13	U	10	U
Nitrobenzene		ug/L	0.20	U	0.20	U	0.20	U	5.1	U	4.0	U
RDX		ug/L	0.50	U	0.50	U	0.50	U	13	U	10	U
Tetryl		ug/L	0.20	U	3.4	U	0.20	U	5.1	U	4.0	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	2.0	U	0.20	U	0.41	UJ	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.40	U	0.20	U	0.41	UJ	0.36	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.40	U	0.20	U	0.41	UJ	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.89		0.20	U	0.41	UJ	0.49		0.20	U
2,6-Dinitrotoluene		ug/L	0.89		0.20	U	0.41	UJ	3.6		0.20	U
2-Nitrotoluene		ug/L	0.40	U	0.20	U	0.41	UJ	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.40	U	0.24	U	0.41	UJ	0.20	U	0.62	
4-Amino-2,6-dinitrotoluene		ug/L	0.40	U	0.20	U	0.41	UJ	0.20	U	0.20	U
HMX		ug/L	1.0	U	0.50	U	1.0	UJ	0.50	U	0.50	U
Nitrobenzene		ug/L	0.40	U	0.20	U	0.41	UJ	0.20	U	0.20	U
RDX		ug/L	1.0	U	0.50	U	5.8	UJ	0.50	U	0.50	U
Tetryl		ug/L	0.40	U	0.20	U	0.41	UJ	0.20	U	0.20	U

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	0.20	U	0.20	U
1,3-Dinitrobenzene		ug/L	0.20	U	0.20	U
2,4,6-Trinitrotoluene		ug/L	0.20	U	0.20	U
2,4-Dinitrotoluene		ug/L	0.20	U	0.20	U
2,6-Dinitrotoluene		ug/L	0.20	U	0.20	U
2-Nitrotoluene		ug/L	0.20	U	0.20	U
3-Nitrotoluene		ug/L	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene		ug/L	0.20	U	0.20	U
HMX		ug/L	0.50	U	0.50	U
Nitrobenzene		ug/L	0.20	U	0.20	U
RDX		ug/L	0.50	U	0.50	U
Tetryl		ug/L	0.20	U	0.20	U

PLUMBROOK
Bedrock Wells
Data Summary

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	10	U

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	44	

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U	10	U	10	U	16	

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	10	U	10	U

APPENDIX H

BLANK CORRECTED - DETECTED HITS SUMMARY

FIRST SEMI-ANNUAL SAMPLING

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	150000		270000		190000		190000		350000	
Chloride		ug/L	-	-	13000		240000		-	-	9000	
Hardness		ug/L	540000		580000		380000		200000		2100000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	130000		31000		130000		29000		1700000	
Total dissolved solids		ug/L	500000		330000		440000		250000		3100000	
Total organic carbon		ug/L	5400		4500		2700		4200		6900	
Total suspended solids		ug/L	-	-	27000		-	-	8000		5000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	370000		300000		360000		550000		350000	
Chloride		ug/L	4000		4000		4000		97000		3000	
Hardness		ug/L	400000		1200000		420000		1500000		760000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	18000		710000		79000		270000		48000	
Total dissolved solids		ug/L	460000		1400000		310000		1300000		420000	
Total organic carbon		ug/L	4500		13000		8600		41000		4700	
Total suspended solids		ug/L	290000		17000		84000		-	-	6000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	320000		470000		340000		45000		300000	
Chloride		ug/L	1000		14000		28000		17000		5000	
Hardness		ug/L	740000		1600000		2200000		760000		370000	
Nitrate		ug/L	-	-	-	-	17000	J	100		200	
Sulfate		ug/L	47000		780000		1500000		300000		32000	
Total dissolved solids		ug/L	420000		1700000		3100000		930000		350000	
Total organic carbon		ug/L	3800		4400		2900		2700		1500	
Total suspended solids		ug/L	-	-	-	-	15000		37000		5000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	450000		590000		340000		120000		110000	
Chloride		ug/L	14000		21000		6000		8000		3000	
Hardness		ug/L	370000		860000		540000		560000		300000	
Nitrate		ug/L	-	-	600		-	-	-	-	-	-
Sulfate		ug/L	270000		54000		54000		280000		160000	
Total dissolved solids		ug/L	350000		500000		410000		670000		350000	
Total organic carbon		ug/L	1400		3100		2000		6100		2600	
Total suspended solids		ug/L	35000		-	-	5000		190000		5000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	36000		38000		400000		430000		280000	
Chloride		ug/L	-	-	-	-	6000		410000		7000	
Hardness		ug/L	490000		440000		540000		900000		420000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	470000		300000		110000		240000		36000	
Total dissolved solids		ug/L	290000		660000		600000		1700000		360000	
Total organic carbon		ug/L	2500		3400		2900		12000		11000	
Total suspended solids		ug/L	-	-	5000		12000		250000		150000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5840		5690		5700		5710		5610	
Sample Date:			13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97		18-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	370000		820000		990000		860000		490000	
Chloride		ug/L	-	-	-	-	6500000		7200000		47000	
Hardness		ug/L	1900000		5000000		13000000		2200000		1100000	
Nitrate		ug/L	-	-	400	J	1600000	J	200	J	-	-
Sulfate		ug/L	1200000		8000000		12000000		3000000		160000	
Total dissolved solids		ug/L	2400000		17000000		50000000		8700000		780000	
Total organic carbon		ug/L	21000		2700000		14000000		1300000		4200	
Total suspended solids		ug/L	400000		25000		73000		8000		7000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5620		5630		5640		5650		5660	
Sample Date:			18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97		20-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	450000		270000		330000		320000		610000	
Chloride		ug/L	140000		17000		23000		50000		3000	
Hardness		ug/L	940000		13000000		9200000		500000		920000	
Nitrate		ug/L	-	-	-	-	91000	J	-	-	-	-
Sulfate		ug/L	150000		2000000		1100000		430000		-	-
Total dissolved solids		ug/L	1000000		3000000		2100000		1000000		640000	
Total organic carbon		ug/L	4500		2400		2600		3000		10000	
Total suspended solids		ug/L	140000		-	-	5000		7000		130000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5670		5680	
Sample Date:			21-NOV-97		23-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	380000		520000	
Chloride		ug/L	7000		2000	
Hardness		ug/L	4900000		3300000	
Nitrate		ug/L	-	-	80000	J
Sulfate		ug/L	170000		2300000	
Total dissolved solids		ug/L	650000		7700000	
Total organic carbon		ug/L	2100		970000	
Total suspended solids		ug/L	-	-	40000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	0.64	J	-	-	-	-	-	-
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	22	J
Benzene		ug/L	-	-	0.53	J	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	0.24	J	-	-	-	-	0.21	J
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	0.17	J	-	-
Chlorobenzene		ug/L	-	-	-	-	0.17	J	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	0.31	J	-	-	0.32	J	0.38	J
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	170	D	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	17		-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	3.4		-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	2.5		-	-	-	-
Toluene		ug/L	-	-	-	-	6.1		13000		-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	68	J	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	0.37	J	-	-	-	-	-	-	-	-
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	35	J	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-
Chlorobenzene		ug/L	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate		ug/L	-	-	-	-	2.7	J	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	100		-	-	-	-	-	-	-	-
di-n-Octyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	43		-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	7.1	J	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	1.5	J	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	12	J	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
di-n-Octyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	5.1	J	-	-
di-n-Octyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	11		-	-	28		1.7	J	6.0	J
di-n-Octyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	1300	D	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	1200	D	-	-
Diethyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	6.8	J	-	-
bis(2-Ethylhexyl)phthalate		ug/L	2.4	J	-	-	-	-	5.0	J	-	-
di-n-Octyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	6000		48	J
2,4-Dinitrotoluene		ug/L	-	-	-	-	1800		1500		110	
2,6-Dinitrotoluene		ug/L	-	-	-	-	140	J	190	J	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	160	J	450	J
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	660	J	2300	J	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
di-n-Octyl phthalate		ug/L	9.3	J	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
;,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
:-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
:-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
i-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
l,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
l-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
)iethyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
'henol		ug/L	-	-	-	-	-	-	-	-	-	-
›is(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-
li-n-Octyl phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
,4-Dinitrophenol		ug/L	-	-	-	-	-	-
,4-Dinitrotoluene		ug/L	-	-	-	-	-	-
,6-Dinitrotoluene		ug/L	-	-	-	-	-	-
-Methylphenol		ug/L	-	-	-	-	-	-
-Nitroaniline		ug/L	-	-	-	-	-	-
-Nitroaniline		ug/L	-	-	-	-	-	-
,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-
-Methylphenol		ug/L	-	-	-	-	-	-
Diethyl phthalate		ug/L	-	-	-	-	-	-
henol		ug/L	-	-	-	-	-	-
is(2-Ethylhexyl)phthalate		ug/L	7.3	J	-	-	-	-
i-n-Octyl phthalate		ug/L	-	-	2.7	J	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
TEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
TEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5840		5690		5700		5710		5610	
Sample Date:			13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97		18-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5620		5630		5640		5650		5660	
Sample Date:			18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97		20-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5670		5680	
Sample Date:			21-NOV-97		23-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	9410	J	878	J	451	J	2390	J	2020	J
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	36.3		-	-	-	-	40.2		-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	75500	J	95200		101000	J	70700	J	601000	
Calcium	Y	ug/L	75400		94400		111000		64100		549000	
Chromium		ug/L	44.9		22.7		11.9		-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	48.0		-	-	-	-	-	-	-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	76600		3130		3750		26300		32900	
Iron	Y	ug/L	4350		806		1130		892		14400	
Lead		ug/L	17.7		-	-	-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	3.2		-	-	-	-
Magnesium		ug/L	31500		19300		23000		20000		199000	
Magnesium	Y	ug/L	30000		19200		24900		17800		305000	
Manganese		ug/L	432		434		475		493		5410	
Manganese	Y	ug/L	350		421		507		369		4740	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	71.8		-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	-	-	-	-	-	-	-	-
Potassium	Y	ug/L	-	-	-	-	-	-	-	-	6710	
Selenium		ug/L	20.4		-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	11600	J	34500	J	-	-	-	-	3970	J
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	10.3		66.2		-	-	-	-	11.5	
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	12.5	
Barium		ug/L	-	-	314		-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	205000		491000		46400		150000	J	116000	
Calcium	Y	ug/L	131000		393000		44900		147000		99500	
Chromium		ug/L	22.8		69.8		-	-	-	-	10.6	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	72.3		-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	33.6		243		-	-	62.6		-	-
Copper	Y	ug/L	-	-	-	-	-	-	41.6		-	-
Iron		ug/L	27300		103000		1320		-	-	14700	
Iron	Y	ug/L	-	-	4890		1090		-	-	3050	
Lead		ug/L	16.6		100		-	-	-	-	6.6	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	52100		113000		17500		70500		38400	
Magnesium	Y	ug/L	29300		85300		17000		68000		36500	
Manganese		ug/L	816		3010		323		896		302	
Manganese	Y	ug/L	78.8		2500		331		877		114	
Mercury		ug/L	-	-	-	-	0.45		-	-	0.30	
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	212		-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	11800		6160		-	-	-	-
Potassium	Y	ug/L	-	-	5220		6180		-	-	-	-
Selenium		ug/L	-	-	8.2		-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	-	-	1200	J	1040		-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	142000		342000		426000	J	183000	J	103000	
Calcium	Y	ug/L	128000		345000		402000		188000		106000	J
Chromium		ug/L	-	-	-	-	10.4		-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	-	-	-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	1620		-	-	3370		3040		-	-
Iron	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Lead		ug/L	-	-	-	-	-	-	4.5		8.5	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	23500		136000		253000		83700		27600	
Magnesium	Y	ug/L	21400		139000		246000		86300		28100	
Manganese		ug/L	340		361		249		1670		-	-
Manganese	Y	ug/L	-	-	328		372		1630		-	-
Mercury		ug/L	0.30		0.24		-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	14900		25600		-	-	-	-
Potassium	Y	ug/L	-	-	15300		26500		-	-	-	-
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	1140		5080		310		520		292	
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	99200	J	161000		133000		172000	J	114000	J
Calcium	Y	ug/L	96700		142000	J	131000	J	216000		118000	
Chromium		ug/L	-	-	12.6		-	-	-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	-	-	-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	2080		12300		830		19300		12700	
Iron	Y	ug/L	-	-	-	-	-	-	22900		12700	
Lead		ug/L	3.5		9.4		-	-	-	-	7.1	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	5.0	
Magnesium		ug/L	27600		39400		21900		26500		17600	
Magnesium	Y	ug/L	26200		33300		21600		32300		17800	
Manganese		ug/L	90.9		344		1130		370		608	
Manganese	Y	ug/L	65.4		-	-	1060		449		617	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	0.68		-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	-	-	-	-	-	-	-	-
Potassium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	4990	J	1830	J	-	-	18400		7790	
Aluminum	Y	ug/L	1080		-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	12.6		-	-	15.8		-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	146000	J	127000	J	158000		240000		118000	J
Calcium	Y	ug/L	147000		114000		176000	J	167000	J	127000	
Chromium		ug/L	-	-	-	-	-	-	42.7		16.6	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	78.8		-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	72.9		-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	29.7		-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	19800		44300		-	-	46700		10900	
Iron	Y	ug/L	2410		34100		-	-	716		-	-
Lead		ug/L	-	-	-	-	-	-	13.1		6.7	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	53800		29900		34900		96200		17500	
Magnesium	Y	ug/L	52300		26300		38300		108000		17900	
Manganese		ug/L	6970		1410		23.4		994		185	
Manganese	Y	ug/L	6900		1260		29.2		65.3		149	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	0.30		-	-	-	-	-	-
Nickel		ug/L	61.8		156		-	-	114		-	-
Nickel	Y	ug/L	47.2		140		-	-	-	-	-	-
Potassium		ug/L	5460		-	-	-	-	33800		-	-
Potassium	Y	ug/L	-	-	-	-	-	-	40600		-	-
Selenium		ug/L	5.0		5.1		-	-	-	-	-	-

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	27300		6620		8960	J	-	-	-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	59.8		-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	13.8		-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	236000		641000	J	625000		749000		-	-
Calcium	Y	ug/L	140000	J	984000		582000		753000	J	-	-
Chromium		ug/L	57.1		25.2		-	-	-	-	-	-
Chromium	Y	ug/L	-	-	14.2		-	-	-	-	-	-
Cobalt		ug/L	50.8		-	-	2320		7270		-	-
Cobalt	Y	ug/L	-	-	-	-	2330		6770		-	-
Copper		ug/L	47.3		-	-	887		3790		-	-
Copper	Y	ug/L	-	-	-	-	911		3390		-	-
Iron		ug/L	68200		13500		21700		22000		-	-
Iron	Y	ug/L	-	-	2920		1360		12200		-	-
Lead		ug/L	29.8		13.1		-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	61400		47400		189000		541000		-	-
Magnesium	Y	ug/L	49900		41300		184000		-	-	-	-
Manganese		ug/L	1370		788		17000		34100		1900	
Manganese	Y	ug/L	265		562		17000		29700		1890	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	0.76		-	-	-	-	-	-
Nickel		ug/L	125		-	-	1710		7600		-	-
Nickel	Y	ug/L	-	-	-	-	1710		6820		-	-
Potassium		ug/L	14400		5640		-	-	-	-	-	-
Potassium	Y	ug/L	8540		-	-	-	-	-	-	-	-
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	877	J	3170	J	-	-	3820	J	3490	J
Aluminum	Y	ug/L	-	-	-	-	-	-	432		-	-
Arsenic		ug/L	12.2		10.5		-	-	21.5		10.1	
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	373		-	-	-	-	-	-	-	-
Barium	Y	ug/L	338		-	-	-	-	-	-	-	-
Calcium		ug/L	186000		180000		566000	J	285000	J	146000	J
Calcium	Y	ug/L	191000		167000		529000		386000		138000	
Chromium		ug/L	-	-	15.6		-	-	25.2		18.4	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	67.5		-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	-	-	-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	18200		13300		805		17400		13900	
Iron	Y	ug/L	7610		-	-	-	-	-	-	-	-
Lead		ug/L	-	-	10.4		-	-	14.5		13.8	
Lead	Y	ug/L	-	-	-	-	-	-	11.0		4.2	
Magnesium		ug/L	52900		63000		215000		145000		55900	
Magnesium	Y	ug/L	54800		62900		204000		181000		54600	
Manganese		ug/L	1530		1030		2950		800		713	
Manganese	Y	ug/L	1440		865		2900		1120		522	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	120		52.4		-	-
Nickel	Y	ug/L	-	-	-	-	77.1		56.8		-	-
Potassium		ug/L	-	-	17400		26700		28200		15400	
Potassium	Y	ug/L	-	-	17800		25800		34500		14700	
Selenium		ug/L	-	-	-	-	-	-	7.2		-	-

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	496	J	2710	J	3720	J
Aluminum	Y	ug/L	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-
Barium	Y	ug/L	-	-	-	-	-	-
Calcium		ug/L	223000		150000	J	497000	J
Calcium	Y	ug/L	243000		136000		472000	
Chromium		ug/L	-	-	-	-	12.8	
Chromium	Y	ug/L	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	142	
Cobalt	Y	ug/L	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	70.2	
Copper	Y	ug/L	-	-	-	-	-	-
Iron		ug/L	2460		5600		7930	
Iron	Y	ug/L	1570		-	-	-	-
Lead		ug/L	-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	-	-
Magnesium		ug/L	15600		58100		181000	
Magnesium	Y	ug/L	17500		54600		170000	
Manganese		ug/L	3700		235		1660	
Manganese	Y	ug/L	4020		163		1620	
Mercury		ug/L	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	228	
Nickel	Y	ug/L	-	-	-	-	-	-
Potassium		ug/L	12200		-	-	28000	
Potassium	Y	ug/L	14300		-	-	-	-
Selenium		ug/L	-	-	-	-	16.7	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	8350	J	16200		9230	J	5510	J	21400	
Sodium	Y	ug/L	8550		16400		9590		5100		39600	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	116		-	-	-	-	-	-	67.4	
Zinc	Y	ug/L	22.0	J	-	-	23.7	J	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	7800		18300		22800		250000	J	18100	
Sodium	Y	ug/L	7180		20400		22200		244000		19100	
Vanadium		ug/L	-	-	158		-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	99.9		836		51.6		-	-	47.6	
Zinc	Y	ug/L	49.9		-	-	46.9		27.2	J	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	-	-	18900		146000	J	48200		6290	
Sodium	Y	ug/L	-	-	19500		144000		50200		6470	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	47.4		23.4		27.2		-	-	-	-
Zinc	Y	ug/L	27.6		33.1		73.3	J	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	-	-	8430		-	-	5960		-	-
Sodium	Y	ug/L	-	-	7950		-	-	7130		-	-
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	25.5		43.5		25.8		25.8		23.0	
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	5.0		-	-	-	-	-	-	-	-
Sodium		ug/L	6560	J	6090	J	11200		223000		7100	
Sodium	Y	ug/L	6470		5170		12200		296000		8360	
Vanadium		ug/L	-	-	-	-	-	-	59.7		-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	75.5		137		-	-	105		35.6	
Zinc	Y	ug/L	54.7	J	87.7	J	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	60200		8130		3540000		10800000		1360000	
Sodium	Y	ug/L	68500		8250		3850000		9230000		1450000	
Vanadium		ug/L	75.2		60.9		-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	53.0		-	-	-	-	-	-
Zinc		ug/L	167		127		-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-	11.4		-	-
Sodium		ug/L	39300		91400		86100	J	79700	J	161000	J
Sodium	Y	ug/L	41000		96500		79400		94900		163000	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	27.0		47.1		34.5		58.7		53.0	
Zinc	Y	ug/L	25.0		45.4		28.5	J	52.0	J	-	-

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium	Y	ug/L	-	-	-	-	-	-
Sodium		ug/L	17600		14300	J	1010000	J
Sodium	Y	ug/L	21300		13800		1030000	
Vanadium		ug/L	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-
Zinc		ug/L	-	-	-	-	36.7	
Zinc	Y	ug/L	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	14		-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	17		-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	47		-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	7.8		-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	0.24	
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	0.74	
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	0.20	
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	0.53	
4-Amino-2,6-dinitrotoluene		ug/L	-	-	3.6		-	-	-	-	0.62	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5830		5840		5690		5700		5710	
Sample Date:			16-NOV-97		13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	2000		1500		-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	1500		1500		35	
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	1200		1300		28	
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5610		5620		5630		5640		5650	
Sample Date:			18-NOV-97		18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5660		5670		5680	
Sample Date:			20-NOV-97		21-NOV-97		23-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5850		5860		5870		5880		5490	
Sample Date:			20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97		20-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5510		5520		5530		5540		5550	
Sample Date:			19-NOV-97		19-NOV-97		19-NOV-97		21-NOV-97		19-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5560		5580		5590		5600		5720	
Sample Date:			19-NOV-97		19-NOV-97		23-NOV-97		14-NOV-97		16-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5730		5740		5750		5760		5770	
Sample Date:			13-NOV-97		18-NOV-97		17-NOV-97		16-NOV-97		16-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5780		5790		5800		5810		5820	
Sample Date:			21-NOV-97		21-NOV-97		16-NOV-97		16-NOV-97		14-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5840		5690		5700		5710		5610	
Sample Date:			13-NOV-97		17-NOV-97		17-NOV-97		17-NOV-97		18-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	120		240		36		-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5620		5630		5640		5650		5660	
Sample Date:			18-NOV-97		21-NOV-97		24-NOV-97		21-NOV-97		20-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/21/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5670		5680	
Sample Date:			21-NOV-97		23-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	79	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	830000		510000		670000		280000		350000	
Chloride		ug/L	1900000		47000		790000		-	-	780000	
Hardness		ug/L	1800000		700000		13000000		500000		1000000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	200	
Sulfate		ug/L	7000		48000		-	-	140000		70000	
Total dissolved solids		ug/L	3600000		750000		1900000		640000		1800000	
Total organic carbon		ug/L	16000		7400		5300	J	3800		-	-
Total suspended solids		ug/L	6000		4000		38000		11000		10000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	670000		180000		220000		430000		210000	
Chloride		ug/L	55000		90000		91000		2500000		79000	
Hardness		ug/L	2000000		360000		450000		1600000		640000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	300	
Sulfate		ug/L	62000		140000		90000		13000		610000	
Total dissolved solids		ug/L	5300000		730000		760000		4800000		2500000	
Total organic carbon		ug/L	11000		12000		5000		9600		190000	
Total suspended solids		ug/L	4000		480000		5000		16000		37000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	85000		1600000		830000		120000		310000	
Chloride		ug/L	1400000		88000		1800000		6900000		330000	
Hardness		ug/L	1500000		5300000		1800000		4000000		1700000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	-	-	150000		59000		16000		14000	
Total dissolved solids		ug/L	3200000		6400000		3000000		12000000		1200000	
Total organic carbon		ug/L	11000		8400		1200		6500		16000	
Total suspended solids		ug/L	7000		7000		-	-	61000		41000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	240000		487000	
Chloride		ug/L	19000000		56900	
Hardness		ug/L	20000000		484000	
Nitrate		ug/L	-	-		
Sulfate		ug/L	-	-	13900	
Total dissolved solids		ug/L	32000000		570000	J
Total organic carbon		ug/L	-	-	2500	
Total suspended solids		ug/L	74000		35000	J

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Acetone		ug/L	-	-	-	-	36	J	-	-	-	-
Benzene		ug/L	11	J	33		-	-	-	-	-	-
Carbon disulfide		ug/L	29	J	5.5	J	4.2	J	-	-	0.65	J
Chlorobenzene		ug/L	-	-	21	J	-	-	-	-	-	-
Ethylbenzene		ug/L	7.7	J	23	J	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-
Total xylenes		ug/L	150		200		-	-	-	-	-	-
Trichloroethene		ug/L	-	-	-	-	-	-	0.25	J	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	0.14	J	0.91	J	130	D	1.1	
Carbon disulfide		ug/L	3.7	J	0.82	J	6.4		5.8		1.3	
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	0.85	J	73	D	0.59	J
Toluene		ug/L	-	-	-	-	-	-	170	D	-	-
Total xylenes		ug/L	-	-	-	-	12		520	D	3.9	
Trichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Acetone		ug/L	-	-	-	-	-	-	-	-	68	J
Benzene		ug/L	570		490		10	J	11		11	
Carbon disulfide		ug/L	-	-	-	-	40	J	32		2.0	
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	130		130		79		32		5.1	
Toluene		ug/L	490		390		140		21		8.9	
Total xylenes		ug/L	920		1100		360		170		38	
Trichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Acetone		ug/L	-	-	-	-
Benzene		ug/L	0.93	J	8.8	J
Carbon disulfide		ug/L	-	-	-	-
Chlorobenzene		ug/L	-	-	-	-
Ethylbenzene		ug/L	0.15	J	-	-
Toluene		ug/L	-	-	-	-
Total xylenes		ug/L	2.6		4.0	J
Trichloroethene		ug/L	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dimethylphenol		ug/L	-	-	1.3	J	-	-	-	-	-	-
2-Methylnaphthalene		ug/L	28		1.3	J	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Isophorone		ug/L	2.9	J	-	-	-	-	-	-	-	-
Naphthalene		ug/L	16		-	-	-	-	-	-	-	-
Phenanthrene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	43		-	-	3.1	J	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	28		-	-	5.8	J	-	-	1.7	J

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dimethylphenol		ug/L	1.7	J	-	-	-	-	16		-	-
2-Methylnaphthalene		ug/L	1.9	J	-	-	-	-	20		-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	4.1	J	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	4.7	J	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Isophorone		ug/L	-	-	-	-	-	-	-	-	-	-
Naphthalene		ug/L	2.3	J	-	-	-	-	15		-	-
Phenanthrene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	17		-	-	2.3	J	62		-	-
bis(2-Ethylhexyl)phthalate		ug/L	3.9	J	3.6	J	3.0	J	39		-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dimethylphenol		ug/L	6.7	J	-	-	-	-	5.1	J	-	-
2-Methylnaphthalene		ug/L	31		-	-	-	-	2.2	J	3.3	J
2-Methylphenol		ug/L	3.0	J	-	-	-	-	2.6	J	-	-
4-Methylphenol		ug/L	3.9	J	-	-	-	-	2.8	J	-	-
Fluorene		ug/L	1.7	J	-	-	-	-	-	-	-	-
Isophorone		ug/L	4.2	J	-	-	-	-	-	-	-	-
Naphthalene		ug/L	22		-	-	-	-	3.8	J	2.1	J
Phenanthrene		ug/L	2.2	J	-	-	-	-	-	-	-	-
Phenol		ug/L	18		-	-	-	-	21	J	55	
bis(2-Ethylhexyl)phthalate		ug/L	37		920	J	-	-	3.5	J	5.8	J

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
2,4-Dimethylphenol		ug/L	-	-	-	-
2-Methylnaphthalene		ug/L	1.1	J	-	-
2-Methylphenol		ug/L	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-
Fluorene		ug/L	-	-	-	-
Isophorone		ug/L	-	-	-	-
Naphthalene		ug/L	-	-	-	-
Phenanthrene		ug/L	-	-	-	-
Phenol		ug/L	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	23	J

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	637		1060	J	-	-	522		9020	
Arsenic		ug/L	16.5		-	-	-	-	11.7		17.6	
Barium		ug/L	1060		220		-	-	-	-	520	
Barium	Y	ug/L	1260		212		-	-	-	-	366	
Calcium		ug/L	302000		186000	J	189000		176000	J	161000	
Calcium	Y	ug/L	305000	J	88600		160000		179000		121000	J
Chromium		ug/L	12.7		-	-	-	-	-	-	18.2	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	26.2		-	-	-	-	-	-	59.5	
Iron		ug/L	1920		5240		-	-	8890		22600	
Iron	Y	ug/L	-	-	-	-	-	-	7260		563	
Lead		ug/L	-	-	-	-	-	-	6.9		26.3	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	218000		56900		108000		34300		79500	
Magnesium	Y	ug/L	237000		54800		96300		34900		72400	
Manganese		ug/L	575		522		74.6		912		2240	
Manganese	Y	ug/L	516		351		57.6		990		1300	
Mercury		ug/L	-	-	-	-	-	-	3.6		-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	38500		29100		49600		-	-	32900	
Potassium	Y	ug/L	42400		30000		44700		-	-	32000	
Sodium		ug/L	582000		99100	J	368000		5070		399000	
Sodium	Y	ug/L	644000		104000		331000		5000		398000	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	32.8		55.0		29.2		27.7		126	
Zinc	Y	ug/L	105		66.2	J	23.0		-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	654		317		-	-	374	J
Arsenic		ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	424		-	-	326		1550		-	-
Barium	Y	ug/L	449		-	-	384		1680		-	-
Calcium		ug/L	336000	J	105000		114000	J	248000	J	152000	
Calcium	Y	ug/L	358000		116000	J	130000		270000		120000	
Chromium		ug/L	-	-	-	-	-	-	-	-	10.2	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	33.9		-	-	-	-	-	-
Iron		ug/L	6400		41700		1030		-	-	923	
Iron	Y	ug/L	-	-	16300		586		-	-	-	-
Lead		ug/L	-	-	3.9		4.8		-	-	-	-
Lead	Y	ug/L	-	-	-	-	3.0		-	-	-	-
Magnesium		ug/L	235000		22800		43800		180000		70700	
Magnesium	Y	ug/L	254000		25600		51100		200000		82500	
Manganese		ug/L	849		677		85.4		17.4		54.0	
Manganese	Y	ug/L	899		694		71.0		-	-	29.1	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	42.1		-	-	-	-	42.3	
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	40.7	
Potassium		ug/L	58800		7240		10400		101000		44700	
Potassium	Y	ug/L	63500		8130		10700		110000		40500	
Sodium		ug/L	1140000	J	34900		127000		1330000		311000	
Sodium	Y	ug/L	1190000		36100		153000		1510000		360000	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	-	-	48.8		73.9		47.2		39.8	
Zinc	Y	ug/L	24.8	J	-	-	-	-	30.1		32.4	

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	502	J	-	-	283	J	-	-
Arsenic		ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	605		463		948		893		1520	
Barium	Y	ug/L	555		389		1100		1010		1520	
Calcium		ug/L	280000		875000	J	318000	J	809000		255000	J
Calcium	Y	ug/L	245000	J	915000		263000		1010000		220000	
Chromium		ug/L	-	-	24.4		-	-	-	-	10.0	
Chromium	Y	ug/L	-	-	13.6		-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	-	-	61.7	
Iron		ug/L	930		1140		1580		-	-	-	-
Iron	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Lead		ug/L	-	-	-	-	-	-	-	-	6.8	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	177000		6190		187000		384000		57200	
Magnesium	Y	ug/L	182000		-	-	213000		572000		65100	
Manganese		ug/L	26.3		133		124		36.8		30.4	
Manganese	Y	ug/L	-	-	-	-	-	-	35.9		-	-
Mercury		ug/L	-	-	-	-	-	-	1.0		-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	58800		26400		38500		148000		49500	
Potassium	Y	ug/L	61100		24900		45400		172000		46200	
Sodium		ug/L	559000		73200	J	355000	j	2190000		120000	
Sodium	Y	ug/L	582000		68600		419000		3010000		125000	
Vanadium		ug/L	-	-	64.7		-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	58.3		-	-	-	-	-	-
Zinc		ug/L	30.6		30.0		49.9		31.0		62.3	
Zinc	Y	ug/L	30.9		-	-	33.3	J	-	-	57.4	

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	3290		-	-
Arsenic		ug/L	-	-	-	-
Barium		ug/L	19000		405	
Barium	Y	ug/L	21000		397	
Calcium		ug/L	2140000		131000	J
Calcium	Y	ug/L	2570000	J	128000	
Chromium		ug/L	-	-	11.1	
Chromium	Y	ug/L	-	-	-	-
Copper		ug/L	32.8		-	-
Iron		ug/L	13200		8000	
Iron	Y	ug/L	2310		-	-
Lead		ug/L	-	-	19.1	
Lead	Y	ug/L	-	-	3.5	
Magnesium		ug/L	920000		54000	
Magnesium	Y	ug/L	1090000		54200	
Manganese		ug/L	180		198	
Manganese	Y	ug/L	162		144	
Mercury		ug/L	-	-	-	-
Nickel		ug/L	-	-	-	-
Nickel	Y	ug/L	-	-	-	-
Potassium		ug/L	92300		9210	
Potassium	Y	ug/L	103000		9180	
Sodium		ug/L	7660000		42000	J
Sodium	Y	ug/L	9110000		42800	
Vanadium		ug/L	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-
Zinc		ug/L	41.6		69.7	
Zinc	Y	ug/L	-	-	22.3	J

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	1.5		-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	1.0		0.22	
Nitrobenzene		ug/L	-	-	-	-	0.34		2.0		0.32	

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5450		5460		5470		5480		5410	
Sample Date:			16-NOV-97		20-NOV-97		19-NOV-97		13-NOV-97		17-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5440		5420		5430		5890		5900	
Sample Date:			20-NOV-97		17-NOV-97		16-NOV-97		13-NOV-97		18-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	16	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5910		5920		5930		5940		5950	
Sample Date:			18-NOV-97		24-NOV-97		20-NOV-97		19-NOV-97		14-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	320		-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/29/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5960		5970	
Sample Date:			17-NOV-97		21-NOV-97	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-

SECOND SEMI-ANNUAL SAMPLING

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	180000		210000		150000		200000		410000	
Chloride		ug/L	1000		4000		2000		2000		9000	J
Hardness		ug/L	430000		550000		480000		360000		2800000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	93000		150000		200000		23000		1800000	J
Total dissolved solids		ug/L	440000		550000		570000		280000		3800000	
Total organic carbon		ug/L	3000		3000		2000		2000		6000	J
Total suspended solids		ug/L	50000		100000		37000		18000		260000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	320000		330000		110000		650000		680000	
Chloride		ug/L	4000	J	5000	J	3000		23000		11000	
Hardness		ug/L	530000		1500000		200000		660000		570000	
Nitrate		ug/L	-	-	200		-	-	-	-	-	-
Sulfate		ug/L	37000	J	660000	J	140000		260000		61000	
Total dissolved solids		ug/L	480000		2800000		400000		1100000		650000	
Total organic carbon		ug/L	2000	J	15000	J	7000		28000		6000	
Total suspended solids		ug/L	150000		2200000		5000		370000		15000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	290000		510000		410000		480000		270000	
Chloride		ug/L	3000		18000	J			13000	J	2000	J
Hardness		ug/L	380000		1300000				820000		320000	
Nitrate		ug/L	-	-	-	-	100		200		200	
Sulfate		ug/L	-	-	920000	J	790000		270000	J	31000	J
Total dissolved solids		ug/L	410000		1900000		1600000		1100000		370000	
Total organic carbon		ug/L	3000		6000	J	2000		3000	J	1000	J
Total suspended solids		ug/L	13000		-	-	-	-	400000		-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	240000		320000		270000		100000		50000	
Chloride		ug/L	4000	J	18000	J	1000	J	5000	J	1000	J
Hardness		ug/L	290000		580000		450000		370000		380000	
Nitrate		ug/L	3200		4700		-	-	-	-	-	-
Sulfate		ug/L	21000	J	53000	J	51000	J	320000	J	10000	J
Total dissolved solids		ug/L	2700000		430000		400000		560000		92000	
Total organic carbon		ug/L	1000	J	2000	J	2000	J	7000	J	1000	J
Total suspended solids		ug/L	74000		58000		-	-	43000		140000	

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	320000		-	-	370000		410000		370000	
Chloride		ug/L	3000		6000		5000		400000		3000	
Hardness		ug/L	750000		490000		640000		2200000		520000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	550000		330000		120000		340000		30000	
Total dissolved solids		ug/L	800000		590000		650000		1700000		370000	
Total organic carbon		ug/L	2000		3000		3000		6000		2000	
Total suspended solids		ug/L	9000		120000		10000		-	-	130000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L			370000		840000		1500000		810000	
Chloride		ug/L			7000		9500000		4700000		3600000	
Hardness		ug/L			1600000		2300000		3100000		1200000	
Nitrate		ug/L			-	-	190000		1500000		110000	
Sulfate		ug/L			1100000		5400000		12000000		1600000	
Total dissolved solids		ug/L			2000000		18000000		49000000		6400000	
Total organic carbon		ug/L	-	-	9000		2900000		11000000		930000	
Total suspended solids		ug/L			7000		17000		79000		7000	

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	410000		460000		350000		250000		380000	
Chloride		ug/L	100000		180000		14000		27000		26000	
Hardness		ug/L	730000		680000		1800000		720000		850000	
Nitrate		ug/L	-	-	-	-	-	-	400		200	
Sulfate		ug/L	100000		93000		1300000		990000		240000	
Total dissolved solids		ug/L	760000		1000000		2900000		1600000		1200000	
Total organic carbon		ug/L	2000		3000		3000		3000		3000	
Total suspended solids		ug/L	-	-	7000		150000		280000		240000	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665		5675		5685	
Sample Date:			16-MAY-98		18-MAY-98		15-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	610000		470000		640000	
Chloride		ug/L	180000		7000		-	-
Hardness		ug/L	790000		940000		1500000	
Nitrate		ug/L	-	-	-	-	62000	
Sulfate		ug/L	-	-	200000		2000000	
Total dissolved solids		ug/L	620000		630000		6400000	
Total organic carbon		ug/L	9000		3000		780000	
Total suspended solids		ug/L	4000		8000		160000	

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	0.27	J	-	-	0.28	J	-	-
Bromodichloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	0.20	J	0.26	J	-	-	1.2	
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	0.14	J	-	-	0.19	J	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-
Total xylenes		ug/L	0.62	J	0.84	J	0.53	J	1.6		-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	6.6	J	-	-	-	-	45	J
Benzene		ug/L	-	-	0.50	J	-	-	-	-	0.21	J
Bromodichloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	0.35	J	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	22		-	-	-	-
Total xylenes		ug/L	-	-	0.15	J	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	0.16	J	-	-	-	-
Bromodichloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	17		-	-	-	-
Total xylenes		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroform		ug/L	0.45	J	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-
Total xylenes		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815R		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		27-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	140		-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	17		-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	2.2	J	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	5.2	J	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	1.8	J	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	63000		7.8	
Total xylenes		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	14	J	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	2.0	J	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	0.17	J	-	-	-	-	-	-	0.47	J
Bromodichloromethane		ug/L	-	-	-	-	-	-	0.23	J	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	0.17	J	-	-	1.5	
Toluene		ug/L	-	-	10		-	-	-	-	1.5	
Total xylenes		ug/L	-	-	-	-	0.82	J	0.44	J	8.0	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	7.6	J	-	-	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Toluene		ug/L	-	-	-	-	-	-	-	-	-	-
Total xylenes		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,1-Trichloroethane		ug/L	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-
1,1-Dichloroethene		ug/L	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-
2-Hexanone		ug/L	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-
Benzene		ug/L	-	-	-	-	-	-
Bromodichloromethane		ug/L	-	-	-	-	-	-
Carbon disulfide		ug/L	-	-	-	-	-	-
Chloroethane		ug/L	-	-	-	-	-	-
Chloroform		ug/L	-	-	-	-	-	-
Ethylbenzene		ug/L	-	-	-	-	-	-
Toluene		ug/L	22		-	-	-	-
Total xylenes		ug/L	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	10		-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	43		-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	6.7	J	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	1.3	J	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	3.3	J	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	1.8	J	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	240	D	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	120		-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	12		-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	3800	NJ	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	1800	NJ	1700	NJ	120	
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	6.6	NJ	15		-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	12000	NJ	20000	NJ	280	NJ
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	42	NJ	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	620	NJ	-	-
Fluorene		ug/L	-	-	-	-	-	-	44	NJ	-	-
Nitrobenzene		ug/L	-	-	-	-	13	NJ	14		-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	890	D	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
Dibenzofuran		ug/L	-	-	-	-	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-Dinitrophenol		ug/L	-	-	-	-	7.6	J
2,4-Dinitrotoluene		ug/L	-	-	-	-	55	
2,6-Dinitrotoluene		ug/L	-	-	-	-	1.8	J
2-Methylphenol		ug/L	-	-	-	-	-	-
2-Nitroaniline		ug/L	-	-	-	-	-	-
2-Nitrophenol		ug/L	-	-	-	-	-	-
3-Nitroaniline		ug/L	-	-	-	-	330	J
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-	-	-
4-Nitrophenol		ug/L	-	-	-	-	1.6	J
Dibenzofuran		ug/L	-	-	-	-	-	-
Fluorene		ug/L	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	3.7	J
Phenol		ug/L	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	4080		3350		410		1380		-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Antimony		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	13.0		-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Beryllium		ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	55900		105000		91800		55600		512000	
Calcium	Y	ug/L	58600		96500		107000		59300		545000	
Chromium		ug/L	14.6		33.9		-	-	-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	27.6		27.9		-	-	-	-	-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	20300	J	9630	J	3570	J	5140	J	26200	
Iron	Y	ug/L	3080		591		1190		1270		39100	
Lead		ug/L	6.6		6.1		-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	23500		24100		26300		17100		283000	
Magnesium	Y	ug/L	23000		21600		25700		17300		257000	
Manganese		ug/L	300		548		515		368		5900	
Manganese	Y	ug/L	301		470		532		386		5550	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	48.1		-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	-	-	-	-	-	-	-	-
Potassium	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	18600		-	-	-	-	15800	J
Aluminum	Y	ug/L	-	-	-	-	276		-	-	-	-
Antimony		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	55.8		-	-	-	-	14.3	
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	233		-	-	-	-	312	
Beryllium		ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	118000		355000		47900		109000		145000	J
Calcium	Y	ug/L	118000		285000		53100		130000		113000	J
Chromium		ug/L	-	-	44.6		-	-	-	-	22.7	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	68.4		-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	181		-	-	30.7		43.7	
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	-	-	91100		2200	J	595	J	26500	
Iron	Y	ug/L	-	-	9240		1970		509		185	
Lead		ug/L	-	-	72.2		-	-	-	-	9.4	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	28000		80400		16300		53000		47200	
Magnesium	Y	ug/L	28100		59800		19500		61900		38300	J
Manganese		ug/L	123		2300		348		754		592	
Manganese	Y	ug/L	139		2010		395		969		223	
Mercury		ug/L	-	-	0.22		-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	142		-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	6950		5560		-	-	7710	
Potassium	Y	ug/L	-	-	-	-	6390		-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	860	J	-	-	-	-	11500		-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Antimony		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-	36.8		-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	372		-	-
Beryllium		ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	139000	J	282000		198000		185000		78500	
Calcium	Y	ug/L	111000	J	347000		212000		188000		92700	
Chromium		ug/L	-	-	-	-	-	-	39.8		-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	30.8		-	-
Copper	Y	ug/L	-	-	-	-	-	-	-	-	50.7	
Iron		ug/L	1810		294		131		41000		-	-
Iron	Y	ug/L	-	-	327		-	-	-	-	-	-
Lead		ug/L	-	-	-	-	-	-	33.6		-	-
Lead	Y	ug/L	-	-	-	-	4.1		-	-	-	-
Magnesium		ug/L	21700		113000		125000		83500		21100	
Magnesium	Y	ug/L	17300	J	137000		133000		86200		25500	
Manganese		ug/L	215		191		30.7		1460		-	-
Manganese	Y	ug/L	20.7		238		36.4		621		-	-
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	0.44		-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	10300		11100		5550		-	-
Potassium	Y	ug/L	-	-	12600		12300		-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	6810		-	-	4550		4380	
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Antimony		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Beryllium		ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	74300		140000		98900		102000		15500	
Calcium	Y	ug/L	84200		117000		113000		146000		15700	
Chromium		ug/L	-	-	15.4		-	-	-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	-	-	-	-	27.2	
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	-	-	17000		396		19100		10300	
Iron	Y	ug/L	121		-	-	-	-	22400		226	
Lead		ug/L	-	-	9.1		-	-	-	-	7.2	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	20700		35500		17000		16600		-	-
Magnesium	Y	ug/L	22800		27700		19400		22400		-	-
Manganese		ug/L	-	-	477		1000		283		101	
Manganese	Y	ug/L	-	-	-	-	1050		373		30.7	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	-	-	-	-	-	-	-	-	-	-
Potassium	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	1180		6920	J	12500		245	J	6200	
Aluminum	Y	ug/L	663		7430		-	-	-	-	-	-
Antimony		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	18.7		12.0		-	-	-	-
Arsenic	Y	ug/L	-	-	22.0		-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Beryllium		ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	133000		104000	J	213000		174000		112000	
Calcium	Y	ug/L	127000		106000	J	152000		193000		114000	
Chromium		ug/L	-	-	-	-	24.7		-	-	13.7	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	69.8		54.9		-	-	-	-	-	-
Cobalt	Y	ug/L	51.9		56.7		-	-	-	-	-	-
Copper		ug/L	-	-	32.9		32.1		-	-	-	-
Copper	Y	ug/L	39.2		32.2		-	-	-	-	-	-
Iron		ug/L	20700	J	41900		24300		2330		10900	J
Iron	Y	ug/L	5970		41600		-	-	1190		-	-
Lead		ug/L	-	-	16.4		30.6		-	-	4.3	
Lead	Y	ug/L	7.4		17.0		3.0		-	-	-	-
Magnesium		ug/L	52700		24300		56800		96200		16200	
Magnesium	Y	ug/L	47900		25100	J	37000		104000		17700	
Manganese		ug/L	13600		1120		418		75.3		142	
Manganese	Y	ug/L	8850		1170		22.4		75.6		114	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	108		130		-	-	-	-	-	-
Nickel	Y	ug/L	81.7		131		-	-	-	-	-	-
Potassium		ug/L	-	-	5040		-	-	25300		-	-
Potassium	Y	ug/L	-	-	-	-	-	-	25700		-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	143000	J	242	J	10500	J	-	-	-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Antimony		ug/L	82.0		-	-	-	-	-	-	-	-
Arsenic		ug/L	113		-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	232		-	-	-	-	-	-	-	-
Beryllium		ug/L	6.9		-	-	-	-	-	-	-	-
Calcium		ug/L	1010000	J	612000		526000		998000		171000	
Calcium	Y	ug/L	152000	J	643000		597000		998000		198000	
Chromium		ug/L	258		-	-	-	-	-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	222		-	-	2350		7150		480	
Cobalt	Y	ug/L	-	-	-	-	2610		7450		522	
Copper		ug/L	225		-	-	1060		3740		430	
Copper	Y	ug/L	-	-	-	-	1050		3900		294	
Iron		ug/L	304000		1960		32600		12100		2070	
Iron	Y	ug/L	-	-	1440		2110		9560		-	-
Lead		ug/L	108		-	-	-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	172000		29700		184000		574000		62900	
Magnesium	Y	ug/L	57100	J	33900		180000		584000		70100	
Manganese		ug/L	7550		458		13700		43900		2300	
Manganese	Y	ug/L	134		454		17600		45500		2500	
Mercury		ug/L	0.25		-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	628		-	-	1790		6950		466	
Nickel	Y	ug/L	-	-	-	-	1900		7310		460	
Potassium		ug/L	35700		-	-	-	-	-	-	-	-
Potassium	Y	ug/L	12300		-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	2280	J	2990	J	6030		4570	J	5230	
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Antimony		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	14.5		-	-	18.6		-	-	21.3	
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-	-	-	-	-
Beryllium		ug/L	-	-	-	-	-	-	-	-	-	-
Calcium		ug/L	136000	J	162000	J	341000		299000		132000	
Calcium	Y	ug/L	131000	J	183000	J	402000		306000		130000	
Chromium		ug/L	-	-	12.2		30.0		11.0		28.0	
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	-	-	31.5		-	-	31.0	
Copper	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Iron		ug/L	18700		6610		23500	J	8230		22700	J
Iron	Y	ug/L	9330		-	-	-	-	-	-	-	-
Lead		ug/L	5.6		3.2		13.8		3.2		20.1	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	46900		58700		137000		136000		46400	
Magnesium	Y	ug/L	48100	J	67600	J	171000		140000		47700	
Manganese		ug/L	1250		444		973		715		616	
Manganese	Y	ug/L	1370		355		617		582		452	
Mercury		ug/L	-	-	-	-	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	7500		16500		10100		22100		11700	
Potassium	Y	ug/L	7710		18400		12000		21100		12300	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665		5675		5685	
Sample Date:			16-MAY-98		18-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	-	-	4220	
Aluminum	Y	ug/L	-	-	-	-	-	-
Antimony		ug/L	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-
Barium		ug/L	-	-	-	-	-	-
Beryllium		ug/L	-	-	-	-	-	-
Calcium		ug/L	194000		166000		371000	
Calcium	Y	ug/L	213000		168000		400000	
Chromium		ug/L	-	-	-	-	11.4	
Chromium	Y	ug/L	-	-	-	-	12.4	
Cobalt		ug/L	-	-	-	-	118	
Cobalt	Y	ug/L	-	-	-	-	126	
Copper		ug/L	-	-	-	-	61.9	
Copper	Y	ug/L	-	-	-	-	66.9	
Iron		ug/L	2080	J	319	J	9390	J
Iron	Y	ug/L	684		-	-	422	
Lead		ug/L	-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	-	-
Magnesium		ug/L	12700		52500		138000	
Magnesium	Y	ug/L	14100		55100		150000	
Manganese		ug/L	3830		303		1510	
Manganese	Y	ug/L	3970		253		2260	
Mercury		ug/L	-	-	-	-	-	-
Mercury	Y	ug/L	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	190	
Nickel	Y	ug/L	-	-	-	-	199	
Potassium		ug/L	9830		-	-	20900	
Potassium	Y	ug/L	12200		-	-	22900	

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	6370		15200		8980		-	-	24700	
Sodium	Y	ug/L	6460		15700		10000		-	-	24200	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	-	-	-	-	-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	6.5		-	-	-	-	-	-
Sodium		ug/L	7220		16500		22000		175000		22100	
Sodium	Y	ug/L	12200		14100		25100		206000		22800	
Vanadium		ug/L	-	-	109		-	-	-	-	-	-
Zinc		ug/L	-	-	685		149		-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	-	-	16700		73200		24700		-	-
Sodium	Y	ug/L	-	-	19900		78300		26200		5760	
Vanadium		ug/L	-	-	-	-	-	-	54.4		-	-
Zinc		ug/L	-	-	-	-	-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	-	-	7030		-	-	-	-	-	-
Sodium	Y	ug/L	-	-	7170		-	-	5730		-	-
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	-	-	163		-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	10500		6030		11900		208000		5720	
Sodium	Y	ug/L	9070		6010		13400		213000		10100	
Vanadium		ug/L	-	-	-	-	54.0		-	-	-	-
Zinc		ug/L	209		152		-	-	-	-	-	-
Zinc	Y	ug/L	-	-	157		-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	60000		5530		3680000		11900000		1210000	
Sodium	Y	ug/L	66800		6820		3970000		11900000		1270000	
Vanadium		ug/L	244		-	-	-	-	-	-	-	-
Zinc		ug/L	735		-	-	-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-	-	-	-	-
Sodium		ug/L	52100		90500		58900		62100		113000	
Sodium	Y	ug/L	55900		107000		74000		60200		127000	
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	-	-	-	-	-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-	-	-	-	-

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665		5675		5685	
Sample Date:			16-MAY-98		18-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Selenium		ug/L	-	-	-	-	-	-
Sodium		ug/L	9450		12100		914000	
Sodium	Y	ug/L	15400		13500		1140000	
Vanadium		ug/L	-	-	-	-	-	-
Zinc		ug/L	-	-	-	-	-	-
Zinc	Y	ug/L	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535R		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		18-MAY-98		15-MAY-98		28-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	15		-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	19		-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	47		-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	8.9		-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	36		-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	2.5		-	-
RDX		ug/L	-	-	-	-	-	-	6.2		-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	0.43	
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	0.68		-	-	-	-	1.7	
2,4-Dinitrotoluene		ug/L	-	-	1.7		-	-	-	-	0.35	
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	1.2	
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	5.7		-	-	-	-	0.86	
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	0.26	
RDX		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW23		MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5835		5845		5695		5705		5715	
Sample Date:			29-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	2800		2400		71	
1,3-Dinitrobenzene		ug/L	-	-	-	-	2000		2100		170	
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	1600		2400		110	
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW10		PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5615		5625		5635		5645		5655	
Sample Date:			29-MAY-98		29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTC-MW6		PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W		WELLS-W	
Sample No:			5665R		5675		5685	
Sample Date:			18-MAY-98		18-MAY-98		15-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-Trinitrobenzene		ug/L	-	-	-	-	23	
1,3-Dinitrobenzene		ug/L	-	-	-	-	23	
2,4,6-Trinitrotoluene		ug/L	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	21	
2,6-Dinitrotoluene		ug/L	-	-	-	-	4.1	
3-Nitrotoluene		ug/L	-	-	-	-	-	-
4-Amino-2,6-dinitrotoluene		ug/L	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			GCL-MW01		GCL-MW02A		GCL-MW02B		GCL-MW03		IT-AA1-GW-002	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5855		5865		5875		5885		5495	
Sample Date:			17-MAY-98		17-MAY-98		17-MAY-98		17-MAY-98		13-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA3-GW-002		IT-ABG-GW-002		IT-MW01		IT-MW02		IT-MW05	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5515		5525		5535		5545		5555	
Sample Date:			14-MAY-98		13-MAY-98		16-MAY-98		15-MAY-98		28-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	16		-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MW06		IT-MW08		IT-MW09		IT-MW10		MK-MW09	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5565		5585		5595		5605		5725	
Sample Date:			28-MAY-98		13-MAY-98		19-MAY-98		14-MAY-98		13-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW10		MK-MW11		MK-MW12		MK-MW14		MK-MW15	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5735		5745		5755		5765		5775	
Sample Date:			12-MAY-98		13-MAY-98		14-MAY-98		14-MAY-98		14-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	38		-	-	11		-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW16		MK-MW17		MK-MW19		MK-MW20		MK-MW22	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5785		5795		5805		5815		5825	
Sample Date:			18-MAY-98		27-MAY-98		01-JUN-98		19-MAY-98		18-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Overburden Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			MK-MW24		PB-PR-MW7		PB-PR-MW8		PB-PR-MW9		PB-TNTA-MW10	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5845		5695		5705		5715		5615	
Sample Date:			20-MAY-98		20-MAY-98		20-MAY-98		20-MAY-98		29-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	200		1700		72		-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-TNTA-MW11		PB-TNTC-MW3		PB-TNTC-MW4		PB-TNTC-MW5		PB-TNTC-MW6	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5625		5635		5645		5655		5665	
Sample Date:			29-MAY-98		18-MAY-98		18-MAY-98		18-MAY-98		16-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Overburden Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-WA-MW1		PB-WA-MW2	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5675		5685	
Sample Date:			18-MAY-98		15-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	89	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	900000		600000		790000		270000		180000	
Chloride		ug/L	3000000	J	53000	J	860000	J	3000	J	34000	
Hardness		ug/L	2000000		860000		860000		530000		340000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	7300	
Sulfate		ug/L	40000	J	70000	J	8000	J	190000	J	45000	
Total dissolved solids		ug/L	730000		310000		1800000		600000		300000	
Total organic carbon		ug/L	11000	J	6000	J	2000	J	3000	J	1000	
Total suspended solids		ug/L	330000		-	-	54000		7000		280000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	-	-	360000		380000		300000		500000	
Chloride		ug/L	3800000		600000		74000		-	-	3000	
Hardness		ug/L	2100000		650000		530000		450000		730000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	24000	
Sulfate		ug/L	64000		120000		140000		5000		630000	
Total dissolved solids		ug/L	7200000		1200000		7600000		510000		2300000	
Total organic carbon		ug/L	7000		5000		4000		2000		160000	
Total suspended solids		ug/L	29000		9000		6000		-	-	23000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	500000		1700000		930000		550000		750000	
Chloride		ug/L	2200000		140000		1600000		1200000		280000	
Hardness		ug/L	1800000		2000000		1300000		10000000		750000	
Nitrate		ug/L	-	-	-	-	-	-	-	-	-	-
Sulfate		ug/L	82000		37000		80000		18000		49000	
Total dissolved solids		ug/L	3800000		4000000		2900000		33000000		590000	
Total organic carbon		ug/L	13000		14000		3000		3000		9000	
Total suspended solids		ug/L	13000		330000		4000		100000		5000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
WATER QUALITY	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Alkalinity		ug/L	260000		67000	
Chloride		ug/L	21000000		15000	
Hardness		ug/L	10000000		180000	
Nitrate		ug/L	-	-	300	
Sulfate		ug/L	-	-	22000	
Total dissolved solids		ug/L	24000000		110000	
Total organic carbon		ug/L	-	-	5000	
Total suspended solids		ug/L	90000		230000	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,2-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	18	J	-	-	-	-	-	-
Acetone		ug/L	-	-	41	J	-	-	-	-	-	-
Benzene		ug/L	31		130		-	-	-	-	-	-
Carbon disulfide		ug/L	63		1.7	J	-	-	0.97	J	-	-
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloromethane		ug/L	-	-	10		-	-	-	-	-	-
Ethylbenzene		ug/L	39		43		-	-	-	-	-	-
Toluene		ug/L	50		20		-	-	-	-	-	-
Total xylenes		ug/L	500		220		-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,2-Trichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	0.19	J	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	-	-	-	-
Benzene		ug/L	19		-	-	-	-	47		-	-
Carbon disulfide		ug/L	21		7.2		-	-	-	-	0.25	J
Chlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Chloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	7.7		-	-	-	-	57		-	-
Toluene		ug/L	18		-	-	-	-	120		-	-
Total xylenes		ug/L	150		-	-	-	-	540		-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,1,2-Trichloroethane		ug/L	4.9	J	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-	-	-	-	-	-	-
2-Butanone		ug/L	-	-	-	-	-	-	-	-	-	-
Acetone		ug/L	-	-	-	-	-	-	34	J	-	-
Benzene		ug/L	780		450	J	-	-	5.7		1.9	J
Carbon disulfide		ug/L	-	-	-	-	-	-	7.9		6.9	
Chlorobenzene		ug/L	5.5	J	-	-	-	-	-	-	-	-
Chloromethane		ug/L	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		ug/L	140		140	J	9.9	J	88		1.2	J
Toluene		ug/L	550		350	J	-	-	53		-	-
Total xylenes		ug/L	880		1000	J	46		420		10	

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
VOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,1,2-Trichloroethane		ug/L	-	-	-	-
1,1-Dichloroethane		ug/L	-	-	-	-
2-Butanone		ug/L	-	-	-	-
Acetone		ug/L	-	-	45	J
Benzene		ug/L	1.6		4.3	J
Carbon disulfide		ug/L	0.17	J	2.1	J
Chlorobenzene		ug/L	-	-	-	-
Chloromethane		ug/L	-	-	-	-
Ethylbenzene		ug/L	-	-	1.6	J
Toluene		ug/L	-	-	1.3	J
Total xylenes		ug/L	0.91	J	5.5	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol		ug/L	3.6	J	8.6	J	-	-	-	-	-	-
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene		ug/L	31		5.6	J	-	-	-	-	-	-
2-Methylphenol		ug/L	-	-	1.6	J	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	-	-	1.6	J	-	-	-	-	-	-
Isophorone		ug/L	-	-	-	-	-	-	-	-	-	-
Naphthalene		ug/L	18		8.1	J	-	-	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenanthrene		ug/L	2.3	J	-	-	-	-	-	-	-	-
Phenol		ug/L	15		74		-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol		ug/L	1.8	J	-	-	-	-	13	J	-	-
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	14	J
2,4-Dinitrotoluene		ug/L	1.3	J	-	-	-	-	-	-	16	
2-Methylnaphthalene		ug/L	1.2	J	-	-	-	-	14	J	-	-
2-Methylphenol		ug/L	-	-	-	-	-	-	3.3	J	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	28	NJ
4-Methylphenol		ug/L	-	-	-	-	-	-	3.3	J	-	-
Isophorone		ug/L	-	-	-	-	-	-	2.7	J	-	-
Naphthalene		ug/L	-	-	-	-	-	-	10	J	-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	5.8	J
Phenanthrene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenol		ug/L	11		-	-	-	-	69	J	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	55	J	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	-	-	1.6	J	-	-	-	-	-	-
1,3-Dichlorobenzene		ug/L	-	-	4.4	J	-	-	-	-	-	-
2,4,5-Trichlorophenol		ug/L	-	-	35		-	-	-	-	-	-
2,4-Dimethylphenol		ug/L	10		-	-	2.8	J	11		-	-
2,4-Dinitrophenol		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene		ug/L	37		-	-	20		5.0	J	1.5	J
2-Methylphenol		ug/L	6.7	J	-	-	-	-	3.3	J	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ug/L	7.7	J	-	-	-	-	4.0	J	-	-
Isophorone		ug/L	3.8	J	-	-	-	-	-	-	-	-
Naphthalene		ug/L	31		-	-	18		10		-	-
Nitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
Phenanthrene		ug/L	2.0	J	-	-	-	-	-	-	-	-
Phenol		ug/L	32		-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
SEMIVOLATILES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,2,4-Trichlorobenzene		ug/L	-	-	-	-
1,3-Dichlorobenzene		ug/L	-	-	-	-
2,4,5-Trichlorophenol		ug/L	-	-	-	-
2,4-Dimethylphenol		ug/L	-	-	-	-
2,4-Dinitrophenol		ug/L	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-
2-Methylnaphthalene		ug/L	-	-	-	-
2-Methylphenol		ug/L	-	-	-	-
4,6-Dinitro-2-methylphenol		ug/L	-	-	-	-
4-Methylphenol		ug/L	-	-	-	-
Isophorone		ug/L	-	-	-	-
Naphthalene		ug/L	-	-	-	-
Nitrobenzene		ug/L	-	-	-	-
Phenanthrene		ug/L	-	-	-	-
Phenol		ug/L	-	-	-	-
bis(2-Ethylhexyl)phthalate		ug/L	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
PEST/PCB	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	468		10200		397		-	-	307	
Aluminum	Y	ug/L	-	-	-	-	-	-	408		-	-
Arsenic		ug/L	21.2		34.2		-	-	-	-	-	-
Arsenic	Y	ug/L	19.6		-	-	-	-	-	-	-	-
Barium		ug/L	1330		645		-	-	-	-	-	-
Barium	Y	ug/L	1490		279		-	-	-	-	-	-
Calcium		ug/L	295000		1970000		131000		153000		57700	
Calcium	Y	ug/L	321000		70400		143000		169000		92100	
Chromium		ug/L	-	-	307		-	-	-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	63.3		-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	-	-	62.7		-	-	-	-	-	-
Iron		ug/L	2540		51600		450		5770		1230	J
Iron	Y	ug/L	-	-	-	-	-	-	5580		-	-
Lead		ug/L	-	-	38.6		-	-	20.2		6.8	
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	230000		132000		76800		30500		19300	
Magnesium	Y	ug/L	259000		54300		89400		33000		41000	
Manganese		ug/L	732		5130		83.8		745		130	
Manganese	Y	ug/L	696		995		51.3		813		658	
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	238		-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	43200		34200		38500		-	-	-	-
Potassium	Y	ug/L	47800		31200		43800		-	-	14400	
Sodium		ug/L	682000		124000		282000		-	-	-	-
Sodium	Y	ug/L	786000		124000		321000		-	-	139000	
Thallium		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	-	-	1130	J	-	-	-	-	-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	12.9		-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Barium		ug/L	457		1100		406		-	-	-	-
Barium	Y	ug/L	596		1040		414		208		-	-
Calcium		ug/L	441000	J	101000		92600		125000	J	99000	
Calcium	Y	ug/L	483000	J	104000		96800		140000	J	149000	
Chromium		ug/L	-	-	-	-	-	-	-	-	-	-
Chromium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	65.4	
Copper		ug/L	-	-	80.9		-	-	-	-	-	-
Iron		ug/L	481		13000		168	J	207		427	J
Iron	Y	ug/L	-	-	302		-	-	-	-	269	
Lead		ug/L	-	-	6.2		7.1		-	-	-	-
Lead	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Magnesium		ug/L	317000		57800		37400		9250		59700	
Magnesium	Y	ug/L	345000	J	60400		38600		14600	J	99900	
Manganese		ug/L	181		196		36.6		41.9		32.0	
Manganese	Y	ug/L	183		278		36.5		43.8		32.6	
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	-	-	-	-	-	-	45.5	
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	71.3	
Potassium		ug/L	60900		37000		8190		-	-	49000	
Potassium	Y	ug/L	65800		36700		7990		-	-	32400	
Sodium		ug/L	1320000		415000		109000		29500		269000	
Sodium	Y	ug/L	1520000		419000		112000		53500		365000	
Thallium		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	513	J	11000		-	-	-	-	-	-
Aluminum	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic		ug/L	-	-	-	-	-	-	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-	13.1		-	-	-	-
Barium		ug/L	1710		612		800		942		1800	
Barium	Y	ug/L	1390		523		871		994		1740	
Calcium		ug/L	662000	J	2880000		279000	J	1370000		171000	
Calcium	Y	ug/L	390000	J	949000		289000	J	1470000		162000	
Chromium		ug/L	20.6		105		-	-	-	-	-	-
Chromium	Y	ug/L	-	-	14.8		-	-	-	-	-	-
Cobalt		ug/L	-	-	-	-	-	-	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Copper		ug/L	39.5		84.9		-	-	-	-	-	-
Iron		ug/L	4810		45900		456		166		141	J
Iron	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Lead		ug/L	-	-	40.4		-	-	-	-	-	-
Lead	Y	ug/L	-	-	-	-	6.8		-	-	-	-
Magnesium		ug/L	259000		105000		212000		938000		80000	
Magnesium	Y	ug/L	299000	J	-	-	231000	J	1020000		77900	
Manganese		ug/L	139		2200		20.4		80.8		-	-
Manganese	Y	ug/L	-	-	-	-	-	-	80.9		16.3	
Mercury	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Nickel		ug/L	-	-	54.7		-	-	-	-	-	-
Nickel	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Potassium		ug/L	62500		22800		37200		155000		26000	
Potassium	Y	ug/L	74800		23500		43100		163000		24800	
Sodium		ug/L	811000		46600		386000		3530000		129000	
Sodium	Y	ug/L	1010000		57200		431000		3820000		127000	
Thallium		ug/L	50.8		101		-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Aluminum		ug/L	678	J	298	
Aluminum	Y	ug/L	-	-	-	-
Arsenic		ug/L	-	-	-	-
Arsenic	Y	ug/L	-	-	-	-
Barium		ug/L	16400		-	-
Barium	Y	ug/L	4950		-	-
Calcium		ug/L	1960000	J	23400	
Calcium	Y	ug/L	491000	J	25300	
Chromium		ug/L	-	-	-	-
Chromium	Y	ug/L	-	-	-	-
Cobalt		ug/L	-	-	-	-
Cobalt	Y	ug/L	-	-	-	-
Copper		ug/L	-	-	29.3	
Iron		ug/L	6770		11100	
Iron	Y	ug/L	1320		1210	
Lead		ug/L	-	-	12.2	
Lead	Y	ug/L	-	-	-	-
Magnesium		ug/L	861000		-	-
Magnesium	Y	ug/L	223000	J	-	-
Manganese		ug/L	153		388	
Manganese	Y	ug/L	47.0		386	
Mercury	Y	ug/L	0.24		-	-
Nickel		ug/L	-	-	-	-
Nickel	Y	ug/L	-	-	-	-
Potassium		ug/L	78600		-	-
Potassium	Y	ug/L	21600		-	-
Sodium		ug/L	7300000		-	-
Sodium	Y	ug/L	1870000		-	-
Thallium		ug/L	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Thallium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium		ug/L	-	-	108		-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Thallium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium		ug/L	-	-	-	-	-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-	-	-	-	-	-	-
Zinc		ug/L	-	-	150	J	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Thallium	Y	ug/L	62.2		53.1		-	-	-	-	-	-
Vanadium		ug/L	-	-	126		-	-	-	-	-	-
Vanadium	Y	ug/L	-	-	50.6		-	-	-	-	-	-
Zinc		ug/L	-	-	235		-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
METALS-W	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Thallium	Y	ug/L	-	-	-	-
Vanadium		ug/L	-	-	-	-
Vanadium	Y	ug/L	-	-	-	-
Zinc		ug/L	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3-Dinitrobenzene		ug/L	-	-	0.81		-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	0.23		2.5		-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	1.2		-	-	-	-	-	-
2-Nitrotoluene		ug/L	1.1		-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	0.31		-	-	-	-	-	-	-	-
RDX		ug/L	2.8		-	-	-	-	-	-	-	-
Tetryl		ug/L	2.4		-	-	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905R	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		18-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3-Dinitrobenzene		ug/L	0.86		-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	2.0		-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ug/L	0.34		-	-	-	-	-	-	-	-
2-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
RDX		ug/L	-	-	-	-	-	-	-	-	-	-
Tetryl		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3-Dinitrobenzene		ug/L	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		ug/L	0.89		-	-	-	-	0.49		-	-
2,6-Dinitrotoluene		ug/L	0.89		-	-	-	-	3.6		-	-
2-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-	-	-	-	-	0.62	
RDX		ug/L	-	-	-	-	-	-	-	-	-	-
Tetryl		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
EXPLOSIVES	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
1,3-Dinitrobenzene		ug/L	-	-	-	-
2,4-Dinitrotoluene		ug/L	-	-	-	-
2,6-Dinitrotoluene		ug/L	-	-	-	-
2-Nitrotoluene		ug/L	-	-	-	-
3-Nitrotoluene		ug/L	-	-	-	-
RDX		ug/L	-	-	-	-
Tetryl		ug/L	-	-	-	-

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-AA1-BEDGW-001		IT-AA2-BEDGW-001		IT-AA3-BEDGW-001		IT-ABG-BEDGW-01		IT-BG8-BEDGW-001	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5455		5465		5475		5485		5415	
Sample Date:			12-MAY-98		12-MAY-98		14-MAY-98		13-MAY-98		15-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	-	-

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			IT-MNTA-BEDGW-001		IT-TNTB-BEDGW-001		IT-TNTB-BEDGW-002		PB-BED-MW13		PB-BED-MW14	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5445		5425		5435		5895		5905	
Sample Date:			28-MAY-98		18-MAY-98		18-MAY-98		29-MAY-98		16-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	44	

PLUMBROOK

Bedrock Wells

Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW15		PB-BED-MW16		PB-BED-MW17		PB-BED-MW18		PB-BED-MW19	
Associated Site:			WELLS-W		WELLS-W		WELLS-W		WELLS-W		WELLS-W	
Sample No:			5915		5925		5935		5945		5955	
Sample Date:			28-MAY-98		01-JUN-98		29-MAY-98		19-MAY-98		16-MAY-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-	-	-	-	-	16	

PLUMBROOK
Bedrock Wells
Blank Corrected Hits Summarization

Report Date: 12/17/98

Sample Location:			PB-BED-MW20		REACTOR1	
Associated Site:			WELLS-W		WELLS-W	
Sample No:			5965		5975	
Sample Date:			28-MAY-98		01-JUN-98	
CYANIDE	Fltr	Units	Result	Val Qlfr	Result	Val Qlfr
Cyanide, total		ug/L	-	-	-	-

APPENDIX I

DATA QUALITY EVALUATIONS

FIRST SEMI-ANNUAL SAMPLING

Data Quality Evaluation
Former Plum Brook Ordnance Works
First Semi-Annual Sampling

1.0 Introduction

This appendix presents the results of the Quality Assurance/Quality Control (QA/QC) protocols implemented during the sampling and analysis portion of the site-wide investigation of groundwater. The quality indicators from the data collection process have been reviewed, and an assessment of the data with regard to the project specific objectives is presented. The reliability of the sampling and analytical procedures used during the investigation was demonstrated by implementing the project specific quality assurance procedures specified in the site-wide Sampling and Analysis Plan and Quality Assurance Project Plan (IT 1996a) and its site-specific attachments (SSAP, IT 1997). Successful execution of these procedures provides strong supporting evidence for the acceptance of the data as being representative of the areas under investigation. A complete evaluation of the procedures implemented in the investigations are summarized in this Data Quality Evaluation (DQE).

2.0 Field Sampling Program

Field Quality Control Activities. To ensure the reliability of the field sampling procedures, and analytical data, field QA/QC samples were collected or prepared for each medium sampled, each sample shipment and/or each sampling event. These QA/QC samples are used to address any sample variability and uncertainty in procedures.

2.1 Field Duplicates and Field Splits

The purpose of the field duplicates and splits is to generate data used to evaluate the precision of the sample collection, handling and analysis procedures. Field duplicates and splits were collected from the following locations: BG8-BEDGW-001, AA1-BEDGW-001, ITMW06, TNTAMW10, PRMW8, and MKMW14.

An independent, third party was subcontracted to evaluate the field duplicates and splits and prepare a chemical quality assurance report (CQAR) based on the findings. Variations in the precision data were determined by calculating the difference between the duplicate sample results

and the split results. Based on the difference, the sample results were considered to be in agreement, disagreement, or major disagreement.

Matrix	Parameter	Disagreement	Major Disagreement
All	All	>5x difference when one result < MDL	>10x difference when one result < MDL
All	All	>3x difference when one result < RL	>5x difference when one result < RL
Water	All	>2x difference	>3x difference

Semivolatiles, explosives, and PCBs were in agreement for all parameters. Volatile results were mostly in agreement. There were some detections by the primary lab that were below the reporting limit of the QA lab. The results from AA1-BEDGW-001 were in major disagreement for benzene. The results from BG8-BEDGW-001 were in major disagreement for carbon disulfide. All analytes for the other pairs were in agreement. There were several disagreements in the metal analyses. For dissolved metals, all analytes for the sample pairs were in agreement except for the following. The sample results from BG8-BEDGW-001 were in disagreement for aluminum and major disagreement for iron. The sample results from PRMW8 were in major disagreement for magnesium, potassium, and sodium. The results from AA1-BEDGW-001 were in major disagreement for aluminum. For total metals, all analytes were in agreement except the following. The sample results from BG8-BEDGW-001 and AA1-BEDGW-001 were in disagreement for aluminum. The sample results from MKMW14 were in disagreement for aluminum and major disagreement for zinc. The sample results from ITMW06 were in major disagreement for manganese. The sample results from PRMW8 were in major disagreement for aluminum, magnesium, nickel, potassium and sodium.

2.2 Trip Blanks

Trip blanks consist of "clean" VOA vials filled with ASTM Type II water. The trip blank data are used to demonstrate that samples requiring volatile analysis are not exposed to contamination during storage and transport to the laboratory. The water exhibited low level concentrations of volatile organics. Compounds detected include methylene chloride and toluene. Detected compounds in associated field samples were qualified (B) in the validation process. Review of the associated field sample data suggest that the analytes are probably a result of laboratory process contamination.

2.3 Equipment Rinsate Samples

Equipment rinsate samples (ER) are used to assess the effectiveness of the equipment decontamination procedures employed and the potential of cross-contamination of environmental samples between sampling locations. Since dedicated equipment was used for each well, no equipment rinsates were collected.

2.4 Field Blanks

Analysis of field blanks ensures that all water sources used during decontamination are free of parameters of interest. A field blank was collected from the final decontamination rinse water. The water exhibited concentrations of volatile organics and one metal. The volatiles detected were chloroform at 1.2 µg/L, methylene chloride at 1.1 µg/L, toluene at 0.54 µg/L, and xylenes at 0.26 µg/L. All concentrations are below reporting limits and qualified as estimated. Iron was detected at 106 µg/L. Review of the associated field sample data suggest that the analytes are probably a result of laboratory process contamination.

3.0 Analytical Program

The analytical program determined, with documented precision and accuracy, if specific compounds were present in the groundwater samples collected. Chemical analyses for the investigation were performed in accordance with the guidelines prescribed by the U.S. Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846), Physical/Chemical Methods, Third Edition, September 1986 and subsequent revisions. The groundwater samples and associated QA/QC samples were analyzed for volatile organics, semivolatile organics, PCBs, metals, explosives, and several water quality parameters.

All analytical samples collected for the generation of definitive data were reported in EPA Level IV CLP-like data packages. A Level III data validation was performed using EPA validation guidelines as stated in EPA Contract Laboratory Functional Guidelines for Organic and Inorganic dated February 1994. The criteria for blank evaluation are based on those detailed in *Region III Modifications to National Functional Guidelines for Organic Data Review* (September 1994) and *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (April 1993). Region III modifications were used to show the extent of blank contamination. The data were reevaluated for that purpose and revisions were made to the original validation results. The regulatory compound/analyte list reported was the Target Compound List (TCL) for organics and the Target Analyte List (TAL) for inorganics.

These data packages have also been reviewed for completeness and compliance to the approved final work plan (IT, 1996). All samples were submitted to the laboratory accompanied by an analysis request/ chain of custody (AR/COC) form. The AR portion of the form provides project specific analytical specifications and quality control instruction to the laboratories. A formal chain-of-custody (COC) traceability record was included to ensure documentation of custody for sample transportation, storage and eventual disposal by the laboratory. Copies of all custody documentation are included in the data packages submitted. All samples were received at the laboratory within the 4 +/- 2 degrees Celsius range with custody seals intact.

3.1 QA/QC Procedures

The project QA/QC program described in the SAP and QAPP was followed for the sample collection and laboratory analysis of samples. The elements of this program are discussed in the sections that follow. The laboratory analytical program consisted of EPA SW-846 methods with Level IV CLP-like deliverables for the generation of definitive data for the investigation. Deliverables included sample preparation information, calibration records, QC data such as method blanks, spikes, duplicates, surrogate recoveries, internal standards, and copies of the AR/COC records. Chemical analyses for this project were performed following standardized methods, which include specific QA/QC requirements for how compounds are analyzed, identified and reported.

3.1.1 Reporting Limits

Practical Quantitation Limits (PQLs) for Quanterra-Knoxville, TN, the laboratory's statistically determined reporting limits, were presented in the QAPP. For purposes of clarity and consistency with respect to definition and terminology, the term "reporting limit" has been substituted for PQL when referencing the limit of detection the laboratory reported for each sample and analytical parameter. This value has been corrected for all necessary dilution and interference factors based on the analytical data for each sample.

All laboratory results were reviewed with respect to the actual reporting limits achieved as compared to the limits presented in the QAPP. Dilutions resulted in elevated reporting limits for several analytes in several samples. Data were reported on a dry-weight basis and reporting limits were adjusted accordingly.

3.1.2 Holding Times

All laboratory results submitted for the Plum Brook groundwater investigation were reviewed with respect to laboratory adherence to analysis holding times as presented in Table 5-1 of the

QAPP. The laboratory exceeded the holding times for several water quality parameters. Sample 5970 (REACTOR1) was qualified (UJ) for total dissolved solids and total suspended solids and sample 5470 (AA3-BEDGW-001) was qualified (J) for total organic carbon. Thirty-four samples in three SDGs were qualified (UJ) or (J) for nitrate for analysis outside the holding times.

3.1.3 Method Blanks

Method blanks were analyzed with each analytical "batch" processed. The blanks were carried through the analytical procedure, step-by-step, including the addition of all solvents and other reagents required in the analytical process. The purpose of the blank is to ensure that no contaminants are being introduced to the sample as a result of the analytical process and clarify the origin of reported concentrations.

The method blank results reported were evaluated for readings characteristic of background or process contamination. There were no significant concentrations detected in the blank samples. The carbon disulfide and methylene chloride concentrations reported for the method blanks submitted may be attributed to laboratory process contamination. Methylene chloride is used as a laboratory solvent in the preparation and extraction of samples for many analyses. All analytes detected in the method blanks and associated samples were qualified (B) by the laboratory and the validation process.

3.1.4 Laboratory Control Samples

Laboratory control samples (LCSs) were used in the analytical program as a measure of accuracy without the influence of matrix on the analysis. The laboratory control sample is a spiked laboratory blank measured and reported by calculating the percent recovery of the known spiked concentrations. An LCS was analyzed with every batch of samples processed and analyzed. The control limits applied were statistically derived by the laboratory as required by the method. The review of the LCS data associated with the groundwater investigation data sets showed the data to be within the specified control limits demonstrating accuracy for the analytical process.

3.1.5 Matrix Spike\Matrix Spike Duplicates

Matrix spikes are used to provide an indication of bias due to matrix effects and a measure of accuracy of associated results. Duplicate analyses, sometimes performed using a matrix spike duplicate in the case of organics analyses, provide a measure of precision in the analytical process. The observed percent recoveries of the spikes were used to determine accuracy for the analyses. Control limits used to evaluate these recoveries and acceptance criteria for the precision data were determined statistically by the laboratory for organics as required by the

methods employed. Metals data exhibited variability in accuracy for several elements in the MS/MSD pairs. Both calcium and aluminum recoveries were varied. Percent recoveries were low for calcium in the dissolved metals analysis for several samples. Percent recoveries were low for calcium and aluminum in the total metals analysis for several samples. Percent recoveries were high for aluminum, sodium, and calcium in the total metals analysis for other samples. Associated data were qualified as estimated in the validation process for the affected elements where appropriate. There were no difficulties with accuracy and precision for the organics or water quality parameters.

3.1.6 Surrogate Standards

Surrogate standards were used in the analytical program to monitor the percent recovery efficiencies of the sample preparation and analytical procedure on a sample-by-sample basis for organic constituents. The surrogate standards used were those required by the analytical methodology employed and were compliant with the requirements of the method employed. Control limits for the surrogate recovery were determined statistically by the laboratory as required by the methodology. Evaluation of the surrogate standard data exhibited acceptable results for most analyses. For semivolatile sample 5940 (BEDMW18), two surrogate standard recoveries were below the acceptable limits. All compounds were qualified (J) or (UJ), estimated. All data were found to be acceptable as reported and qualified. No other problems were encountered in the surrogate standard data reported.

4.0 Data Quality Objectives

DQOs are qualitative and quantitative criteria used to guide sample collection and analysis activities. The DQOs for the project were developed at the outset of the investigation to ensure that the data generated during the execution of the analytical program were of appropriate quality to support the anticipated end use of the data. DQOs describe the level of uncertainty that a decision-maker is willing to accept in results derived from the environmental data. This uncertainty is used to the quality of the measurement data, usually in terms of objectives, bias, representativeness, comparability and completeness. DQOs seek to ensure that the right type, amount and quality of data are collected to accomplish the objectives of the project.

The DQOs for this project are to produce scientifically valid data of known accuracy and precision, which are complete with respect to identified critical samples, comparable with similar data types and representative of the media sampled so as to be useful for the cited purposes.

In order to achieve these DQOs, criteria were established in the SAP by which these goals could be achieved. The Site Investigation required that all laboratory analyses be performed and resulting data reported as definitive data. A non-CLP, (SW-846) method was employed and Level IV (CLP-like) data packages were provided for evaluation for these samples. Definitive data criteria were chosen because compliance with the criteria specified within its guidelines provides quantified concentrations with acceptable reliability for the purposes of the investigation.

5.0 Data Useability

The data review process as presented in this report, compares sample results to pre-established criteria to confirm that the data are of acceptable technical quality. Specific criteria were reviewed which verifies the achievement of all precision, accuracy, completeness, comparability and representativeness goals established to meet the project DQOs. To verify that these objectives were met, field measurements, sampling and handling procedures, laboratory analysis and reporting and all nonconformances and discrepancies in the data were examined to determine compliance with the appropriate and applicable procedures. The results of this review were presented in previous sections with all outliers or nonconformances were discussed where they occurred.

Precision data was obtained through the analysis and evaluation of duplicate QA samples. Accuracy was determined through the analysis and evaluation of method blanks, laboratory control samples, trip blanks and matrix spike samples. These QA samples were collected and/or analyzed at the frequency established in the SAP, verifying the completeness element of the goals along with the evaluation of holding times, and reporting limits.

Completeness is a measure of the amount of valid data that are obtained during a sampling event. Some analytical data for organic analyses were rejected. In the volatile analyses, acetone, 2-butanone, and 2-hexanone were rejected in several samples due to low relative response factors (RRF) in the initial and continuing calibrations. Nondetects were rejected. Detects were qualified (J), estimated.

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. Comparability ensures that results for the sampling event can be compared with data from other past and/or future sampling programs. Comparability for this

sampling event was achieved through the use of established and recognized techniques and accepted standard EPA methods. All samples collected and analyzed were subjected to the same sampling, handling, preparation, analysis, reporting and validation criteria for the purpose of achieving comparability goals within the data set.

To verify sample representativeness, field data such as field activity daily logs (FADL), sample collection logs, COC/RFA forms, field instrument calibrations and variances were reviewed. The overall results of the analyses as discussed in this evaluation suggest that representative samples were collected and analyzed with results being indicative of the media analyzed with the exception of the few anomalies noted. Organic chemicals were omitted from consideration if they were a common laboratory contaminant or could be traced to some other source within the analytical investigation process.

All analytical results for chemicals are reported using validation data qualifiers. Chemicals flagged with a (U) qualifier are considered to be not detected, or detected at a concentration below the normal, random "noise" of the analytical instrument. Analytes flagged with a (B) qualifier were detected in an associated blank sample. The (J) qualifier describes an estimated value when a compound is qualitatively identified (spectral identification criteria are met), but at values less that the project-required reporting limit. The (UJ) qualifier describes an analyte that is not detected above the reported quantitation limit. However, the quantitation limit is approximate. A full list of laboratory data qualifiers and their definitions are included in the laboratory data report.

6.0 Conclusions

The goals and objectives for the Plum Brook Groundwater Investigation were to provide information concerning the possible environmental contamination that can be used in making management decisions about the site. The groundwater sampling was conducted to acquire additional groundwater quality data on a sitewide basis that can be used to determine if there are hazardous substances present at the site that constitute unacceptable risk to human health and the environment and to aid in the evaluation of contaminant fate and transport pathways. Evaluation of the data using the specific DQOs established for the project and the data validation process resulted in the determination that the most of the data set is valid and of sufficient quality to meet the objectives of the investigation. There were no significant problems observed that would adversely affect the application of the data or the success of the overall investigation.

SECOND SEMI-ANNUAL SAMPLING

Data Quality Evaluation
Former Plum Brook Ordnance Works
Second Semi-Annual Sampling

1.0 Introduction

This appendix presents the results of the Quality Assurance/Quality Control (QA/QC) protocols implemented during the sampling and analysis portion of the site-wide investigation of groundwater. The quality indicators from the data collection process have been reviewed, and an assessment of the data with regard to the project specific objectives is presented. The reliability of the sampling and analytical procedures used during the investigation was demonstrated by implementing the project specific quality assurance procedures specified in the site-wide Sampling and Analysis Plan and Quality Assurance Project Plan (IT 1996a) and its site-specific attachments (SSAP, IT 1997). Successful execution of these procedures provides strong supporting evidence for the acceptance of the data as being representative of the areas under investigation. A complete evaluation of the procedures implemented in the investigations are summarized in this Data Quality Evaluation (DQE).

2.0 Field Sampling Program

Field Quality Control Activities. To ensure the reliability of the field sampling procedures, and analytical data, field QA/QC samples were collected or prepared for each medium sampled, each sample shipment and/or each sampling event. These QA/QC samples are used to address any sample variability and uncertainty in procedures.

2.1 Field Duplicates and Field Splits

The purpose of the field duplicates and splits is to generate data used to evaluate the precision of the sample collection, handling and analysis procedures. Field duplicates and splits were collected from the following locations: BG8-BEDGW-001, AA1-GW-002, ITMW05, TNTAMW10, PRMW7, and MKMW14.

An independent, third party was subcontracted to evaluate the field duplicates and splits and prepare a chemical quality assurance report (CQAR) based on the findings. Variations in the precision data were determined by calculating the difference between the duplicate sample results

and the split results. Based on the difference, the sample results were considered to be in agreement, disagreement, or major disagreement.

Matrix	Parameter	Disagreement	Major Disagreement
All	All	>5x difference when one result < MDL	>10x difference when one result < MDL
All	All	>3x difference when one result < RL	>5x difference when one result < RL
Water	All	>2x difference	>3x difference

Semivolatiles, explosives, volatiles, and PCBs were in agreement for all parameters. There were some detections by the primary lab that were below the reporting limit of the QA lab. There were several disagreements in the metal analyses. For dissolved metals, the results from sample pairs from MKMW14, TNTAMW10, and BG8-BEDGW-001 were in agreement. All analytes for the other pairs were in agreement except for the following. The sample results from AA1-GW-002 were in disagreement for aluminum. The sample results from PRMW7 were in disagreement for magnesium, manganese, and nickel. The sample results from ITMW05 were in disagreement for zinc. For total metals, all analytes were in agreement except the following. The sample results from BG8-BEDGW-001 were in disagreement for sodium. The sample results from AA1-GW-002 were in disagreement for aluminum and major disagreement for iron. The sample results from ITMW05 were in disagreement for copper and vanadium and major disagreement for aluminum, arsenic, potassium, and zinc. The sample results from TNTAMW10 were in major disagreement for chromium and magnesium. The sample results from PRMW7 were in disagreement for aluminum. The sample results from MKMW14 were in major disagreement for aluminum and iron.

2.2 Trip Blanks

Trip blanks consist of "clean" VOA vials filled with ASTM Type II water. The trip blank data are used to demonstrate that samples requiring volatile analysis are not exposed to contamination during storage and transport to the laboratory. The water exhibited low level concentrations of volatile organics. Compounds detected include acetone, chloroform, methylene chloride, toluene, and trichloroethene. Detected compounds in associated field samples were qualified (B) in the validation process. Review of the associated field sample data suggest that the analytes are probably a result of laboratory process contamination.

2.3 Equipment Rinsate Samples

Equipment rinsate samples (ER) are used to assess the effectiveness of the equipment decontamination procedures employed and the potential of cross-contamination of environmental samples between sampling locations. Since dedicated equipment was used for each well, no equipment rinsates were collected.

2.4 Field Blanks

Analysis of field blanks ensures that all water sources used during decontamination are free of parameters of interest. A field blank was collected from the final decontamination rinse water. The water exhibited concentrations of volatile organics, one semivolatile organic, and one metal. The volatiles detected were methylene chloride at 0.45 µg/L, 1,1,1-trichloroethene at 0.15 µg/L, and toluene at 0.14 µg/L. All concentrations are below reporting limits and qualified as estimated. bis(2Ethylhexyl)phthalate was detected at 6.2 µg/L and zinc at 29 µg/L. Review of the associated field sample data suggest that the analytes are probably a result of laboratory process contamination.

3.0 Analytical Program

The analytical program determined, with documented precision and accuracy, if specific compounds were present in the groundwater samples collected. Chemical analyses for the investigation were performed in accordance with the guidelines prescribed by the U.S. Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846), Physical/Chemical Methods, Third Edition, September 1986 and subsequent revisions. The groundwater samples and associated QA/QC samples were analyzed for volatile organics, semivolatile organics, PCBs, metals, explosives, and several water quality parameters.

All analytical samples collected for the generation of definitive data were reported in EPA Level IV CLP-like data packages. A Level III data validation was performed using EPA validation guidelines as stated in EPA Contract Laboratory Functional Guidelines for Organic and Inorganic dated February 1994. The criteria for blank evaluation are based on those detailed in *Region III Modifications to National Functional Guidelines for Organic Data Review* (September 1994) and *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (April 1993). Region III modifications were used to show the extent of blank contamination. The data were reevaluated for that purpose and revisions were made to the original validation results. The regulatory compound/analyte list reported was the

Target Compound List (TCL) for organics and the Target Analyte List (TAL) for inorganics. These data packages have also been reviewed for completeness and compliance to the approved final work plan (IT, 1996). All samples were submitted to the laboratory accompanied by an analysis request/ chain of custody (AR/COC) form. The AR portion of the form provides project specific analytical specifications and quality control instruction to the laboratories. A formal chain-of-custody (COC) traceability record was included to ensure documentation of custody for sample transportation, storage and eventual disposal by the laboratory. Copies of all custody documentation are included in the data packages submitted. All samples were received at the laboratory within the 4 +/- 2 degrees Celsius range with custody seals intact.

3.1 QA/QC Procedures

The project QA/QC program described in the SAP and QAPP was followed for the sample collection and laboratory analysis of samples. The elements of this program are discussed in the sections that follow. The laboratory analytical program consisted of EPA SW-846 methods with Level IV CLP-like deliverables for the generation of definitive data for the investigation. Deliverables included sample preparation information, calibration records, QC data such as method blanks, spikes, duplicates, surrogate recoveries, internal standards, and copies of the AR/COC records. Chemical analyses for this project were performed following standardized methods, which include specific QA/QC requirements for how compounds are analyzed, identified and reported.

3.1.1 Reporting Limits

Practical Quantitation Limits (PQLs) for Quanterra-Knoxville, TN, the laboratory's statistically determined reporting limits, were presented in the QAPP. For purposes of clarity and consistency with respect to definition and terminology, the term "reporting limit" has been substituted for PQL when referencing the limit of detection the laboratory reported for each sample and analytical parameter. This value has been corrected for all necessary dilution and interference factors based on the analytical data for each sample.

All laboratory results were reviewed with respect to the actual reporting limits achieved as compared to the limits presented in the QAPP. Dilutions resulted in elevated reporting limits for several analytes in several samples. Data were reported on a dry-weight basis and reporting limits were adjusted accordingly.

3.1.2 Holding Times

All laboratory results submitted for the Plum Brook groundwater investigation were reviewed with respect to laboratory adherence to analysis holding times as presented in Table 5-1 of the QAPP. Samples 5625 (TNTAMW11) and 5925 (BEDMW16) arrived at the lab with pHs greater than 2. Their holding times exceeded the seven day limit for unpreserved samples. Benzene, toluene, chlorobenzene, ethyl benzene, styrene, and xylenes were qualified (UJ) or (J), estimated. Field split sample 5417 (BG8-BEDGW-001) was extracted passed the holding time for the explosives analysis. The sample was not validated and no qualifiers were assigned.

3.1.3 Method Blanks

Method blanks were analyzed with each analytical "batch" processed. The blanks were carried through the analytical procedure, step-by-step, including the addition of all solvents and other reagents required in the analytical process. The purpose of the blank is to ensure that no contaminants are being introduced to the sample as a result of the analytical process and clarify the origin of reported concentrations.

The method blank results reported were evaluated for readings characteristic of background or process contamination. There were no significant concentrations detected in the blank samples that signify an analytical process out of control or require further corrective action. The toluene and methylene chloride concentrations reported for the method blanks submitted should be attributed to laboratory process contamination. Methylene chloride is used as laboratory solvent in the preparation and extraction of samples for many analyses. All analytes detected in the method blanks and associated samples were qualified (B) by the laboratory and the validation process.

3.1.4 Laboratory Control Samples

Laboratory control samples (LCSs) were used in the analytical program as a measure of accuracy without the influence of matrix on the analysis. The laboratory control sample is a spiked laboratory blank measured and reported by calculating the percent recovery of the known spiked concentrations. An LCS was analyzed with every batch of samples processed and analyzed. The control limits applied were statistically derived by the laboratory as required by the method. The review of the LCS data associated with the groundwater investigation data sets showed the data to be within the specified control limits demonstrating accuracy for the analytical process.

3.1.5 Matrix Spike\Matrix Spike Duplicates

Matrix spikes are used to provide an indication of bias due to matrix effects and a measure of accuracy of associated results. Duplicate analyses, sometimes performed using a matrix spike duplicate in the case of organics analyses, provide a measure of precision in the analytical process. Three matrix spike/matrix spike duplicate (MS/MSD) pairs were analyzed for the groundwater investigation. The observed percent recoveries of the spikes were used to determine accuracy for the analyses. Control limits used to evaluate these recoveries and acceptance criteria for the precision data were determined statistically by the laboratory for organics as required by the methods employed. Metals data exhibited variability in accuracy for several elements in the MS/MSD pairs. Percent recoveries were high for calcium, magnesium, and antimony in the dissolved metals analysis. Percent recoveries were low for silver and iron in the total metals analysis. Percent recoveries were high for aluminum and antimony in the total metals analysis. Associated data were qualified as estimated in the validation process for the affected elements where appropriate. There were no difficulties with accuracy and precision for the organics. Several sample results were qualified as estimated because of MS/MSD recoveries outside acceptable limits for sulfate, chloride, and TOC.

3.1.6 Surrogate Standards

Surrogate standards were used in the analytical program to monitor the percent recovery efficiencies of the sample preparation and analytical procedure on a sample-by-sample basis for organic constituents. The surrogate standards used were those required by the analytical methodology employed and were compliant with the requirements of the method employed. Control limits for the surrogate recovery were determined statistically by the laboratory as required by the methodology. Evaluation of the surrogate standard data exhibited acceptable results for most analyses. One volatile sample (GCLMW02B) exceeded the surrogate standard recoveries. The two detected compounds were qualified estimated. One explosive sample (BEDMW17) and one PCB sample (BEDMW16) had surrogate standard recoveries below the acceptable limits. All compounds were qualified estimated. All data were found to be acceptable as reported and qualified. No other problems were encountered in the surrogate standard data reported.

4.0 Data Quality Objectives

DQOs are qualitative and quantitative criteria used to guide sample collection and analysis activities. The DQOs for the project were developed at the outset of the investigation to ensure

that the data generated during the execution of the analytical program were of appropriate quality to support the anticipated end use of the data. DQOs describe the level of uncertainty that a decision-maker is willing to accept in results derived from the environmental data. This uncertainty is used to the quality of the measurement data, usually in terms of objectives, bias, representativeness, comparability and completeness. DQOs seek to ensure that the right type, amount and quality of data are collected to accomplish the objectives of the project.

The DQOs for this project are to produce scientifically valid data of known accuracy and precision, which are complete with respect to identified critical samples, comparable with similar data types and representative of the media sampled so as to be useful for the cited purposes.

In order to achieve these DQOs, criteria were established in the SAP by which these goals could be achieved. The Site Investigation required that all laboratory analyses be performed and resulting data reported as definitive data. A non-CLP, (SW-846) method was employed and Level IV (CLP-like) data packages were provided for evaluation for these samples. Definitive data criteria were chosen because compliance with the criteria specified within its guidelines provides quantified concentrations with acceptable reliability for the purposes of the investigation.

5.0 Data Useability

The data review process as presented in this report, compares sample results to pre-established criteria to confirm that the data are of acceptable technical quality. Specific criteria were reviewed which verifies the achievement of all precision, accuracy, completeness, comparability and representativeness goals established to meet the project DQOs. To verify that these objectives were met, field measurements, sampling and handling procedures, laboratory analysis and reporting and all nonconformances and discrepancies in the data were examined to determine compliance with the appropriate and applicable procedures. The results of this review were presented in previous sections with all outliers or nonconformances were discussed where they occurred.

Precision data was obtained through the analysis and evaluation of duplicate QA samples. Accuracy was determined through the analysis and evaluation of method blanks, laboratory control samples, trip blanks and matrix spike samples. These QA samples were collected and/or

analyzed at the frequency established in the SAP, verifying the completeness element of the goals along with the evaluation of holding times, and reporting limits.

Completeness is a measure of the amount of valid data that are obtained during a sampling event. Some analytical data for organic analyses were rejected. In the volatile analyses, acetone, 2-butanone, and 2-hexanone were rejected in several samples due to low relative response factors (RRF) in the initial and continuing calibrations. Nondetects were rejected. Detects were qualified (J), estimated. In the semivolatile analyses, compounds associated with the internal standard perylene-d12 in samples 5685 (WAMW2), 5905R (BEDMW14), 5695 (PRMW7), 5696 (PRMW7), 5705 (PRMW8), and 5715 (PRMW9) were rejected. Perylene-d12 had zero area counts. Compounds associated with acenaphthene-d10 and phenanthrene-d10 in sample 5695 were qualified as "NJ" for detects or "R" for nondetects because of low area counts. For the semivolatile analyses, the lab chose not to reanalyze because of historical difficulty with Plum Brook samples and to prevent possible instrument failure.

The results of samples 5695, 5696, 5705, 5715, and 5905R are questionable. 2,4-Dinitrotoluene, 4,6-dinitro-2-methylphenol, 2,4-dinitophenol, and dibenzofuran exceeded the calibration range and had retention time shifts. The samples were not reanalyzed because of their effect on the instrument. All compounds considered to be questionable were qualified "NJ". "NJ" means the analyte has been tentatively identified and the associated concentration is estimated.

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. Comparability ensures that results for the sampling event can be compared with data from other past and/or future sampling programs. Comparability for this sampling event was achieved through the use of established and recognized techniques and accepted standard EPA methods. All samples collected and analyzed were subjected to the same sampling, handling, preparation, analysis, reporting and validation criteria for the purpose of achieving comparability goals within the data set.

To verify sample representativeness, field data such as field activity daily logs (FADL), sample collection logs, COC/RFA forms, field instrument calibrations and variances were reviewed. The overall results of the analyses as discussed in this evaluation suggest that representative samples were collected and analyzed with results being indicative of the media analyzed with the exception of the few anomalies noted. Organic chemicals were omitted from consideration if they were a common laboratory contaminant or could be traced to some other source within the analytical investigation process.

All analytical results for chemicals are reported using validation data qualifiers. Chemicals flagged with a (U) qualifier are considered to be not detected, or detected at a concentration below the normal, random "noise" of the analytical instrument. Analytes flagged with a (B) qualifier were detected in an associated blank sample. The (J) qualifier describes an estimated value when a compound is qualitatively identified (spectral identification criteria are met), but at values less that the project-required reporting limit. The (UJ) qualifier describes an analyte that is not detected above the reported quantitation limit. However, the quantitation limit is approximate. A full list of laboratory data qualifiers and their definitions are included in the laboratory data report.

6.0 Conclusions

The goals and objectives for the Plum Brook Groundwater Investigation were to provide information concerning the possible environmental contamination that can be used in making management decisions about the site. The groundwater sampling was conducted to acquire additional groundwater quality data on a sitewide basis that can be used to determine if there are hazardous substances present at the site that constitute unacceptable risk to human health and the environment and to aid in the evaluation of contaminant fate and transport pathways. Evaluation of the data using the specific DQOs established for the project and the data validation process resulted in the determination that the most of the data set is valid and of sufficient quality to meet the objectives of the investigation. As stated previously, the results of samples 5695 (PRMW7), 5696 (PRMW7), 5705 (PRMW8), 5715 (PRMW9), and 5905R (BEDMW14) are questionable. 2,4-Dinitrotoluene, 4,6-dinitro-2-methylphenol, 2,4-dinitophenol, and dibenzofuran exceeded the calibration range and had retention time shifts. Since the samples were not reanalyzed, proper corrective actions were not taken. Despite this, there were no other significant problems observed that would adversely affect the application of the data or the success of the overall investigation.

APPENDIX J

RECHARGE CALCULATIONS

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NASHVILLE C.O.E.	JOB NUMBER: 773206
SUBJECT: CALCULATION OF MONTHLY RUNOFF @ PLUMBROOK ORDNANCE WORKS	
BASED ON: SOIL CONSERVATION SERVICE TECH RELEASE #55, JUNE 1986 / ERIE COUNTY SOIL SURVEY REPORT OF PROGRESS, 1994 BY OHIO DEPT. OF NAT. RESOURCES	

BY	CHECKED BY	APPROVED BY	DATE
LR ELLIS	JAME Li		1/12/99

CALCULATION ASSUMPTIONS:

1. RUNOFF EQUATION FOR A STORM EVENT CAN BE USED FOR MONTHLY RUNOFF RATES

2. LAND USES CAN BE LARGELY DEFINED BY USING AN AERIAL PHOTO

3. THE SOIL NAMES IN THE 1994 ERIE COUNTY PROGRESS REPORT (FOR THE ERIE COUNTY SOIL SURVEY) CAN BE USED FOR CHARACTERIZATION OF THE ~~CN NUMBE~~ HYDROLOGIC SOIL GROUP (E.G. THE NAMES PEWAMO & BENNINGTON [IN THE PEWAMO-BENNINGTON ASSOC] CAN BE LOOKED UP & THOSE TWO ARE CHARACTERISTIC OF THE WHOLE ASSOCIATION) – SEE ATTACHED ERIE COUNTY REPORT.

Eq.1 $$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

Eq.2 $$S = 1000/CN - 10$$

Eq.3 $$I_a = 0.2S$$

Q = RUNOFF IN INCHES
P = RAINFALL IN INCHES
S = POTENTIAL MAXIMUM RETENTION AFTER RAINFALL BEGINS (INCHES)
I_a = INITIAL ABSTRACTION (INCHES) [WHICH IS ALL LOSSES BEFORE RUNOFF BEGINS]
CN = CURVE NUMBER [OBTAINED BY FIRST GETTING THE HYDROLOGIC NUMBER FOR EACH SOIL TYPE ON SCS TECH REPT TABLE 2.2a, THEN USING IT ON TABLE 2.2.

NOTES

* SEE CALC. SHEET 2 OF 3 FOR DERIVATION OF CN

* SEE ATTACHED EXCEL SPREADSHEET FOR MONTHLY RUNOFF CALCULATIONS USING $Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$

INTERNATIONAL TECHNOLOGY CORPORATION

By Rick Ellis Date 1/8/99 Subject Determining CN for PBOW Soil for Runoff Calc. Sheet No. 2 of ___

Chkd. By J. Li Date 1/12/99 Proj. No. ___

Soil Name	General Location	Approx. Percentage PBOW of Site		Approx Curve No (Rounded)		Land Use	Hydrol Soil Group
		Assoc	Each	Assoc	Each		
Pewamo-Bennington Assoc.	Extreme Southeast & Extreme Northeast	1/5		75		Thinly Wooded	
Pewamo					80		C/D
Bennington					70		C
Horatio-Fries-Colwood Assoc.	Central	1/2		75		1/2 Open Spaces (Good Cover); 1/2 Wooded (Good Cover)	
Horatio					80		D
Fries					77		D
Colwood					66		B/D
Castalia-Millsdale-Milton-Ritchey Assoc.	North-Central (West to East Strip)	1/10		75		2/3 Open Spaces (Good Cover); 1/3 Wooded (Good Cover)	
Castalia					74		C
Millsdale					70		B/D
Milton					74		C
Ritchey					80		D
Kibbie-Elnora-Tuscola-Colwood Assoc.	North-Western Portion of Site	1/5		58		Wooded (Good Cover)	
Kibbie					55		B
Elnora					55		B
Tuscola					55		B
Colwood					66		B/D
			Total Avg CN	72			

Use to yield this w/ Tech Rpt 55

108-10-85

Month	Rain (P)	*Ia*	*S*	*Curve Number (CN)*	Runoff (Q	Evapo-transpir-ation (E)	Evapo*0.6 (E est.)	Monthly Rechge
Source	Sandusky, OH rain gauge	*Ia=0.2S*	*S=1000/CN-10*	*(Determined with Table 2.2 from Tech Rpt 55)*	Q=(P-0.2S)^2 /P+0.8S	(From National Weather Service (Cleveland)	Estimated	R = P-Q-E est
Jan-94	2.33	0.78	3.89	72	0.44	0.6	0.36	**1.53**
Feb-94	1.09	0.78	3.89	72	0.02	1.5	0.90	**0.17**
Mar-94	1.48	0.78	3.89	72	0.11	2.3	1.38	**-0.01**
Apr-94	2.62	0.78	3.89	72	0.59	5	3.00	**-0.97**
May-94	1.92	0.78	3.89	72	0.26	5	3.00	**-1.34**
Jun-94	4.86	0.78	3.89	72	2.09	6	3.60	**-0.83**
Jul-94	1.38	0.78	3.89	72	0.08	5.9	3.54	**-2.24**
Aug-94	2.83	0.78	3.89	72	0.71	4.7	2.82	**-0.70**
Sep-94	2.83	0.78	3.89	72	0.71	4	2.40	**-0.28**
Oct-94	1.46	0.78	3.89	72	0.10	2.7	1.62	**-0.26**
Nov-94	2.38	0.78	3.89	72	0.47	2.1	1.26	**0.65**
Dec-94	2.1	0.78	3.89	72	0.34	0.6	0.36	**1.40**
Jan-95	3.22	0.78	3.89	72	0.94	0.6	0.36	**1.92**
Feb-95	0.82	0.78	3.89	72	0.00	1	0.60	**0.22**
Mar-95	1.39	0.78	3.89	72	0.08	2.3	1.38	**-0.07**
Apr-95	4.28	0.78	3.89	72	1.66	3.3	1.98	**0.64**
May-95	4.2	0.78	3.89	72	1.60	4.9	2.94	**-0.34**
Jun-95	2.48	0.78	3.89	72	0.52	5.2	3.12	**-1.16**
Jul-95	6.77	0.78	3.89	72	3.63	6.2	3.72	**-0.58**
Aug-95	3.68	0.78	3.89	72	1.24	5.1	3.06	**-0.62**
Sep-95	1.25	0.78	3.89	72	0.05	3.9	2.34	**-1.14**
Oct-95	3.84	0.78	3.89	72	1.35	2.9	1.74	**0.75**
Nov-95	2.6	0.78	3.89	72	0.58	1.4	0.84	**1.18**
Dec-95	1.09	0.78	3.89	72	0.02	NA	NA	NA
Jan-96	1.27	0.78	3.89	72	0.06	0.7	0.42	**0.79**
Feb-96	1	0.78	3.89	72	0.01	0.7	0.42	**0.57**
Mar-96	2.04	0.78	3.89	72	0.31	1.7	1.02	**0.71**
Apr-96	4.39	0.78	3.89	72	1.74	3.3	1.98	**0.67**
May-96	2.25	0.78	3.89	72	0.40	4.3	2.58	**-0.73**
Jun-96	4.66	0.78	3.89	72	1.94	5.4	3.24	**-0.52**
Jul-96	3.72	0.78	3.89	72	1.27	5.6	3.36	**-0.91**
Aug-96	0.4	0.78	3.89	72	0.04	5.1	3.06	**-2.70**
Sep-96	6.5	0.78	3.89	72	3.41	3.1	1.86	**1.23**
Oct-96	2.37	0.78	3.89	72	0.46	2.1	1.26	**0.65**
Nov-96	1.94	0.78	3.89	72	0.27	0.8	0.48	**1.19**
Dec-96	3.35	0.78	3.89	72	1.02	0.5	0.30	**2.03**
Jan-97	1.65	0.78	3.89	72	0.16	0.6	0.36	**1.13**
Feb-97	3.29	0.78	3.89	72	0.99	1	0.60	**1.70**

Month	Rain (P)	*Ia*	*S*	*Curve Number (CN)*	Runoff (Q	Evapo-transpir-ation (E)	Evapo*0.6 (E est.)	Monthly Rechge
Mar-97	3.04	0.78	3.89	72	0.83	1.6	0.96	**1.25**
Apr-97	1.62	0.78	3.89	72	0.15	3	1.80	**-0.33**
May-97	5.19	0.78	3.89	72	2.34	3.9	2.34	**0.51**
Jun-97	6.79	0.78	3.89	72	3.65	5.2	3.12	**0.02**
Jul-97	2.26	0.78	3.89	72	0.41	4.9	2.94	**-1.09**
Aug-97	4.23	0.78	3.89	72	1.62	3.2	1.92	**0.69**
Sep-97	4.11	0.78	3.89	72	1.54	2.8	1.68	**0.89**
Oct-97	1.58	0.78	3.89	72	0.14	2.3	1.38	**0.06**
Nov-97	2.24	0.78	3.89	72	0.40	0.9	0.54	**1.30**
Dec-97	1.95	0.78	3.89	72	0.27	0.3	0.18	**1.50**
Jan-98	3.85	0.78	3.89	72	1.36	0.4	0.24	**2.25**
Feb-98	2.67	0.78	3.89	72	0.62	0.5	0.30	**1.75**
Mar-98	3.45	0.78	3.89	72	1.09	1.9	1.14	**1.22**
Apr-98	1.62	0.78	3.89	72	0.15	2.6	1.56	**-0.09**
May-98	5.19	0.78	3.89	72	2.34	3.9	2.34	**0.51**

Attachment 1

Table 2-2.--Runoff curve numbers for selected agricultural, suburban, and urban land use. (Antecedent moisture condition II, and $I_a = 0.2S$)

LAND USE DESCRIPTION	HYDROLOGIC SOIL GROUP			
	A	B	C	D
Cultivated land[1]: without conservation treatment	72	81	88	91
: with conservation treatment	62	71	78	81
Pasture or range land: poor condition	68	79	86	89
good condition	39	61	74	80
Meadow: good condition	30	58	71	78
Wood or Forest land: thin stand, poor cover, no mulch	45	66	77	83
good cover[2]	25	55	70	77
Open Spaces, lawns, parks, golf courses, cemeteries, etc.				
good condition: grass cover on 75% or more of the area	39	61	74	80
fair condition: grass cover on 50% to 75% of the area	49	69	79	84
Commercial and business areas (85% impervious)	89	92	94	95
Industrial districts (72% impervious)	81	88	91	93
Residential:[3]				
Average lot size — Average % Impervious[3]				
1/8 acre or less — 65	77	85	90	92
1/4 acre — 38	61	75	83	87
1/3 acre — 30	57	72	81	86
1/2 acre — 25	54	70	80	85
1 acre — 20	51	68	79	84
Paved parking lots, roofs, driveways, etc.[5]	98	98	98	98
Streets and roads:				
paved with curbs and storm sewers[5]	98	98	98	98
gravel	76	85	89	91
dirt	72	82	87	89

1/ For a more detailed description of agricultural land use curve numbers refer to National Engineering Handbook, Section 4, Hydrology, Chapter 9, Aug. 1972.

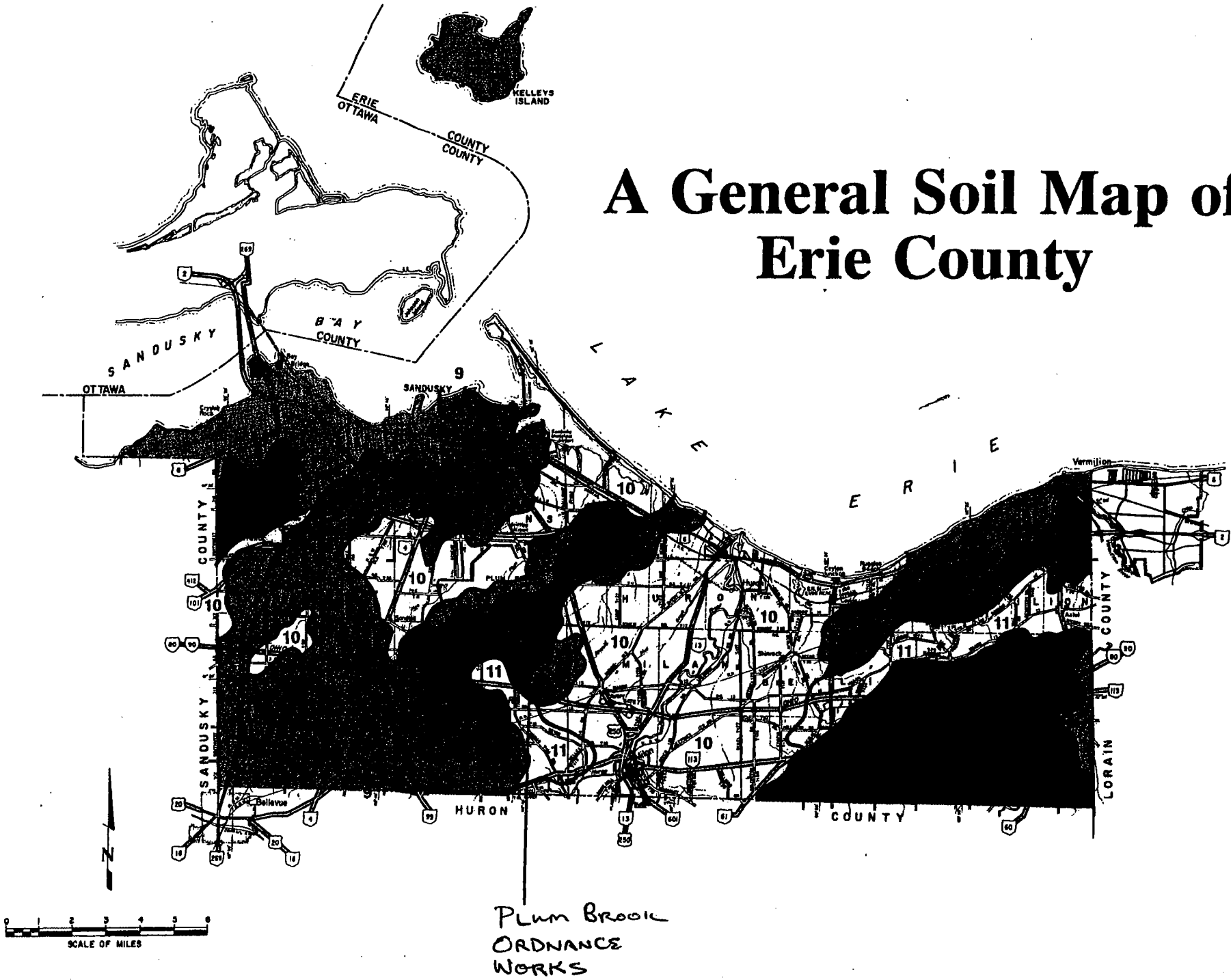
2/ Good cover is protected from grazing and litter and brush cover soil.

3/ Curve numbers are computed assuming the runoff from the house and driveway is directed towards the street with a minimum of roof water directed to lawns where additional infiltration could occur.

4/ The remaining pervious areas (lawn) are considered to be in good pasture condition for these curve numbers.

5/ In some warmer climates of the country a curve number of 95 may be used.

A General Soil Map of Erie County



Soil Legend

VERY DEEP SOILS ON LAKE PLAINS

Toledo-Fulton Association: Nearly level, very poorly drained and somewhat poorly drained soils formed in lacustrine sediments.

Del Rey-Milford Association: Nearly level, somewhat poorly drained and very poorly drained soils formed in lacustrine sediments.

Weyers-Haplaquents-Sandusky Association: Level, very poorly drained soils formed in calcareous tufa and marl over lacustrine sediments.

VERY DEEP SOILS PRIMARILY ON TILL PLAINS

Bennington-Cardington-Haskins Association: Nearly level to sloping, somewhat poorly drained and moderately well drained soils formed in glacial till and loamy outwash sediments over glacial till or lacustrine sediments.

Pewamo-Bennington Association: Nearly level to gently sloping, very poorly drained and somewhat poorly drained soils formed in glacial till and lacustrine sediments.

Mahoning-Rawson-Ellsworth Association: Nearly level to sloping, somewhat poorly drained and moderately well drained soils formed in glacial till and loamy outwash over glacial till or lacustrine sediments.

SHALLOW TO DEEP SOILS ON BEDROCK-CONTROLLED TILL PLAINS AND LAKE PLAINS

Allis-Fries Association: Moderately deep, nearly level, somewhat poorly drained to very poorly drained soils formed in glacial till or lacustrine sediments over shale bedrock.

Hornell-Fries-Colwood Association: Moderately deep and deep, nearly level to gently sloping, somewhat poorly drained and very poorly drained soils formed in glacial till and lacustrine sediments over shale bedrock.

Castalia-Millsdale-Milton-Ritchey Association: Shallow to moderately deep, nearly level to moderately steep, well drained and very poorly drained soils formed in glacial till, lacustrine sediments and limestone residuum.

VERY DEEP SOILS ON OUTWASH PLAINS, LAKE PLAINS, DELTAS AND BEACH RIDGES

10 Kibbie-Elnora-Tuscola-Colwood Association: Nearly level to gently sloping, somewhat poorly drained, moderately well drained and very poorly drained soils formed in outwash, lacustrine and deltaic sediments.

11 Jimtown-Oshtemo-Millgrove Association: Nearly level to gently sloping, somewhat poorly drained, well drained and very poorly drained soils formed in outwash and beach sediments.

The general soil map shows the location of the 11 soil associations or general soil areas in Erie County. Each association typically consists of two to four major soils for which it is named and some soils of minor extent. The soils in each association occur together in a distinct and repetitive landscape pattern.

The general soil map is most useful for providing generalized information about the soil resources of Erie County. It is not suitable for planning the management of a farm or for selection of a building site because of its small scale.

Information on how to obtain more detailed soil maps in the county is given elsewhere in this publication. The following information about the 28 soils identified on the General Soil Map plus 32 other soil series in the county can also be obtained by request:

- Slope range
- Drainage class
- Permeability
- Available water capacity
- Seasonal high water table depth
- Depth to bedrock
- Shrink-swell potential

Some of the more common management concerns that can be identified in places from the detailed soil maps are slope, erosion, shallowness to bedrock, slow permeability, seasonal wetness, ponding, droughtiness, poor filtration, and flooding. Information about recommended management practices can be obtained from the Erie SWCD.