APPENDIX 1

Tables

Table 1: Monitoring Well Data

Well	Inside Ditch	Outside Ditch	Background	Status	Elevation: Top of Casing	Ground Surface	Base of Grout	Top of Screen	Base of Screen	Bottom of Borehole	Elevation: Approximate Water Level Range as of May 2006: High	Low
GWC-1		X			22.48	19.9	7.4	5.4	-4.6	-5.1	13.4	9.6
GWC-2	X				18.94	16.5	13.0	11.5	1.5	1.0	14.3	8.1
GWC-3	X				19.67	17.2	13.7	12.2	2.2	1.7	11.4	8.0
GWC-4	X				27.55	25.0	12.0	10.5	0.5	0.0	10.1	4.8
GWC-5		X			17.07	14.6	11.1	9.6	-0.4	-0.9	9.8	5.6
GWC-6		X			17.38	13.7	-0.8	-2.3	-12.3	-12.8	10.2	4.6
GWC-7		X			19.55	16.9	12.4	10.9	0.9	0.4	12.2	4.8
GWC-8		X			18.74	16.1	1.6	0.1	-9.9	-10.4	11.5	3.2
GWC-9		X			19.97	17.4	12.9	11.4	1.4	0.9	11.3	7.2
GWC-10	X				20.93	18.4	10.4	8.9	-1.1	-1.6	10.7	5.6
GWC-11	X				22.71	20.5	3.0	1.5	-8.5	-9.0	11.0	7.2
GWC-12		X			16.03	13.6	9.1	7.6	-2.4	-2.9	11.0	8.5
GWC-13		X			19.63	17.1	2.6	1.1	-8.9	-9.4	11.8	8.2
GWC-14		X			22.30	19.9	14.4	12.9	2.9	-0.1	11.7	4.1
GWC-15		X			17.83	15.7	3.7	2.2	-7.8	-8.3	12.0	7.4
GWC-15A		X			18.13	14.6	11.1	9.6	-0.4	-0.9	11.7	6.7
GWC-16		X			18.35	15.8	9.8	8.8	-1.2	-1.7	12.2	7.9
GWC-17		X			16.13	13.6	2.1	0.6	-9.4	-9.9	11.5	7.5
GWC-17A		X			15.93	13.4	9.9	8.4	-1.6	-2.1	11.7	7.5
GWC-18		X			16.17	13.8	9.3	7.8	-2.2	-2.7	12.0	8.3
GWC-19		X			19.30	16.9	4.4	2.9	-7.1	-7.6	13.0	8.5
GWC-19A		X			19.02	16.6	12.1	10.6	0.6	0.1	12.0	8.8
GWC-20		X			21.96	19.5	15.0	13.5	3.5	3.0	12.0	9.4
GWUL-24	X				26.19	24.0	7.5	5.5	-4.5	-6.0	*12.3*	*9.9*
GWUL-25	X				32.07	29.4	6.9	4.9	-5.1	-5.6	*9.3*	*9.0*
GWUL-26	X				24.00	21.2	9.7	6.7	-3.3	-3.8	*9.6*	*9.2*
GWC-29DR		X			18.39	15.9	23.1	-24.6	-34.6	-35.1	*7.2*	*5.8*
AMW-1		X			18.45	16.0	10.0	8.0	-2.0	-3.5	8.2	1.3
AMW-2		X			19.75	17.3	10.8	9.3	-0.7	-2.2	10.1	1.9
GWA-1		X		W	19.69	17.7	*	*	*	0.7	13.5	2.2
GWA-2		X		W	19.25	17.2	*	*	*	0.2	13.2	3.7
GWA-3			X		15.13	12.6	6.6	5.6	-5.4	-5.9	10.2	2.3
GWA-4			X		16.25	13.7	7.7	6.7	-4.3	-4.8	11.8	1.8
GWA-5			X		14.43	11.8	9.3	7.3	-2.7	-2.7	*9.6*	*6.1*
GWA-6			X		17.11	14.4	6.9	4.9	-5.1	-5.6	*10.1*	*6.6*
P-1			X	W	14.81	12.3				-1.2		
P-2			X	W	12.38	9.9				-0.6		
P-3			X	W	10.31	7.8				-2.7		
P-4			X	W	9.60	7.1				-3.4		
P-5			X	W	6.38	3.9				-14.6		
P-6		X	X	W	11.24							
P-7		X		W	15.96							
P-8		X		A	18.76							
P-9				A	16.77							
P-10		X		A	15.99							
P-11		X		A	18.02							
P-12		X		W	18.17							
P-13		X		W	19.44							
P-14		X		W	19.74							
P-15		X		A	18.07							

Key: A = Abandoned, W = Water level monitoring only (all others are sampled). * Log/construction not located.

Table 2: Representative Porosity Values

	Total Porosity, p_t		Effective Porosity, p_e	
Material	**Range**	**Arithmetic Mean**	**Range**	**Arithmetic Mean**
Sandstone (fine)	-	-	0.02 - 0.40	0.21
Sandstone (medium)	0.14 - 0.49	0.34	0.12 - 0.41	0.27
Siltstone	0.21 - 0.41	0.35	0.01 - 0.33	0.12
Sand (fine)	0.25 - 0.53	0.43	0.01 - 0.46	0.33
Sand (medium)	-	-	0.16 - 0.46	0.32
Sand (coarse)	0.31 - 0.46	0.39	0.18 - 0.43	0.30
Gravel (fine)	0.25 - 0.38	0.34	0.13 - 0.40	0.28
Gravel (medium)	-	-	0.17 - 0.44	0.24
Gravel (coarse)	0.24 - 0.36	0.28	0.13 - 0.25	0.21
Silt	0.34 - 0.51	0.45	0.01 - 0.39	0.20
Clay	0.34 - 0.57	0.42	0.01 - 0.18	0.06
Limestone	0.07 - 0.56	0.30	~0 - 0.36	0.14

A hyphen indicates that no data are available.

Source: McWorter, D.B., and D.K. Sunada, (1977) Groundwater Hydrology and Hydraulics: Water Resources Publications, Ft. Collins, CO

Table 3: Hydraulic Conductivity Values from Site Tests

Location / Area	Contractor and Date	Boring or Well	Dominant Material Description in Saturated Part of Screened Zone	Hydraulic Conductivity
Near GWA-2	ATE 1992	B-3	sl. Clayey fine SAND, tr. Silt (2 ft) / Silty CLAY (3 ft)	7.4 E-3*
Between NW & SW landfill quadrants	ATE 1992	B-7	sl. Clayey v.f.-med. SAND, tr. Silt (3 ft) / CLAY (2 ft)	2.5 E-3
Between NE & SE landfill quadrants	ATE 1992	B-8	firm CLAY with Sand laminations (4 ft) / sl. Clayey fine-med. SAND (1 ft)	7.2 E-6
NW part of SE landfill quadrant	ATE 1992	B-9	Clayey very fine-very coarse SAND	6.0 E-5
SE side of SW landfill quadrant	ATE 1992	B-14	slightly clayey-clayey v. fine - v. coarse SAND	1.7 E-4
NE side of SW landfill quadrant	ATE 1992	B-15	slightly clayey-clayey v. fine - v. coarse SAND	3.0 E-4
SS West	GCI 1998	B-1	slightly Clayey coarse SAND	2.88 E-5
SS West	GCI 1998	B-2	Silty Clayey fine SAND	6.35 E-6
SS West	GCI 1998	B-3	Clayey Silty fine SAND	4.94 E-6
SS West	GCI 1998	B-4	Silty Sandy CLAY	Not used*
SS West	GCI 1998	B-5	Silty SAND	8.07 E-4
SS West	GCI 1998	B-6	Silty Clayey SAND	1.82 E-5
SS South	GCI 1998	B-7	Clayey Silty coarse SAND	8.28 E-6
SS South	GCI 1998	B-8	fine SAND	1.41 E-4
SS South	GCI 1998	B-9	slightly Sandy CLAY	1.13 E-6
SS South	GCI 1998	B-10	Silty fine SAND	3.5 E-4
SS South	GCI 1998	B-11	Sandy CLAY	2.89 E-4*
SS South	GCI 1998	B-13	fine SAND (Sandy SILT above that)	5.03 E-5*
SS South	GCI 1998	B-14	Sandy CLAY	6.96 E-5
SS South	GCI 1998	B-15	CLAY	2.21 E-4*
SS South	GCI 1998	B-16	Sandy CLAY	3.09 E-6
SS South	GCI 1998	B-17	Sandy CLAY	3.12 E-6
SS South	GCI 1998	B-18	CLAY	1.26 E-3*
SS South	GCI 1998	B-19	Sandy CLAY/Clayey SAND	4.98 E-5
SS South	GCI 1998	B-20	fine-med. SAND (CLAY above)	1.76 E-5*
SS South	GCI 1998	B-21	Sandy CLAY (one ft SAND above)	1.15 E-5
SS South	GCI 1998	B-22	Silty fine SAND	1.36 E-4
SS South	GCI 1998	B-23	Silty Clayey fine SAND	6.15 E-5
SS South	GCI 1998	B-24	Clayey Silty SAND	1.23 E-5*
SS South	GCI 1998	B-25	CLAY	3.38 E-7
SS South	GCI 1998	B-26	Clayey SILT	6.86 E-6

Notes:

1. Area Definitions are:

"SS West" = Site Suitability Study area south of GWA-4, 5 and west of GWA-3,4.

"SS South" = Site Suitability Study area south of SS West and the Dean Forest Road landfill.

Exact locations of borings in SS South are not known; all other locations are shown on included figures.

2. ATE = Atlanta Testing and Engineering; GCI = Geo-Environmental Consultants, Inc.

3. Hydraulic conductivity values are in cm/sec. Only slug test results are included.

***** Values for GCI B-4 are not used because perched water was likely present. Other values with asterix are assumed erronious due to incompatibility with materials description and/or problematic test data.

Table 4: Site Hydraulic Conductivity Values by Lithology

Contractor/Date	Boring	Hydraulic Conductivity
SAND		
GCI 1998	B-8	1.41E-04
Geometric Mean =	***1.41E-04***	
Maximum =	***1.41E-04***	
slightly Clayey SAND and Silty SAND		
ATE 1992	B-7	2.50E-03
GCI 1998	B-1	2.88E-05
GCI 1998	B-5	8.07E-04
GCI 1998	B-10	3.50E-04
ATE 1992	B-14	1.70E-04
ATE 1992	B-15	3.00E-04
GCI 1998	B-22	1.36E-04
Geometric Mean =	***2.82E-04***	
Maximum =	***2.50E-03***	
Clayey SAND - Silty/Clayey SAND		
ATE 1992	B-9	6.00E-05
GCI 1998	B-2	6.35E-06
GCI 1998	B-3	4.94E-06
GCI 1998	B-6	1.82E-05
GCI 1998	B-7	8.28E-06
GCI 1998	B-23	6.15E-05
Geometric Mean =	***1.61E-05***	
Maximum =	***6.15E-05***	
Clayey SILT - SAND and CLAY		
GCI 1998	B-19	4.98E-05
GCI 1998	B-26	6.86E-06
Geometric Mean =	***1.85E-05***	
Maximum =	***4.98E-05***	

Contractor/Date	Boring	Hydraulic Conductivity
Sandy CLAY		
ATE 1992	B-8	7.20E-06
GCI 1998	B-9	1.13E-06
GCI 1998	B-14	6.96E-05
GCI 1998	B-16	3.09E-06
GCI 1998	B-17	3.12E-06
GCI 1998	B-21	1.15E-05
Geometric Mean =	***6.30E-06***	
Maximum =	***6.96E-05***	
CLAY		
GCI 1998	B-25	3.38E-07
Geometric Mean =	***3.38E-07***	
Maximum =	***3.38E-07***	

Estimated Values for Sediment Types at Dean Forest Road Site	
Typical Sediment	**Hydraulic Conductivity**
Sand	*9 E-4 cm/s**
Sl. Clayey Sand, Silty Sand	2.8 E-4 cm/s
(Silty) Clayey Sand	1.6 E-5 cm/s
Sand & Clay, Clayey Silt	*1 E-5 cm/s **
Sandy Clay	6.6 E-6 cm/s
Clay	3.4 E-7 cm/s

** Approximation, based on geometric mean of one valid test result and prediction of Beard & Weyl plots.*

*** Geometric mean between preceeding & following.*

Table 5: Hydraulic Gradient and Flow Velocity

	Direction of Flow				
	Southeast	**South**	**Southwest**	**West**	**North**
Predominant Sediment Type at Landfill Boundary	clayey Sand	sandy Clay	sandy Clay	sandy Clay	clayey Sand
Points Used to Determine Gradient	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1
	GWC-2	GWC-5	GWC-8	GWA-1	GWC-17A
Flow Path Length (ft)	650	1700	2100	2000	700
Average Gradient	0.0028	0.0024	0.0021	0.0020	0.0022
Maximum Gradient	0.0074	0.0057	0.0037	0.0090	0.0092
Porosity	0.22	0.12	0.12	0.12	0.22
Hydraulic Conductivity (cm/s)	1.6E-05	6.6E-06	6.6E-06	6.6E-06	1.6E-05
Average Flow Velocity (feet/year)	0.21	0.13	0.12	0.12	0.16
Maximum Flow Velocity (feet/year)	0.56	0.33	0.21	0.51	0.69

Table 6: Samples for Soil Description and Acid Sulfate Testing

Sample	Date	Location	Description	Photos
Grab samples for acid sulfate field testing, obtained near the ground surface by trowel unless otherwise noted.				
AST-1	5/11/06	SW landfill quadrant, south excavation wall, 200 ft from corner.	Grey fine SAND (below oxidized horizon)	1301, 1313
AST-2	5/11/06	As AST-1 but deeper into face of excavation.	Grey fine SAND, tr(+) dark nodules	1301, 1313
AST-3	5/11/06	As AST-1 but above oxidized horizon.	Orange and tan fine SAND, partly indurated	1301, 1313
AST-4	5/11/06	Hand auger hole near AST-1, sample interval 5.7-6.2 ft BLS.	Grey clayey fine SAND; few orange streaks	1319
AST-5	5/11/06	Borrow area, center of gulch near quicksand, below water table.	Dark grey fine SAND (turned or-gry in weeks)	1333, 1382
AST-6	5/11/06	Borrow area, dewatered sediments at higher elevations.	Dark grey-black w/yellow sl. silty fine SAND	1342, 1361
AST-7	5/11/06	As AST-6 but ~40 ft. farther south.	Dark grey to black w/yellow fine SAND	1341, 1360
AST-8	5/11/06	Borrow area, south hillside, area of orange soils above shell beds.	Orange med-fine SAND	1497
AST-9	6/20/06	Borrow area, bank below AMW-1, near surface.	Grey partly-cemented fine SAND, tr organics	1598, 1600
AST-9 (2)	6/20/06	Bank below AMW-1, near surface.	Tan sand as above (just above grey horizon)	1598, 1600
AST-10	6/21/06	Borrow area, near WL @ 130' W, 300' N of AMW-1.	Dark grey fine SAND	1646-47
AST-11	6/21/06	Oxidized soil above AST-10 (over 2.6' above WL).	Tan with orange mottled fine SAND	1647-49
AST-12	6/21/06	Opposite side of N-S ditch from AST-11.	Dark grey fine SAND	1664-69
AST-13	6/21/06	Borrow area, opposite AMW-2	Med. grey fine SAND (layered with tan sand)	1672, 1674
AST-14	6/21/06	Location near AST-13, but higher in section.	As above: both have tr(-) dark minerals	1680-81
AST-15	6/21/06	Saturated soil, water line, 11 ft below base of well AMW-1.	Light grey-tan Sandy CLAY; soft	1685, 1694-95
AST-16	6/21/06	Borrow area, south of E-W center road, opp. GWA-2.	Grey fine SAND, tr(-) dark minerals	1697-1706
AST-17	6/21/06	As above, middle layer below AST-16.	Grey hard CLAY; layered, shaly	1697-1706
AST-18	6/21/06	As above, lower layer below AST-17.	Tan/orange Silty SAND, tr. Clay	1697-1706
Samples from south end of trench for force main, 6.5 ft deep, 20-25 ft north of GWC-2.				
TP-1	6/21/06	Depth 1.0 - 1.5 ft.	Tan, brown, orange, grey v.f.-m. Silty SAND	1637, 1639
TP-2	6/21/06	Depth 2.5 - 3.0 ft.	Light grey (with orange mottles) stiff CLAY	1638, 1643
TP-3	6/21/06	Depth 4.0 - 5.0 ft.	Light grey (with orange mottles) Sandy CLAY	1644-45
Samples for field and laboratory testing of potential acid sulfate (PASS) conditions, obtained by hand auger.				
ASL-1	8/9/06	Low area in outer ditch by jarosite, 110' W, 65' S from AMW-2. Sample depth 2.0-2.85 ft; water level 2.50 ft.	Greenish-grey (NRC 150) fine SAND (0.1-0.25 mm dominant), well-sorted, subangular. Trace to some silt and clay. Trace(-) mica, occ. rounded c-vc sand grain. Trace v.f. soft, dark mineral; slightly more abundant in ASL-2 and ASL-4 (0.25-0.5%). No shell fragments.	2063-4, 2067-8
ASL-2	8/9/06	As above but 60' south of ASL-1, against E bank of ditch. Sample depth 2.50-3.25 ft; water level 2.65 ft..		2071-2, 2080-1
ASL-3	8/9/06	By N bank in E-W ditch segment, by rivulet, 80' W of ASL-2. Sample depth 0.8-1.0 ft; water level 0.65 ft.		2086-88
ASL-4	8/9/06	Next to bank cut, by quicksand; 125' N of ASL-3, nearly opposite AMW-2. Sample depth 1.75-3.0 ft; water level 1.75 ft.		2091-93
ASL-5	8/9/06	Base of steep bank by broad quicksand area; ~400' W, 150' N of AMW-2. Sample depth 1.0-1.2 ft; water level at surface.		2096

Table 7: Sample Location Elevations

Location	Description	Δ Elev.	From Reference Point	Elev. (feet)	Method of Estimating
AST-10	Elev. of saturated sediment, 130' W, 300' N of AMW-1	-15.2	Cement pad at base of AMW-2 (elev. = 17.3)	2.1	5x hand level.
AST-12:	Opposite side of N-S ditch from AST-11.	-11.2	Cement pad at base of AMW-2 (elev. = 17.3)	6.1	5x hand level.
AST-13	Borrow area, opposite AMW-2	-16.2	Cement pad at base of AMW-2 (elev. = 17.3)	1.1	5x hand level.
AST-14	Location near AST-13, but higher in section	-12.7	Cement pad at base of AMW-2 (elev. = 17.3)	4.6	5x hand level.
Standing water	In Borrow Area, ~ 115 ft SSW from ASW-1	NA	NA	6.08	Surveyed 6/30/06 by Southern Surveying

Table 8: Summary of Acid Sulfate Test Results

		Field Peroxide Tests									Lab		
Sample / Aliquot	Sample Description	E.T. (days)	Test Method	pH_F	pH_{FOX}	pH_F - pH_{FOX}	Reaction Rate	Max. Temp. Rise (°C)	Initial S.C. (uS/cm)	Final S.C. (uS/cm)	E.T. (days)	S_{Cr} (%Sulfur)	Interpretation of Results
AST-1	Grey fine SAND	0	P1	4.55	2.86	1.69	H	2.8					PASS likely, organics also.
AST-2a	Grey fine SAND, tr(+) dark nodules	0	P1	4.71	3.14	1.57	M	1.4					PASS possible, but foamy bubbling partly due to organics.
AST-2b		28	P1	3.82	2.16	1.66	M	1.3					
AST-3	Orange/tan ptly indurated fine SAND	0	P1	4.43	3.95	0.48	L	0.3					May be leached AASS.
AST-4	Grey clayey fine SAND	0	P1	5.66	5.36	0.30	L	0.2					Not reactive.
AST-5	Dark grey fine SAND	28	P1	3.38	1.70	1.68	V	42.9					PASS, partly oxidized.
AST-6	Dark grey-black silty fine SAND	28	P1	2.14	1.93	0.21	H	1.7					AASS. Largely oxidized.
AST-8	Orange med-fine SAND	28	P2	3.72	3.05	0.67	L	2.7		281			Not very reactive, may be AASS.
AST-9	Grey partly-cemented fine SAND	7	P2	3.74	1.95	1.79	H	2.4		3.76			PASS, partly oxidized.
AST-10a	Dark grey fine SAND	6	P2	3.49	1.22	2.27	V	33.2		11.46			PASS. Has already undergone some oxidation but much potential remains.
AST-10b		6	P2	3.50	1.01	2.49	V	21.6	905	11.12			
AST-10c		6	P2	3.50	1.01	2.49	V	19.0	685	9.76			
AST-10d		12	P2	2.65	1.20	1.45	V	41.0	3	11.66			(Initial flocs; more oxidized)
AST-11	Tan/orange mottled fine SAND	6	P2	2.08	1.58	0.50	M	6.7		4.62			AASS.
AST-12	Dark grey fine SAND	6	P2	2.12	0.86	1.26	X	37.5		11.39			PASS, partly oxidized.
AST-13	Med. grey fine SAND, tr(-) dark min.	6	P2	3.24	0.96	2.28	X	17.9					PASS, partly oxidized.
AST-14a	Med. grey fine SAND, tr(-) dark min.	8	P2	3.40	1.49	1.91	H	14.1	1865	5.35			PASS, partly oxidized. Sulfuric acid odor when residue heated.
AST-14b		13	P2	3.29	1.71	1.58	M	5.8	2.1	2.1			
AST-15	Light grey-tan Sandy CLAY; soft	8	P2	4.72	4.03	0.69	M	1.8	227	250			Slow reaction (pH=3.80 @ 8 hrs)
AST-16	Grey fine SAND, tr(-) dark minerals	8	P2	5.18	4.61	0.57	H	4.4	32.4	115			Weakly reactive, poss. organics.
AST-17	Grey hard CLAY; layered, shaly	8	P2	4.48	3.01	1.47	H	5.2	205	210			PASS possible.
AST-18	Tan/orange Silty SAND, tr. Clay	8	P2	4.59	3.60	0.99	M	3.1	48.4	105			Weakly reactive.
ASL-1a	Greenish-grey fine SAND, well-sorted, trace to some silt and clay, trace (-) mica, trace (-) vf soft, dark mineral. No shell fragments. Samples from several locations, mostly below water table.	1	P3	5.18	1.45	3.73	X	29.9	280	7.5	8	0.37	PASS conclusively established, has not undergone oxidation.
ASL-1b		1	P4	5.18	1.25	3.93	V	40.5	NA	NA			
ASL-2a		1	P3	5.48	1.67	3.81	X	26.1	180	8.3	8	0.31	PASS conclusively established, has not undergone oxidation.
ASL-2b		1	P4	5.48	1.17	4.31	V	41.8	NA	NA			
ASL-3a		1	P3	5.73	1.45	4.28	V	36.5	132	9.2	8	0.49	PASS conclusively established, has not undergone oxidation.
ASL-3b		1	P4	5.73	1.21	4.52	V	42.8	NA	NA			
ASL-4a		1	P3	6.17	1.82	4.35	X	13.6	235	4.8	8	0.24	PASS conclusively established, has not undergone oxidation.
ASL-4b		1	P4	6.17	1.50	4.67	X	25.2	NA	NA			
ASL-5a		1	P3	5.70	1.72	3.98	V	42.5	95	6.4	8	0.36	PASS conclusively established, has not undergone oxidation.
ASL-5b		1	P4	5.70	1.51	4.19	V	44.8	NA	NA			

Table 8: (continued)

Definitions:

E.T. =	Time elapsed from sample collection to testing, in days. Significant due to potential for oxidation in container.
pH_F =	Field value of soil pH, determined from a slurry of approximately equal parts distilled or deionized water and soil.
pH_{FOX} =	Field value of soil pH after oxidation with pH-adjusted (pH 4.5 to 5.5) hydrogen peroxide. Specifics depend on method employed.
PASS =	Potential acid sulfate soil. Contains mostly unoxidized inorganic sulfur predominantly in the form of iron sulfide (pyrite).
AASS =	Actual acid sufate soil. Much of the pyrite has been oxidized resulting in pH typically less than 4.0, but may contain pyrite that can undergo oxidation and release additional sulfate as indicated by the magnitude of (pH_F - pH_{FOX}).

L =	Low reaction	Little or no bubbling or visible gas generation.
M =	Medium reaction	Slow bubbling; gas bubbles form in sediment and migrate upward or are released by disturbance.
H =	High reaction	Rapid gas generation and bubbling.
X =	Extreme reaction	Reaction similar to water boiling; surface is roiled, water is turbulent. Temperature increases.
V =	Volcanic reaction	As above but like a high boil; gas visible as vapor cloud, sizzling sound. Large temperature increase.

Test Methods:

P1	Peroxide field test. Slurry of 1 part soil + 2 to 4 parts water, roughly 1/2 part 30% hydrogen peroxide added to slurry.
P2	Peroxide field test. Slurry of 10 ml soil + 10 ml water, 5 ml 30% hydrogen peroxide added to slurry.
P3	Peroxide field test. Slurry of 10 ml soil + 10 ml water, 10 ml 30% hydrogen peroxide added to slurry.
P4	Peroxide field test. (a) Slurry of 10 ml soil + 10 ml water; (b) 5 ml 30% hydrogen peroxide added to separate 5 ml soil aliquot (not water slurry). Corresponds to field methods in "Acid Sulfate Soils Laboratory Methods Guidelines, Ver. 2.1", Department of Natural Resources, Australia, June 2004; and "(Draft) Identification and Investigation of Acid Sulfate Soils", Department of Environment (Australia), May 2006.

Interpretation:

From "(Draft) Identification and Investigation of Acid Sulfate Soils", Department of Environment (Australia), May 2006:

A combination of three factors is considered in arriving at a 'positive field sulfide identification':

• A reaction with hydrogen peroxide - the strength of the reaction is a useful indicator but cannot be used alone. Organic matter, coffee rock and other soil constituents such as manganese oxides can also cause a reaction. Care should be exercised in interpreting a reaction on surface soils and high organic matter soils such as peats and coffee rock, and some mangrove/estuarine muds and marine clays. This reaction should be rated, e.g. L = Low reaction, M = Medium reaction, H = High reaction, X = Extreme reaction, V = volcanic reaction.

• The actual value of pH_{FOX}. - If pH_{FOX} <3, and a significant reaction occurred, then it strongly indicates a PASS. The more the pH_{FOX} drops below 3, the more positive the presence of inorganic sulfides.

• A much lower pH_{FOX} than field pH_F - The greater the difference between pH_{FOX} and pH_F, the more indicative of the presence of PASS. This difference may not be as great if starting with an already very acid pH_F (close to 4). Where fine shell, coral or carbonate is present the change in pH may not be as large due to buffering. The 'fizz test' (effervescence with 1 M HCl) should be used to test for carbonates and shell.

Of these three factors, the final pH_{FOX} value is the most conclusive indicator.

Table 9: TCLP Results for Conditioned Flyash and Bottom Ash

		Date	Aug-95	Aug-96	Jul-97	Jul-98	Aug-99	Jul-00	Aug-01	Aug-02	Aug-03	Jul-04	Jul-05
Mean (Maximum), mg/L	Flyash TCLP	Arsenic											
		Barium				0.80 (1.2)	0.93 (1.3)	0.86 (1.3)	1.41 (2.0)	1.29 (1.7)	1.34 (1.8)	1.64 (2.1)	1.40 (2.2)
		Cadmium	0.15 (0.51)	0.15 (0.66)	0.13 (0.76)	0.11 (0.63)	0.57 (0.10)	0.23 (1.8)	0.41 (2.8)				
		Chromium	0.15 (0.40)	0.35 (0.60)	0.14 (0.30)		0.10 (0.10)	0.11 (0.20)	0.10 (0.10)	0.11 (0.20)	0.10 (0.10)	0.10 (0.10)	
		Lead		0.56 (1.4)			1.18 (5.1)				0.54 (0.90)	0.52 (0.80)	0.62 (1.7)
		Mercury											0.012 (0.02)
		Selenium									0.13 (0.3)	0.11 (0.20)	
		Silver											
	Bottom Ash TCLP	Arsenic											
		Barium					0.54 (0.90)	0.52 (1.0)	0.50 (0.60)		0.52 (0.80)		0.52 (0.80)
		Cadmium	0.07 (0.37)	0.07 (0.50)			0.54 (1.2)	0.05 (0.05)				0.17 (1.9)	0.12 (0.50)
		Chromium							0.10 (0.10)				
		Lead	0.98 (9.2)				1.36 (10)		0.56 (2.0)	0.56 (2.3)	1.55 (22)	0.51 (0.90)	0.95 (10)
		Mercury											
		Selenium											
		Silver											
14 Flyash Samples													
Number (MDL)	Flyash Detects	Arsenic	0	0	0	0	0	0	0	0	0	0	0
		Barium	1 (0.50)	0	0	13 (0.50)	13 (0.50)	10 (0.50)	14 (0.50)	14 (0.50)	14 (0.50)	14 (0.50)	13 (0.50)
		Cadmium	5 (0.05)	3 (0.05)	5 (0.05)	5 (0.05)	2 (0.05)	1 (0.05)	2 (0.05)	0	0	0	0
		Chromium	8 (0.10)	13 (0.10)	4 (0.10)	0	1 (0.10)	1 (0.10)	1 (0.10)	4 (0.10)	2 (0.10)	4 (0.10)	0
		Lead	0	1 (0.50)	0	0	8 (0.50)	0	0	0	2 (0.50)	1 (0.50)	3 (0.50)
		Mercury	0	0	0	0	0	0	0	0	0	0	3 (0.01)
		Selenium	0	0	0	0	0	0	0	0	3 (0.10)	7 (0.10)	0
		Silver	0	0	0	0	0	0	0	0	0	0	0
28 Bottom Ash Samples													
Number (MDL)	Bottom Ash Detects	Arsenic	0	0	0	0	0	0	0	0	0	0	0
		Barium	1	0	0	0	6 (0.50)	1 (0.50)	3 (0.50)	28 (0.50)	3 (0.50)	0 (0.50)	2 (0.50)
		Cadmium	3 (0.05)	2 (0.05)	0	0	4 (0.05)	1 (0.05)	0	0	0	2 (0.10)	6 (0.10)
		Chromium	0	0	0	0	0	0	1 (0.10)	0	0	0	0
		Lead	5 (0.50)	0	0	0	8 (0.50)	0	2 (0.50)	1 (0.50)	4 (0.50)	1 (0.50)	7 (0.50)
		Mercury	0	0	0	0	0	0	0	0	0	0	0
		Selenium	0	0	0	0	0	0	0	0	0	0	0
		Silver	0	0	0	0	0	0	0	0	0	0	0

Note: Some values have been rounded to significant digits.

Table 10: Results of Subgrade Testing

		Metal and Concentration (mg/kg)															
Trench No. & Sample	**Contents**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
T28-S1	Ash	--	2.4	30	--	--	10	--	--	5.5	--	--	--	--	--	14	5.9
T28-S2	Ash	--	--	43.2	--	--	7.84	--	--	--	--	--	--	--	--	10.7	5.46
T28-S3	Ash	--	--	80.6	--	--	7.02	--	3.27	12.3	--	--	--	--	--	1.5	12.3
T29-S1	Ash	--	1.1	74	--	--	9.7	--	1.5	7.3	--	1.3	--	--	--	10	5.1
T29-S2	Ash	--	--	18.3	--	--	5.27	--	--	--	--	--	--	--	--	6.78	6.8
T29-S3	Ash	--	--	41	--	--	4.77	--	5.35	8.34	--	--	--	--	--	7.69	19.4
T30-S1	Ash	--	6.1	35	0.52	0.55	17	--	1.6	7.6	--	2	--	--	--	32	9.5
T30-S2	Ash	--	--	35	--	--	9.68	--	7.68	--	--	--	--	--	--	7.09	14.7
T30-S3	Ash	--	--	29.8	--	--	2.63	--	2180	14.1	--	--	--	--	--	3.24	296
T30-S3A	Ash	--	--	53.1	--	--	3.32	--	--	--	--	--	--	--	--	4.16	7.01
T30-S4A	Ash	--	--	29.9	--	--	3.04	--	2.7	6.9	--	--	--	--	--	3.97	17.9
T30-S4B	Ash	--	--	26.8	--	--	3.05	2.58	--	--	--	--	--	--	--	--	4.6
T30-S4C	Ash	--	--	12.1	--	--	--	--	--	--	--	--	--	--	--	--	--
T30-S4D	Ash	--	--	57.5	--	--	2.74	--	--	--	--	--	--	--	--	5.2	4.69
T31-S1	Ash	1.3	2.7	20	--	--	7.5	--	9.4	22	--	1.9	--	--	--	13	59
T31-S2	Ash	--	--	32.8	--	--	5.25	--	--	--	--	--	--	--	--	6.51	5.87
T31-S3	Ash	--	3.42	79.5	--	--	14.2	2.79	22.2	26.6	--	4.4	--	--	--	11.6	103
T31-S3A	Ash	--	--	145	--	--	6.89	3.36	--	15	--	--	--	--	--	4.29	11.2
T31-S4A	Ash	--	--	67.5	--	--	5.28	3.38	--	6.72	--	--	--	--	--	9.63	5.2
T31-S4B	Ash	--	--	129	--	--	6.11	2.07	2.05	6.91	--	--	--	--	--	7.8	9.33
T31-S4C	Ash	--	--	188	3.47	--	8.34	3.49	3.8	5.56	--	--	--	--	--	8.82	9.91
T31-S4D	Ash	--	--	92.4	--	--	6.38	3.69	1.77	5.64	--	--	--	--	--	9.22	8.46
T31-S5	Ash	--	--	100	--	--	14.4	4.43	2.6	6.22	--	--	--	--	--	15.7	20.5
T31-S5A	Ash	--	--	80.9	--	--	7.24	--	--	4.78	--	--	--	--	--	7.87	9.7
T31-S5B	Ash	--	--	105	--	--	14.1	4.02	--	7.41	--	--	--	--	--	17.1	11.9
T31-S5C	Ash	--	33.4	99	--	--	13.7	6.5	3.48	8.74	--	6.96	--	--	--	19.5	31.2
T31-S6	Ash	--	--	85.9	--	--	8.44	5.94	6.39	6.5	--	--	--	--	--	13.6	17.6
T31-S6A	Ash	--	--	101	--	--	4.75	--	--	7.08	--	--	--	--	--	--	7.19
T31-S6B	Ash	--	--	78.7	--	--	7.36	3.41	--	8.56	--	--	--	--	--	7.54	8.27
T32-S1	MSW	--	--	33.2	--	--	14.6	--	--	5.01	0.1	--	--	--	--	15.8	10
T32-S2	MSW	0.84	7	170	1.1	--	34	4.6	2.7	21	--	7.5	--	--	0.24	45	37
T33-S1	MSW	--	--	13.6	--	--	9.23	--	2.09	3.39	0.098	--	--	--	--	14.5	5.82
T33-S2	MSW	--	3.2	52	0.32	--	18	2.3	0.72	7.5	--	3.3	--	--	--	19	9.9
T34-S1	MSW	--	7.78	35.4	--	--	10.6	3.07	--	4.34	0.099	--	--	--	--	11.9	18.3
T34-S2	MSW	--	0.91	9.9	--	--	3.2	0.26	--	2.2	--	0.76	--	--	--	5.4	--
T35-S1A	MSW	--	2.1	39	0.28	--	14	--	1.4	10	--	1.5	--	--	--	22	11
T35-S1A (Dup)	MSW	--	1.6	34	0.27	--	14	--	1.3	9.1	--	1.4	--	--	--	21	11
T35-S2	MSW	--	5.3	90	0.68	--	14	3.3	2.2	8.9	--	3.6	--	--	--	16	13
T35-S2 (Dup)	MSW	--	4.6	66	0.52	--	13	2.7	1.2	7.3	--	3.4	--	--	--	14	9.9
T36-S1A	MSW	--	1.3	50	0.31	--	19	2.3	1.1	12	--	3.9	--	--	--	18	11
T36-S2	MSW	--	3.2	69	0.41	--	11	1.4	2.1	9.6	--	2.3	--	--	--	14	9.9
T37-S1A	MSW	--	1.6	31	0.25	--	12	--	1.4	8.7	--	1.8	--	--	--	15	15
T37-S2	MSW	--	--	17	0.23	--	12	--	--	7.4	--	1.6	--	--	--	13	6.1
T38-S1A	MSW	--	3	64	0.3	--	21	--	1.4	19	--	1.9	--	--	--	20	8
T38-S2	MSW	--	--	72	0.42	--	14	2.6	1.6	6.4	--	3.5	--	--	--	13	9.3
T39A-S1A	Ash	--	--	22	0.26	--	17	--	--	8.5	0.051	2.2	--	--	--	15	11
T39A-S2	Ash	--	5.3	67	0.66	--	20	2.8	--	11	--	4.4	--	--	--	31	12
T39W-S1A	MSW	--	1.9	55	0.24	--	15	--	5.3	12	--	2.1	--	--	--	18	27
T39W-S2	MSW	--	--	100	0.54	--	15	1.8	1.7	11	--	3.4	--	--	--	20	10
TP-1 (tr. 43)	MSW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TP-2 (tr. 42)	Ash	--	--	1.08	--	--	--	--	--	--	--	--	--	--	--	--	--
TP-3 (tr. 42)	Ash	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.52
TP-4 (tr. 42)	Ash	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TP-5 (tr. 42)	Ash	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TP-6 (tr. 41)	MSW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TP-7 (tr. 41)	MSW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TP-8 (tr.40)	MSW	--	--	1.16	--	--	--	--	--	--	--	--	--	--	--	--	--
WT-S1	MSW	--	--	61	1.1	--	22	4.5	4.2	9.3	--	4.9	--	--	--	25	26
WT-S2	MSW	--	1.2	31	0.3	--	12	--	1.6	5.5	--	1.4	--	--	--	15	6.5
Non-Detect RL (min)		0.10	0.10	1.00	0.10	0.10	0.50	0.50	0.50	0.50	0.010	0.50	0.10	0.10	0.10	0.50	0.50
Non-Detect RL (ave.)		2.19	2.79	1.00	1.42	0.54	0.60	1.29	1.48	2.33	0.072	3.11	1.77	1.63	1.98	1.45	1.17
Non-Detect RL (max)		4.95	4.95	1.00	2.47	1.96	1.40	2.47	2.47	4.95	0.110	4.95	4.91	4.95	4.95	4.79	4.20

Note: *Cells without data (--) are non-detections. RL = Reporting Limit*

Table 11: Summary of Subgrade Testing

	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (1)	Lead	Nickel	Vanadium	Zinc
Percent of Detections	36%	90%	34%	2%	85%	41%	53%	73%	41%	81%	85%
For Detections:					Concentrations (mg/kg)						
Average in Ash Trenches	7.8	64.4	1.23	0.55	8.4	3.7	5.3	9.5	3.3	10.9	24.2
Average in MSW Trenches	3.2	52.1	0.45	NA	14.9	2.6	2.0	9.0	2.8	17.8	13.4
Average for All	**4.7**	**59.5**	**0.61**	**0.55**	**11.0**	**3.2**	**3.5**	**9.3**	**3.0**	**13.8**	**20.1**
Average in Shallow Water Clayey Sediment (2)	5	460	3	0.6	60	13	56	22	35	145	92
Average in Sandstone (3)	1	320	<1	0.05	35	0.3	30	10	9	20	30

From Table 42 in Salomons, W. and Förstner, U., 1984, Metals in the Hydrocycle

Notes:

1. Average for Copper does not include one concentration of 2180 mg/kg in Trench T30 (ash). This is two orders of magnitude higher than the next highest value and is clearly not representative.

2. Shallow water argillaceous sediments (continental & marine) are said to be the "proper reference basis for the calculation of anthropogenic effects" in most cases. Values for barium & cadmium not were given for shallow water sediment; used values from "average in soil" from same table.

3. Sandstone or sandy sediments contain less clay, have lower trace element concentrations.

Table 12: Headspace Monitoring Results

DATE: 27 JULY 06 **INSTRUMENT: LANDTEC GEM 2000 GAS ANALYZER**

ATMOSPHERIC CONDITIONS: Sunny, 95 Degrees, Barometric Pressure 29.99" Hg

SAMPLED BY: F.E. Prevatt

Well ID	%CH4	%CO2	%O2	% Balance	Time
GWA 1	0	0	20.8	79.2	12:46
GWA 2	0	0	20.7	79.3	12:52
GWA 3	0	0	20.5	79.4	13:00
GWA 4	0	0	20.5	79.5	13:04
GWA 5	0	0	20.5	79.5	13:10
GWA 6	0	0	20.5	79.5	13:15
GWC 14	0	0	20.8	79.2	13:26
GWC 20	0	0	20.7	79.3	13:32
GWC 19	0	0	20.7	79.3	13:35
GWC 19A	0	0	20.8	79.2	13:37
GWC 18	0	0	20.7	79.3	13:41
GWC 12	0	0	20.5	79.5	13:43
GWC 17	0	0	20.3	79.6	13:47
GWC 17A	0	0	20.3	79.6	13:49
GWC 13	0	0	20.2	79.8	13:52
GWC 16	0	0	20.2	79.8	13:55
GWC 15	0	0	20.2	79.8	14:02
GWC 15A	0	0	20.1	79.8	14:00
GWC 9	0	0	20.1	79.8	14:05
GWUL24	0	0	20.1	79.9	14:10
GWUL25	0.1	0	20.1	79.8	14:14
GWUL26	0	0	20.4	79.6	14:27
GWC 1	0	0	20.5	79.5	14:35
GWC 4	0	0	20.9	79.1	14:41
GWC 3	0	0	20.6	79.4	14:46
GWC 2	0.1	0	20.6	79.3	14:50
AMW 2	0	0	20.8	79.2	15:00
AMW 1	0	0	20.8	79.2	15:05
GWC 8	0	0	20.7	79.3	15:08
GWC 7	0	0	20.8	79.2	15:12
GWC 6	0	0	20.8	79.2	15:15
GWC29DR	0	0	20.8	79.1	15:18
GWC 5	0	0	20.8	79.1	15:20

Table 13: Leachate Composite Analytical Results (ug/L)

Date	Antimony (Leachate)	Arsenic (Leachate)	Cadmium (Leachate)	Chromium (Leachate)	Lead (Leachate)	Mercury (Leachate)	Nickel (Leachate)	Zinc (Leachate)	Iron (mg/L)	pH of Leachate	Lab
2/7/95	4	9	0.05	0.5	0.5	0.15	10	30		7.7	Spectrum
2/17/95	5	7	0.9	5	3	0.15	5	30	27.9	7.2	Spectrum
3/1/95	3	5	0.3	5	0.5	0.15	5	20	23.3	7.2	Spectrum
3/9/95	5	8	0.05	5	0.5	0.15	5	30	74.8	7.6	Spectrum
3/17/95	6	12	0.2	5	0.5	0.15	5	40	68.9	6.9	Spectrum
4/6/95	1	15	0.05	5	3	0.15	5	30	62.1	7.6	Spectrum
5/19/95	1	1	48.3	5	3	0.15	140	350	12.7	7.2	Spectrum
6/21/95	1	1	93	40	0.5	0.15	150	540	15.0	6.6	Spectrum
6/29/95	1	2	26.6	20	0.5	0.15	110	350	12.6	6.5	Spectrum
7/14/95	1	15	283	10	9	0.15	150	1040	107.0	6.4	Spectrum
7/25/95	1	1	32.6	10	0.5	0.15	110	530	50.5	6.4	Spectrum
8/2/95	1	5	12.8	40	0.5	0.15	130	330	28.8	6.6	Spectrum
8/16/95	1	3	5.2	10	0.5	0.15	80	130	23.9	6.9	Spectrum
9/1/95	1	4	2.6	10	0.5	0.15	40	250	63.4	6.7	Spectrum
10/11/95	1	3	0.7	10	0.5	0.15	50	60	88.0	6.8	Spectrum
11/30/95	1	6	5.2	10	8	0.15	15	1960	40.4	7.0	Spectrum
12/7/95	1	5	0.5	10	5	0.1	80	280	72.3	7.3	Spectrum
1/3/96	1	1	7.5	10	9	0.1	80	320	26.0	7.1	Spectrum
1/8/96	8	7	9.4	90	13	0.1	110	300			Spectrum
2/6/96	3.2	5	10.6	10	3	0.05	50	250	55.0	7.3	Spectrum
2/29/96	5	1	8.2	10	2	0.05	15	210	50.9	7.1	Spectrum
4/3/96	3	9	7.5	40	0.5	0.15	140	140	85.3	6.7	Spectrum
5/16/96	6	5	0.8	25	2	0.05	70	50	85.0	6.6	Spectrum
6/17/96	3	1	6.6	25	2	0.05	40	60	50.4	6.4	Spectrum
7/16/96	0.45	13	1.4	25	0.5	0.05	8	9	94.4	6.6	Spectrum
8/15/96	2.5	2.5	4.4	2.5	6	0.1	23	10	36.4	6.84	SAS
9/17/96	2.5	19	14.4	8	8	0.1	19	46	86.2	6.60	SAS
10/17/96	2.5	22	20	15	4	0.1	16	54	59.8	6.72	SAS
11/14/96	2.5	29	19	9	6	0.1	5	28	67.4	7.18	SAS
12/10/96	2.5	2.5	0.5	2.5	1.5	0.1	5	10	95.0	6.88	SAS
1/23/97	2.5	27	0.5	23	1.5	5.27	5	25		7.13	SAS
2/12/97	2.5	17	11	23	8	0.1	5	59		7.02	SAS
3/6/97	2.5	14	13	8	5	0.1	5	10	120	6.87	SAS
4/10/97	2.5	2.5	0.5	2.5	1.5	0.1	5	10	100	6.95	SAS
5/6/97	2.5	2.5	0.5	2.5	1.5	0.1	5	10	92.6	7.13	Sp. As.
6/2/97	2.5	18	0.5	2.5	1.5	0.1	5	30	123	6.95	Sp. As.
7/1/97	2.5	13	5	2.5	1.5	0.1	5	10	56.1		Sp. As.
8/6/97	2.5	2.5	0.5	10	1.5	0.1	85	270	1.72	3.60	Sp. As.
9/2/97	2.5	2.5	0.5	2.5	1.5	0.1	5	10	98.1	5.72	Sp. As.
10/1/97	2.5	8	2	6	4	0.1	15	67	61.5		Sp. As.
11/6/97	2.5	2.5	0.5	2.5	1.5	0.1	5	10	75.6	6.58	Sp. As.
12/2/97	2.5	2.5	0.5	2.5	1.5	0.1	5	108	23.9	5.96	Sp. As.
1/5/98	2.5	8	6	2.5	1.5	0.1	5	170	46.6	6.01	Sp. As.
2/3/98	2.5	19	1.5	2.5	1.5	0.1	5	22	40.7	7.00	Sp. As.
2/3/98	2.5	21	1.3	2.5	1.5	0.1	5	10			Sp. As.

Table 13: Leachate Composite Analytical Results (ug/L) - continued

3/3/98	*2.5*	23	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	39.7	6.78	Sp. As.
4/1/98	*2.5*	16	*0.5*	*2.5*	*1.5*	*0.1*	*5*	195	15.1	6.10	Sp. As.
5/4/98	*2.5*	17	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	34.2	6.15	Sp. As.
6/1/98	*2.5*	29	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	66.4	6.60	Sp. As.
7/1/98	*2.5*	10	*0.5*	*2.5*	*1.5*	*0.1*	*5*	68	33.5	6.19	Sp. As.
8/3/98	*2.5*	34	*0.5*	*2.5*	*1.5*	*0.1*	*5*	35	85.0	6.52	Sp. As.
9/1/98	*2.5*	9	*0.5*	*2.5*	*1.5*	0.41	*5*	*10*	40.0	6.63	Sp. As.
10/1/98	*2.5*	*2.5*	*0.5*	*2.5*	*1.5*	*0.1*	*5*	54	24.2	6.38	Sp. As.
11/2/98	*2.5*	10	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	46.2	6.81	Sp. As.
12/1/98	*2.5*	16	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	76.4	6.68	Sp. As.
1/7/99	*2.5*	11	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	62.1	7.10	Sp. As.
2/3/99	*2.5*	24	6	19	4	*0.1*	16	58	148.0	6.42	Sp. As.
3/2/99	*2.5*	12	*0.5*	15	*1.5*	*0.1*	*5*	41	92.2	7.27	Sp. As.
4/6/99	*2.5*	11	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	81.8	7.05	Sp. As.
5/5/99	*2.5*	19	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	84.9	7.06	Sp. As.
6/9/99	*2.5*	16	3	11	*1.5*	*0.1*	14	*10*	86.7	7.06	Sp. As.
7/2/99	*2.5*	12	*0.5*	6	*1.5*	*0.1*	*5*	20	63.7	6.67	Sp. As.
8/3/99	*2.5*	24	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	85.9	7.17	Sp. As.
9/9/99	*2.5*	22	*0.5*	*2.5*	*1.5*	*0.1*	*5*	*10*	62.7	7.23	Sp. As.
10/5/99	*2.5*	28	8	10	*1.5*	*0.1*	*5*	65	111.0	6.9	Sp. As.
12/3/99	*0.45*	*1*	*0.05*	*5*	*0.5*	*0.05*	*10*	*3*		7.5	Spectrum
6/1/00	*0.45*	*1*	*0.05*	*5*	*0.5*	*0.05*	300	220		7.2	Spectrum
12/6/00	*0.45*	*1*	*0.05*	*5*	*0.5*	*0.05*	*10*	70		7.2	Spectrum
6/6/01	*0.45*	18	1.4	*5*	*0.5*	*0.05*	220	220		6.8	Spectrum
4/2/02	*0.45*	*1*	*0.05*	*1*	*0.5*	*0.05*	30	30		6.5	Spectrum
12/4/02	*1*	8	*0.05*	*1*	*0.5*	*0.25*	*2.5*	30		6.6	Spectrum
6/10/03	*1*	80	2	20	*0.5*	*0.25*	20	90		6.7	Spectrum
12/2/03	*1*	8	0.6	40	4	ND	290	180		6.7	Spectrum
6/8/04	*1*	14	*0.05*	**5**	*0.5*	*0.05*	*6.5*	150		6.8	Spectrum
12/7/04	*1*	*1*	*0.5*	*0.5*	*1*	*0.05*	10	50		6.5	Spectrum
6/2/05	*1*	15	*0.5*	*0.5*	*1*	*0.05*	10	60		6.6	Spectrum
12/9/05	1.5	2.1	0.26	5.8	3.5	0.22	4.2	70		6.50	STL

Values in italics are non-detections, presented as one-half of the method detection limit.
Sp. As. = Specialized Assays, STL = STL Laboratories