

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-1	Total Depth	39.4 ft
County	Hawkins	Surface Elevation	1145.4 ft		
Project Type	Geotechnical Exploration	Date Started	3/24/09	Completed	3/25/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	34.5 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core							RQD
1145.4	0.0	Top of Hole								
1145.2	0.2	DGA + SOIL 1		SPT-1	0.0 - 1.5	0.7	1-1-2	13	Boring advanced with 4 1/4 I.D. Hollow Stem Augers	
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp to moist, stiff to very stiff, with occasional manganese concretions and silty zones		SPT-2	1.5 - 3.0	0.8	9-12-14	13		
			SPT-3	3.0 - 4.5	1.3	8-10-11	15			
			SPT-4	4.5 - 6.0	1.1	5-6-7	21			
			SPT-5	6.0 - 7.5	0.6	6-7-11	19			
			SPT-6	7.5 - 9.0	0.1	6-6-8	--			Rock in Spoon Tip
			SPT-7	9.0 - 10.5	1.0	5-7-8	23			
			SPT-8	10.5 - 12.0	0.4	7-14-13	17			Large Gravel in Tip
			SPT-9	12.0 - 13.5	1.4	4-5-8	25			
			SPT-10	13.5 - 15.0	1.0	5-6-8	23			
			SPT-11	15.0 - 16.5	1.2	5-9-10	19			
			SPT-12	16.5 - 18.0	1.4	5-7-10	20			
1125.9	19.5		SPT-13	18.0 - 19.5	1.0	6-8-10	22			
			SOIL 10: Lean Clay, light brown to brown, moist, stiff to very stiff, with rare manganese concretions		SPT-14	19.5 - 21.0	1.5	5-6-7	30	Installed Piezometer with 10' of slotted screen at 37.1' and 27.1' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 39.5' with well installation materials.
		SPT-15		21.0 - 22.5	1.5	2-6-8	26			
		SPT-16		22.5 - 24.0	1.4	7-9-12	25			
		SPT-17		24.0 - 25.5	1.5	4-7-9	28			
		SPT-18		25.5 - 27.0	1.5	5-9-10	23			
		SPT-19		27.0 - 28.5	1.4	5-11-17	34			
		SPT-20		28.5 - 30.0	1.5	9-10-11	33			
		SPT-21		30.0 - 31.5	1.5	6-9-9	35			
		SPT-22		31.5 - 33.0	1.5	6-13-11	31			
		SPT-23		33.0 - 34.5	1.5	3-8-11	30			
		SPT-24		34.5 - 36.0	1.5	5-10-14	36			

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>BA-1</u> Total Depth <u>39.4 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
				SPT-25	36.0 - 37.5	1.5	3-10-18	35	
1106.4	39.0			SPT-26	37.5 - 39.0	1.5	6-11-16	33	
1106.0	39.4			SPT-27	39.0 - 39.4	0.4	50+	26	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 39.0 Elevation (1106.4)							

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMISM_GRAPHIC.LOG.GDT_1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-2	Total Depth	50.5 ft
County	Hawkins	Surface Elevation	1145.9 ft		
Project Type	Geotechnical Exploration	Date Started	3/25/09	Completed	3/26/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	34.5 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1145.9	0.0	Top of Hole							
1145.3	0.6	SOIL 3: Bottom Ash, gray to dark gray, moist, medium dense, medium to very coarse grained, poorly sorted SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp to moist, medium stiff to very stiff, with occasional manganese concretions and silty zones		SPT-1	0.0 - 1.5	0.6	10-12-4	13	Boring advanced with 4 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 40.1' and 30.1' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 50.5' with well installation materials.
				SPT-2	1.5 - 3.0	1.1	6-10-19	16	
				SPT-3	3.0 - 4.5	0.4	8-10-14	13	
				SPT-4	4.5 - 6.0	0.8	9-8-9	15	
				SPT-5	6.0 - 7.5	1.2	7-11-11	19	
				SPT-6	7.5 - 9.0	1.3	4-8-11	16	
				SPT-7	9.0 - 10.5	1.2	4-8-5	24	
				SPT-8	10.5 - 12.0	0.5	13-14-11	18	
				SPT-9	12.0 - 13.5	1.2	3-4-5	24	
				SPT-10	13.5 - 15.0	1.1	3-7-10	15	
				SPT-11	15.0 - 16.5	1.5	4-5-5	21	
				SPT-12	16.5 - 18.0	1.3	4-6-6	25	
1126.4	19.5				SPT-13	18.0 - 19.5	1.1	2-3-4	
		SOIL 10: Lean Clay, light brown to brown, moist, stiff to hard, with rare manganese concretions		SPT-14	19.5 - 21.0	1.2	3-4-6	28	
				SPT-15	21.0 - 22.5	1.4	5-10-13	25	
				SPT-16	22.5 - 24.0	1.2	4-6-7	27	
				SPT-17	24.0 - 25.5	1.4	3-6-11	28	
				SPT-18	25.5 - 27.0	1.5	6-12-12	33	
				SPT-19	27.0 - 28.5	1.5	6-12-17	29	
				SPT-20	28.5 - 30.0	1.5	5-10-13	28	
				SPT-21	30.0 - 31.5	0.8	22-26-13	29	
				SPT-22	31.5 - 33.0	1.5	5-12-10	21	
				SPT-23	33.0 - 34.5	1.1	5-9-8	21	
1109.9	36.0				SPT-24	34.5 - 36.0	1.1	5-7-6	24

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-2	Total Depth	50.5 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) <i>(Continued)</i>		SPT-25	36.0 - 37.5	1.5	6-19-27	27	
				SPT-26	37.5 - 39.0	0.9	6-19-29	29	
				SPT-27	39.0 - 40.5	1.4	5-10-10	34	
				SPT-28	40.5 - 42.0	0.8	5-10-18	28	
				SPT-29	42.0 - 43.5	0.8	6-8-11	24	
				SPT-30	43.5 - 45.0	1.0	4-5-8	26	
				SPT-31	45.0 - 46.5	0.9	5-10-12	23	
1095.4	50.5			SPT-32	50.0 - 50.5	0.5	50+	2	

No Refusal /
Bottom of Hole

Top of Rock = 36.0
Elevation (1109.9)

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-3	Total Depth	37.1 ft
County	Hawkins	Surface Elevation	1145.3 ft		
Project Type	Geotechnical Exploration	Date Started	3/31/09	Completed	3/31/09
Supervisor	A. Davis Driller M. Martin	Depth to Water	31.5 ft	Date/Time	3/31/09
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1145.3	0.0	Top of Hole							
1145.2	0.1	DGA + Soil 1		SPT-1	0.0 - 1.5	0.7	3-3-3	20	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 34.8' and 24.8' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 37.1' with well installation materials. Rock in Spoon Tip
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp to moist, medium stiff to hard, with occasional manganese concretions and silty zones		SPT-2	1.5 - 3.0	0.7	3-6-9	16	
			SPT-3	3.0 - 4.5	1.1	5-8-8	18		
			SPT-4	4.5 - 6.0	0.9	5-7-9	20		
			SPT-5	6.0 - 7.5	1.0	6-7-11	17		
			SPT-6	7.5 - 9.0	1.0	6-8-11	23		
			SPT-7	9.0 - 10.5	0.9	8-14-14	16		
			SPT-8	10.5 - 12.0	0.7	8-23-20	15		
			SPT-9	12.0 - 13.5	0.4	7-13-10	23		
			SPT-10	13.5 - 15.0	0.6	9-14-14	24		
			SPT-11	15.0 - 16.5	1.3	8-15-15	21		
1128.8	16.5	SOIL 10: Lean Clay, light brown to brown, damp to moist, stiff to hard, with rare manganese concretions		SPT-12	16.5 - 18.0	1.1	20-19-17	28	
			SPT-13	18.0 - 19.5	0.1	7-6-8	19		
			SPT-14	19.5 - 21.0	1.5	7-10-12	34		
			SPT-15	21.0 - 22.5	1.4	6-7-12	31		
			SPT-16	22.5 - 24.0	1.3	7-11-12	30		
			SPT-17	24.0 - 25.5	1.5	4-9-15	27		
			SPT-18	25.5 - 27.0	0.7	5-20-22	29		
			SPT-19	27.0 - 28.5	1.3	14-15-17	27		
			SPT-20	28.5 - 30.0	1.5	4-9-11	28		
			SPT-21	30.0 - 31.5	0.4	5-8-15	26		
			SPT-22	31.5 - 33.0	1.5	20-25-27	29		
			SPT-23	33.0 - 34.5	0.5	5-12-13	34		
			SPT-24	34.5 - 36.0	0.9	5-10-12	29		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>BA-3</u> Total Depth <u>37.1 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1108.3	37.0	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) No Refusal / Bottom of Hole Top of Rock = 37.0 Elevation (1108.3)		SPT-25	36.0 - 37.1	0.9	5-10-50+	28	
1108.2	37.1								

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Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	BA-4	Total Depth	42.5 ft	
County	Hawkins		Surface Elevation	1145.2 ft			
Project Type	Geotechnical Exploration		Date Started	3/31/09	Completed	4/1/09	
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	Dry	Date/Time	4/1/09
Logged By	A. Davis		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1145.2	0.0	Top of Hole							
1144.9	0.3	DGA							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp, stiff to hard, with occasional manganese concretions and silty zones and a thin fly ash zone.		SPT-1	0.0 - 1.5	0.7	4-4-5	15	Boring grouted from 0 to 42.5 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
			SPT-2	1.5 - 3.0	0.4	6-7-8	27		
			SPT-3	3.0 - 4.5	0.4	7-7-8	27		
			SPT-4	4.5 - 6.0	0.7	6-7-6	30		
			SPT-5	6.0 - 7.5	1.0	7-10-12	30		
			SPT-6	7.5 - 9.0	1.5	6-7-11	27		
			SPT-7	9.0 - 10.5	1.0	5-7-12	27		
			SPT-8	10.5 - 12.0	1.2	5-7-16	22		
			SPT-9	12.0 - 13.5	1.0	12-16-18	26		
			SPT-10	13.5 - 15.0	1.0	6-8-11	25		
			SPT-11	15.0 - 16.5	0.5	4-8-10	30		
			SPT-12	16.5 - 18.0	0.6	4-7-8	36		
1125.4	19.8				SPT-13	18.0 - 19.5	0.9	5-10-8	
		SOIL 10: Lean Clay, light brown to brown, damp, stiff to hard, with rare manganese concretions		SPT-14	19.5 - 21.0	0.9	4-6-7	26	
			SPT-15	21.0 - 22.5	0.4	4-7-15	31		
			SPT-16	22.5 - 24.0	1.3	4-10-16	30		
			SPT-17	24.0 - 25.5	1.0	4-9-17	30		
1118.2	27.0				SPT-18	25.5 - 27.0	1.1	6-16-22	29
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-19	27.0 - 28.5	1.5	8-17-20	30	
			SPT-20	28.5 - 30.0	1.3	6-12-13	33		
			SPT-21	30.0 - 31.5	1.1	5-11-17	34		
			SPT-22	31.5 - 33.0	1.5	9-14-18	34		
			SPT-23	33.0 - 34.5	1.5	5-8-14	33		
			SPT-24	34.5 - 36.0	1.5	5-7-10	33		

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Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>BA-4</u> Total Depth <u>42.5 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1102.7	42.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) <i>(Continued)</i>		SPT-25	36.0 - 37.5	1.5	9-14-15	27	
				SPT-26	37.5 - 39.0	1.5	8-15-18	27	
				SPT-27	39.0 - 40.5	1.5	8-15-19	22	
				SPT-28	40.5 - 42.0	1.5	7-19-38	15	
				SPT-29	42.0 - 42.5	0.5	50+	20	

No Refusal /
Bottom of Hole

Top of Rock = 27.0
Elevation (1118.2)

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-5	Total Depth	56.4 ft
County	Hawkins	Surface Elevation	1144.9 ft		
Project Type	Geotechnical Exploration	Date Started	4/1/09	Completed	4/1/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	31.5 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1144.9	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp, medium stiff to very stiff, with occasional manganese concretions and silty zones.		SPT-1	0.0 - 1.5	0.3	2-3-5	22	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 40.0' and 30.0' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 56.4' with well installation materials.
				SPT-2	1.5 - 3.0	0.3	4-7-8	25	
				SPT-3	3.0 - 4.5	1.1	5-5-8	32	
				SPT-4	4.5 - 6.0	0.7	4-7-9	25	
				SPT-5	6.0 - 7.5	0.9	6-9-12	25	
				SPT-6	7.5 - 9.0	1.5	5-8-14	25	
				SPT-7	9.0 - 10.5	0.3	5-8-9	24	
1134.4	10.5	SOIL 10: Lean Clay, light brown to brown, damp, stiff to hard, with rare manganese concretions		SPT-8	10.5 - 12.0	1.3	5-7-11	27	
				SPT-9	12.0 - 13.5	0.7	4-7-11	26	
				SPT-10	13.5 - 15.0	0.4	5-8-15	26	
				SPT-11	15.0 - 16.5	0.9	5-15-18	27	
				SPT-12	16.5 - 18.0	0.5	5-14-32	23	
				SPT-13	18.0 - 19.5	0.9	6-8-10	27	
				SPT-14	19.5 - 21.0	0.8	4-6-9	26	
				SPT-15	21.0 - 22.5	1.0	6-8-9	28	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-16	22.5 - 24.0	0.8	5-7-7	27	
1120.4	24.5			SPT-17	24.0 - 25.5	1.0	3-3-7	34	
				SPT-18	25.5 - 27.0	0.6	3-4-7	34	
				SPT-19	30.0 - 31.5	1.5	5-7-11	30	
				SPT-20	35.0 - 36.5	1.5	6-9-13	26	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F:\MISM\GRAPHIC\LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-5	Total Depth	56.4 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) (Continued)		SPT-21	40.0 - 41.5	1.5	6-6-5	27	
				SPT-22	45.0 - 46.5	1.0	8-10-9	26	
				SPT-23	50.0 - 51.5	1.0	7-7-12	26	
1088.5	56.4			SPT-24	55.0 - 56.4	0.6	7-18-50+	21	

No Refusal /
Bottom of Hole

Top of Rock = 24.5
Elevation (1120.4)

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		BA-6		Total Depth		48.9 ft
County		Hawkins		Surface Elevation		1145.1 ft				
Project Type		Geotechnical Exploration		Date Started		4/2/09		Completed		4/2/09
Supervisor		A. Davis		Driller		M. Martin		Depth to Water		Dry
Logged By		A. Davis		Date/Time		4/2/09		Depth to Water		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1145.1	0.0	Top of Hole							
1144.8	0.3	DGA + SOIL 1		SPT-1	0.0 - 1.5	1.0	5-6-6	17	Boring grouted from 0 to 48.9 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp, stiff to very stiff, with occasional manganese concretions and silty zones.		SPT-2	1.5 - 3.0	0.7	6-8-10	20	
			SPT-3	3.0 - 4.5	1.0	7-5-6	18		
			SPT-4	4.5 - 6.0	1.0	4-5-9	18		
			SPT-5	6.0 - 7.5	0.9	6-10-12	22		
			SPT-6	7.5 - 9.0	1.2	4-5-10	21		
			SPT-7	9.0 - 10.5	1.1	4-5-8	23		
			SPT-8	10.5 - 12.0	1.3	5-10-12	23		
			SPT-9	12.0 - 13.5	0.9	5-11-12	23		
			SPT-10	13.5 - 15.0	0.9	5-4-8	27		
			SPT-11	15.0 - 16.5	0.5	4-6-9	20		
			SPT-12	16.5 - 18.0	0.8	5-7-8	23		
1125.6	19.5				SPT-13	18.0 - 19.5	1.5	8-11-14	
			SOIL 10: Lean Clay, light brown to brown, damp to moist, very stiff to hard, with rare manganese concretions		SPT-14	19.5 - 21.0	0.3	8-11-20	24
		SPT-15		21.0 - 22.5	1.2	12-14-14	25		
		SPT-16		22.5 - 24.0	0.5	9-19-17	25		
		SPT-17		24.0 - 25.5	1.0	6-8-12	30		
		SPT-18		25.5 - 27.0	0.3	6-11-14	34		
		SPT-19		27.0 - 28.5	0.5	11-18-19	35		
1115.6	29.5			SPT-20	28.5 - 30.0	1.5	5-9-11	35	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-21	30.0 - 31.5	1.5	8-9-13	32	
			SPT-22	35.0 - 36.5	1.1	8-6-8	31		

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT_1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-6	Total Depth	48.9 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) <i>(Continued)</i>		SPT-23	40.0 - 41.5	0.8	4-8-7	28	
				SPT-24	45.0 - 46.5	0.9	6-8-11	31	
1096.2	48.9			SPT-25	48.5 - 48.9	0.4	50+	10	

No Refusal /
Bottom of Hole

Top of Rock = 29.5
Elevation (1115.6)

Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	BA-7	Total Depth	39.6 ft	
County	Hawkins		Surface Elevation	1144.3 ft			
Project Type	Geotechnical Exploration		Date Started	4/2/09	Completed	4/2/09	
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	Dry	Date/Time	4/2/09
Logged By	A. Davis		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1144.3	0.0	Top of Hole							
1144.0	0.3	DGA + SOIL 1		SPT-1	0.0 - 1.5	1.2	5-6-8	19	Boring grouted from 0 to 39.6 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp, stiff to hard, with occasional manganese concretions and silty zones.		SPT-2	1.5 - 3.0	0.2	7-12-13	25	
				SPT-3	3.0 - 4.5	0.9	10-10-13	20	
				SPT-4	4.5 - 6.0	1.0	8-6-10	23	
				SPT-5	6.0 - 7.5	1.1	9-15-15	27	
				SPT-6	7.5 - 9.0	1.5	10-10-12	23	
				SPT-7	9.0 - 10.5	0.4	8-10-18	19	
				SPT-8	10.5 - 12.0	0.4	9-14-14	18	
				SPT-9	12.0 - 13.5	0.2	13-20-18	24	
				SPT-10	13.5 - 15.0	1.3	5-8-8	18	
1129.3	15.0		SOIL 10: Lean Clay, light brown to brown with gray mottling, damp to moist, stiff to hard, with rare manganese concretions		SPT-11	15.0 - 16.5	1.5	6-6-10	23
				SPT-12	16.5 - 18.0	0.9	6-16-18	21	
				SPT-13	18.0 - 19.5	1.5	3-5-9	46	
				SPT-14	19.5 - 21.0	1.5	7-6-7	48	
				SPT-15	21.0 - 22.5	1.3	5-10-9	44	
				SPT-16	22.5 - 24.0	0.8	4-9-8	34	
				SPT-17	24.0 - 25.5	0.8	8-5-7	40	
1118.8	25.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-18	25.5 - 27.0	0.9	12-9-10	30	
				SPT-19	27.0 - 28.5	0.7	10-9-11	28	
				SPT-20	28.5 - 30.0	0.7	9-8-11	28	
				SPT-21	35.0 - 36.5	1.2	6-10-13	24	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>BA-7</u> Total Depth <u>39.6 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1104.7	39.6			SPT-22	39.3 - 39.6	0.3	50+	6	
<p>No Refusal / Bottom of Hole</p> <p>Top of Rock = 25.5 Elevation (1118.8)</p>									

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-8	Total Depth	40.2 ft
County	Hawkins	Surface Elevation	1145.2 ft		
Project Type	Geotechnical Exploration	Date Started	4/3/09	Completed	4/3/09
Supervisor	A. Davis Driller M. Martin	Depth to Water	31.5 ft	Date/Time	4/3/09
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1145.2	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp to moist, medium stiff to hard, with occasional manganese concretions and silty zones.		SPT-1	0.0 - 1.5	0.9	2-2-4	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 34.5' and 24.5' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 40.2' with well installation materials.
			SPT-2	1.5 - 3.0	1.0	3-4-4	21		
			SPT-3	3.0 - 4.5	0.5	3-5-6	28		
			SPT-4	4.5 - 6.0	1.0	7-9-11	26		
			SPT-5	6.0 - 7.5	1.5	4-8-15	25		
			SPT-6	7.5 - 9.0	1.2	5-8-14	24		
			SPT-7	9.0 - 10.5	1.5	7-14-10	19		
			SPT-8	10.5 - 12.0	1.5	7-6-11	24		
			SPT-9	12.0 - 13.5	1.2	7-11-12	23		
			SPT-10	13.5 - 15.0	1.3	8-8-10	26		
			SPT-11	15.0 - 16.5	0.7	7-8-9	23		
			SPT-12	16.5 - 18.0	0.5	7-13-23	22		
1125.7	19.5				SPT-13	18.0 - 19.5	1.0	14-22-19	
		SOIL 10: Lean Clay, light brown to brown, moist, very stiff, with rare manganese concretions		SPT-14	19.5 - 21.0	1.2	9-13-12	16	
			SPT-15	21.0 - 22.5	1.5	9-12-12	40		
			SPT-16	22.5 - 24.0	1.5	7-11-18	32		
			SPT-17	24.0 - 25.5	1.5	5-10-20	31		
1119.7	25.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-18	25.5 - 27.0	1.5	7-13-15	29	
			SPT-19	27.0 - 28.5	1.5	11-25-30	26		
			SPT-20	28.5 - 30.0	1.1	7-9-14	28		
			SPT-21	30.0 - 31.5	1.3	7-13-15	27		
			SPT-22	35.0 - 36.5	1.4	11-15-16	27		

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>BA-8</u> Total Depth <u>40.2 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.0	40.2			SPT-23	40.0 - 40.2	0.2	50+	5	
No Refusal / Bottom of Hole Top of Rock = 25.5 Elevation (1119.7)									

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	BA-9	Total Depth	41.2 ft
County	Hawkins	Surface Elevation	1144.7 ft		
Project Type	Geotechnical Exploration	Date Started	4/4/09	Completed	4/4/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	35.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1144.7	0.0	Top of Hole							
1144.2	0.5	DGA + TOPSOIL		SPT-1	0.0 - 1.5	0.9	4-4-5	19	Boring grouted from 0 to 52.0 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp, stiff to hard, with occasional manganese concretions and silty zones.		SPT-2	1.5 - 3.0	1.1	7-9-9	23	
			SPT-3	3.0 - 4.5	0.9	7-7-7	20		
			SPT-4	4.5 - 6.0	0.6	7-7-9	19		
			SPT-5	6.0 - 7.5	1.1	10-18-15	18		
			SPT-6	7.5 - 9.0	1.4	6-8-10	24		
			SPT-7	9.0 - 10.5	1.2	5-9-7	21		
			SPT-8	10.5 - 12.0	1.3	6-6-7	23		
			SPT-9	12.0 - 13.5	0.9	5-9-13	22		
1129.7	15.0		SPT-10	13.5 - 15.0	0.6	4-8-8	27		
		SOIL 10: Lean Clay, light brown to brown, damp, stiff to very stiff, with occasional manganese concretions, with trace sand and weathered shale		SPT-11	15.0 - 16.5	0.6	7-8-10	27	
			SPT-12	16.5 - 18.0	1.3	6-12-15	27		
			SPT-13	18.0 - 19.5	1.5	5-7-11	28		
			SPT-14	19.5 - 21.0	1.5	5-8-8	28		
			SPT-15	21.0 - 22.5	1.2	12-15-15	25		
			SPT-16	22.5 - 24.0	1.1	4-5-8	27		
1119.2	25.5		SPT-17	24.0 - 25.5	1.5	5-6-9	25		
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-18	25.5 - 27.0	1.5	6-9-12	27	
			SPT-19	27.0 - 28.5	1.5	7-13-13	29		
			SPT-20	28.5 - 30.0	1.4	3-4-7	30		
			SPT-21	30.0 - 31.5	1.5	4-5-9	13		
			SPT-22	31.5 - 33.0	1.5	7-12-12	30		
			SPT-23	33.0 - 34.5	0.8	2-4-5	29		
			SPT-24	34.5 - 36.0	0.9	6-6-8	21		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>BA-9</u> Total Depth <u>41.2 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1103.5	41.2	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) <i>(Continued)</i>		SPT-25	36.0 - 37.5	0.9	4-7-8	27	
				SPT-26	37.5 - 39.0	1.5	4-8-13	28	
				SPT-27	39.0 - 40.5	1.5	4-19-20	26	
				SPT-28	40.5 - 41.2	0.7	19-50+	20	

No Refusal /
Bottom of Hole

Top of Rock = 25.5
Elevation (1119.2)

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-01	Total Depth	36.0 ft
County	Hawkins	Surface Elevation	1105.4 ft		
Project Type	Geotechnical Exploration	Date Started	5/6/09	Completed	5/6/09
Supervisor	A. Davis	Driller	G. Thompson	Depth to Water	Dry
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.4	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown, with occasional gray mottling, damp, medium stiff to hard, with manganese concretions, gravel, and silty zones		SPT-1	0.0 - 1.5	1.4	3-4-4	16	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
			SPT-2	1.5 - 3.0	1.3	3-3-6	15		
			SPT-3	3.0 - 4.5	1.4	4-6-9	13		
			BAG-1	1.5 - 7.5	--				
			SPT-4	4.5 - 6.0	1.3	5-5-5	15		
			SPT-5	6.0 - 7.5	1.3	5-6-7	12		
			SPT-6	7.5 - 9.0	1.4	2-4-6	12		
			SPT-7	9.0 - 10.5	1.4	4-7-9	13		
			SPT-8	10.5 - 12.0	1.4	5-11-12	24		
			SPT-9	12.0 - 13.5	1.5	10-15-22	19		
			SPT-10	13.5 - 15.0	1.2	6-10-12	16		
			SPT-11	15.0 - 16.5	0.3	7-17-13	16		
			SPT-12	16.5 - 18.0	0.0	11-12-20	--		
			SPT-13	18.0 - 19.5	1.5	5-8-13	11		
			SPT-14	19.5 - 21.0	1.5	6-10-14	16		
		SPT-15	21.0 - 22.5	1.5	7-12-16	21			
		SPT-16	22.5 - 24.0	1.5	6-11-9	18			
		BAG-2	19.5 - 28.5	--					
		SPT-17	24.0 - 25.5	0.6	8-12-14	17			
		SPT-18	25.5 - 27.0	1.2	5-8-12	19			
		SPT-19	27.0 - 28.5	1.2	9-20-12	18			
1075.9	29.5	SPT-20	28.5 - 30.0	1.4	4-7-9	21			
1073.8	31.6	SOIL 7: Sand, brown, tan, damp, medium dense, fine grained	SPT-21	30.0 - 31.5	1.5	5-5-7	4		
1072.8	32.6		SPT-22	31.5 - 33.0	1.4	7-9-11	9		
		SOIL 6: Gravel with Sand, gray to brown to tan, medium dense, medium grained,	SPT-23	33.0 - 34.5	1.5	4-3-6	30		
1069.4	36.0		SPT-24	34.5 - 36.0	1.5	2-22-30	24		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JP-01</u> Total Depth <u>36.0 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		poorly graded subrounded Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 32.6 Elevation (1072.8)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-02	Total Depth	36.0 ft
County	Hawkins	Surface Elevation	1105.7 ft		
Project Type	Geotechnical Exploration	Date Started	5/11/09	Completed	5/11/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	Dry
Logged By	R. Mehnert	Depth to Water	--	Date/Time	5/11/09
		Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.7	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown with occasional gray mottling, damp, medium stiff to hard, with occasional manganese concretions, gravel, and chert		SPT-1	0.0 - 1.5	0.8	3-3-3	13	Boring advanced with 3-1/4 I.D. Hollow Stem Augers Boring grouted from 0 to 42.5 feet.
				SPT-2	1.5 - 3.0	1.4	4-5-7	15	
				SPT-3	3.0 - 4.5	1.4	3-6-8	19	
				BAG-1	0.0 - 9.0			--	
				SPT-4	4.5 - 6.0	0.7	4-9-10	18	
				SPT-5	6.0 - 7.5	0.1	13-14-14	11	
				SPT-6	7.5 - 9.0	1.0	5-13-15	17	
				SPT-7	9.0 - 10.5	1.1	4-10-10	18	
				SPT-8	10.5 - 12.0	1.1	6-10-15	18	
				SPT-9	12.0 - 13.5	0.9	14-16-21	20	
				SPT-10	13.5 - 15.0	1.4	13-10-9	23	
				SPT-11	15.0 - 16.5	0.1	9-10-10	20	
				SPT-12	16.5 - 18.0	0.3	10-11-14	19	
				SPT-13	18.0 - 19.5	1.0	5-5-12	18	
				SPT-14	19.5 - 21.0	1.2	7-10-15	16	
				SPT-15	21.0 - 22.5	1.3	15-21-24	19	
				BAG-2	22.5 - 24.0	1.5	8-7-10	--	
				SPT-16	22.5 - 24.0			18	
				SPT-17	24.0 - 25.5	1.4	5-9-11	15	
				SPT-18	25.5 - 27.0	1.5	6-8-10	17	
				SPT-19	27.0 - 28.5	1.1	9-13-14	11	
			SPT-20	28.5 - 30.0	1.3	6-9-10	15		
1074.3	31.4		SPT-21	30.0 - 31.5	1.0	4-6-18	12		
1072.2	33.5	SOIL 6: Gravel with Sand, gray to brown to tan, damp, medium dense to very dense, medium grained, poorly graded subrounded		SPT-22	31.5 - 33.0	1.4	28-40-55	5	
				SPT-23	33.0 - 34.5	1.1	13-7-7	28	
1069.7	36.0			SPT-24	34.5 - 36.0	1.5	4-28-25	21	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-03	Total Depth	35.4 ft
County	Hawkins	Surface Elevation	1105.8 ft		
Project Type	Geotechnical Exploration	Date Started	5/12/09	Completed	5/12/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	Dry
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.8	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown with occasional gray mottling, damp to wet, medium stiff to hard, with occasional manganese concretions, shale, cobble, and silty zones		SPT-1	0.0 - 1.5	0.9	2-3-5	20	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 34.9' and 24.9' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 35.4 with well installation materials.
				SPT-2	5.0 - 6.5	1.5	4-5-6	20	
				BAG-1	6.5 - 11.5			--	
				SPT-3	10.0 - 11.5	1.5	5-6-9	26	
				SPT-4	15.0 - 16.5	1.5	5-7-13	16	
				SPT-5	20.0 - 21.5	0.5	10-17-21	18	
				SPT-6	25.0 - 26.5	0.5	8-17-17	17	
				BAG-2	26.5 - 30.0			--	
				SPT-7	30.0 - 31.5	1.1	5-8-7	18	
1073.2	32.6			SPT-8	31.5 - 33.0	1.4	5-7-13	16	
1071.1	34.7	SOIL 6: Gravel with Sand, gray to brown to tan, damp, medium dense to very dense, medium grained,		SPT-9	33.0 - 34.5	0.7	5-9-21	10	
1070.4	35.4			SPT-10	34.5 - 35.4	0.9	14-50+	13	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FIMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JP-03</u> Total Depth <u>35.4 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		subrounded with areas of clay. Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 34.7 Elevation (1071.1)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JP-04		Total Depth		47.7 ft
County		Hawkins		Surface Elevation		1105.6 ft				
Project Type		Geotechnical Exploration		Date Started		5/12/09		Completed		5/12/09
Supervisor		R. Mehnert		Driller		G. Thompson		Depth to Water		45.7 ft
Logged By		R. Mehnert		Date/Time		5/12/09		Date/Time		--
Logged By		R. Mehnert		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.6	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, brown and gray, damp to wet, medium stiff to very stiff, with shale, gravel.		SPT-1	0.0 - 1.5	1.1	3-4-2	18	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
				SPT-2	5.0 - 6.5	1.5	4-8-7	15	Installed Piezometer with 10' of slotted screen at 46.0' and 36.0' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 47.7 with well installation materials.
				BAG-1	0.0 - 11.5			--	
				SPT-3	10.0 - 11.5	1.5	7-7-11	17	
				SPT-4	15.0 - 16.5	1.5	6-7-7	21	
				SPT-5	20.0 - 21.5	1.1	9-10-11	17	
				BAG-2	20.0 - 25.0	5.0		--	
1079.9	25.7		SOIL 2: Lean Clay with Sand, dark brown to brown, damp to moist, soft to very stiff, with silty zones.		SPT-6	25.0 - 26.5	1.5	10-12-16	17
					BAG-3	25.7 - 30.0			--
					SPT-7	30.0 - 31.5	1.5	7-8-11	21
				SPT-8	31.5 - 33.0	1.5	10-13-15	21	
				SPT-9	33.0 - 34.5	1.4	3-5-5	19	
			SPT-10	34.5 - 36.0	0.8	2-3-3	20		

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Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		SOIL 2: Lean Clay with Sand, dark brown to brown, damp to moist, soft to very stiff, with silty zones. <i>(Continued)</i>		SPT-11	36.0 - 37.5	1.0	7-4-5	23	
			SPT-12	37.5 - 39.0	1.2	WoR-1-4	25		
			SPT-13	39.0 - 40.5	1.2	WoR-1-3	24		
			SPT-14	40.5 - 42.0	0.5	2-4-5	24		
			BAG-4	37.5 - 45.0	--				
			SPT-15	42.0 - 43.5	1.0	5-8-9	23		
			SPT-16	43.5 - 45.0	1.5	WoR-2-2	22		
1060.0	45.6				SPT-17	45.0 - 46.5	1.2	WoR-2-3	21
1058.3	47.3	SOIL 7: Sand, light brown to brown, wet, loose, medium grained, well graded		SPT-18	46.5 - 47.7	1.2	3-9-50+	19	
1057.9	47.7		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)						
		No Refusal / Bottom of Hole							
		Top of Rock = 47.3 Elevation (1058.3)							

Project Number		175569038		Location		Rogersville, TN	
Project Name		John Sevier Ash Disposal Areas		Boring No.		JP-4A Total Depth 30.0 ft	
County		Hawkins		Surface Elevation		1105.3 ft	
Project Type		Geotechnical Exploration		Date Started		8/27/09 Completed 8/27/09	
Supervisor		A. Davis Driller S. Bradford		Depth to Water		Dry Date/Time 8/27/09	
Logged By		A. Davis		Depth to Water		-- Date/Time --	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.3	0.0	Top of Hole							
		SOIL 1: Lean Clay with Gravel and Sand, light brown to brown with occasional gray mottling, damp to wet, medium stiff to stiff, with occasional manganese concretions and silty zones		BAG-1	5.0 - 10.0	5.0		--	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Boring Grouted from 0 to 30 feet
				ST-1	10.0 - 12.0	2.0		--	
				BAG-2	15.0 - 25.0	10.0		--	
				ST-2	20.0 - 21.0	1.0		--	
1079.9	25.4								
		SOIL 2: Lean Clay, dark brown, damp to moist, medium stiff to very stiff, with silty zones, gravel and sand.		BAG-3	25.0 - 30.0	5.0		--	
1075.3	30.0								
		No Refusal / Bottom of Hole							

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SUBSURFACE LOG

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-05	Total Depth	45.7 ft
County	Hawkins	Surface Elevation	1104.5 ft		
Project Type	Geotechnical Exploration	Date Started	5/13/09	Completed	5/13/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	Dry
Logged By	R. Mehnert	Depth to Water	--	Date/Time	5/13/09
		Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1104.5	0.0	Top of Hole							
		SOIL 1: Sandy Lean Clay, light brown to dark brown with occasional gray mottling, damp, medium stiff to very stiff, with gravel, cobble, shale, and silty zones		SPT-1	0.0 - 1.5	1.2	3-3-3	21	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
				SPT-2	5.0 - 6.5	1.5	5-5-10	17	Installed Piezometer with 10' of slotted screen at 45.7' and 35.7' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 45.7' with well installation materials.
				SPT-3 BAG-1	10.0 - 11.5 6.5 - 16.5	0.2	6-8-8	18 --	
				SPT-4	15.0 - 16.5	0.2	5-6-10	18	
				SPT-5	20.0 - 21.5	1.5	4-7-11	22	
				SPT-6	25.0 - 26.5	1.5	3-6-8	22	
				BAG-2	26.5 - 32.0			--	
				SPT-7	30.0 - 31.5	1.5	6-8-11	22	
				SPT-8	35.0 - 36.5	1.3	2-4-8	23	

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Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-05	Total Depth	45.7 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		SOIL 1: Sandy Lean Clay, light brown to dark brown with occasional gray mottling, damp, medium stiff to very stiff, with gravel, cobble, shale, and silty zones <i>(Continued)</i>		BAG-3	36.5 - 40.0			--	
				SPT-9	40.0 - 41.5	0.4	5-6-6	18	
1059.5	45.0								
1058.8	45.7	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-10	45.0 - 45.7	0.7	30-50+	13	
		No Refusal / Bottom of Hole Top of Rock = 45.0 Elevation (1059.5)							

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Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-06	Total Depth	42.0 ft
County	Hawkins	Surface Elevation	1106.3 ft		
Project Type	Geotechnical Exploration	Date Started	5/13/09	Completed	5/13/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	31.4 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1106.3	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to dark brown with occasional gray mottling, damp to moist, medium stiff to very stiff, with gravel, cobble, manganese concretions, and silty zones		SPT-1	0.0 - 1.5	1.3	3-4-4	14	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
				SPT-2	5.0 - 6.5	1.5	5-8-9	19	Installed Piezometer with 10' of slotted screen at 40.6' and 30.6' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 40.6' with well installation materials.
				BAG-1 SPT-3	6.5 - 15.0 10.0 - 11.5	1.5	5-6-11	-- 18	
				SPT-4	15.0 - 16.5	1.3	7-5-6	25	
				SPT-5	20.0 - 21.5	1.4	4-6-6	26	
				SPT-6	25.0 - 26.5	1.5	2-4-8	23	
				BAG-2 SPT-7	26.5 - 34.5 30.0 - 31.5	1.5	4-7-9	-- 22	
				SPT-8	31.5 - 33.0	1.2	7-11-14	22	
				SPT-9	33.0 - 34.5	1.5	3-6-9	19	
				SPT-10	34.5 - 36.0	1.5	4-6-8	20	

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Project Number	175569038	Location	Rogersville, TN	
Project Name	John Sevier Ash Disposal Areas	Boring No.	JP-06	Total Depth 42.0 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
				SPT-11	36.0 - 37.5	0.9	2-2-6	22	
				SPT-12	37.5 - 39.0	1.5	3-4-8	18	
1066.7	39.6			SPT-13	39.0 - 40.5	1.5	3-3-8	23	
1066.3	40.0	SOIL 7: Sand, light brown to brown, wet, medium dense, medium to coarse grained		SPT-14	40.5 - 42.0	1.2	3-4-6	30	
1064.3	42.0		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)						
		No Refusal / Bottom of Hole							
		Top of Rock = 40.0 Elevation (1066.3)							

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-10		Total Depth		23.2 ft
County		Hawkins		Surface Elevation		1085.0 ft				
Project Type		Geotechnical Exploration		Date Started		4/16/09		Completed		4/16/09
Supervisor		A. Davis		Driller		M. Martin		Depth to Water		21.0 ft
Logged By		A. Davis		Date/Time		4/16/09		Depth to Water		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1085.0	0.0	Top of Hole							
1084.2	0.8	Topsoil and Clay		SPT-1	0.0 - 1.5	0.8	1-5-7	21	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 23.8' and 16.8' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 24.3' with well installation materials. Used roller-bit to clean out hole
		Shale (Fragmented Fill)		SPT-2	1.5 - 3.0	1.3	12-11-16	14	
				SPT-3	3.0 - 4.5	1.0	4-4-6	21	
1080.5	4.5			SPT-4	4.5 - 6.0	1.5	2-4-9	21	
		SOIL 2: Lean Clay, light brown to brown, moist to wet, stiff to hard, with occasional manganese concretions, with and silty zones		SPT-5	6.0 - 7.5	1.0	2-4-6	20	
				SPT-6	7.5 - 9.0	1.3	11-12-12	20	
				SPT-7	9.0 - 10.5	1.2	12-7-8	21	
				SPT-8	10.5 - 12.0	1.5	13-6-9	22	
				SPT-9	12.0 - 13.5	1.5	9-11-5	21	
				SPT-10	13.5 - 15.0	1.5	4-6-7	23	
				SPT-11	15.0 - 16.5	1.0	4-5-7	25	
				SPT-12	16.5 - 18.0	1.1	3-5-7	23	
				SPT-13	18.0 - 19.5	1.5	1-22-33	20	
1064.0	21.0			SPT-14	19.5 - 21.0	0.4	9-25-15	22	
1062.5	22.5	SOIL 6: Gravel with Sand, gray to brown to tan, wet, dense, medium grained, poorly graded and subrounded		SPT-15	21.0 - 22.5	0.5	9-15-18	27	
1061.8	23.2	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered with some limestone (augered)		SPT-16	22.5 - 23.2	0.7	50+	10	
		No Refusal / Bottom of Hole							
		Top of Rock = 22.5 Elevation (1062.5)							

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMSM_GRAPHIC.LOG_GDT_1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-11	Total Depth	61.0 ft
County	Hawkins	Surface Elevation	1115.3 ft		
Project Type	Geotechnical Exploration	Date Started	5/1/09	Completed	5/1/09
Supervisor	A. Davis	Driller	G. Thompson	Depth to Water	29.3 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1115.3	0.0	Top of Hole							
		SOIL 1: Lean Clay, brown, tan, with occasional gray mottling, damp, medium stiff to very stiff, with gravel and silt		SPT-1	0.0 - 1.5	1.5	4-5-4	21	Installed 59.8' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 59.8 feet Boring advanced with 4-1/4 I.D. Hollow Stem Augers Rotary bit was used to auger from 53.4' to 61.0' to set casing.
				SPT-2	1.5 - 3.0	1.1	3-3-4	20	
				SPT-3	3.0 - 4.5	1.4	2-3-4	26	
				SPT-4	4.5 - 6.0	1.1	3-4-3	19	
				SPT-5	6.0 - 7.5	1.2	3-5-7	16	
				SPT-6	7.5 - 9.0	1.5	3-4-5	18	
1105.1	10.2			SPT-7	9.0 - 10.5	1.5	3-8-15	17	
		SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, very loose to medium dense, with coal fragments and trace amounts of bottom ash		SPT-8	10.5 - 12.0	0.9	4-10-8	16	
				SPT-9	12.0 - 13.5	0.7	3-4-5	16	
				SPT-10	13.5 - 15.0	1.1	2-3-3	16	
				SPT-11	15.0 - 16.5	1.2	3-4-6	16	
				SPT-12	16.5 - 18.0	1.3	3-4-3	15	
				SPT-13	18.0 - 19.5	1.1	2-3-4	19	
				SPT-14	19.5 - 21.0	1.4	3-3-4	20	
				SPT-15	21.0 - 22.5	1.0	7-12-12	15	
				BAG-1	13.5 - 31.5			--	
				SPT-16	22.5 - 24.0	1.3	2-4-2	16	
			SPT-17	24.0 - 25.5	1.5	3-2-2	25		
			SPT-18	25.5 - 27.0	1.3	3-3-3	30		
1086.8	28.5		SPT-19	27.0 - 28.5	1.2	2-3-3	41		
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-20	28.5 - 30.0	1.2	2-1-1	48	
1084.8	30.5			SPT-21	30.0 - 31.5	1.3	1-2-2	21	
		SOIL 2: Sandy Lean Clay, brown to tan, wet, soft to hard, with manganese concretions, increasing silty zones, gravel, sand, and cobble		SPT-22	31.5 - 33.0	1.3	3-4-4	20	
				SPT-23	33.0 - 34.5	1.5	2-8-19	21	
				SPT-24	34.5 - 36.0	1.4	5-9-10	20	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1066.8	48.5	SOIL 2: Sandy Lean Clay, brown to tan, wet, soft to hard, with manganese concretions, increasing silty zones, gravel, sand, and cobble (Continued)		SPT-25	36.0 - 37.5	1.5	7-11-11	20	
				BAG-2	31.5 - 43.5			--	
				SPT-26	37.5 - 39.0	1.0	4-18-26	20	
				SPT-27	39.0 - 40.5	1.3	19-6-9	20	
				SPT-28	40.5 - 42.0	1.5	3-7-7	20	
				SPT-29	42.0 - 43.5	1.3	5-8-10	20	
				SPT-30	43.5 - 45.0	1.5	2-4-4	20	
				SPT-31	45.0 - 46.5	1.5	2-3-4	21	
1063.2	52.1	SOIL 6: Gravel with Sand, gray to brown to tan, wet, medium dense to dense, medium grained, poorly graded subrounded		SPT-32	46.5 - 48.0	1.2	WoH-3-4	20	
				SPT-33	48.0 - 49.5	1.4	WoH-2-15	20	
				SPT-34	49.5 - 51.0	0.7	15-19-15	10	
1054.3	61.0	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-35	51.0 - 52.5	0.9	11-11-18	20	
				SPT-36	52.5 - 53.4	0.6	19-50+	11	
		No Refusal / Bottom of Hole							
		Top of Rock = 52.1 Elevation (1063.2)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-12	Total Depth	52.5 ft
County	Hawkins	Surface Elevation	1114.8 ft		
Project Type	Geotechnical Exploration	Date Started	5/2/09	Completed	5/2/09
Supervisor	A. Davis	Driller	G. Thompson	Depth to Water	47.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1114.8	0.0	Top of Hole							
1112.5	2.3	SOIL 1: Lean Clay, tan, gray, stiff, damp, with gravel		SPT-1	0.0 - 1.5	1.1	4-5-4	19	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 52.2' and 45.2' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 52.2' with well installation materials.
				SPT-2	1.5 - 3.0	0.5	3-3-3	19	
		SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, very loose to dense, with clay layers, coal fragments, bottom ash and gravel		SPT-3	3.0 - 4.5	0.6	5-9-13	22	
				BAG-1	2.8 - 7.5	1.2	6-12-10	--	
				SPT-4	4.5 - 6.0			22	
				SPT-5	6.0 - 7.5	1.5	6-17-13	22	
				SPT-6	7.5 - 9.0	1.4	5-7-9	20	
				SPT-7	9.0 - 10.5	1.4	4-4-3	13	
				SPT-8	10.5 - 12.0	1.4	3-3-4	29	
				SPT-9	12.0 - 13.5	1.4	3-2-3	30	
				SPT-10	13.5 - 15.0	1.5	2-1-2	26	
				BAG-2	13.5 - 18.0	1.5	1-1-2	--	
			SPT-11	15.0 - 16.5			28		
			SPT-12	16.5 - 18.0	1.3	2-2-2	36		
			SPT-13	18.0 - 19.5	1.3	5-3-2	26		
			SPT-14	19.5 - 21.0	1.5	2-2-2	16		
	SPT-15	21.0 - 22.5	1.5	3-2-5	26				
1090.8	24.0			SPT-16	22.5 - 24.0	1.2	4-3-3	37	
1089.3	25.5	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-17	24.0 - 25.5	1.5	1-1-2	22	
				SPT-18	25.5 - 27.0	0.8	2-1-3	22	
		SOIL 2: Lean Clay with Sand, brown, tan, soft to hard, damp to moist, with gravels, cobbly, manganese concretions, and silty zones		SPT-19	27.0 - 28.5	1.2	2-3-8	15	
				SPT-20	28.5 - 30.0	0.8	2-3-4	21	
				SPT-21	30.0 - 31.5	1.1	4-5-3	20	
				SPT-22	31.5 - 33.0	1.5	2-3-6	24	
				SPT-23	33.0 - 34.5	1.2	2-4-6	22	
				SPT-24	34.5 - 36.0	1.5	5-5-9	17	

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		SOIL 2: Lean Clay with Sand, brown, tan, soft to hard, damp to moist, with gravels, cobbly, manganese concretions, and silty zones <i>(Continued)</i>		SPT-25	36.0 - 37.5	1.5	7-10-8	19	
				BAG-3	28.5 - 46.5	0.0	15-19-19	--	
				SPT-26	37.5 - 39.0	0.0	15-19-19	--	
				SPT-27	39.0 - 40.5	1.4	3-6-10	18	
				SPT-28	40.5 - 42.0	1.5	4-7-8	18	
				SPT-29	42.0 - 43.5	1.3	5-8-10	23	
				SPT-30	43.5 - 45.0	1.5	6-9-11	21	
				SPT-31	45.0 - 46.5	1.5	3-4-5	22	
				SPT-32	46.5 - 48.0	1.2	3-6-5	20	
1065.5	49.3			SPT-33	48.0 - 49.5	0.2	1-5-8	13	
1064.0	50.8	SOIL 6: Gravel with Sand, gray to brown to tan, wet, medium dense, medium grained to coarse grained, poorly graded subrounded		SPT-34	49.5 - 51.0	1.0	5-4-4	23	
1062.3	52.5			SPT-35	51.0 - 52.5	1.0	4-4-9	27	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered with some remineralized limestone (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 50.8 Elevation (1064.0)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-13	Total Depth	69.0 ft
County	Hawkins	Surface Elevation	1132.5 ft		
Project Type	Geotechnical Exploration	Date Started	5/18/09	Completed	5/18/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	47.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1132.5	0.0	Top of Hole							
1132.1	0.4	SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, loose		SPT-1	0.0 - 1.5	1.4	2-4-5	20	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 68.0' and 61.0' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 69.0' with well installation materials.
1129.2	3.3			SPT-2	1.5 - 3.0	0.8	3-3-4	22	
		SOIL 1: Lean Clay with Gravel and Sand, light brown to brown, medium stiff, damp		SPT-3	3.0 - 4.5	1.5	3-10-14	19	
				SPT-4	4.5 - 6.0	1.5	6-10-13	20	
		SOIL 4: Compacted Fly Ash, gray to dark gray, damp to moist, medium dense to dense, with bottom ash and gravel		BAG-1	3.0 - 9.0	--	--	--	
				SPT-5	6.0 - 7.5	1.5	13-20-20	20	
				SPT-6	7.5 - 9.0	1.5	4-11-15	19	
				SPT-7	9.0 - 10.5	1.5	3-11-17	17	
				SPT-8	10.5 - 12.0	1.5	4-12-14	17	
				SPT-9	12.0 - 13.5	1.5	12-13-16	16	
				SPT-10	13.5 - 15.0	1.5	5-10-15	17	
				SPT-11	15.0 - 16.5	1.5	9-11-15	18	
				SPT-12	16.5 - 18.0	1.5	11-15-17	20	
				SPT-13	18.0 - 19.5	1.5	4-12-15	21	
				BAG-2	18.0 - 21.0	--	--	--	
				SPT-14	19.5 - 21.0	1.5	5-15-14	19	
				SPT-15	21.0 - 22.5	1.5	11-13-15	22	
1107.9	24.6			SPT-16	22.5 - 24.0	1.2	3-5-6	21	
		SOIL 3: Bottom Ash, gray to dark gray to black, wet, medium dense to very dense, medium to coarse grained, poorly sorted, angular		SPT-17	24.0 - 25.5	1.5	4-8-12	18	
				SPT-18	25.5 - 27.0	1.3	5-8-10	15	
				SPT-19	27.0 - 28.5	1.5	9-21-25	17	
				SPT-20	28.5 - 30.0	1.5	4-24-27	18	
				SPT-21	30.0 - 31.5	1.5	5-12-11	18	
1100.6	31.9	SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, very loose to medium dense, with occasional areas of bottom ash		SPT-22	31.5 - 33.0	1.5	5-10-13	26	
				SPT-23	33.0 - 34.5	1.0	5-7-7	36	
				SPT-24	34.5 - 36.0	1.4	3-4-3	38	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1083.0	49.5	SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, very loose to medium dense, with occasional areas of bottom ash (Continued)		SPT-25	36.0 - 37.5	1.5	4-4-5	42	
				SPT-26	37.5 - 39.0	1.5	4-3-2	22	
				SPT-27	39.0 - 40.5	1.5	4-4-4	26	
				SPT-28	40.5 - 42.0	1.4	5-4-4	28	
				SPT-29	42.0 - 43.5	1.2	4-4-5	36	
				SPT-30	43.5 - 45.0	1.5	4-3-4	32	
				SPT-31	45.0 - 46.5	1.5	6-3-4	36	
				SPT-32	46.5 - 48.0	1.4	4-3-4	38	
				SPT-33	48.0 - 49.5	1.5	4-3-2	43	
			1079.1	53.4	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-34	49.5 - 51.0	1.5
	SPT-35	51.0 - 52.5				1.4	WoH	39	
	SPT-36	52.5 - 54.0				1.5	1-2-5	29	
1067.6	64.9	SOIL 2: Lean Clay, light brown to brown, damp to moist, medium stiff to stiff, with manganese concretions, gravel, and sand		SPT-37	54.0 - 55.5	1.4	2-4-5	24	
				SPT-38	55.5 - 57.0	1.5	2-4-5	22	
				SPT-39	57.0 - 58.5	0.5	4-4-7	22	
				SPT-40	58.5 - 60.0	0.3	6-5-6	20	
				SPT-41	60.0 - 61.5	1.4	3-4-3	22	
				SPT-42	61.5 - 63.0	1.5	5-6-9	17	
				SPT-43	63.0 - 64.5	1.1	4-4-5	23	
1064.5	68.0	SOIL 7: Sand, light brown to brown, wet, medium dense, medium to coarse grained		SPT-44	64.5 - 66.0	1.5	3-6-12	20	
1063.5	69.0			SPT-45	66.0 - 67.5	1.5	4-10-12	20	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-46	67.5 - 69.0	1.5	10-29-40	18	
			No Refusal / Bottom of Hole Top of Rock = 68.0 Elevation (1064.5)						

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FIMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-15		Total Depth		25.5 ft
County		Hawkins		Surface Elevation		1084.1 ft				
Project Type		Geotechnical Exploration		Date Started		4/16/09		Completed		4/16/09
Supervisor		A. Davis Driller M. Martin		Depth to Water		22.5 ft		Date/Time		4/16/09
Logged By		A. Davis		Depth to Water		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1084.1	0.0	Top of Hole							
1082.6	1.5	Topsoil and Clay		SPT-1	0.0 - 1.5	1.5	4-6-6	17	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 24.7' and 14.7' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 25.5' with well installation materials.
		Shale (Fragmented Fill)		SPT-2	1.5 - 3.0	0.1	12-14-17	15	
			SPT-3	3.0 - 4.5	1.0	3-9-14	11		
			SPT-4	4.5 - 6.0	1.0	8-7-8	21		
			SPT-5	6.0 - 7.5	0.8	8-8-12	22		
			SPT-6	7.5 - 9.0	0.0	8-6-6	--		
			SPT-7	9.0 - 10.5	0.4	2-4-5	20		
1073.6	10.5	SOIL 2: Lean Clay with Sand and Gravel, light brown to dark brown, soft to very stiff, damp to moist, with few manganese concretions		SPT-8	10.5 - 12.0	1.0	4-6-9	23	
			SPT-9	12.0 - 13.5	1.5	10-13-16	21		
			SPT-10	13.5 - 15.0	1.5	5-6-10	20		
			SPT-11	15.0 - 16.5	1.5	4-5-7	22		
			SPT-12	16.5 - 18.0	1.5	4-7-7	23		
			SPT-13	18.0 - 19.5	1.0	1-2-1	24		
			SPT-14	19.5 - 21.0	1.5	3-3-3	25		
			SPT-15	21.0 - 22.5	1.5	4-4-7	22		
1060.6	23.5		SPT-16	22.5 - 24.0	1.5	4-7-23	18		
1059.2	24.9		SOIL 6: Gravel with Sand, gray, brown, medium grained, poorly graded, medium dense, wet		SPT-17	24.0 - 25.5	1.0	25-26-50+	
1058.6	25.5								
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 24.9 Elevation (1059.2)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-16	Total Depth	61.5 ft
County	Hawkins	Surface Elevation	1115.7 ft		
Project Type	Geotechnical Exploration	Date Started	4/14/09	Completed	4/15/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	31.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1115.7	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, brown, tan, medium stiff to very stiff, damp, with manganese concretions and silty zones		SPT-1	0.0 - 1.5	1.0	3-3-3	21	Installed 61.5' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 61.5 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.3	4-9-8	16	
				SPT-3	3.0 - 4.5	1.5	2-5-7	21	
				SPT-4	4.5 - 6.0	1.5	3-6-6	17	
				SPT-5	6.0 - 7.5	1.0	10-11-9	16	
				SPT-6	7.5 - 9.0	1.5	5-6-7	21	
				SPT-7	9.0 - 10.5	1.5	3-3-4	16	
				SPT-8	10.5 - 12.0	0.4	4-6-7	21	
				SPT-9	12.0 - 13.5	0.8	7-6-7	15	
				SPT-10	13.5 - 15.0	1.5	2-5-5	20	
1100.0	15.7			SPT-11	15.0 - 16.5	1.5	5-10-11	20	
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to medium dense, damp to wet, with gravel and bottom ash layers		SPT-12	16.5 - 18.0	1.5	9-9-8	16	
				SPT-13	18.0 - 19.5	1.2	2-4-4	18	
				BAG-1	16.5 - 22.5	--	--	--	
				SPT-14	19.5 - 21.0	1.5	4-4-4	22	
				SPT-15	21.0 - 22.5	1.5	4-5-3	20	
				SPT-16	22.5 - 24.0	1.0	3-4-5	21	
				SPT-17	24.0 - 25.5	1.5	2-3-4	21	
				SPT-18	25.5 - 27.0	1.2	4-4-4	28	
				SPT-19	27.0 - 28.5	1.4	3-3-4	33	
				SPT-20	28.5 - 30.0	1.5	2-2-4	36	
1082.7	33.0			SPT-21	30.0 - 31.5	1.5	2-2-2	39	
				SPT-22	31.5 - 33.0	1.5	2-2-2	47	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-23	33.0 - 34.5	1.5	1-1-2	40	
1080.0	35.7				SPT-24	34.5 - 36.0	1.5	1-2-1	34

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1077.5	38.2	Limestone (Fragmented Fill) (Continued)		SPT-25	36.0 - 37.5	1.0	8-11-14	10	
				SPT-26	37.5 - 39.0	1.3	10-7-6	14	
		SOIL 2: Lean Clay, dark brown, gray, stiff to very stiff, moist to wet, with gravel and sand		SPT-27	39.0 - 40.5	1.5	6-7-8	22	
				SPT-28	40.5 - 42.0	1.5	2-3-5	21	
				SPT-29	42.0 - 43.5	1.5	5-6-9	22	
				SPT-30	43.5 - 45.0	1.5	3-4-5	21	
				SPT-31	45.0 - 46.5	1.5	5-7-9	21	
				SPT-32	46.5 - 48.0	1.5	3-5-7	23	
1065.9	49.8			SPT-33	48.0 - 49.5	0.8	1-6-15	22	
		SOIL 6: Gravel with Sand, brown, tan, gray, medium grained, poorly graded, dense, wet, subrounded with clay		SPT-34	49.5 - 51.0	1.2	18-22-24	17	
				SPT-35	51.0 - 52.5	1.1	15-23-23	14	
1061.5	54.2			SPT-36	52.5 - 54.0	1.2	49-17-14	11	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-37	54.0 - 55.5	1.1	17-9-10	24	
				SPT-38	55.5 - 55.8	0.1	50+	15	
1054.2	61.5								
No Refusal / Bottom of Hole									

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-17	Total Depth	54.5 ft
County	Hawkins	Surface Elevation	1114.5 ft		
Project Type	Geotechnical Exploration	Date Started	5/2/09	Completed	5/2/09
Supervisor	A. Davis	Driller	G. Thompson	Depth to Water	28.2 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1114.5	0.0	Top of Hole							
		SOIL 1: Lean Clay, brown, tan, stiff, damp, with gravel		SPT-1	0.0 - 1.5	0.9	3-4-7	18	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 53.0' and 46.0' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 54' with well installation materials.
				SPT-2	1.5 - 3.0	0.9	4-4-6	24	
1110.5	4.0			SPT-3	3.0 - 4.5	0.9	4-4-2	21	
		SOIL 4: Compacted Fly Ash, gray to dark gray, very loose to medium dense, damp to wet		SPT-4	4.5 - 6.0	1.3	5-7-7	22	
				SPT-5	6.0 - 7.5	1.5	7-8-8	24	
				SPT-6	7.5 - 9.0	1.2	2-3-5	24	
				BAG-1	4.0 - 13.5	--	--	--	
				SPT-7	9.0 - 10.5	1.2	4-7-12	25	
				SPT-8	10.5 - 12.0	1.4	4-4-5	25	
				SPT-9	12.0 - 13.5	1.4	3-3-3	28	
				SPT-10	13.5 - 15.0	1.4	3-5-6	24	
				SPT-11	15.0 - 16.5	1.5	4-4-6	32	
				SPT-12	16.5 - 18.0	1.5	3-4-4	29	
				SPT-13	18.0 - 19.5	1.5	2-2-3	30	
				BAG-2	18.0 - 22.5	1.5	2-2-1	--	
			SPT-14	19.5 - 21.0	--	--	35		
			SPT-15	21.0 - 22.5	1.5	2-2-3	38		
			SPT-16	22.5 - 24.0	1.5	3-2-3	25		
			SPT-17	24.0 - 25.5	1.5	3-4-3	32		
			SPT-18	25.5 - 27.0	1.5	2-3-4	30		
1086.0	28.5		SPT-19	27.0 - 28.5	1.5	3-2-3	39		
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-20	28.5 - 30.0	1.5	2-1-2	35	
				SPT-21	30.0 - 31.5	1.5	2-1-1	34	
1081.5	33.0			SPT-22	31.5 - 33.0	1.5	1-1-1	35	
		SOIL 2: Lean Clay, brown, tan, soft to hard, moist to wet, with gravel and trace silt		SPT-23	33.0 - 34.5	1.3	WoH-2-3	23	
				SPT-24	34.5 - 36.0	1.1	WoH-2-2	19	

STANTEC\FM\LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ\FM\SM\GRAPHIC\LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1069.5	45.0	SOIL 2: Lean Clay, brown, tan, soft to hard, moist to wet, with gravel and trace silt (Continued)		SPT-25	36.0 - 37.5	1.4	2-2-4	18	
				SPT-26	37.5 - 39.0	1.5	2-6-7	16	
				SPT-27	39.0 - 40.5	1.5	5-6-8	21	
				SPT-28	40.5 - 42.0	1.5	3-6-7	21	
				SPT-29	42.0 - 43.5	1.2	5-7-9	21	
				SPT-30	43.5 - 45.0	1.3	1-3-50+	20	
				SPT-31	45.0 - 46.5	1.0	10-22-13	12	
1062.0	52.5	SOIL 6: Gravel with Sand, gray, brown, tan, medium grained, medium dense to very dense, wet, poorly graded, subrounded with trace areas of clay		SPT-32	46.5 - 48.0	0.9	11-12-19	15	
				SPT-33	48.0 - 49.5	0.9	2-18-28	25	
				SPT-34	49.5 - 51.0	0.6	4-12-14	15	
				SPT-35	51.0 - 52.5	1.5	16-14-16	13	
1060.0	54.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered with gravel/cobble (augered)		SPT-36	52.5 - 54.0	0.5	5-9-6	34	
				SPT-37	54.0 - 54.5	0.5	50+	16	
		No Refusal / Bottom of Hole Top of Rock = 52.5 Elevation (1062.0)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F:\MISM\GRAPHIC\LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-18	Total Depth	76.5 ft
County	Hawkins	Surface Elevation	1136.3 ft		
Project Type	Geotechnical Exploration	Date Started	5/30/09	Completed	5/31/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	52.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1136.3	0.0	Top of Hole							
1133.8	2.5	SOIL 1: Lean Clay, brown, tan, damp, medium stiff, with gravel		SPT-1	0.0 - 1.5	1.2	3-3-4	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 66.1' and 59.1' of riser- protected with steel cover set in concrete pad. Boring backfilled from 0' to 70.6' with well installation materials.
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to wet, with areas of bottom ash		SPT-2	1.5 - 3.0	1.0	7-11-14	20	
				SPT-3	3.0 - 4.5	1.2	7-12-15	21	
				SPT-4	4.5 - 6.0	1.5	7-10-12	22	
				SPT-5	6.0 - 7.5	1.5	9-11-15	11	
				SPT-6	7.5 - 9.0	1.1	5-9-13	18	
				SPT-7	9.0 - 10.5	1.5	6-9-9	18	
				SPT-8	10.5 - 12.0	1.5	5-8-14	17	
				SPT-9	12.0 - 13.5	1.5	9-12-13	21	
				SPT-10	13.5 - 15.0	1.5	5-6-10	15	
				SPT-11	15.0 - 16.5	1.5	4-8-10	16	
				SPT-12	16.5 - 18.0	1.5	9-13-12	17	
				SPT-13	18.0 - 19.5	1.5	7-10-14	21	
				SPT-14	19.5 - 21.0	1.5	9-13-12	20	
				SPT-15	21.0 - 22.5	1.5	10-12-14	21	
				SPT-16	22.5 - 24.0	1.5	5-8-11	16	
				SPT-17	24.0 - 25.5	1.5	5-9-9	24	
				SPT-18	25.5 - 27.0	1.5	8-8-13	24	
				SPT-19	27.0 - 28.5	1.5	15-18-22	22	
				SPT-20	28.5 - 30.0	1.5	11-15-17	21	
				SPT-21	30.0 - 31.5	1.5	6-10-11	28	
				SPT-22	31.5 - 33.0	1.5	8-7-7	13	
				SPT-23	33.0 - 34.5	1.5	6-5-6	27	
				SPT-24	34.5 - 36.0	1.5	3-3-4	34	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-18	Total Depth		76.5 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1082.3	54.0	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to wet, with areas of bottom ash (Continued)		SPT-25	36.0 - 37.5	1.5	1-5-4	38		
				SPT-26	37.5 - 39.0	1.5	2-3-3	3		
				SPT-27	39.0 - 40.5	1.5	3-3-3	40		
				SPT-28	40.5 - 42.0	1.5	3-2-2	35		
				SPT-29	42.0 - 43.5	1.5	3-3-3	16		
				SPT-30	43.5 - 45.0	1.5	3-5-5	23		
				SPT-31	45.0 - 46.5	1.5	5-6-6	32		
				SPT-32	46.5 - 48.0	1.5	5-6-7	33		
				SPT-33	48.0 - 49.5	1.5	7-8-9	28		
				SPT-34	49.5 - 51.0	1.5	5-7-9	34		
				SPT-35	51.0 - 52.5	1.2	9-6-5	43		
	SPT-36	52.5 - 54.0	1.5	3-5-5	41					
1073.6	62.7	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-37	54.0 - 55.5	1.5	1-1-2	42		
				SPT-38	55.5 - 57.0	1.3	1-2-3	46		
				SPT-39	57.0 - 58.5	1.5	2-3-3	48		
				SPT-40	58.5 - 60.0	1.5	2-2-2	44		
				SPT-41	60.0 - 61.5	1.5	WoH	38		
				SPT-42	61.5 - 63.0	1.5	WoH-1-1	38		
1068.8	67.5	SOIL 2: Lean Clay, light brown to brown, most to wet, soft to stiff, with trace silt and sand		SPT-43	63.0 - 64.5	1.3	1-2-5	20		
				SPT-44	64.5 - 66.0	1.3	6-3-4	23		
				SPT-45	66.0 - 67.5	1.0	7-9-11	19		
1060.4	75.9	SOIL 6: Gravel with Sand, dark brown to light brown, gray, tan, wet, medium dense to very dense, sand is medium grained, poorly graded		SPT-46	67.5 - 69.0	0.5	5-8-8	13		
				SPT-47	69.0 - 70.5	0.1	2-3-13	--		
				SPT-48	70.5 - 72.0	0.9	2-11-21	12		
				SPT-49	72.0 - 73.5	1.0	13-50+	15		
				SPT-50	73.5 - 75.0	1.1	21-15-15	11		
				SPT-51	75.0 - 76.5	1.0	21-32-19	28		
1059.8	76.5	Shale, brown to gray, soft to moderately hard, very								

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-18</u> Total Depth <u>76.5 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		thin bedded, water stained, heavily weathered with gravel/cobble (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 75.9 Elevation (1060.4)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-19	Total Depth	20.0 ft
County	Hawkins	Surface Elevation	1077.3 ft		
Project Type	Geotechnical Exploration	Date Started	4/16/09	Completed	4/16/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	16.5 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1077.3	0.0	Top of Hole							
		SOIL 1: Lean Clay, brown to dark brown, soft to stiff, damp to moist, with manganese concretions, sand, and gravel		SPT-1	0.0 - 1.5	1.1	3-4-6	22	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 19.5' and 9.5' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 20.0' with well installation materials.
				SPT-2	1.5 - 3.0	1.0	6-5-6	24	
				SPT-3	3.0 - 4.5	1.0	1-2-2	28	
				SPT-4	4.5 - 6.0	1.5	8-8-12	24	
1071.0	6.3	SOIL 2: Lean Clay with Sand, light brown to brown, stiff to very stiff, moist, with trace silt		SPT-5	6.0 - 7.5	1.3	13-13-16	22	
				SPT-6	7.5 - 9.0	0.7	8-10-14	25	
				SPT-7	9.0 - 10.5	0.8	6-8-12	23	
				SPT-8	10.5 - 12.0	1.0	4-5-8	23	
				SPT-9	12.0 - 13.5	1.5	6-7-12	23	
				SPT-10	13.5 - 15.0	1.1	3-4-5	23	
				SPT-11	15.0 - 16.5	1.5	5-6-8	21	
1060.4	16.9	SOIL 6: Gravel with Sand, gray, brown, tan, medium grained, poorly graded, very dense, wet		SPT-12	16.5 - 18.0	1.3	30-40-32	18	
1059.3	18.0			SPT-13	18.0 - 19.5	0.8	14-15-20	23	
1057.3	20.0			SPT-14	19.5 - 20.0	0.5	50+	12	
		Shale, brown to gray, hard, very thin bedded (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 18.0 Elevation (1059.3)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM-GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-20	Total Depth	61.5 ft
County	Hawkins	Surface Elevation	1113.8 ft		
Project Type	Geotechnical Exploration	Date Started	4/14/09	Completed	4/14/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	29.7 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1113.8	0.0	Top of Hole							
1109.3	4.5	SOIL 1: Lean Clay with Sand and Gravel, brown, tan, gray, medium stiff to very stiff, damp		SPT-1	0.0 - 1.5	1.3	3-4-3	24	Installed 61.5' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 61.5 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	0.1	7-8-8	23	
				SPT-3	3.0 - 4.5	1.5	2-4-3	21	
			SPT-4	4.5 - 6.0	1.5	2-1-1	26		
			SPT-5	6.0 - 7.5	1.5	2-2-2	23		
			SPT-6	7.5 - 9.0	1.5	2-2-1	21		
			SPT-7	9.0 - 10.5	1.3	6-2-3	25		
			SPT-8	10.5 - 12.0	1.2	4-2-3	22		
			SPT-9	12.0 - 13.5	0.4	2-3-4	21		
			SPT-10	13.5 - 15.0	1.5	4-4-3	21		
			BAG-1	7.5 - 22.0	--	--	--		
			SPT-11	15.0 - 16.5	1.0	6-7-8	23		
			SPT-12	16.5 - 18.0	1.3	4-4-4	21		
			SPT-13	18.0 - 19.5	0.5	8-11-13	21		
			SPT-14	19.5 - 21.0	1.1	10-5-2	24		
			SPT-15	21.0 - 22.5	1.5	4-3-5	22		
			SPT-16	22.5 - 24.0	1.5	2-3-3	21		
			SPT-17	24.0 - 25.5	1.5	2-3-3	23		
			SPT-18	25.5 - 27.0	1.3	7-3-4	23		
			SPT-19	27.0 - 28.5	1.5	5-4-3	23		
			SPT-20	28.5 - 30.0	1.5	2-3-4	27		
			SPT-21	30.0 - 31.5	1.3	11-2-2	25		
1080.8	33.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-22	31.5 - 33.0	1.3	1-4-4	28	
				SPT-23	33.0 - 34.5	1.5	1-1-2	34	
				SPT-24	34.5 - 36.0	1.1	3-2-1	44	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1074.8	39.0			SPT-25	36.0 - 37.5	1.5	1-2-3	36	
				SPT-26	37.5 - 39.0	1.5	2-2-6	29	
1061.7	52.1	SOIL 2: Lean Clay, brown, tan, gray, medium stiff to very stiff, moist to wet, with sand, gravel		SPT-27	39.0 - 40.5	0.9	12-13-14	24	
				SPT-28	40.5 - 42.0	1.5	6-9-10	24	
				SPT-29	42.0 - 43.5	0.7	6-8-6	21	
				SPT-30	43.5 - 45.0	0.8	10-13-13	25	
				SPT-31	45.0 - 46.5	1.5	3-4-4	23	
				SPT-32	46.5 - 48.0	1.5	4-3-4	24	
				SPT-33	48.0 - 49.5	1.5	3-3-3	22	
				SPT-34	49.5 - 51.0	1.1	2-6-4	20	
				SPT-35	51.0 - 52.5	1.3	4-14-16	16	
			1056.5	57.3	SOIL 6: Gravel with Sand, gray, brown, tan, medium grained, medium dense to very dense, poorly graded, subrounded, wet		SPT-36	52.5 - 54.0	1.2
	SPT-37	54.0 - 54.2				0.0	50+	--	
	SPT-38	55.5 - 55.8				0.1	50+	15	
1052.3	61.5	Shale, brown to gray, soft to moderately hard, very thin bedded, heavily weathered (augered)							
No Refusal / Bottom of Hole									

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-21		Total Depth		51.8 ft
County		Hawkins		Surface Elevation		1111.0 ft				
Project Type		Geotechnical Exploration		Date Started		5/4/09		Completed		5/4/09
Supervisor		A. Davis		Driller		G. Thompson		Depth to Water		26.5 ft
Logged By		R. Mehnert		Date/Time		5/4/09		Date/Time		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1111.0	0.0	Top of Hole							
		SOIL 1: Lean Clay, brown, tan, medium stiff, damp, with gravel		SPT-1	0.0 - 1.5	1.2	2-4-2	24	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 45.0' and 38.0' of riser- protected with steel cover set in concrete pad. Boring backfilled from 0' to 51.8' with well installation materials.
1108.4	2.6			SPT-2	1.5 - 3.0	1.2	3-3-8	28	
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to medium dense, damp to wet, with areas of bottom ash		SPT-3	3.0 - 4.5	1.1	6-11-12	20	
				BAG-1	2.5 - 7.5	1.0	5-7-6	--	
				SPT-4	4.5 - 6.0	1.0	5-7-6	22	
				SPT-5	6.0 - 7.5	1.3	4-6-8	25	
				SPT-6	7.5 - 9.0	1.1	2-3-5	26	
				SPT-7	9.0 - 10.5	1.0	1-2-3	21	
				SPT-8	10.5 - 12.0	1.5	4-5-10	23	
				SPT-9	12.0 - 13.5	1.5	17-14-10	17	
				SPT-10	13.5 - 15.0	1.3	2-1-3	33	
				SPT-11	15.0 - 16.5	1.3	3-2-4	30	
				SPT-12	16.5 - 18.0	1.3	2-3-4	33	
1091.5	19.5			SPT-13	18.0 - 19.5	1.5	2-3-3	29	
		SOIL 3: Bottom Ash, gray to dark gray to black, loose, coarse grained, angular		SPT-14	19.5 - 21.0	1.5	2-2-3	16	
				SPT-15	21.0 - 22.5	1.5	2-3-4	19	
				SPT-16	22.5 - 24.0	1.5	3-2-2	15	
1085.5	25.5			SPT-17	24.0 - 25.5	1.4	2-3-2	24	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-18	25.5 - 27.0	1.4	1-2-1	39	
				SPT-19	27.0 - 28.5	1.4	1-2-2	45	
				SPT-20	28.5 - 30.0	1.4	1-1-1	44	
				SPT-21	30.0 - 31.5	1.5	1-1-1	45	
				SPT-22	31.5 - 33.0	1.5	1-1-2	65	
				SPT-23	33.0 - 34.5	1.5	WoH-1-1	51	
1075.6	35.4			SPT-24	34.5 - 36.0	1.5	WoR-1-1	29	

STANTECFINSM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FINSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1066.2	44.8	SOIL 2: Lean Clay, brown, tan, medium stiff to stiff, moist to wet, with trace manganese concretions and silt (Continued)		SPT-25	36.0 - 37.5	1.3	3-4-6	24	
				SPT-26	37.5 - 39.0	1.3	3-4-5	24	
				SPT-27	39.0 - 40.5	1.3	3-3-5	19	
				SPT-28	40.5 - 42.0	1.5	2-2-3	25	
				SPT-29	42.0 - 43.5	1.5	3-3-6	19	
				SPT-30	43.5 - 45.0	1.2	1-4-33	19	
1061.6	49.4	SOIL 6: Gravel with Sand, brown, tan, gray, medium grained, poorly graded, medium dense to dense, wet, with trace areas of clay		SPT-31	45.0 - 46.5	0.7	10-9-13	11	
				SPT-32	46.5 - 48.0	0.8	12-13-16	--	
				SPT-33	48.0 - 49.5	1.2	5-4-3	--	
1059.2	51.8	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-34	49.5 - 51.0	1.2	18-10-19	25	
				SPT-35	51.0 - 51.8	0.7	23-50+	22	
		No Refusal / Bottom of Hole Top of Rock = 49.4 Elevation (1061.6)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-22	Total Depth	74.7 ft
County	Hawkins	Surface Elevation	1134.7 ft		
Project Type	Geotechnical Exploration	Date Started	5/29/09	Completed	5/30/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	61.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	5/30/09
		Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1134.7	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp to wet, with areas of bottom ash, clay, and gravel		SPT-1	0.0 - 1.5	1.4	3-5-6	17	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 74.3' and 67.3' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 74.7' with well installation materials.
				SPT-2	1.5 - 3.0	1.3	8-10-15	14	
				SPT-3	3.0 - 4.5	1.4	4-14-17	14	
				SPT-4	4.5 - 6.0	1.5	6-16-17	12	
				SPT-5	6.0 - 7.5	1.4	17-21-19	16	
				SPT-6	7.5 - 9.0	1.5	5-14-15	20	
				SPT-7	9.0 - 10.5	1.5	13-16-15	13	
				SPT-8	10.5 - 12.0	1.5	5-16-15	19	
				SPT-9	12.0 - 13.5	1.5	5-12-12	23	
				SPT-10	13.5 - 15.0	1.5	5-8-9	15	
				SPT-11	15.0 - 16.5	1.4	8-10-13	23	
				SPT-12	16.5 - 18.0	1.5	11-11-13	18	
				SPT-13	18.0 - 19.5	1.5	7-9-13	20	
				SPT-14	19.5 - 21.0	1.5	9-13-20	19	
				SPT-15	21.0 - 22.5	1.5	20-25-33	20	
				SPT-16	22.5 - 24.0	1.5	8-16-14	21	
				SPT-17	24.0 - 25.5	1.5	6-10-15	19	
				SPT-18	25.5 - 27.0	1.5	11-13-14	19	
				SPT-19	27.0 - 28.5	1.5	9-11-17	22	
				SPT-20	28.5 - 30.0	1.5	16-23-25	18	
				SPT-21	30.0 - 31.5	1.5	8-17-22	20	
				SPT-22	31.5 - 33.0	1.5	14-16-15	20	
				SPT-23	33.0 - 34.5	1.4	9-8-8	29	
				SPT-24	34.5 - 36.0	1.5	5-3-4	27	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>				Location <u>Rogersville, TN</u>					
Project Name <u>John Sevier Ash Disposal Areas</u>				Boring No. <u>JS-22</u>		Total Depth <u>74.7 ft</u>			
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1083.7	51.0	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp to wet, with areas of bottom ash, clay, and gravel (Continued)		SPT-25	36.0 - 37.5	1.5	3-5-5	36	
				SPT-26	37.5 - 39.0	1.5	5-4-3	31	
				SPT-27	39.0 - 40.5	1.5	5-4-4	26	
				SPT-28	40.5 - 42.0	1.5	3-3-4	24	
				SPT-29	42.0 - 43.5	1.4	3-5-3	31	
				SPT-30	43.5 - 45.0	1.5	9-5-5	35	
				SPT-31	45.0 - 46.5	1.5	8-4-3	33	
				SPT-32	46.5 - 48.0	1.5	3-5-4	21	
				SPT-33	48.0 - 49.5	1.5	5-4-3	35	
				SPT-34	49.5 - 51.0	1.5	5-2-2	37	
1080.7	54.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-35	51.0 - 52.5	1.5	1-1-1	44	
				SPT-36	52.5 - 54.0	1.5	WoR-4-6-10	22	
1063.6	71.1	SOIL 2: Lean Clay, brown, tan, soft to very stiff, damp to wet, with gravel and sand		SPT-37	54.0 - 55.5	1.5	4-7-9	19	
				SPT-38	55.5 - 57.0	1.5	11-9-13	18	
				SPT-39	57.0 - 58.5	0.5	3-4-5	--	
				SPT-40	58.5 - 60.0	1.1	4-7-8	19	
				SPT-41	60.0 - 61.5	1.5	7-6-7	20	
				SPT-42	61.5 - 63.0	1.3	2-9-5	20	
				SPT-43	63.0 - 64.5	1.3	WoR-2-3	20	
				SPT-44	64.5 - 66.0	1.0	2-2-3	17	
				SPT-45	66.0 - 67.5	0.6	WoR-2-2	17	
				SPT-46	67.5 - 69.0	0.4	3-4-13	18	
1061.0	73.7	SOIL 7: Sand, brown, tan, gray, dense, medium to coarse grained, wet, with gravels		SPT-47	69.0 - 70.5	1.5	8-15-19	21	
				SPT-48	70.5 - 72.0	1.5	15-23-18	11	
1060.0	74.7			SPT-49	72.0 - 73.5	1.2	7-15-50+	22	
				SPT-50	73.5 - 74.7				
		Shale, brown to gray, soft to moderately hard, very thin bedded, heavily weathered (augered)							

STANTECFMISM-LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FNMISM-GPHIC LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-22</u> Total Depth <u>74.7 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		No Refusal / Bottom of Hole Top of Rock = 73.7 Elevation (1061.0)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	JS-23	Total Depth	17.1 ft	
County	Hawkins		Surface Elevation	1075.1 ft			
Project Type	Geotechnical Exploration		Date Started	4/16/09	Completed	4/16/09	
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	10.5 ft	Date/Time	4/16/09
Logged By	A. Davis		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1075.1	0.0	Top of Hole							
1070.6	4.5	SOIL 1: Lean Clay, brown, medum stiff, to very stiff, damp, with sand and gravel		SPT-1	0.0 - 1.5	1.1	2-3-5	26	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 16.0' and 6.0' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 17.1' with well installation materials.
				SPT-2	1.5 - 3.0	1.3	7-8-11	23	
				SPT-3	3.0 - 4.5	1.5	6-8-13	22	
1060.7	14.4	SOIL 2: Lean Clay, light brown to brown, stiff to very stiff, damp to wet, with sand and gravel		SPT-4	4.5 - 6.0	1.5	6-8-12	22	
				SPT-5	6.0 - 7.5	1.5	11-13-13	22	
				SPT-6	7.5 - 9.0	1.2	5-6-8	24	
				SPT-7	9.0 - 10.5	1.5	3-5-6	24	
				SPT-8	10.5 - 12.0	1.5	4-6-8	24	
				SPT-9	12.0 - 13.5	1.5	6-6-9	22	
1059.5	15.6	SOIL 6: Gravel with Sand, gray, tan, medium grained, poorly graded, medium dense, wet		SPT-10	13.5 - 15.0	1.0	4-17-13	17	
1058.0	17.1			SPT-11	15.0 - 16.5	1.1	2-6-6	24	
				SPT-12	16.5 - 17.1	0.6	50+	21	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 15.6 Elevation (1059.5)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F:\MISM\GRAPHIC\LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-24	Total Depth	58.7 ft
County	Hawkins	Surface Elevation	1113.4 ft		
Project Type	Geotechnical Exploration	Date Started	4/7/09	Completed	4/7/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	25.7 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1113.4	0.0	Top of Hole							
1108.4	5.0	SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, tan, with occasional gray mottling, medium stiff to stiff, damp to moist		SPT-1	0.0 - 1.5	1.1	3-4-5	18	Installed 58.7' of slope inclinometer casing. Casing protected with flushmount cover set in concrete pad. Boring grouted from 0 to 58.7 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.1	4-4-7	20	
				SPT-3	3.0 - 4.5	1.5	4-2-3	27	
			SPT-4	4.5 - 6.0	1.3	4-5-14	23		
			SPT-5	6.0 - 7.5	1.5	12-15-13	21		
			SPT-6	7.5 - 9.0	1.2	5-7-7	24		
			SPT-7	9.0 - 10.5	1.5	2-1-2	33		
			SPT-8	10.5 - 12.0	0.5	2-3-3	18		
			SPT-9	12.0 - 13.5	1.3	1-2-3	23		
			SPT-10	13.5 - 15.0	1.5	3-2-3	25		
			SPT-11	15.0 - 16.5	1.5	3-2-2	26		
			SPT-12	16.5 - 18.0	1.3	2-3-2	28		
			SPT-13	18.0 - 19.5	1.5	2-1-2	29		
			SPT-14	19.5 - 21.0	1.5	1-2-6	32		
		1090.9	22.5	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-15	21.0 - 22.5	1.4	
	SPT-16	22.5 - 24.0	1.1		1-1-1	44			
	SPT-17	24.0 - 25.5	1.5		WoH-1-1	48			
	SPT-18	25.5 - 27.0	1.2		WoH	47			
	SPT-19	27.0 - 28.5	1.1		WoH	46			
	SPT-20	28.5 - 30.0	1.5		1-1-1	45			
	SPT-21	30.0 - 31.5	1.5		WoH	46			
	SPT-22	31.5 - 33.0	1.5		WoH	40			
	SPT-23	33.0 - 34.5	1.5		WoH-1-1	37			
	SPT-24	34.5 - 36.0	1.5		1-1-1	36			

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-24</u> Total Depth <u>58.7 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1075.6	37.8	SOIL 2: Lean Clay, brown, tan, stiff to hard, moist to wet, with trace silt and gravel		SPT-25	36.0 - 37.5	1.5	1-1-2	41	
			SPT-26	37.5 - 39.0	1.4	1-5-7	44		
			SPT-27	39.0 - 40.5	1.5	4-6-8	22		
			SPT-28	40.5 - 42.0	1.2	4-8-8	22		
			SPT-29	42.0 - 43.5	0.9	4-5-5	22		
1068.7	44.7		SPT-30	43.5 - 45.0	1.3	3-35-50+	22		
1061.0	52.4	SOIL 6: Gravel with Sand, gray to brown to tan, wet, loose to very dense, medium grained, subrounded with areas of clay.		SPT-31	45.0 - 46.5	0.6	18-29-18	20	
				SPT-32	46.5 - 48.0	1.2	6-4-6	21	
				SPT-33	48.0 - 49.5	0.5	16-16-10	21	
				SPT-34	49.5 - 51.0	0.9	11-9-16	18	
				SPT-35	51.0 - 52.5	1.2	16-12-10	16	
1054.7	58.7	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-36	52.5 - 53.9	0.9	10-21-50+	19	

No Refusal /
Bottom of Hole

Top of Rock = 52.4
Elevation (1061.0)

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FISM-GRAPHIC.LOG.GDT_1/23/10

Project Number		175569038			Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-25	Total Depth		48.5 ft	
County		Hawkins			Surface Elevation		1108.1 ft				
Project Type		Geotechnical Exploration			Date Started		4/30/09	Completed		4/30/09	
Supervisor		A. Davis	Driller		G. Thompson	Depth to Water		20.6 ft	Date/Time		4/30/09
Logged By		R. Mehnert			Depth to Water		--	Date/Time		--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1108.1	0.0	Top of Hole							
1105.5	2.6	SOIL 1: Lean Clay, brown, tan, gray, medium stiff, damp, with sand and gravel		SPT-1	0.0 - 1.5	1.2	3-4-4	19	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	0.5	4-8-8	13	
1096.4	11.7	SOIL 3: Bottom Ash, gray to dark gray to black, very loose to medium dense, medium to very coarse, poorly sorted, damp, angular,		SPT-3	3.0 - 4.5	1.1	5-10-13	18	Installed Piezometer with 10' of slotted screen at 40' and 33' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 45' with well installation materials.
				SPT-4	4.5 - 6.0	1.0	6-9-11	15	
				SPT-5	6.0 - 7.5	1.5	9-10-8	19	
				BAG-1	2.6 - 11.7	--	--	--	
				SPT-6	7.5 - 9.0	1.5	4-5-4	20	
				SPT-7	9.0 - 10.5	1.2	3-2-1	29	
				SPT-8	10.5 - 12.0	1.3	1-2-2	28	
1088.6	19.5	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to medium dense, damp to wet, with occasional bottom ash		SPT-9	12.0 - 13.5	1.3	4-8-9	--	
				SPT-10	13.5 - 15.0	1.2	3-7-8	25	
				SPT-11	15.0 - 16.5	1.3	3-6-8	33	
				BAG-2	11.7 - 21.0	--	--	--	
				SPT-12	16.5 - 18.0	1.5	5-5-7	35	
1077.3	30.8	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-13	18.0 - 19.5	1.4	2-2-2	38	
				SPT-14	19.5 - 21.0	1.4	2-1-1	42	
				SPT-15	21.0 - 22.5	1.3	2-2-1	49	
				SPT-16	22.5 - 24.0	1.5	WoH-1-1	42	
				SPT-17	24.0 - 25.5	1.2	WoH	42	
				SPT-18	25.5 - 27.0	1.1	WoH-1-1	43	
				SPT-19	27.0 - 28.5	1.5	1-1-3	45	
				SPT-20	28.5 - 30.0	1.3	WoH-2-2	36	
	SPT-21	30.0 - 31.5	1.4	1-1-4	23				
		SOIL 2: Lean Clay, brown, tan, gray, soft to hard, moist to wet, with gravel		SPT-22	31.5 - 33.0	0.8	3-6-8	22	
				SPT-23	33.0 - 34.5	1.1	3-4-5	17	
				SPT-24	34.5 - 36.0	0.7	4-6-5	25	
				SPT-25	36.0 - 36.8	0.4	14-50+	19	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1066.1	42.0	SOIL 2: Lean Clay, brown, tan, gray, soft to hard, moist to wet, with gravel (Continued)		SPT-26	37.5 - 39.0	1.0	15-7-17	21	
				SPT-27	39.0 - 40.5	1.2	3-1-2	21	
				SPT-28	40.5 - 42.0	0.4	3-3-2	21	
1060.4	47.7	SOIL 6: Gravel with Sand, gray, brown, tan, loose to very dense, medium grained, poorly graded, subrounded, wet		SPT-29	42.0 - 43.5	1.1	2-1-3	22	
				SPT-30	43.5 - 45.0	0.1	2-4-5	4	
				SPT-31	45.0 - 46.5	0.6	30-38-22	7	
				SPT-32	46.5 - 48.0	1.2	14-11-7	34	
1059.6	48.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-33	48.0 - 48.5	0.5	50+	14	
		No Refusal / Bottom of Hole							
		Top of Rock = 47.7 Elevation (1060.4)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-26	Total Depth	90.0 ft
County	Hawkins	Surface Elevation	1141.8 ft		
Project Type	Geotechnical Exploration	Date Started	5/29/09	Completed	5/29/09
Supervisor	A. Davis	Driller	G. Thompson	Depth to Water	49.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1141.8	0.0	Top of Hole							
1141.4	0.4	SOIL 1: Lean Clay, brown, tan, soft, damp, with sand and gravel SOIL 4: Compacted Fly Ash, gray to dark gray, very loose to dense, damp, with areas of clay, bottom ash, and gravel		SPT-1	0.0 - 1.5	1.4	2-2-2	37	Installed 91.5' of slope inclinometer casing with a depth of 89.5' and 2' stickup. Casing protected with steel cover set in concrete pad. Boring grouted from 0 to 89.5 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	0.6	2-2-1	24	
				SPT-3	3.0 - 4.5	1.4	1-2-1	22	
				SPT-4	4.5 - 6.0	1.2	2-7-12	20	
				SPT-5	6.0 - 7.5	1.5	23-22-24	18	
				SPT-6	7.5 - 9.0	1.5	18-15-16	13	
				SPT-7	9.0 - 10.5	1.5	6-12-16	17	
				SPT-8	10.5 - 12.0	1.5	9-14-13	17	
				SPT-9	12.0 - 13.5	1.5	9-10-11	16	
				SPT-10	13.5 - 15.0	1.5	4-8-12	14	
				SPT-11	15.0 - 16.5	1.5	9-11-15	18	
				SPT-12	16.5 - 18.0	1.5	12-14-15	23	
				SPT-13	18.0 - 19.5	1.5	6-11-18	19	
				SPT-14	19.5 - 21.0	1.5	10-17-16	24	
				SPT-15	21.0 - 22.5	1.5	10-12-17	20	
				SPT-16	22.5 - 24.0	1.5	9-9-11	20	
				SPT-17	24.0 - 25.5	1.5	6-16-19	17	
				SPT-18	25.5 - 27.0	1.5	8-19-22	21	
				SPT-19	27.0 - 28.5	1.5	19-25-22	19	
				SPT-20	28.5 - 30.0	1.5	6-10-13	17	
1111.3	30.5	SOIL 3: Bottom Ash, gray to dark gray, dense to very dense, medium to coarse grained, poorly sorted, damp		SPT-21	30.0 - 31.5	1.5	12-5-50+	16	
				SPT-22	31.5 - 33.0	1.5	44-49-53	19	
1107.3	34.5			SPT-23	33.0 - 34.5	1.5	11-17-21	14	
				SPT-24	34.5 - 36.0	1.5	11-21-33	15	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-26	Total Depth		90.0 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1089.3	52.5	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp, with areas of bottom ash (Continued)		SPT-25	36.0 - 37.5	1.5	32-35-36	19		
				SPT-26	37.5 - 39.0	1.5	13-27-32	23		
				SPT-27	39.0 - 40.5	1.5	10-13-9	21		
				SPT-28	40.5 - 42.0	1.5	6-6-5	26		
				SPT-29	42.0 - 43.5	1.3	5-5-5	33		
				SPT-30	43.5 - 45.0	1.5	4-4-4	32		
				SPT-31	45.0 - 46.5	1.5	5-4-4	34		
				SPT-32	46.5 - 48.0	1.5	4-3-6	40		
				SPT-33	48.0 - 49.5	1.5	4-4-4	38		
				SPT-34	49.5 - 51.0	1.5	3-2-5	42		
1082.8	59.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-35	51.0 - 52.5	1.5	3-2-4	41		
				SPT-36	52.5 - 54.0	1.5	1-1-1	41		
				SPT-37	54.0 - 55.5	1.5	2-1-1	39		
				SPT-38	55.5 - 57.0	1.5	WoR-1-1	44		
1065.3	76.5	SOIL 2: Lean Clay, light brown to brown, very soft to stiff, damp to wet, with maganese concretions, sand and gravel		SPT-39	57.0 - 58.5	1.5	3-5-3	53		
				SPT-40	58.5 - 60.0	1.5	WoR-2-3	20		
				SPT-41	60.0 - 61.5	1.5	4-6-9	23		
				SPT-42	61.5 - 63.0	1.5	5-8-8	22		
				SPT-43	63.0 - 64.5	1.2	3-8-11	21		
				SPT-44	64.5 - 66.0	1.3	6-7-8	17		
				SPT-45	66.0 - 67.5	1.4	6-8-6	19		
				SPT-46	67.5 - 69.0	1.5	2-2-2	22		
				SPT-47	69.0 - 70.5	1.5	1-1-2	23		
				SPT-48	70.5 - 72.0	1.4	WoR-2-4	24		
				SPT-49	72.0 - 73.5	1.0	WoR-1-1	25		
				SPT-50	73.5 - 75.0	1.5	1-2-2	22		
				SPT-51	75.0 - 76.5	1.5	2-4-4	25		
				SPT-52	76.5 - 78.0	1.5	20-27-24	20		

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FISM_GRAPHIC.LOG.GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-26</u> Total Depth <u>90.0 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1061.2	80.6	SOIL 7: Sand, gray, brown, tan, medium dense to very dense, medium to coarse grained, wet, with gravel <i>(Continued)</i>		SPT-53	78.0 - 79.5	0.7	7-6-7	21	
				SPT-54	79.5 - 81.0	1.0	4-8-15	10	
1051.8	90.0	Shale, brown to gray, soft to moderately hard, very thin bedded, heavily weathered (augered)							

No Refusal /
Bottom of Hole

Top of Rock = 80.6
Elevation (1061.2)

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-27	Total Depth	97.5 ft
County	Hawkins	Surface Elevation	1158.3 ft		
Project Type	Geotechnical Exploration	Date Started	6/1/09	Completed	6/2/09
Supervisor	A. Davis	Driller	K. Clements	Depth to Water	72.6 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1158.3	0.0	Top of Hole							
		Soil: 4 Compacted Fly Ash, gray to dark gray, loose to very dense, dry to wet, with clay seams and bottom ash		SPT-1	0.0 - 1.5	1.0	1-3-4	19	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed temporary Piezometer with 10' of slotted screen at 80' and 70' of riser protected with steel cover set in concrete pad. Boring backfilled from 64.5' to 97.5' with well installation materials.
				SPT-2	1.5 - 3.0	1.1	7-8-8	17	
				SPT-3	3.0 - 4.5	1.2	5-8-11	18	
				SPT-4	4.5 - 6.0	0.7	3-7-9	18	
				SPT-5	6.0 - 7.5	1.5	10-12-18	20	
				SPT-6	7.5 - 9.0	1.2	14-16-19	20	
				SPT-7	9.0 - 10.5	1.0	4-9-11	21	
				SPT-8	10.5 - 12.0	1.3	3-7-9	20	
				SPT-9	12.0 - 13.5	0.6	10-12-15	22	
				SPT-10	13.5 - 15.0	0.9	6-7-9	21	
				SPT-11	15.0 - 16.5	0.8	7-9-11	22	
				SPT-12	16.5 - 18.0	1.0	9-8-9	27	
				SPT-13	18.0 - 19.5	1.5	5-5-12	18	
				SPT-14	19.5 - 21.0	1.4	4-9-15	13	
				SPT-15	21.0 - 22.5	1.5	15-17-18	10	
				SPT-16	22.5 - 24.0	1.5	10-9-10	13	
				SPT-17	24.0 - 25.5	1.2	5-7-10	16	
				SPT-18	25.5 - 27.0	1.3	5-8-9	16	
				SPT-19	27.0 - 28.5	1.5	12-14-18	15	
				SPT-20	28.5 - 30.0	1.5	4-11-14	20	
				SPT-21	30.0 - 31.5	1.5	11-12-9	18	
				SPT-22	31.5 - 33.0	1.4	4-4-6	13	
				SPT-23	33.0 - 34.5	0.6	3-2-3	13	
				SPT-24	34.5 - 36.0	1.5	9-3-6	14	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		Soil: 4 Compacted Fly Ash, gray to dark gray, loose to very dense, dry to wet, with clay seams and bottom ash (Continued)		SPT-25	36.0 - 37.5	1.5	16-40-53	12	
			SPT-26	37.5 - 39.0	1.5	27-21-42	16		
			SPT-27	39.0 - 40.5	0.9	12-12-41	14		
			SPT-28	40.5 - 42.0	1.5	21-22-28	15		
			SPT-29	42.0 - 43.5	1.5	24-60-62	18		
			SPT-30	43.5 - 45.0	1.5	7-11-13	17		
			SPT-31	45.0 - 46.5	1.5	7-13-21	15		
1111.0	47.3			SPT-32	46.5 - 48.0	1.5	24-27-35	9	
1110.3	48.0	SOIL 3: Bottom Ash, gray to dark gray, most, very dense, very coarse grained		SPT-33	48.0 - 49.5	1.5	24-19-27	16	
			SPT-34	49.5 - 51.0	1.0	4-15-16	13		
		Soil: 4 Compacted Fly Ash, gray to dark gray, loose to very dense, dry to wet, with clay seams and bottom ash		SPT-35	51.0 - 52.5	1.5	18-19-22	21	
			SPT-36	52.5 - 54.0	0.9	23-37-31	16		
			SPT-37	54.0 - 55.5	1.1	4-7-9	16		
			SPT-38	55.5 - 57.0	1.1	3-6-9	20		
			SPT-39	57.0 - 58.5	1.4	5-5-5	24		
			SPT-40	58.5 - 60.0	1.1	11-3-7	34		
			SPT-41	60.0 - 61.5	1.0	4-3-5	41		
			SPT-42	61.5 - 63.0	1.2	9-5-6	33		
			SPT-43	63.0 - 64.5	1.3	2-2-4	37		
			SPT-44	64.5 - 66.0	1.4	4-3-4	30		
			SPT-45	66.0 - 67.5	1.5	2-4-4	35		
			SPT-46	67.5 - 69.0	0.6	2-5-8	50		
			SPT-47	69.0 - 70.5	1.5	1-2-2	55		
1086.3	72.0				SPT-48	70.5 - 72.0	1.5	3-3-3	37
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-49	72.0 - 73.5	1.5	WoH-1-1	44	
			SPT-50	73.5 - 75.0	1.5	2-4-4	42		
			SPT-51	75.0 - 76.5	1.5	WoH-1-1	48		
			SPT-52	76.5 - 78.0	1.5	3-4-5	34		

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMISM_GRAPHIC.LOG.GDT_1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1079.7	78.6	SOIL 2: Lean Clay, light brown to brown, medium stiff to very stiff, most to wet, with sand and gravel		SPT-53	78.0 - 79.5	1.5	3-5-9	20	
			SPT-54	79.5 - 81.0	1.3	4-5-8	20		
			SPT-55	81.0 - 82.5	1.1	6-11-9	19		
			SPT-56	82.5 - 84.0	0.8	5-8-11	19		
			SPT-57	84.0 - 85.5	1.5	4-7-12	20		
			SPT-58	85.5 - 87.0	0.4	2-3-2	21		
			SPT-59	87.0 - 88.5	1.2	4-5-7	23		
1068.9	89.4	SOIL 7: Sand, light brown to brown, medium dense, wet, coarse grained, with gravel		SPT-60	88.5 - 90.0	1.0	7-3-6	22	
			SPT-61	90.0 - 91.5	0.3	8-7-7	16		
			SPT-62	91.5 - 93.0	0.0	6-8-9	--		
			SPT-63	93.0 - 94.5	0.5	5-9-11	18		
			SPT-64	94.5 - 96.0	0.8	21-12-6	23		
1062.5	95.8	Shale, brown to gray, soft to moderately hard, very thin bedded, heavily weathered (augered)		SPT-65	96.0 - 97.5	0.8	5-5-7	121	
1060.8	97.5								
No Refusal / Bottom of Hole Top of Rock = 95.8 Elevation (1062.5)									

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F:\MISM\GRAPHIC\LOG.GDT 1/23/10

Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	JS-28	Total Depth	18.3 ft	
County	Hawkins		Surface Elevation	1074.5 ft			
Project Type	Geotechnical Exploration		Date Started	4/15/09	Completed	4/15/09	
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	9.0 ft	Date/Time	4/15/09
Logged By	A. Davis		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1074.5	0.0	Top of Hole							
1070.0	4.5	SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, gray, with occasional gray mottling, medium stiff to very stiff, damp to moist with few manganese concretions and silty zones		SPT-1	0.0 - 1.5	1.1	3-14-8	18	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 16.8' and 6.8' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 17.6' with well installation materials.
				SPT-2	1.5 - 3.0	1.0	8-8-11	26	
				SPT-3	3.0 - 4.5	1.3	3-3-3	24	
	SPT-4	4.5 - 6.0	1.1	3-5-6	22				
	SPT-5	6.0 - 7.5	1.5	6-7-9	21				
	SPT-6	7.5 - 9.0	1.2	6-9-14	19				
1064.8	9.7	SOIL 2: Lean Clay, brown to tan, moist, stiff to very stiff, with sand and gravel		SPT-7	9.0 - 10.5	1.2	3-5-5	20	
1062.5	12.0	SOIL 7: Sand, light brown to brown, loose, wet		SPT-8	10.5 - 12.0	1.0	4-5-5	21	
				SPT-9	12.0 - 13.5	1.3	14-22-30	20	
1059.5	15.0	SOIL 6: Gravel with Sand, gray brown, medium grained, poorly graded, medium dense to very dense, subrounded, wet		SPT-10	13.5 - 15.0	0.7	11-15-13	22	
				SPT-11	15.0 - 16.5	0.5	7-9-13	24	
1056.2	18.3			SPT-12	16.5 - 18.0	1.0	10-13-50+	33	
				SPT-13	18.0 - 18.3	0.3	50+	8	
		Shale, dark brown to tan to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 15.0 Elevation (1059.5)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F:\MISM-GRAPHIC\LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-29		Total Depth		52.0 ft
County		Hawkins		Surface Elevation		1111.5 ft				
Project Type		Geotechnical Exploration		Date Started		4/6/09		Completed		4/6/09
Supervisor		R. Riker		Driller		G. Thompson		Depth to Water		24.0 ft
Logged By		R. Mehnert		Depth to Water		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1111.5	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, tan, with occasion gray mottling, medium stiff to very stiff,damp to moist		SPT-1	0.0 - 1.5	0.8	1-3-2	21	Installed 52' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 52.0 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	0.4	1-4-4	22	
				SPT-3	3.0 - 4.5	1.3	1-4-7	18	
				SPT-4	4.5 - 6.0	0.1	2-3-3	20	
				SPT-5	6.0 - 7.5	0.5	1-2-3	21	
1102.8	8.7			SPT-6	7.5 - 9.0	1.5	2-5-12	24	
		SOIL 4: Compacted Fly Ash, gray to dark gray, very loose to medium dense, damp to wet, with clay layers, gravel, and sand		SPT-7	9.0 - 10.5	1.5	4-5-6	18	
				SPT-8	10.5 - 12.0	1.4	3-3-10	18	
				SPT-9	12.0 - 13.5	1.5	5-4-5	26	
				SPT-10	13.5 - 15.0	1.1	3-3-6	28	
				SPT-11	15.0 - 16.5	1.5	2-1-1	31	
				SPT-12	16.5 - 18.0	1.2	1-3-3	16	
				SPT-13	18.0 - 19.5	0.9	1-2-3	19	
				SPT-14	19.5 - 21.0	1.2	1-2-2	19	
1089.0	22.5		SPT-15	21.0 - 22.5	1.5	2-2-3	39		
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-16	22.5 - 24.0	1.2	2-1-1	34	
				SPT-17	24.0 - 25.5	1.3	1-1-1	28	
				SPT-18	25.5 - 27.0	1.1	1-1-1	30	
				SPT-19	27.0 - 28.5	1.5	1-1-1	28	
				SPT-20	28.5 - 30.0	0.3	WoR	28	
				SPT-21	30.0 - 31.5	1.5	WoH-1-2	27	
				SPT-22	31.5 - 33.0	1.3	1-2-2	42	
				SPT-23	33.0 - 34.5	1.3	1-1-1	44	
1075.2	36.3			SPT-24	34.5 - 36.0	1.4	2-2-2	35	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT_1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1064.3	47.2	SOIL 2: Lean Clay, light brown to brown, tan, soft to stiff, wet, with manganese concretions, sand, and gravel (Continued)		SPT-25	36.0 - 37.5	1.5	1-3-6	37	
			SPT-26	37.5 - 39.0	1.5	1-5-7	20		
			SPT-27	39.0 - 40.5	1.5	2-5-6	19		
			SPT-28	40.5 - 42.0	1.5	3-3-5	21		
			SPT-29	42.0 - 43.5	1.5	4-8-5	21		
			SPT-30	43.5 - 45.0	1.5	1-1-5	20		
			SPT-31	45.0 - 46.5	0.6	4-1-3	19		
1061.2	50.3	SOIL 6: Gravel with Sand, gray to brown to tan, medium dense to dense, medium grained, poorly graded, wet		SPT-32	46.5 - 48.0	1.5	10-19-17	18	
			SPT-33	48.0 - 49.5	0.7	17-10-10	14		
			SPT-34	49.5 - 51.0	1.5	5-4-5	16		
1059.5	52.0	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-35	51.0 - 51.5	0.4	50+	24	
			No Refusal / Bottom of Hole						
		Top of Rock = 50.3 Elevation (1061.2)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-30		Total Depth		49.2 ft
County		Hawkins		Surface Elevation		1105.6 ft				
Project Type		Geotechnical Exploration		Date Started		4/30/09		Completed		4/30/09
Supervisor		A. Davis		Driller		G. Thompson		Depth to Water		18.2 ft
Logged By		R. Mehnert		Date/Time		4/30/09		Depth to Water		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1105.6	0.0	Top of Hole							
1102.8	2.8	SOIL 1: Lean Clay, brown, tan, medium stiff to very stiff, to stiff, damp, with gravel and silt		SPT-1	0.0 - 1.5	1.2	4-4-3	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 30' and 23' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 49.2' with well installation materials.
				SPT-2	1.5 - 3.0	0.8	10-10-8	15	
				SPT-3	3.0 - 4.5	1.1	4-3-4	17	
			BAG-1	3.0 - 7.5	1.1	4-2-4	--		
			SPT-4	4.5 - 6.0			29		
			SPT-5	6.0 - 7.5	1.5	5-9-10	34		
			SPT-6	7.5 - 9.0	1.1	3-5-7	27		
			SPT-7	9.0 - 10.5	1.5	3-6-7	29		
			SPT-8	10.5 - 12.0	1.3	3-4-5	32		
			SPT-9	12.0 - 13.5	1.5	3-6-6	25		
			SPT-10	13.5 - 15.0	1.5	3-4-5	27		
			SPT-11	15.0 - 16.5	1.5	5-5-8	27		
			SPT-12	16.5 - 18.0	1.2	7-10-11	38		
			SPT-13	18.0 - 19.5	1.5	4-5-6	36		
			SPT-14	19.5 - 21.0	1.3	5-6-9	34		
		1081.6	24.0	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to medium dense, damp to wet, with bottom ash zones		BAG-2	19.5 - 24.0	1.2	
	SPT-15				21.0 - 22.5			33	
	SPT-16				22.5 - 24.0	0.8	2-6-3	32	
1080.6	25.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-17	24.0 - 25.5	1.5	WoH	34	
				SPT-18	25.5 - 27.0	0.6	WoH-1-2	23	
		SOIL 2: Lean Clay, light brown to brown, tan, very soft to very stiff, wet, with manganese concretions, sand and gravel		SPT-19	27.0 - 28.5	0.8	WoH-2-2	20	
				SPT-20	28.5 - 30.0	1.3	4-6-8	18	
				SPT-21	30.0 - 31.5	1.5	4-5-6	19	
				SPT-22	31.5 - 33.0	1.1	8-7-8	21	
				SPT-23	33.0 - 34.5	0.3	4-4-6	20	
				SPT-24	34.5 - 36.0	1.5	2-3-3	21	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-30</u> Total Depth <u>49.2 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1066.6	39.0			SPT-25	36.0 - 37.5	1.5	6-8-12	24	
				SPT-26	37.5 - 39.0	0.5	3-3-4	18	
1060.8	44.8	SOIL 6: Gravel with Sand, gray to brown to tan, medium dense to very dense, medium grained, poorly graded, subrounded, wet		SPT-27	39.0 - 40.5	0.6	7-8-8	14	
				SPT-28	40.5 - 42.0	0.0	5-19-18	23	
				SPT-29	42.0 - 43.5	1.2	22-30-50+	10	
				SPT-30	43.5 - 45.0	0.7	13-15-10	7	
				SPT-31	45.0 - 46.5	0.0	7-9-30	22	
1056.4	49.2	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-32	46.5 - 48.0	0.2	17-19-26	23	
				SPT-33	48.0 - 49.2	0.9	7-7-50+	24	
			No Refusal / Bottom of Hole Top of Rock = 44.8 Elevation (1060.8)						

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-31	Total Depth	98.8 ft
County	Hawkins	Surface Elevation	1151.1 ft		
Project Type	Geotechnical Exploration	Date Started	5/17/09	Completed	5/17/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	55.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	5/17/09
		Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1151.1	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, very loose to very dense, damp to wet, with clay layers, and areas of bottom ash		SPT-1	0.0 - 1.5	1.5	2-3-3	20	Boring advanced with 4-1/4 I.D. Hollow Stem Augers Installed 98.5' of slope inclinometer casing. Casing protected with steel cover set in concrete pad. Boring grouted from 0 to 98.5'.
				SPT-2	1.5 - 3.0	0.8	3-3-4	20	
				SPT-3	3.0 - 4.5	1.5	1-3-2	20	
				SPT-4	4.5 - 6.0	0.9	2-1-2	20	
				SPT-5	6.0 - 7.5	1.1	1-1-2	18	
				SPT-6	7.5 - 9.0	1.2	2-2-2	19	
				SPT-7	9.0 - 10.5	1.5	3-4-4	18	
				SPT-8	10.5 - 12.0	1.5	2-5-6	26	
				SPT-9	12.0 - 13.5	1.5	3-4-6	29	
				SPT-10	13.5 - 15.0	1.4	5-13-17	16	
				SPT-11	15.0 - 16.5	1.5	12-12-16	20	
				BAG-1	13.5 - 18.0			--	
				SPT-12	16.5 - 18.0	1.1	5-17-16	15	
				SPT-13	18.0 - 19.5	0.1	4-5-5	13	
				SPT-14	19.5 - 21.0	1.5	2-1-2	14	
				SPT-15	21.0 - 22.5	1.5	4-8-13	26	
				SPT-16	22.5 - 24.0	1.5	4-14-17	19	
				SPT-17	24.0 - 25.5	1.5	5-10-12	20	
				SPT-18	25.5 - 27.0	1.4	3-9-10	19	
				SPT-19	27.0 - 28.5	1.5	8-8-13	18	
				SPT-20	28.5 - 30.0	1.5	5-7-9	10	
				SPT-21	30.0 - 31.5	1.5	4-5-17	19	
				SPT-22	31.5 - 33.0	1.5	9-27-29	20	
				SPT-23	33.0 - 34.5	1.4	10-33-50	16	
			SPT-24	34.5 - 36.0	1.2	10-30-50+	18		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks			
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth				
1094.1	57.0	SOIL 4: Compacted Fly Ash, gray to dark gray, very loose to very dense, damp to wet, with clay layers, and areas of bottom ash (Continued)		SPT-25	36.0 - 37.5	0.7	33-50+	18				
				SPT-26	37.5 - 39.0	1.5	6-13-14	18				
				SPT-27	39.0 - 40.5	1.5	6-14-19	21				
				SPT-28	40.5 - 42.0	1.5	11-21-21	21				
				SPT-29	42.0 - 43.5	0.8	14-50+	16				
				SPT-30	43.5 - 45.0	1.5	12-14-16	19				
				SPT-31	45.0 - 46.5	1.4	9-10-14	26				
				SPT-32	46.5 - 48.0	1.5	10-13-14	28				
				SPT-33	48.0 - 49.5	1.5	5-6-8	28				
				BAG-2	48.0 - 51.0			--				
				SPT-34	49.5 - 51.0	1.4	6-10-8	24				
				SPT-35	51.0 - 52.5	1.5	7-7-8	24				
				SPT-36	52.5 - 54.0	1.4	5-5-7	26				
				SPT-37	54.0 - 55.5	1.5	4-3-4	36				
				SPT-38	55.5 - 57.0	1.5	5-2-2	41				
			1078.3	72.8	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-39	57.0 - 58.5	1.5	WoR-	35	
							SPT-40	58.5 - 60.0	1.3	WoR-1	39	
							SPT-41	60.0 - 61.5	1.1	1-1-1	50	
	SPT-42	61.5 - 63.0				1.5	WoR-2-1	46				
	SPT-43	63.0 - 64.5				1.1	WoH	44				
	SPT-44	64.5 - 66.0				1.0	WoR	40				
	SPT-45	66.0 - 67.5				1.5	WoR	38				
	SPT-46	67.5 - 69.0				1.4	WoR	40				
	SPT-47	69.0 - 70.5				1.5	WoR-1-2	39				
	SPT-48	70.5 - 72.0				1.2	WoR	49				
	SPT-49	72.0 - 73.5	1.5	WoR-6-8	33							
	SPT-50	73.5 - 75.0	1.4	5-10-12	22							
	SPT-51	75.0 - 76.5	1.5	5-7-10	21							
	SPT-52	76.5 - 78.0	1.1	8-8-10	21							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-31</u> Total Depth <u>98.8 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1068.6	82.5	SOIL 2: Lean Clay with Sand and Gravel, light brown to brown, medium stiff to very stiff, damp to moist, with occasional manganese concretions <i>(Continued)</i>		SPT-53	78.0 - 79.5	1.5	4-6-7	22	
				SPT-54	79.5 - 81.0	1.5	4-5-7	23	
				SPT-55	81.0 - 82.5	1.5	3-3-4	24	
				SPT-56	82.5 - 84.0	1.3	1-2-2	23	
1064.1	87.0	SOIL 7: Sand, light brown to brown, loose, medium to coarse grained, wet		SPT-57	84.0 - 85.5	0.9	2-3-3	26	
				SPT-58	85.5 - 87.0	0.9	3-4-4	24	
1062.2	88.9	SOIL 6: Gravel with Sand, gray to brown to tan, dense, poorly sorted, wet		SPT-59	87.0 - 88.5	1.1	5-13-22	13	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-60	88.5 - 90.0	0.4	12-13-26	13	
				SPT-61	90.0 - 90.5	0.4	50+	13	

No Refusal /
Bottom of Hole

Top of Rock = 88.9
Elevation (1062.2)

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-32	Total Depth	67.0 ft
County	Hawkins	Surface Elevation	1150.6 ft		
Project Type	Geotechnical Exploration	Date Started	6/3/09	Completed	6/3/09
Supervisor	A. Davis	Driller	K. Clements	Depth to Water	55.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1150.6	0.0	Top of Hole							
									Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed temporary Piezometer with 10' of slotted screen at 66' and 57.5' of riser protected with steel cover set in concrete pad. Boring backfilled from 48' to 67' with well installation materials.

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-32</u> Total Depth <u>67.0 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-33A	Total Depth	72.1 ft
County	Hawkins	Surface Elevation	1152.4 ft		
Project Type	Geotechnical Exploration	Date Started	3/30/09	Completed	3/31/09
Supervisor	A. Davis	Driller	G. Thompson	Depth to Water	51.0 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1152.4	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to moist, with gravel		SPT-1	0.0 - 1.5	1.3	4-8-10	20	Boring advanced with 3 1/4 I.D. Hollow Stem Auger
			SPT-2	1.5 - 3.0	1.5	10-10-12	19		
			SPT-3	3.0 - 4.5	1.5	6-9-11	18		
			SPT-4	4.5 - 6.0	1.5	6-6-10	18		
			SPT-5	6.0 - 7.5	1.5	12-18-26	20		
			BAG-1	0.0 - 15.0	--		--		
			SPT-6	7.5 - 9.0	1.5	7-12-14	20		
			SPT-7	9.0 - 10.5	1.5	9-9-14	22		
			SPT-8	10.5 - 12.0	1.5	6-11-12	22		
			SPT-9	12.0 - 13.5	1.5	10-16-15	24		
			SPT-10	13.5 - 15.0	1.5	13-13-16	22		
			SPT-11	15.0 - 16.5	1.1	6-9-15	25		
			SPT-12	16.5 - 18.0	1.5	13-23-24	22		
			SPT-13	18.0 - 19.5	1.5	10-11-13	20		
			SPT-14	19.5 - 21.0	1.5	5-9-13	20		
			SPT-15	21.0 - 22.5	1.5	6-10-20	20		
			SPT-16	22.5 - 24.0	1.5	6-21-23	21		
			SPT-17	24.0 - 25.5	1.4	10-15-18	21		
			SPT-18	25.5 - 27.0	1.4	10-12-17	21		
			SPT-19	27.0 - 28.5	1.5	18-18-30	22		
			SPT-20	28.5 - 30.0	1.5	14-24-31	25		
			SPT-21	30.0 - 31.5	1.2	12-19-20	26		
			SPT-22	31.5 - 33.0	1.5	16-22-22	26		
			SPT-23	33.0 - 34.5	1.5	15-21-25	21		
		SPT-24	34.5 - 36.0	1.5	12-16-14	25			

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1112.0	40.4			SPT-25	36.0 - 37.5	1.5	10-11-10	28	
				SPT-26	37.5 - 39.0	1.4	3-3-4	27	
				SPT-27	39.0 - 40.5	1.5	11-6-7	27	
1101.4	51.0	SOIL 3: Bottom Ash, gray to dark gray to black, loose to medium dense, medium to very coarse grained, angular, damp to moist		SPT-28	40.5 - 42.0	0.5	6-7-6	15	
				SPT-29	42.0 - 43.5	1.4	4-4-3	18	
				BAG-2	40.5 - 46.5			--	
				SPT-30	43.5 - 45.0	1.5	7-3-3	13	
				SPT-31	45.0 - 46.5	1.4	3-3-4	18	
				SPT-32	46.5 - 48.0	1.2	4-6-6	10	
				SPT-33	48.0 - 49.5	1.3	13-5-6	18	
1099.9	52.5	SOIL 4: Compacted Fly Ash, gray to dark gray, loose, wet, with gravel		SPT-34	49.5 - 51.0	0.9	3-5-5	20	
			SPT-35	51.0 - 52.5	1.5	2-4-2	46		
1087.4	65.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense		SPT-36	52.5 - 54.0	1.5	WoH	40	
				SPT-37	54.0 - 55.5	1.5	1-1-1	33	
				SPT-38	55.5 - 57.0	1.3	1-7-11	48	
				SPT-39	57.0 - 58.5	1.3	10-11-11	51	
				SPT-40	58.5 - 60.0	1.5	1-1-4	60	
				SPT-41	60.0 - 61.5	1.4	WoR- WoH-1	3	
				SPT-42	61.5 - 63.0	1.5	1-1-1	65	
				SPT-43	63.0 - 64.5	1.5	1-4-7	45	
1080.6	71.8	SOIL 6: Gravel with Sand, gray, brown, tan, black, medium dense to very dense, poorly graded, wet		SPT-44	64.5 - 66.0	1.2	6-22-22	12	
				SPT-45	66.0 - 67.5	1.4	20-16-16	13	
				SPT-46	67.5 - 69.0	0.7	5-14-15	11	
				SPT-47	69.0 - 70.5	1.1	15-27-20	17	
1080.3	72.1	Shale, tan to brown, very stiff, highly weathered (augered)		SPT-48	70.5 - 72.0	1.3	50+-14-	8	
			SPT-49	72.0 - 72.1	0.1	50+ 50+	5		
		No Refusal / Bottom of Hole							
		Top of Rock = 71.8							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M.GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-33B	Total Depth	72.8 ft
County	Hawkins	Surface Elevation	1155.3 ft		
Project Type	Geotechnical Exploration	Date Started	4/2/09	Completed	4/3/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	49.7 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1155.3	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to moist, with gravel		SPT-1	0.0 - 1.5	1.5	5-6-6	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Boring Grouted from 0 to 72.8 feet
				SPT-2	1.5 - 3.0	1.5	8-9-13	29	
				SPT-3	3.0 - 4.5	1.2	5-7-8	26	
				SPT-4	4.5 - 6.0	1.2	7-11-15	23	
				SPT-5	6.0 - 7.5	1.5	19-18-22	24	
				BAG-1	0.0 - 15.0	15.0	--	--	
				SPT-6	7.5 - 9.0	1.4	11-16-24	28	
				SPT-7	9.0 - 10.5	1.5	9-13-12	26	
				SPT-8	10.5 - 12.0	1.4	6-7-8	29	
				SPT-9	12.0 - 13.5	1.5	6-7-9	28	
				SPT-10	13.5 - 15.0	1.5	6-12-13	22	
				SPT-11	15.0 - 16.5	1.1	10-13-16	17	
				SPT-12	16.5 - 18.0	1.3	13-13-23	20	
				SPT-13	18.0 - 19.5	1.5	10-12-12	17	
				SPT-14	19.5 - 21.0	1.3	5-8-10	21	
				SPT-15	21.0 - 22.5	1.5	11-15-21	18	
				SPT-16	22.5 - 24.0	1.5	10-12-20	20	
				SPT-17	24.0 - 25.5	1.4	13-19-19	22	
				SPT-18	25.5 - 27.0	1.5	10-14-18	17	
				SPT-19	27.0 - 28.5	1.2	10-18-20	19	
				SPT-20	28.5 - 30.0	1.5	12-13-18	20	
				SPT-21	30.0 - 31.5	1.3	8-12-14	19	
				SPT-22	31.5 - 33.0	1.5	12-15-23	18	
				SPT-23	33.0 - 34.5	1.4	7-7-12	20	
			SPT-24	34.5 - 36.0	1.3	8-11-13	25		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-33B	Total Depth		72.8 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1107.3	48.0	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to moist, with gravel (Continued)		SPT-25	36.0 - 37.5	1.2	14-18-26	20		
				SPT-26	37.5 - 39.0	1.3	7-12-13	23		
				SPT-27	39.0 - 40.5	1.3	7-15-15	23		
				SPT-28	40.5 - 42.0	1.5	16-11-8	25		
				SPT-29	42.0 - 43.5	1.4	4-4-4	31		
				SPT-30	43.5 - 45.0	1.5	6-5-5	25		
				SPT-31	45.0 - 46.5	1.3	3-2-2	26		
				SPT-32	46.5 - 48.0	1.0	5-5-4	29		
1104.3	51.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-33	48.0 - 49.5	1.5	3-1-1	31		
				SPT-34	49.5 - 51.0	1.4	WoR	30		
1102.8	52.5	SOIL 3: Bottom Ash, gray to dark gray, black, very loose, medium to very coarse grained, moist SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense		SPT-35	51.0 - 52.5	0.9	WoR-1-1	48		
				SPT-36	52.5 - 54.0	0.8	1-1-1	31		
				SPT-37	54.0 - 55.5	1.3	1-1-1	30		
				SPT-38	55.5 - 57.0	1.2	WoR	31		
				SPT-39	57.0 - 58.5	1.4	WoR	31		
				SPT-40	58.5 - 60.0	1.3	WoR	29		
				SPT-41	60.0 - 61.5	1.5	WoR-4	34		
				SPT-42	61.5 - 63.0	1.1	WoR-7-8	38		
				SPT-43	63.0 - 64.5	1.2	1-4-4	51		
				SPT-44	64.5 - 66.0	1.3	1-4-7	23		
1089.3	66.0			SPT-45	66.0 - 67.5	1.5	5-6-8	20		
				SPT-46	67.5 - 69.0	1.5	4-6-12	21		
				SPT-47	69.0 - 70.5	1.5	1-17-13	22		
1084.8	70.5	SOIL 6: Gravel with Sand, brown to tan, medium dense, poorly graded, wet		SPT-48	70.5 - 72.0	1.2	3-9-15	19		
				SPT-49	72.0 - 72.8	0.8	13-50+	37		
1082.5	72.8	Shale, gray, thin bedded, moderately hard (augered)								
		No Refusal / Bottom of Hole								
		Top of Rock = 70.5 Elevation (1084.8)								

STANTECFM5M_LEGACY_JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-34A	Total Depth	74.6 ft
County	Hawkins	Surface Elevation	1156.4 ft		
Project Type	Geotechnical Exploration	Date Started	3/31/09	Completed	4/1/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	43.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1156.4	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp to wet, with gravel		SPT-1	0.0 - 1.5	1.2	4-7-11	21	Boring advanced with 3-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.4	11-11-15	23	
				SPT-3	3.0 - 4.5	1.5	4-7-13	24	
				SPT-4	4.5 - 6.0	1.5	10-7-10	24	
				SPT-5	6.0 - 7.5	1.5	9-13-15	22	
				BAG-1	0.0 - 15.0	15.0		--	
				SPT-6	7.5 - 9.0	1.2	7-13-16	20	
				SPT-7	9.0 - 10.5	1.0	5-11-12	22	
				SPT-8	10.5 - 12.0	1.5	4-6-7	21	
				SPT-9	12.0 - 13.5	1.4	6-7-11	20	
				SPT-10	13.5 - 15.0	1.4	5-12-15	20	
				SPT-11	15.0 - 16.5	1.2	4-11-13	22	
				SPT-12	16.5 - 18.0	1.5	16-19-23	26	
				SPT-13	18.0 - 19.5	1.4	5-11-15	21	
				SPT-14	19.5 - 21.0	1.5	5-10-15	23	
				SPT-15	21.0 - 22.5	1.4	7-15-20	24	
				SPT-16	22.5 - 24.0	1.3	3-9-13	21	
				SPT-17	24.0 - 25.5	1.5	5-11-17	22	
				SPT-18	25.5 - 27.0	1.5	7-16-15	24	
				SPT-19	27.0 - 28.5	1.5	9-17-17	21	
				SPT-20	28.5 - 30.0	1.5	5-12-16	21	
				SPT-21	30.0 - 31.5	1.5	12-17-20	24	
				SPT-22	31.5 - 33.0	1.5	21-30-35	26	
				SPT-23	33.0 - 34.5	1.5	2-13-23	26	
			SPT-24	34.5 - 36.0	1.5	5-15-20	30		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMISM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1114.4	42.0	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp to wet, with gravel (Continued)		SPT-25	36.0 - 37.5	1.5	12-20-14	32	
				SPT-26	37.5 - 39.0	1.5	3-13-18	24	
				SPT-27	39.0 - 40.5	1.5	6-12-9	32	
				SPT-28	40.5 - 42.0	1.5	5-3-3	32	
1112.5	43.9	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-29	42.0 - 43.5	1.2	1-1-1	31	
				SPT-30	43.5 - 45.0	1.4	1-2-2	29	
1106.9	49.5	SOIL 3: Bottom Ash, gray to dark gray to black, very loose to loose, medium to very coarse grained, poorly sorted, angular, damp to wet		SPT-31	45.0 - 46.5	0.9	3-1-1	19	
				SPT-32	46.5 - 48.0	1.4	2-1-1	32	
				SPT-33	48.0 - 49.5	1.5	3-1-1	38	
				SPT-34	49.5 - 51.0	1.1	1-1-1	38	
				SPT-35	51.0 - 52.5	1.5	WoH- WoH-1	48	
				SPT-36	52.5 - 54.0	1.5	WoR- WoR-1	45	
1095.8	60.6	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-37	54.0 - 55.5	1.5	WoR	39	
				SPT-38	55.5 - 57.0	1.5	WoR	40	
				SPT-39	57.0 - 58.5	0.7	WoR	38	
				SPT-40	58.5 - 60.0	1.4	WoR	36	
				SPT-41	60.0 - 61.5	1.4	WoR	30	
1088.7	67.7	SOIL 2: Lean Clay with Sand and Gravel, light brown to brown, gray, tan, very soft to stiff, moist to wet		SPT-42	61.5 - 63.0	1.2	2-2-2	24	
				SPT-43	63.0 - 64.5	0.9	1-2-1	26	
				SPT-44	64.5 - 66.0	1.5	2-3-6	24	
				SPT-45	66.0 - 67.5	1.1	6-4-10	16	
				SPT-46	67.5 - 69.0	1.1	4-16-29	23	
1083.3	73.1	SOIL 6: Gravel with Sand, brown, gray, tan, dense to very dense, medium grained, wet		SPT-47	69.0 - 70.5	0.9	18-36-40	11	
				SPT-48	70.5 - 72.0	1.3	22-29-11	11	
				SPT-49	72.0 - 72.8	0.8	42-50+	20	
1081.8	74.6	Shale, brown to gray, very hard, very thin bedded (augered)		SPT-50	73.1 - 74.6	0.8	38-21-27	27	
		No Refusal / Bottom of Hole							

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FIMSM_GRAPHIC.LOG.GDT_1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-34B	Total Depth	72.3 ft
County	Hawkins	Surface Elevation	1156.3 ft		
Project Type	Geotechnical Exploration	Date Started	4/2/09	Completed	4/2/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	48.3 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1156.3	0.0	Top of Hole								
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to wet, with gravel		SPT-1	0.0 - 1.5	1.3	2-2-7	32	Boring advanced with 3-1/4 I.D. Hollow Stem Augers Boring grouted from 0 to 72.3 feet	
				SPT-2	1.5 - 3.0	1.4	6-10-12	30		
				SPT-3	3.0 - 4.5	1.5	4-9-18	22		
				SPT-4	4.5 - 6.0	1.5	6-17-25	25		
				SPT-5	6.0 - 7.5	1.5	15-18-18	25		
				BAG-1	0.0 - 15.0	15.0		--		
				SPT-6	7.5 - 9.0	1.5	7-10-12	25		
				SPT-7	9.0 - 10.5	1.5	4-7-8	28		
				SPT-8	10.5 - 12.0	1.5	5-7-9	29		
				SPT-9	12.0 - 13.5	1.5	10-9-11	19		
				SPT-10	13.5 - 15.0	1.5	3-5-7	24		
				SPT-11	15.0 - 16.5	1.5	6-10-14	24		
				SPT-12	16.5 - 18.0	1.5	6-11-13	20		
				SPT-13	18.0 - 19.5	1.5	6-11-13	26		
				SPT-14	19.5 - 21.0	1.5	7-13-14	24		
				SPT-15	21.0 - 22.5	1.5	6-17-17	22		
				SPT-16	22.5 - 24.0	1.5	13-7-10	20		
				SPT-17	24.0 - 25.5	1.5	9-11-15	21		
				SPT-18	25.5 - 27.0	1.5	12-14-17	21		
				SPT-19	27.0 - 28.5	1.1	12-14-16	23		
				SPT-20	28.5 - 30.0	1.5	16-10-10	24		
				ST-1	30.0 - 30.2	0.0		--		ST-1 Refusal, no recovery
				SPT-21	30.2 - 31.5	1.5	3-4-5	25		
				SPT-22	31.5 - 33.0	1.5	6-9-15	31	Perched zone from 32.0'-32.3'	
			SPT-23	33.0 - 34.5	1.5	3-9-15	30			
			SPT-24	34.5 - 36.0	1.2	6-12-15	31			

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT_1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-34B	Total Depth		72.3 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1117.3	39.0			SPT-25	36.0 - 37.5	1.5	13-16-16	33	Perched zone from 38.1'-38.4'	
				SPT-26	37.5 - 39.0	1.5	2-2-2	36		
1107.8	48.5	SOIL 3: Bottom Ash, gray to dark gray to black, very loose to medium dense, medium to very coarse, moist to wet, angular		SPT-27	39.0 - 40.5	1.5	3-6-10	18		
				ST-2	40.5 - 42.5	1.7		--		
				SPT-28	42.5 - 44.0	1.3	3-2-1	16		
				SPT-29	44.0 - 45.5	1.0	2-4-4	18		
				SPT-30	45.5 - 47.0	0.1	2-2-2	16		
				SPT-31	47.0 - 48.5	0.5	2-3-4	23		
1091.6	64.7	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense		SPT-32	48.5 - 50.0	1.3	1-1-1	30		ST-3: No recovery, sample too soft
				SPT-33	50.0 - 51.5	1.5	WoR	31		
				SPT-34	51.5 - 53.0	1.1	WoR-1-1	33		
				ST-3	53.0 - 55.0	0.0		--		
				SPT-35	55.0 - 56.5	1.5	WoR	33		
				SPT-36	56.5 - 58.0	0.9	WoR	32		
				SPT-37	58.0 - 59.5	1.3	WoR	44		
				SPT-38	59.5 - 61.0	1.1	WoR-1-5	32		
				SPT-39	61.0 - 62.5	1.1	6-11-11	27		
				SPT-40	62.5 - 64.0	1.1	8-7-11	22		
1086.1	70.2	SOIL 2: Lean Clay, brown to dark brown, gray, stiff to hard, moist to damp, with roots		SPT-41	64.0 - 65.5	1.4	4-5-8	24		
				SPT-42	65.5 - 67.0	1.5	4-5-10	21		
				SPT-43	67.0 - 68.5	1.3	8-12-16	20		
1084.0	72.3	SOIL 6: Gravel with Sand, gray to tan to brown, poorly graded, dense, wet		SPT-44	68.5 - 70.0	1.0	6-18-32	20		
				SPT-45	70.0 - 71.5	0.4	12-20-12	21		
				SPT-46	71.5 - 72.3	0.5	16-50-50+	13		
		No Refusal / Bottom of Hole								
		Top of Rock = 72.3 Elevation (1084.0)								

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M.GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-34C		Total Depth		36.9 ft
County		Hawkins		Surface Elevation		1120.4 ft				
Project Type		Geotechnical Exploration		Date Started		6/2/09		Completed		6/2/09
Supervisor		R. Mehnert		Driller		G. Thompson		Depth to Water		8.5 ft
Logged By		R. Mehnert		Depth to Water		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1120.4	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, medium dense, damp to wet, with occasional areas of clay and gravel		SPT-1	0.0 - 1.5	1.3	2-3-9	24	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 21.5' and 14.5' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 36.9' with well installation materials.
				SPT-2	1.5 - 3.0	1.5	9-12-14	23	
				SPT-3	3.0 - 4.5	1.5	6-10-10	22	
				SPT-4	4.5 - 6.0	1.4	3-6-8	21	
1112.9	7.5			SPT-5	6.0 - 7.5	1.5	11-11-14	16	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-6	7.5 - 9.0	1.5	2-1-1	21	
				SPT-7	9.0 - 10.5	0.5	WoH	23	
				BAG-1	7.5 - 13.5	--	--	--	
				SPT-8	10.5 - 12.0	1.0	WoH- WoH-1	22	
				SPT-9	12.0 - 13.5	1.0	1-2-3	23	
				SPT-10	13.5 - 15.0	1.5	1-WoR- WoR	24	
				SPT-11	15.0 - 16.5	1.2	WoR-1-2	23	
				SPT-12	16.5 - 18.0	1.3	1-1-1	26	
1100.9	19.5		SPT-13	18.0 - 19.5	0.4	1-2-2	24		
		SOIL 9: Lean Clay, dark brown to gray, wet, very soft to soft, with sand and silty zones and a strong organic odor.		SPT-14	19.5 - 21.0	1.5	WoR-1-1	28	
				SPT-15	21.0 - 22.5	0.5	WoH	20	
				SPT-16	22.5 - 24.0	1.5	WoH	19	
				SPT-17	24.0 - 25.5	1.5	WoR- WoR-2	23	
				SPT-18	25.5 - 27.0	1.5	WoR-1-1	34	
1092.2	28.2			SPT-19	27.0 - 28.5	1.5	WoR-1-2	32	
1089.7	30.7	SOIL 2: Lean Clay, light brown to brown, medium stiff,		SPT-20	28.5 - 30.0	1.5	2-2-4	25	
		SOIL 7: Sand, light brown to brown, medium dense, medium to coarse grained, wet, with areas of clay and gravel		SPT-21	30.0 - 31.5	1.5	3-4-7	21	
				SPT-22	31.5 - 33.0	1.5	9-13-17	14	
				SPT-23	33.0 - 34.5	0.7	7-11-11	11	
1084.2	36.2			SPT-24	34.5 - 36.0	0.4	15-9-8	14	
				SPT-25	36.0 - 36.9	0.7	8-50+	16	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-34C</u> Total Depth <u>36.9 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1083.5	36.9	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered) (Continued)							
		No Refusal / Bottom of Hole							
		Top of Rock = 36.2 Elevation (1084.2)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-35 Total Depth 22.3 ft
County	Hawkins	Surface Elevation	1078.9 ft
Project Type	Geotechnical Exploration	Date Started	4/14/09 Completed 4/14/09
Supervisor	A. Davis Driller M. Martin	Depth to Water	15.0 ft Date/Time 4/14/09
Logged By	A. Davis	Depth to Water	-- Date/Time --

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1078.9	0.0	Top of Hole							
1078.5	0.4	DGA and TOPSOIL		SPT-1	0.0 - 1.5	1.0	7-9-6	21	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 21.5' and 11.5' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 21.5' with well installation materials.
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, gray, with gray mottling, stiff to very stiff, damp to moist, with few manganese concretions and silty zones		SPT-2	1.5 - 3.0	1.2	7-9-11	18	
			SPT-3	3.0 - 4.5	0.2	7-6-7	16		
			SPT-4	4.5 - 6.0	1.5	3-3-6	21		
1071.4	7.5		SPT-5	6.0 - 7.5	1.5	6-9-14	21		
			SPT-6	7.5 - 9.0	1.5	3-7-8	21		
		SOIL 9: Lean Clay, dark brown to gray, stiff, damp to moist, with sand		SPT-7	9.0 - 10.5	1.1	4-7-5	19	
			SPT-8	10.5 - 12.0	1.5	4-6-7	19		
			SPT-9	12.0 - 13.5	1.5	3-5-6	20		
			SPT-10	13.5 - 15.0	0.5	4-5-10	18		
1063.1	15.8		SPT-11	15.0 - 16.5	0.7	10-18-38	6		
1061.5	17.4	SOIL 6: Gravel with Sand, gray to brown to tan, wet, medium dense to very dense, medium coarse, subrounded, wet		SPT-12	16.5 - 18.0	1.5	21-8-5	23	
			SPT-13	18.0 - 19.5	1.0	4-5-8	28		
			SPT-14	19.5 - 21.0	0.7	5-10-8	28		
1056.6	22.3	Shale, brown to gray, moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-15	21.0 - 22.3	1.1	10-13-50+	13	
			No Refusal / Bottom of Hole						
		Top of Rock = 17.4 Elevation (1061.5)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-36	Total Depth		52.0 ft	
County		Hawkins			Surface Elevation		1108.5 ft				
Project Type		Geotechnical Exploration			Date Started		4/5/09	Completed		4/5/09	
Supervisor		R. Riker	Driller		G. Thompson	Depth to Water		15.0 ft	Date/Time		4/5/09
Logged By		R. Mehnert			Depth to Water		--	Date/Time		--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1108.5	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, tan, damp to moist, stiff to very stiff, with occasional gray mottling		SPT-1	0.0 - 1.5	0.6	1-4-5	15	Installed 52' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 52.0 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.1	5-5-6	16	
				SPT-3	3.0 - 4.5	1.5	2-2-7	15	
1102.5	6.0			SPT-4	4.5 - 6.0	1.0	14-6-10	18	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to medium dense, dry to wet, with gravel		SPT-5	6.0 - 7.5	0.1	8-8-7	19	
				SPT-6	7.5 - 9.0	0.1	10-12-10	13	
				SPT-7	9.0 - 10.5	1.2	7-4-4	35	
				SPT-8	10.5 - 12.0	0.5	12-8-8	22	
1095.0	13.5			SPT-9	12.0 - 13.5	1.5	4-2-2	38	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-10	13.5 - 15.0	1.5	1-1-1	45	
				SPT-11	15.0 - 16.5	1.5	WoH	42	
				SPT-12	16.5 - 18.0	1.5	1-1-1	52	
				SPT-13	18.0 - 19.5	1.5	WoH	48	
				SPT-14	19.5 - 21.0	1.5	WoH	52	
				SPT-15	21.0 - 22.5	1.2	WoR	63	
				SPT-16	22.5 - 24.0	1.2	WoH	65	
				SPT-17	24.0 - 25.5	1.3	WoH	63	
				SPT-18	25.5 - 27.0	1.0	WoR	40	
				SPT-19	27.0 - 28.5	1.2	WoR	48	
				SPT-20	28.5 - 30.0	1.3	WoR	52	
				SPT-21	30.0 - 31.5	1.1	WoR	50	
				SPT-22	31.5 - 33.0	0.9	WoR	59	
				SPT-23	33.0 - 34.5	1.5	WoH	64	
				SPT-24	34.5 - 36.0	1.0	WoR	49	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN	
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-36	Total Depth 52.0 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1070.4	38.1	SOIL 9: Lean Clay, dark brown, gray, very soft to medium stiff, wet, with sand and silt		SPT-25	36.0 - 37.5	1.1	WoR	49	
				SPT-26	37.5 - 39.0	1.5	WoH	38	
				SPT-27	39.0 - 40.5	1.5	WoH	31	
				SPT-28	40.5 - 42.0	0.9	WoH	30	
				SPT-29	42.0 - 43.5	1.0	WoH	33	
				SPT-30	43.5 - 45.0	1.5	WoH	33	
				SPT-31	45.0 - 46.5	1.4	1-2-3	34	
1061.3	47.2	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-32	46.5 - 47.9	1.4	3-3-50+	26	
1056.5	52.0								

No Refusal /
Bottom of Hole

Top of Rock = 47.2
Elevation (1061.3)

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-36A		Total Depth		53.0 ft
County		Hawkins		Surface Elevation		1106.2 ft				
Project Type		Geotechnical Exploration		Date Started		4/16/09		Completed		4/17/09
Supervisor		R. Riker		Driller		G. Thompson		Depth to Water		27.0 ft
Logged By		R. Mehnert		Date/Time		4/17/09		Date/Time		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1106.2	0.0	Top of Hole							
1099.9	6.3	SOIL 1: Lean Clay with Gravel and Silt, brown, tan, gray, stiff, damp to wet		SPT-1	0.0 - 1.5	0.9	4-3-5	12	Installed 53.0' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 53.0 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.3	4-6-5	14	
				SPT-3	3.0 - 4.5	1.1	4-4-5	18	
				SPT-4	4.5 - 6.0	1.0	4-5-5	21	
1096.4	9.8	SOIL 3: Bottom Ash, gray to dark gray to black, medium to very coarse grained, loose to medium dense, angular, damp to wet		SPT-5	6.0 - 7.5	1.3	6-7-8	22	
				BAG-1	6.3 - 7.5	--	--	--	
				SPT-6	7.5 - 9.0	1.4	3-4-6	25	
1083.5	22.7	SOIL 1: Sandy Lean Clay, brown, tan, brown, soft to very stiff, damp to moist, with Gravel		SPT-7	9.0 - 10.5	1.2	3-2-3	32	
				SPT-8	10.5 - 12.0	0.6	2-1-2	19	
				SPT-9	12.0 - 13.5	1.2	2-3-4	23	
				BAG-2	10.5 - 18.0	1.3	2-2-4	--	
				SPT-10	13.5 - 15.0	--	--	21	
				SPT-11	15.0 - 16.5	1.0	2-3-6	21	
				SPT-12	16.5 - 18.0	1.4	3-5-6	17	
				SPT-13	18.0 - 19.5	1.0	2-3-4	16	
				SPT-14	19.5 - 21.0	0.4	2-3-9	19	
				SPT-15	21.0 - 22.5	1.0	8-10-10	17	
1077.7	28.5	Dense Grade Aggregate (DGA), gray to dark gray, moist to wet, medium dense to very dense, medium to very coarse grained, and poorly sorted		SPT-16	22.5 - 24.0	1.4	12-24-30	5	
				SPT-17	24.0 - 25.5	1.3	19-22-18	5	
				SPT-18	25.5 - 27.0	0.7	9-16-12	7	
				SPT-19	27.0 - 28.5	0.7	9-10-8	7	
1073.5	32.7	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-20	28.5 - 30.0	1.5	1-1-1	52	
				SPT-21	30.0 - 31.5	0.6	1-2-2	46	
				SPT-22	31.5 - 33.0	1.0	2-1-1	47	
		SOIL 9: Lean Clay, brown to dark brown, very soft to medium stiff, wet, with gravel		SPT-23	33.0 - 34.5	1.5	1-2-3	27	
				SPT-24	34.5 - 36.0	1.4	1-2-1	28	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN	
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-36A	Total Depth 53.0 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1062.1	44.1	SOIL 9: Lean Clay, brown to dark brown, very soft to medium stiff, wet, with gravel (Continued)		SPT-25	36.0 - 37.5	0.0	1-1-1	--	
				SPT-26	37.5 - 39.0	1.4	1-1-1	32	
				SPT-27	39.0 - 40.5	1.5	WoH	31	
				SPT-28	40.5 - 42.0	1.0	WoR	40	
				SPT-29	42.0 - 43.5	1.3	WoH	34	
				SPT-30	43.5 - 45.0	0.9	24-34-18	23	
1053.2	53.0	Shale, brown to gray, soft to moderately hard, very thin bedded, heavily weathered (augered)		SPT-31	45.0 - 46.5	1.2	11-11-50+	25	

No Refusal /
Bottom of Hole

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-36B	Total Depth	56.6 ft
County	Hawkins	Surface Elevation	1110.8 ft		
Project Type	Geotechnical Exploration	Date Started	4/16/09	Completed	4/16/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	27.0 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1110.8	0.0	Top of Hole							
		SOIL 1: Sandy Lean Clay, brown, tan, gray, soft to very stiff, damp to moist, with few manganese concretions and gravel		SPT-1	0.0 - 1.5	0.1	4-3-2	11	Installed 56.6' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 56.6 feet. Boring advanced with 3-1/4 I.D. Hollow Stem Augers
			SPT-2	1.5 - 3.0	0.2	4-6-7	20		
			SPT-3	3.0 - 4.5	1.4	3-5-5	18		
			SPT-4	4.5 - 6.0	1.0	5-5-9	23		
			BAG-1	4.7 - 7.5			--		
			SPT-5	6.0 - 7.5	1.3	9-9-8	24		
			SPT-6	7.5 - 9.0	0.3	4-7-10	21		
			SPT-7	9.0 - 10.5	0.0	7-7-7	--		
			SPT-8	10.5 - 12.0	0.0	6-5-5	--		
			SPT-9	12.0 - 13.5	1.2	4-2-2	25		
			BAG-2	13.5 - 15.0	1.5	4-5-5	--		
			SPT-10	13.5 - 15.0			15		
			SPT-11	15.0 - 16.5	1.3	5-3-4	16		
			SPT-12	16.5 - 18.0	0.8	2-3-3	18		
			SPT-13	18.0 - 19.5	0.2	2-2-3	24		
			SPT-14	19.5 - 21.0	1.2	1-2-2	25		
			SPT-15	21.0 - 22.5	1.3	2-2-2	28		
			BAG-3	18.0 - 27.0			--		
		SPT-16	22.5 - 24.0	1.2	WoR- WoR-2	26			
		SPT-17	24.0 - 25.5	1.1	1-1-1	23			
1083.8	27.0			SPT-18	25.5 - 27.0	1.5	1-1-1	23	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose, wet, with gravel and clay		SPT-19	27.0 - 28.5	1.1	2-4-3	33	
1080.8	30.0			SPT-20	28.5 - 30.0	0.0	2-3-3	--	
				SPT-21	30.0 - 31.5	1.5	2-1-2	35	
				BAG-4	27.0 - 36.0			--	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-22	31.5 - 33.0	1.5	1-1-1	33	
				SPT-23	33.0 - 34.5	1.5	2-1-1	43	
1074.8	36.0			SPT-24	34.5 - 36.0	0.6	2-1-2	32	

STANTEC\FMSM_LEGACY\JOHN SEVIER ASH DISPOSAL AREAS.GPJ\FMSM\GRAPHIC\LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1067.3	43.5	SOIL 2: Lean Clay, brown, tan, gray, medium stiff, to stiff, moist to wet (Continued)		SPT-25	36.0 - 37.5	1.3	4-5-7	20	
				SPT-26	37.5 - 39.0	1.5	4-6-7	21	
				SPT-27	39.0 - 40.5	1.3	5-4-4	23	
				SPT-28	40.5 - 42.0	1.5	WoH-3-3	24	
				SPT-29	42.0 - 43.5	0.6	3-4-4	24	
1061.4	49.4	SOIL 6: Gravel with Sand, medium grained, loose to dense, subrounded, wet		SPT-30	43.5 - 45.0	0.8	5-8-7	14	
				SPT-31	45.0 - 46.5	1.0	1-2-4	18	
				SPT-32	46.5 - 48.0	1.1	11-18-23	14	
				SPT-33	48.0 - 49.5	1.4	12-24-11	20	
1054.2	56.6	Shale, brown to gray, soft to moderately hard, thin bedded, heavily weathered (augered)		SPT-34	49.5 - 50.7	0.8	11-11- 50+	23	
		No Refusal / Bottom of Hole							
		Top of Rock = 49.4 Elevation (1061.4)							

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-36-SV	Total Depth	42.0 ft
County	Hawkins	Surface Elevation	1108.4 ft		
Project Type	Geotechnical Exploration	Date Started	6/4/09	Completed	6/4/09
Supervisor	A. Davis	Driller	Kent C.	Depth to Water	Dry
Logged By	A. Davis	Depth to Water	--	Date/Time	6/4/09
		Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1108.4	0.0	Top of Hole							
1102.5	5.9	SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, tan, damp to moist, stiff to very stiff, with occasional gray mottling							
1095.0	13.4	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to medium dense, dry to wet, with gravel							
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose							
				ST-1	18.5 - 20.5	2.0		--	Vane shear test performed at 19.0 feet. Undrained Shear Strength = 6.1 psi
				ST-2	28.5 - 29.5	1.0		--	Vane shear test performed at 29.1 feet. Undrained Shear Strength = 8.6 psi

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-36-SV</u> Total Depth <u>42.0 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1070.4	38.0	SOIL 9: Lean Clay, dark brown, gray, very soft to medium stiff, wet, with sand and silt							Vane shear test performed at 40.6 feet. Undrained Shear Strength = 11.1 psi
1066.4	42.0			ST-3	40.0 - 42.0	2.0		--	

No Refusal /
Bottom of Hole

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-37	Total Depth	25.0 ft
County	Hawkins	Surface Elevation	1103.8 ft		
Project Type	Geotechnical Exploration	Date Started	4/17/09	Completed	4/18/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	13.8 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1103.8	0.0	Top of Hole							
1099.9	3.9	SOIL 1: Lean Clay with Sand and Gravel, brown, tan, gray, medium stiff to very stiff, damp, with cobble and silt							Boring advanced with 3 1/4 I.D. Hollow Stem Augers
1089.4	14.4	SOIL 4: Compacted Fly Ash, loose to medium dense, damp to wet, with occasional bottom ash layers							Installed Piezometer with 10' of slotted screen at 25' and 17' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 25' with well installation materials. Boring is located 5' east of JS-37
1078.8	25.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose							

No Refusal /
Bottom of Hole

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM-GRAPHIC LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-37-SV		Total Depth		36.3 ft
County		Hawkins		Surface Elevation		1102.3 ft				
Project Type		Geotechnical Exploration		Date Started		6/4/09	Completed		6/4/09	
Supervisor		A. Davis		Driller		Kent C.		Depth to Water		Dry
Logged By		A. Davis		Date/Time		6/4/09		Depth to Water		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1102.3	0.0	Top of Hole							
1099.0	3.3	SOIL 1: Lean Clay with Sand and Gravel, brown, tan, gray, medium stiff to very stiff, damp, with cobble and silt							
1089.4	12.9	SOIL 4: Compacted Fly Ash, loose to medium dense, damp to wet, with occasional bottom ash layers							
1067.2	35.1	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		ST-1	18.0 - 19.7	1.7	--	--	Vane shear test performed at 18.5 feet. Undrained Shear Strength = 7.5 psi
1066.0	36.3	SOIL 2: Lean Clay, brown to dark		ST-2	24.5 - 26.4	1.9	--	--	Vane shear test performed at 25.0 feet. Undrained Shear Strength = 7.0 psi
				ST-3	35.0 - 36.3	1.3	--	--	

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMSM_GRAPHIC.LOG_GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-37X</u> Total Depth <u>43.2 ft</u>
County <u>Hawkins</u>	Surface Elevation <u>1104.4 ft</u>
Project Type <u>Geotechnical Exploration</u>	Date Started <u>4/17/09</u> Completed <u>4/18/09</u>
Supervisor <u>R. Riker</u> Driller <u>G. Thompson</u>	Depth to Water <u>13.8 ft</u> Date/Time <u>4/18/09</u>
Logged By <u>R. Mehnert</u>	Depth to Water <u>--</u> Date/Time <u>--</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1104.4	0.0	Top of Hole							
1099.9	4.5	SOIL 1: Lean Clay with Sand and Gravel, brown, tan, gray, medium stiff to very stiff, damp, with cobble and silt		SPT-1	0.0 - 1.5	1.4	2-3-5	20	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.2	3-3-3	22	
				SPT-3	3.0 - 4.5	0.7	3-17-12	11	
1089.4	15.0	SOIL 4: Compacted Fly Ash, loose to medium dense, damp to wet, with occasional bottom ash layers		SPT-4	4.5 - 6.0	1.0	5-8-6	24	Boring Grouted from 0 to 43.2 feet
				SPT-5	6.0 - 7.5	1.5	5-6-7	28	
				BAG-1	4.5 - 10.0	--	--	--	
				SPT-6	7.5 - 9.0	1.2	2-1-3	27	
				SPT-7	9.0 - 10.5	1.3	2-3-4	27	
				SPT-8	10.5 - 12.0	1.3	2-5-11	24	
				SPT-9	12.0 - 13.5	1.4	7-11-11	30	
				SPT-10	13.5 - 15.0	1.4	3-4-2	46	
				SPT-11	15.0 - 16.5	0.5	1-1-2	43	
				SPT-12	16.5 - 18.0	1.5	WoH	49	
	SPT-13	18.0 - 19.5	1.1	WoR	54				
	SPT-14	19.5 - 21.0	1.5	WoH	83				
	SPT-15	21.0 - 22.5	0.9	4-2-2	48				
	SPT-16	22.5 - 24.0	0.9	WoH	54				
	SPT-17	24.0 - 25.5	1.5	WoH	47				
	SPT-18	25.5 - 27.0	1.0	WoR	42				
	SPT-19	27.0 - 28.5	1.5	WoH	50				
	SPT-20	28.5 - 30.0	1.5	WoR	54				
	SPT-21	30.0 - 31.5	1.1	WoR	56				
	SPT-22	31.5 - 33.0	1.5	WoR	52				
	SPT-23	33.0 - 34.5	1.5	WoR	42				
	SPT-24	34.5 - 36.0	0.9	WoR	45				

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM-GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-37X</u> Total Depth <u>43.2 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1067.2	37.2	SOIL 2: Lean Clay, brown to dark brown, tan, gray, very soft to very stiff, with gravel, moist		SPT-25	36.0 - 37.5	1.0	WoR	35	
1065.0	39.4			SPT-26	37.5 - 39.0	1.0	4-5-12	21	
1063.4	41.0			SPT-27	39.0 - 40.5	0.8	5-12-21	17	
				SPT-28	40.5 - 42.0	0.8	12-36-10	17	
1061.2	43.2	SOIL 6: Gravel with Sand, gray to brown to tan, medium grained, poorly graded, dense, subrounded, wet		SPT-29	42.0 - 43.2	1.2	7-33-50+	22	
		Shale, brown to gray, soft to moderately hard, thin bedded, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 41.0 Elevation (1063.4)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-38	Total Depth	93.0 ft
County	Hawkins	Surface Elevation	1151.5 ft		
Project Type	Geotechnical Exploration	Date Started	5/14/09	Completed	5/16/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	52.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	5/16/09
		Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1151.5	0.0	Top of Hole							
1150.4	1.1	SOIL 1: Lean Clay, brown, soft, damp, with gravel		SPT-1	0.0 - 1.5	1.0	2-2-2	20	Boring advanced with 4-1/4 I.D. Hollow Stem Augers Installed 91.5' of slope inclinometer casing. Casing protected with steel cover set in concrete pad. Boring grouted from 0 to 91.5'.
				SPT-2	1.5 - 3.0	1.0	2-2-1	24	
		SOIL 4: Compacted Fly Ash, gray to dark grey, very loose to medium dense, damp to wet		SPT-3	3.0 - 4.5	1.5	1-1-1	26	
				SPT-4	4.5 - 6.0	1.0	1-1-1	29	
				SPT-5	6.0 - 7.5	1.0	WoH- WoH-2	27	
				SPT-6	7.5 - 9.0	0.6	2-2-2	26	
				SPT-7	9.0 - 10.5	1.1	4-6-6	24	
				BAG- SPT-8	7.5 - 13.8 10.5 - 12.0	1.5	3-5-5	-- 26	
				SPT-9	12.0 - 13.5	1.5	2-1-2	29	
1137.7	13.8								
1137.0	14.5	SOIL 1: Lean Clay, brown, tan, damp, very stiff		SPT-10	13.5 - 15.0	1.5	3-4-12	23	
				SPT-11	15.0 - 16.5	1.2	6-10-16	18	
		SOIL 4: Compacted Fly Ash, gray to dark gray, medium dense, to dense, damp to wet, with occasional clay seams and gravel		SPT-12	16.5 - 18.0	1.4	17-21-22	20	
				SPT-13	18.0 - 19.5	1.5	7-9-11	21	
				SPT-14	19.5 - 21.0	1.5	6-8-10	25	
				SPT-15	21.0 - 22.5	1.5	6-5-10	28	
				SPT-16	22.5 - 24.0	1.5	7-8-10	26	
				SPT-17	24.0 - 25.5	1.5	7-9-7	25	
				SPT-18	25.5 - 27.0	1.5	2-6-8	26	
1124.1	27.4								
		SOIL 1: Lean Clay, brown, tan, medium stiff to very stiff, damp		SPT-19	27.0 - 28.5	1.5	10-8-12	20	
1121.5	30.0			SPT-20	28.5 - 30.0	1.2	3-3-5	19	
		SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, very loose to very dense, with gravel and bottom ash		SPT-21	30.0 - 31.5	1.4	5-7-13	18	
				SPT-22	31.5 - 33.0	1.5	17-18-24	18	
				SPT-23	33.0 - 34.5	1.4	12-14-19	14	
				SPT-24	34.5 - 36.0	1.5	15-23-29	17	

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM-GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1097.5	54.0	SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, very loose to very dense, with gravel and bottom ash (Continued)		SPT-25	36.0 - 37.5	1.5	19-20-27	14	
				SPT-26	37.5 - 39.0	1.5	7-14-18	18	
				SPT-27	39.0 - 40.5	1.5	3-13-20	16	
				SPT-28	40.5 - 42.0	1.3	4-22-22	16	
				SPT-29	42.0 - 43.5	1.5	22-40-46	21	
				SPT-30	43.5 - 45.0	1.5	12-17-18	22	
				SPT-31	45.0 - 46.5	1.4	8-18-23	22	
				BAG-1	45.0 - 48.0		--		
				SPT-32	46.5 - 48.0	1.5	17-20-28	23	
				SPT-33	48.0 - 49.5	1.5	3-20-23	22	
				SPT-34	49.5 - 51.0	0.5	18-21-18	14	
				SPT-35	51.0 - 52.5	0.5	10-14-12	25	
				SPT-36	52.5 - 54.0	1.3	2-2-3	38	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-37	54.0 - 55.5	1.5	2-1-2	38	
				SPT-38	55.5 - 57.0	1.5	WoH	36	
				SPT-39	57.0 - 58.5	1.5	WoR	44	
				SPT-40	58.5 - 60.0	1.5	WoR	45	
				SPT-41	60.0 - 61.5	1.5	WoR-2-5	48	
				SPT-42	61.5 - 63.0	1.5	3-3-5	54	
				SPT-43	63.0 - 64.5	1.5	WoR-2-2	56	
				SPT-44	64.5 - 66.0	1.5	1-1-1	58	
				SPT-45	66.0 - 67.5	1.5	1-1-1	56	
				SPT-46	67.5 - 69.0	1.5	WoR	65	
				SPT-47	69.0 - 70.5	1.5	WoR- WoH-2	80	
				SPT-48	70.5 - 72.0	1.2	WoR-2-2	48	
				SPT-49	72.0 - 73.5	1.5	1-1-2	47	
				SPT-50	73.5 - 75.0	1.5	WoH-2-2	49	
				SPT-51	75.0 - 76.5	0.9	WoR	55	
				SPT-52	76.5 - 78.0	1.3	WoH	50	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN	
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-38	Total Depth 93.0 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1068.4	83.1	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose (Continued)		SPT-53	78.0 - 79.5	1.3	WoR	60	
				SPT-54	79.5 - 81.0	1.4	WoR	43	
				SPT-55	81.0 - 82.5	1.2	WoR	40	
1065.3	86.2	SOIL 2: Lean Clay, brown to gray, very stiff, moist, with gravel		SPT-56	82.5 - 84.0	1.5	WoR-4-12	28	
				SPT-57	84.0 - 85.5	0.8	2-8-10	21	
				SPT-58	85.5 - 87.0	1.4	20-24-30	20	
1058.5	93.0	Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered)							

No Refusal /
Bottom of Hole

Top of Rock = 86.2
Elevation (1065.3)

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-39	Total Depth	105.5 ft
County	Hawkins	Surface Elevation	1181.3 ft		
Project Type	Geotechnical Exploration	Date Started	6/3/09	Completed	6/4/09
Supervisor	A. Davis	Driller	K. Clements	Depth to Water	85.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1181.3	0.0	Top of Hole							
		Soil: 4 Compacted Fly Ash, gray to dark gray, loose to very dense, dry to wet, with clay seams and bottom ash		SPT-1	0.0 - 1.5	1.0	5-4-5	20	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed temporary Piezometer with 10' of slotted screen at 92.5' and 83.5' of riser protected with steel cover set in concrete pad. Boring backfilled from 74' to 105.5' with well installation materials.
				SPT-2	1.5 - 3.0	1.4	6-8-11	19	
				SPT-3	3.0 - 4.5	1.4	14-17-19	23	
				SPT-4	4.5 - 6.0	1.0	5-11-18	24	
				SPT-5	6.0 - 7.5	1.0	14-11-14	23	
				SPT-6	7.5 - 9.0	1.1	14-17-18	20	
				SPT-7	9.0 - 10.5	1.3	5-6-13	23	
				SPT-8	10.5 - 12.0	1.2	6-7-9	23	
				SPT-9	12.0 - 13.5	1.2	15-13-16	22	
				SPT-10	13.5 - 15.0	1.2	11-14-18	22	
				SPT-11	15.0 - 16.5	1.3	9-7-6	25	
				SPT-12	16.5 - 18.0	1.2	6-6-7	25	
				SPT-13	18.0 - 19.5	0.9	2-2-2	25	
				SPT-14	19.5 - 21.0	1.5	1-3-8	26	
				SPT-15	21.0 - 22.5	1.2	15-13-13	23	
				SPT-16	22.5 - 24.0	1.0	3-6-9	26	
				SPT-17	24.0 - 25.5	1.1	10-14-11	22	
				SPT-18	25.5 - 27.0	1.5	5-8-11	25	
				BAG-1	22.5 - 30.0			--	
				SPT-19	27.0 - 28.5	1.3	9-12-12	28	
				SPT-20	28.5 - 30.0	1.0	3-5-9	30	
				SPT-21	30.0 - 31.5	1.2	2-5-8	31	
				SPT-22	31.5 - 33.0	1.2	9-9-7	32	
				SPT-23	33.0 - 34.5	1.3	4-5-9	30	
				SPT-24	34.5 - 36.0	1.5	11-18-24	32	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-39	Total Depth		105.5 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1141.5	39.8	SOIL 1: Lean Clay, brown, very stiff, damp, with some gravel		SPT-25	36.0 - 37.5	1.3	17-22-22	27		
1140.8	40.5		SPT-26	37.5 - 39.0	0.9	34-49-50+	22			
		SOIL 4 Compacted Fly Ash, gray to dark gray, medium dense to very dense, dry to wet, with clay seams and bottom ash		SPT-27	39.0 - 40.5	1.0	12-13-15	26		
			SPT-28	40.5 - 42.0	0.0	13-24-18	--			
			SPT-29	42.0 - 43.5	0.0	38-36-50+	--			
			SPT-30	43.5 - 45.0	1.5	14-22-32	16			
			SPT-31	45.0 - 46.5	1.3	7-13-21	12			
			SPT-32	46.5 - 48.0	1.5	21-21-25	14			
			SPT-33	48.0 - 49.5	1.4	15-17-21	14			
			SPT-34	49.5 - 51.0	1.5	12-13-14	10			
			SPT-35	51.0 - 52.5	1.3	18-24-25	11			
			SPT-36	52.5 - 54.0	1.0	11-22-17	9			
			SPT-37	54.0 - 55.5	1.5	11-19-27	16			
			SPT-38	55.5 - 57.0	1.3	5-14-24	16			
			SPT-39	57.0 - 58.5	1.5	29-32-35	18			
			SPT-40	58.5 - 60.0	1.4	14-18-21	16			
			SPT-41	60.0 - 61.5	1.4	16-17-20	17			
			SPT-42	61.5 - 63.0	1.4	12-14-13	18			
			SPT-43	63.0 - 64.5	1.5	15-16-17	16			
1114.6	66.7		SOIL 3: Bottom Ash, gray to dark gray, medium to very coarse grained, dense, poorly sorted, angular		SPT-44	64.5 - 66.0	1.5	15-10-16	21	
1113.8	67.5	SPT-45		66.0 - 67.5	1.5	19-20-17	16			
		SOIL 4 Compacted Fly Ash, gray to dark gray, medium dense to very dense, dry to wet, with clay seams and bottom ash		SPT-46	67.5 - 69.0	1.3	11-18-22	19		
			SPT-47	69.0 - 70.5	1.2	19-14-16	20			
			SPT-48	70.5 - 72.0	1.5	14-17-22	21			
			SPT-49	72.0 - 73.5	1.3	30-37-41	20			
			SPT-50	73.5 - 75.0	1.4	5-9-11	26			
			SPT-51	75.0 - 76.5	1.2	3-8-10	30			
1103.7	77.6		SPT-52	76.5 - 78.0	1.5	8-6-10	22			

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M.GRAPHIC LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1103.1	78.2	SOIL 1: Lean Clay, brown, very stiff, moist (Continued)		SPT-53	78.0 - 79.5	1.5	2-12-16	27	
			SPT-54	79.5 - 81.0	1.0	6-2-5	38		
1098.8	82.5	Soil: 4 Compacted Fly Ash, gray to dark gray, loose to medium dense, dry to wet, with clay seams and bottom ash		SPT-55	81.0 - 82.5	1.3	3-2-3	43	
			SPT-56	82.5 - 84.0	1.3	WoR	64		
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-57	84.0 - 85.5	1.3	WoR- WoH-2	38	
			SPT-58	85.5 - 87.0	1.2	WoH	41		
			SPT-59	87.0 - 88.5	1.2	WoH-1-1	41		
			SPT-60	88.5 - 90.0	0.0	WoR-1-2	--		
			SPT-61	90.0 - 91.5	1.5	WoR	56		
1085.6	95.7	SOIL 2: Lean Clay, brown, medium stiff to hard, with sand and gravel		SPT-62	95.0 - 96.5	1.3	WoH-1-6	22	
			SPT-63	96.5 - 98.0	1.2	19-14-16	22		
			SPT-64	98.0 - 99.5	1.2	42-30-19	22		
			SPT-65	99.5 - 101.0	1.2	1-7-9	24		
1077.4	103.9			SPT-66	101.0 - 102.5	1.5	3-3-5	24	
			SPT-67	102.5 - 104.0	1.1	4-4-6	29		
1075.8	105.5	Shale, brown to gray, soft to moderately hard, very thin bedded, heavily weathered (augered)		SPT-68	104.0 - 105.5	1.1	46-48-43	26	
		No Refusal / Bottom of Hole							
		Top of Rock = 103.9 Elevation (1077.4)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-40		Total Depth		90.2 ft
County		Hawkins		Surface Elevation		1170.2 ft				
Project Type		Geotechnical Exploration		Date Started		4/6/09		Completed		4/7/09
Supervisor		A. Davis Driller M. Martin		Depth to Water		57.4 ft		Date/Time		4/7/09
Logged By		A. Davis		Depth to Water		70.5 ft		Date/Time		4/8/09

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1170.2	0.0	Top of Hole							
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to medium dense, damp to wet, with occasional bottom ash and gravel		SPT-1	0.0 - 1.5	1.5	3-3-6	30	Boring advanced with 3-1/4 I.D. Hollow Stem Augers Boring Backfilled with Cuttings
			SPT-2	1.5 - 3.0	1.0	5-11-12	24		
			SPT-3	3.0 - 4.5	1.2	9-14-12	23		
			SPT-4	4.5 - 6.0	1.5	9-11-13	23		
			SPT-5	6.0 - 7.5	1.5	8-14-14	25		
			BAG-1	0.0 - 15.0	--				
			SPT-6	7.5 - 9.0	1.4	8-14-15	26		
			SPT-7	9.0 - 10.5	1.4	5-7-6	27		
			SPT-8	10.5 - 12.0	1.2	4-6-7	25		
			SPT-9	12.0 - 13.5	1.1	5-9-11	28		
			SPT-10	13.5 - 15.0	1.5	3-5-5	25		
			SPT-11	15.0 - 16.5	1.3	2-6-11	26		
		SPT-12	16.5 - 18.0	1.2	19-22-24	18			
1151.7	18.5	SOIL 3: Bottom Ash, gray to dark gray and black, dense to very dense, medium to very coarse grained, gray to dark gray, poorly sorted, damp, angular		SPT-13	18.0 - 19.5	1.0	5-16-23	14	
			SPT-14	19.5 - 21.0	0.8	9-30-27	14		
1147.7	22.5	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp to wet, with occasional bottom ash and gravel		SPT-15	21.0 - 22.5	1.4	23-27-23	12	
			SPT-16	22.5 - 24.0	1.5	7-13-18	12		
			SPT-17	24.0 - 25.5	1.3	2-16-24	12		
			SPT-18	25.5 - 27.0	1.3	14-24-25	11		
			SPT-19	27.0 - 28.5	1.1	14-25-39	11		
			SPT-20	28.5 - 30.0	1.2	14-24-39	13		
			SPT-21	30.0 - 31.5	1.3	10-24-25	15		
			SPT-22	31.5 - 33.0	1.5	29-35-32	13		
			SPT-23	33.0 - 34.5	1.5	9-15-23	12		
			SPT-24	34.5 - 36.0	1.5	15-18-25	12		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-40	Total Depth		90.2 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
		SOIL 4: Compacted Fly Ash, gray to dark gray, loose to very dense, damp to wet, with occasional bottom ash and gravel <i>(Continued)</i>		SPT-25	36.0 - 37.5	1.5	17-20-21	11		
			SPT-26	37.5 - 39.0	1.5	17-21-38	16			
			SPT-27	39.0 - 40.5	1.5	10-11-21	15			
			SPT-28	40.5 - 42.0	1.5	8-17-17	12			
			SPT-29	42.0 - 43.5	1.3	8-17-19	14			
			SPT-30	43.5 - 45.0	1.3	8-17-20	11			
			SPT-31	45.0 - 46.5	1.3	17-34-36	19			
			SPT-32	46.5 - 48.0	1.5	21-34-47	19			
			SPT-33	48.0 - 49.5	1.3	10-15-20	21			
			SPT-34	49.5 - 51.0	1.5	8-20-31	14			
			SPT-35	51.0 - 52.5	1.5	21-31-37	18			
			SPT-36	52.5 - 54.0	1.4	9-18-19	15			
			SPT-37	54.0 - 55.5	1.4	10-16-20	22			
			SPT-38	55.5 - 57.0	1.5	15-24-27	22			
			SPT-39	57.0 - 58.5	1.5	10-13-22	23			
			SPT-40	58.5 - 60.0	1.5	30-36-50	24			
			SPT-41	60.0 - 61.5	1.4	5-14-20	23			
			SPT-42	61.5 - 63.0	0.8	9-11-15	27			
			SPT-43	63.0 - 64.5	1.5	7-13-18	27			
			SPT-44	64.5 - 66.0	1.0	WoR- WoR-8	27			
		SPT-45	66.0 - 67.5	1.2	5-14-20	22				
1101.7	68.5	SPT-46	67.5 - 69.0	1.5	8-10-12	20				
		SOIL 3: Bottom Ash, gray to dark gray and black, damp to wet, very loose to medium dense, medium to very course grained, poorly sorted, angular		SPT-47	69.0 - 70.5	1.2	4-6-7	38		
			SPT-48	70.5 - 72.0	1.1	7-8-7	33			
			SPT-49	72.0 - 73.5	1.2	WoR	38			
1096.7	73.5		SPT-50	73.5 - 75.0	1.4	3-4-4	40			
			SPT-51	75.0 - 76.5	1.5	1-2-4	41			
			SPT-52	76.5 - 78.0	1.5	9-18-18	35			

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ.FMISM.GRAPHIC.LOG.GDT.1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1089.5	80.7	SOIL 4: Compacted Fly Ash, gray to dark gray, loose to dense, damp to wet, with occasional bottom ash and gravel (Continued)		SPT-53	78.0 - 79.5	1.5	8-13-12	34	
			SPT-54	79.5 - 81.0	1.5	1-1-4	62		
			SPT-55	81.0 - 82.5	1.5	15-19-31	36		
1084.7	85.5	SOIL 2: Lean Clay with Sand and Gravel, brown, very stiff to hard, wet		SPT-56	82.5 - 84.0	0.6	9-26-38	12	
				SPT-57	84.0 - 85.5	0.6	4-7-13	34	
1080.0	90.2	Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered)		SPT-58	85.5 - 87.0	1.5	19-20-21	32	
		No Refusal / Bottom of Hole		SPT-59	90.0 - 91.5	0.2	50+	21	
		Top of Rock = 85.5 Elevation (1084.7)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-41	Total Depth	75.2 ft
County	Hawkins	Surface Elevation	1154.6 ft		
Project Type	Geotechnical Exploration	Date Started	4/5/09	Completed	4/5/09
Supervisor	A. Davis Driller M. Martin	Depth to Water	49.5 ft	Date/Time	4/5/09
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1154.6	0.0	Top of Hole								
		SOIL 4: Compacted Fly Ash, gray to dark gray, medium dense to very dense, damp, with occasional clay seams		SPT-1	0.0 - 1.5	1.2	2-6-7	21	Boring advanced with 3-1/4 I.D. Hollow Stem Augers	
				SPT-2	1.5 - 3.0	1.0	7-10-10	20		
				SPT-3	3.0 - 4.5	1.5	11-11-12	21		
				SPT-4	4.5 - 6.0	1.3	8-9-8	21		
				SPT-5	6.0 - 7.5	1.5	9-13-12	21		
				BAG-1	0.0 - 15.0			--		
				SPT-6	7.5 - 9.0	1.5	6-10-12	22		Boring Backfilled With Cuttings
				SPT-7	9.0 - 10.5	1.5	9-8-10	23		
				SPT-8	10.5 - 12.0	1.3	7-10-11	23		
				SPT-9	12.0 - 13.5	1.4	7-10-11	25		
				SPT-10	13.5 - 15.0	1.5	5-11-13	26		
				SPT-11	15.0 - 16.5	1.5	6-6-9	29		
				SPT-12	16.5 - 18.0	1.5	10-11-12	25		
				SPT-13	18.0 - 19.5	1.3	9-13-17	16		
				SPT-14	19.5 - 21.0	1.5	8-17-19	16		
				SPT-15	21.0 - 22.5	1.2	13-19-19	16		
				SPT-16	22.5 - 24.0	1.5	5-12-13	17		
				SPT-17	24.0 - 25.5	1.5	6-10-11	20		
				SPT-18	25.5 - 27.0	1.2	5-12-13	13		
				SPT-19	27.0 - 28.5	1.2	7-19-21	13		
				SPT-20	28.5 - 30.0	1.5	7-10-12	15		
				SPT-21	30.0 - 31.5	1.5	11-12-16	14		
				SPT-22	31.5 - 33.0	1.5	14-24-34	15		
				SPT-23	33.0 - 34.5	1.4	7-21-50	12		
			SPT-24	34.5 - 36.0	1.5	43-30-47	13			

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-41	Total Depth		75.2 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1102.1	52.5	SOIL 4: Compacted Fly Ash, gray to dark gray, medium dense to very dense, damp, with occasional clay seams (Continued)		SPT-25	36.0 - 37.5	1.0	32-32-34	16		
				SPT-26	37.5 - 39.0	1.3	17-21-27	15		
				SPT-27	39.0 - 40.5	1.5	17-29-38	17		
				SPT-28	40.5 - 42.0	1.5	32-26-32	17		
				SPT-29	42.0 - 43.5	1.2	23-26-21	20		
				SPT-30	43.5 - 45.0	1.5	17-30-47	19		
				SPT-31	45.0 - 46.5	1.5	50-27-30	23		
				SPT-32	46.5 - 48.0	1.5	15-16-18	28		
				SPT-33	48.0 - 49.5	1.5	9-9-12	29		
				SPT-34	49.5 - 51.0	1.0	7-10-10	31		
1100.6	54.0	SOIL 3: Bottom Ash, gray to dark gray to black, wet, very loose, medium to very course, poorly sorted, angular		SPT-35	51.0 - 52.5	1.4	5-7-9	37		
				SPT-36	52.5 - 54.0	1.1	WoR	66		
				SPT-37	54.0 - 55.5	1.2	WoH- WoH-1	46		
1093.4	61.2	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-38	55.5 - 57.0	0.7	1-1-1	39		
				SPT-39	57.0 - 58.5	0.7	2-3-4	40		
				SPT-40	58.5 - 60.0	0.9	WoH- WoH-1	44		
				SPT-41	60.0 - 61.5	1.5	1-1-50+	31		
1090.1	64.5	SOIL 6: Gravel with Sand, gray, wet, very dense, medium grained, poorly graded		SPT-42	61.5 - 63.0	0.5	41-33- 50+	9		
				SPT-43	63.0 - 64.5	0.6	16-43-24	9		
1079.4	75.2	Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered)		SPT-44	64.5 - 66.0	0.8	7-10-12	38		
				SPT-45	66.0 - 67.5	0.4	7-28-18	33		
				SPT-46	70.0 - 71.5	0.8	9-11-15	27		
		No Refusal / Bottom of Hole		SPT-47	75.0 - 76.5	0.2	50+	4		

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ.FMISM_GRAPHIC.LOG.GDT.1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-42	Total Depth	49.5 ft
County	Hawkins	Surface Elevation	1138.2 ft		
Project Type	Geotechnical Exploration	Date Started	4/17/09	Completed	4/17/09
Supervisor	A. Davis Driller M. Martin	Depth to Water	30.0 ft	Date/Time	4/17/09
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1138.2	0.0	Top of Hole							
1137.5	0.7	SOIL 1: Lean Clay with Sand, light brown to brown, stiff, damp SOIL 4: Compacted Fly Ash, gray to dark gray, medium dense to very dense, damp to wet		SPT-1	0.0 - 1.5	0.7	2-3-7	25	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 46.5' and 36.5' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 49.5' with well installation materials.
				SPT-2	1.5 - 3.0	1.3	15-18-21	18	
				SPT-3	3.0 - 4.5	0.8	2-4-12	17	
				SPT-4	4.5 - 6.0	1.4	12-22-23	16	
				SPT-5	6.0 - 7.5	1.5	12-12-25	18	
				BAG-1	0.0 - 15.0	--	--	--	
				SPT-6	7.5 - 9.0	1.4	10-15-19	19	
				SPT-7	9.0 - 10.5	1.5	10-14-14	19	
				SPT-8	10.5 - 12.0	1.3	12-11-15	20	
				SPT-9	12.0 - 13.5	1.5	18-27-34	23	
				SPT-10	13.5 - 15.0	1.4	11-17-21	23	
				SPT-11	15.0 - 16.5	1.5	11-18-20	22	
				SPT-12	16.5 - 18.0	1.3	11-17-11	22	
				SPT-13	18.0 - 19.5	1.5	7-11-16	23	
				SPT-14	19.5 - 21.0	1.5	7-12-13	23	
				SPT-15	21.0 - 22.5	1.5	7-15-20	24	
1114.2	24.0		SPT-16	22.5 - 24.0	1.3	10-13-14	26		
		SOIL 3: Bottom Ash, gray to dark gray to black, very loose to very dense, damp to wet		SPT-17	24.0 - 25.5	1.5	7-14-15	18	
				SPT-18	25.5 - 27.0	1.5	14-20-37	21	
				SPT-19	27.0 - 28.5	1.5	14-35-50+	19	
				SPT-20	28.5 - 30.0	1.5	18-20-20	23	
				SPT-21	30.0 - 31.5	1.2	9-12-16	23	
				SPT-22	31.5 - 33.0	1.0	7-3-3	22	
				SPT-23	33.0 - 34.5	0.8	WoR	25	
				SPT-24	34.5 - 36.0	0.3	WoR-WoR-1	23	

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-42</u> Total Depth <u>49.5 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1099.7	38.5			SPT-25	36.0 - 37.5	1.5	3-3-2	20	
					SPT-26	37.5 - 39.0	1.5	WoR-1-1	27
1097.7	40.5	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-27	39.0 - 40.5	1.2	WoR	27	
1093.8	44.4	SOIL 2: Lean Clay with Sand, light brown to brown, soft to hard, wet		SPT-28	40.5 - 42.0	0.8	WoR- WoH-2	25	
				SPT-29	42.0 - 43.5	0.8	21-24-29	16	
				SPT-30	43.5 - 45.0	0.9	14-23-8	21	
1091.9	46.3	SOIL 6: Gravel with Sand, brown, gray, medium grained, poorly graded, medium dense, wet		SPT-31	45.0 - 46.5	0.8	12-11-11	34	
1088.7	49.5	Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered)		SPT-32	46.5 - 48.0	1.0	12-12-24	27	
				SPT-33	48.0 - 49.5	0.9	12-40-27	16	
		No Refusal / Bottom of Hole							
		Top of Rock = 46.3 Elevation (1091.9)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-43		Total Depth		23.8 ft
County		Hawkins		Surface Elevation		1081.5 ft				
Project Type		Geotechnical Exploration		Date Started		4/14/09		Completed		4/14/09
Supervisor		A. Davis Driller M. Martin		Depth to Water		18.0 ft		Date/Time		4/14/09
Logged By		A. Davis		Depth to Water		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1081.5	0.0	Top of Hole								
1081.0	0.5	DGA		SPT-1	0.0 - 1.5	1.2	8-9-11	19	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 22.8' and 12.8' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 22.8' with well installation materials.	
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasion gray mottling, stiff to very stiff, damp, with few manganese concretions, and silty zones		SPT-2	1.5 - 3.0	1.4	8-8-13	17		
			SPT-3	3.0 - 4.5	0.2	6-5-4	18			
			SPT-4	4.5 - 6.0	1.5	7-7-9	18			
			SPT-5	6.0 - 7.5	0.7	7-10-11	21			
			SPT-6	7.5 - 9.0	1.5	7-9-12	18			
			SPT-7	9.0 - 10.5	1.5	5-7-11	20			
1071.0	10.5		SOIL 9: Lean Clay, brown to dark brown, gray, very stiff to hard, damp		SPT-8	10.5 - 12.0	1.5	8-12-16		19
		SPT-9		12.0 - 13.5	1.5	14-15-14	22			
		SPT-10		13.5 - 15.0	0.8	10-11-13	19			
		SPT-11		15.0 - 16.5	1.5	6-9-11	17			
		SPT-12		16.5 - 18.0	1.4	14-14-18	17			
		SPT-13		18.0 - 19.5	1.5	8-10-15	18			
		SPT-14		19.5 - 21.0	1.5	9-12-13	16			
1059.0	22.5	Limestone with re-mineralization, light gray to gray, hard (augered)			SPT-15	21.0 - 22.5	1.3	13-15-17		19
1057.7	23.8			SPT-16	22.5 - 23.8	1.3	13-13-50+	13		
		No Refusal / Bottom of Hole								
		Top of Rock = 22.5 Elevation (1059.0)								

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-44	Total Depth	49.0 ft
County	Hawkins	Surface Elevation	1103.2 ft		
Project Type	Geotechnical Exploration	Date Started	4/4/09	Completed	4/4/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	27.8 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1103.2	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, brown, gray, medium stiff to very stiff, damp, with manganese concretions and silty zones		SPT-1	0.0 - 1.5	1.0	2-2-3	14	Installed 49' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 49.0 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers
			SPT-2	1.5 - 3.0	0.9	7-7-6	16		
			SPT-3	3.0 - 4.5	0.1	5-6-12	6		
			SPT-4	4.5 - 6.0	0.0	5-8-9	--		
			SPT-5	6.0 - 7.5	0.0	6-5-5	17		
			SPT-6	7.5 - 9.0	1.1	2-2-6	20		
			SPT-7	9.0 - 10.5	0.7	10-7-10	17		
			SPT-8	10.5 - 12.0	1.0	18-7-8	20		
			SPT-9	12.0 - 13.5	0.1	6-7-9	18		
			SPT-10	13.5 - 15.0	0.9	4-4-5	19		
			SPT-11	15.0 - 16.5	1.4	9-5-7	17		
			SPT-12	16.5 - 18.0	1.4	9-8-7	20		
			SPT-13	18.0 - 19.5	1.4	18-6-6	20		
			SPT-14	19.5 - 21.0	1.5	18-6-6	17		
			SPT-15	21.0 - 22.5	1.4	7-7-9	17		
			SPT-16	22.5 - 24.0	1.3	8-4-4	20		
			SPT-17	24.0 - 25.5	1.2	4-4-20	19		
1076.2	27.0		SPT-18	25.5 - 27.0	1.3	13-5-3	24		
1074.7	28.5	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose, moist to wet, with gravel		SPT-19	27.0 - 28.5	1.5	3-4-3	51	
			SPT-20	28.5 - 30.0	1.3	17-1-1	44		
1072.7	30.5		SPT-21	30.0 - 31.5	1.2	13-1-1	65		
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-22	31.5 - 33.0	1.2	1-1-2	27	
			SPT-23	33.0 - 34.5	0.0	50+	--		
		SOIL 9: Lean Clay, dark brown, gray, soft to hard, moist to		SPT-24	34.5 - 36.0	1.5	9-13-16	25	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN	
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-44	Total Depth 49.0 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1059.7	43.5	wet, with gravel SOIL 9: Lean Clay, dark brown, gray, soft to hard, moist to wet, with gravel (Continued)		SPT-25	36.0 - 37.5	0.9	9-13-16	24	
				SPT-26	37.5 - 39.0	1.5	6-9-12	26	
				SPT-27	39.0 - 40.5	1.5	8-9-11	27	
				SPT-28	40.5 - 42.0	1.5	6-7-8	23	
				SPT-29	42.0 - 43.5	1.1	4-4-6	22	
				SPT-30	43.5 - 43.9	0.4	12-50+	22	
1054.2	49.0	Shale, brown to gray, soft, very thin bedded, water stained, heavily weathered (augered)							

No Refusal /
Bottom of Hole

Top of Rock = 43.5
Elevation (1059.7)



SUBSURFACE LOG

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-45	Total Depth	25.0 ft
County	Hawkins	Surface Elevation	1101.3 ft		
Project Type	Geotechnical Exploration	Date Started	4/18/09	Completed	4/18/09
Supervisor	R. Riker	Driller	G. Thompson	Depth to Water	21.0 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1101.3	0.0	Top of Hole							
1097.9	3.4	SOIL 1: Lean Clay with Gravel, brown, tan, gray, medium stiff, damp							Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 24.5' and 17.5' of riser- protected with steel cover set in concrete pad. Boring backfilled from 0' to 24.5' with well installation materials. Boring JS-45X is located 5 feet North-East of JS-45
1094.0	7.3	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to medium dense, damp to wet, with gravel and bottom ash layers							
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense							
1076.3	25.0	No Refusal / Bottom of Hole							

STANTEC\FM\SM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FM\SM_GRAPHIC\LOG.GDT_1/23/10



SUBSURFACE LOG

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-45-SV	Total Depth	31.5 ft
County	Hawkins	Surface Elevation	1100.1 ft		
Project Type	Geotechnical Exploration	Date Started	6/4/09	Completed	6/4/09
Supervisor	A. Davis	Driller	K. Clements	Depth to Water	Dry
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1100.1	0.0	Top of Hole							
1097.9	2.2	SOIL 1: Lean Clay with Gravel, brown, tan, gray, medium stiff, damp							
1094.0	6.1	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to medium dense, damp to wet, with gravel and bottom ash layers							
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense							
				ST-1	18.5 - 19.5	1.0		--	Vane shear test performed at 19.0 feet. Undrained Shear Strength = 16.4 psi
				ST-2	24.5 - 26.5	2.0		--	Vane shear test performed at 25.0 feet. Undrained Shear Strength = 2.1 psi
1068.6	31.5			ST-3	29.5 - 31.5	2.0		--	Vane shear test performed at 30.0 feet. Undrained Shear Strength = 7.8 psi
		No Refusal / Bottom of Hole							

STANTEC\FISM\LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ\FISM\GRAPHIC\LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number	175569038		Location	Rogersville, TN	
Project Name	John Sevier Ash Disposal Areas		Boring No.	JS-45X	Total Depth 41.4 ft
County	Hawkins		Surface Elevation	1101.5 ft	
Project Type	Geotechnical Exploration		Date Started	4/18/09	Completed 4/18/09
Supervisor	R. Riker	Driller G. Thompson	Depth to Water	21.0 ft	Date/Time 4/18/09
Logged By	R. Mehnert		Depth to Water	--	Date/Time --

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1101.5	0.0	Top of Hole							
1097.9	3.6	SOIL 1: Lean Clay with Gravel, brown, tan, gray, medium stiff, damp		SPT-1	0.0 - 1.5	1.1	3-2-3	25	Boring advanced with 3-1/4 I.D. Hollow Stem Augers Boring grouted from 0 to 41.4 feet
				SPT-2	1.5 - 3.0	1.0	2-3-4	22	
				SPT-3	3.0 - 4.5	1.2	2-4-10	23	
1094.0	7.5	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to medium dense, damp to wet, with gravel and bottom ash layers		SPT-4	4.5 - 6.0	0.7	4-8-6	24	
				BAG-1	3.6 - 7.0	--	--	--	
				SPT-5	6.0 - 7.5	1.2	4-5-4	32	
				SPT-6	7.5 - 9.0	1.4	2-1-1	30	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense		SPT-7	9.0 - 10.5	1.0	WoH	28	
				SPT-8	10.5 - 12.0	1.5	WoH	34	
				SPT-9	12.0 - 13.5	1.4	WoH-1-1	38	
				SPT-10	13.5 - 15.0	1.3	1-1-2	38	
				SPT-11	15.0 - 16.5	0.8	2-3-5	42	
				SPT-12	16.5 - 18.0	0.9	4-4-11	41	
				SPT-13	18.0 - 19.5	0.7	5-5-3	37	
				SPT-14	19.5 - 21.0	1.4	3-2-2	45	
				SPT-15	21.0 - 22.5	1.5	WoH	49	
				SPT-16	22.5 - 24.0	0.5	WoR	61	
				SPT-17	24.0 - 25.5	0.9	WoR	51	
				SPT-18	25.5 - 27.0	0.2	WoH	--	
				SPT-19	27.0 - 28.5	0.0	WoH	49	
				SPT-20	28.5 - 30.0	1.0	WoR	69	
				SPT-21	30.0 - 31.5	0.7	WoH	39	
				SPT-22	31.5 - 33.0	0.8	WoH	41	
				SPT-23	33.0 - 34.5	1.4	WoR	51	
	SPT-24	34.5 - 36.0	1.2	WoR	41				
								Gypsum seam from 22.3'-22.5'	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-45X</u> Total Depth <u>41.4 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1064.0	37.5			SPT-25	36.0 - 37.5	1.5	WoR	48	
		SOIL 2: Lean Clay, brown to dark brown, stiff, damp		SPT-26	37.5 - 39.0	1.2	3-4-6	28	
				SPT-27	39.0 - 40.5	1.5	4-6-7	24	
1060.5	41.0			SPT-28	40.5 - 41.4	0.9	3-50+	19	
1060.1	41.4								
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 41.0 Elevation (1060.5)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-46	Total Depth	82.0 ft
County	Hawkins	Surface Elevation	1144.7 ft		
Project Type	Geotechnical Exploration	Date Started	5/13/09	Completed	5/14/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	48.9 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1144.7	0.0	Top of Hole							
1143.7	1.0	Soil 1: Lean Clay, brown, soft, damp, with gravel		SPT-1	0.0 - 1.5	1.0	1-1-2	19	Boring advanced with 4-1/4 I.D. Hollow Stem Augers Installed 81.3' of slope inclinometer casing. Casing protected with steel cover set in concrete pad. Boring grouted from 0 to 81.3'.
				SPT-2	1.5 - 3.0	1.0	1-2-3	26	
		SOIL 4: Compacted Fly Ash, gray to dark gray, damp to moist, loose		SPT-3	3.0 - 4.5	1.1	1-3-4	25	
1138.7	6.0			SPT-4	4.5 - 6.0	1.1	2-4-2	25	
1137.2	7.5	SOIL 1: Lean Clay with Gravel, brown, damp, stiff		SPT-5	6.0 - 7.5	0.9	3-4-7	16	
				SPT-6	7.5 - 9.0	1.2	4-6-3	13	
		SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, loose to very dense, with occasional clay seams, gravels, and bottom ash layers		SPT-7	9.0 - 10.5	1.3	2-3-3	15	
				SPT-8	10.5 - 12.0	1.5	2-3-3	15	
				SPT-9	12.0 - 13.5	1.5	3-8-20	13	
				SPT-10	13.5 - 15.0	1.1	WoR-2-9	14	
				BAG-1	12.0 - 18.0			--	
				SPT-11	15.0 - 16.5	1.5	8-12-13	13	
				SPT-12	16.5 - 18.0	1.5	15-16-22	16	
				SPT-13	18.0 - 19.5	1.2	4-10-11	15	
				SPT-14	19.5 - 21.0	1.5	4-10-13	16	
				SPT-15	21.0 - 22.5	1.5	14-28-25	19	
				SPT-16	22.5 - 24.0	1.5	7-15-18	19	
				SPT-17	24.0 - 25.5	1.5	3-9-11	18	
				SPT-18	25.5 - 27.0	1.3	3-5-4	17	
				SPT-19	27.0 - 28.5	1.2	2-3-3	37	
				SPT-20	28.5 - 30.0	1.4	3-7-8	18	
				SPT-21	30.0 - 31.5	1.4	5-9-15	18	
				SPT-22	31.5 - 33.0	1.5	19-20-21	18	
				SPT-23	33.0 - 34.5	1.5	2-17-23	17	
				SPT-24	34.5 - 36.0	1.5	15-15-20	22	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1101.0	43.7	SOIL 4: Compacted Fly Ash, gray to dark gray, damp to wet, loose to very dense, with occasional clay seams, gravels, and bottom ash layers (Continued)		SPT-25	36.0 - 37.5	1.5	16-21-22	16	
				SPT-26	37.5 - 39.0	1.5	7-15-21	20	
				SPT-27	39.0 - 40.5	1.5	5-15-20	19	
				SPT-28	40.5 - 42.0	1.5	6-16-13	25	
				SPT-29	42.0 - 43.5	1.5	12-16-18	27	
1096.0	48.7	SOIL 1: Lean Clay with Gravel, brown, gray, stiff, moist		SPT-30	43.5 - 45.0	1.5	2-8-11	22	
				SPT-31	45.0 - 46.5	1.4	4-7-7	21	
				SPT-32	46.5 - 48.0	1.5	5-5-5	22	
1085.2	59.5	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to medium dense		SPT-33	48.0 - 49.5	1.3	WoR-2-2	22	
				SPT-34	49.5 - 51.0	0.9	WoR	27	
				SPT-35	51.0 - 52.5	1.5	5-8-12	25	
				SPT-36	52.5 - 54.0	1.5	2-3-2	39	
				SPT-37	54.0 - 55.5	1.2	WoR- WoH	52	
				SPT-38	55.5 - 57.0	1.5	WoR-2-3	48	
				SPT-39	57.0 - 58.5	1.5	WoR	43	
				SPT-40	58.5 - 60.0	1.5	WoR	30	
1076.2	68.5	SOIL 2: Lean Clay, brown, tan, moist to wet, very soft to very stiff, with gravel		SPT-41	60.0 - 61.5	1.5	2-3-6	20	
				SPT-42	61.5 - 63.0	1.3	WoR-4-6	21	
				SPT-43	63.0 - 64.5	1.0	4-8-8	21	
				SPT-44	64.5 - 66.0	1.4	4-8-9	24	
				SPT-45	66.0 - 67.5	1.5	2-1-1	24	
				SPT-46	67.5 - 69.0	1.5	2-3-2	20	
1074.1	70.6	SOIL 7: Sand, light brown to brown, gray, tan, wet, loose to dense, medium to coarse grained, with gravel Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered)		SPT-47	69.0 - 70.5	1.2	3-23-19	19	
				SPT-48	70.5 - 72.0	1.4	4-3-5	29	
				SPT-49	72.0 - 73.5	1.1	3-5-8	41	
				SPT-50	73.5 - 75.0	1.2	10-11-22	24	
				SPT-51	75.0 - 75.7	0.7	20-50+	27	

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMISM_GRAPHIC.LOG.GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-46</u> Total Depth <u>82.0 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1062.7	82.0	Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered) <i>(Continued)</i>							
		No Refusal / Bottom of Hole							
		Top of Rock = 70.6 Elevation (1074.1)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-47	Total Depth	18.0 ft
County	Hawkins	Surface Elevation	1078.2 ft		
Project Type	Geotechnical Exploration	Date Started	4/13/09	Completed	4/13/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	15.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1078.2	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, with occasional gray mottling, stiff to hard, damp to moist, with few manganese concretions and silty zones		SPT-1	0.0 - 1.5	1.5	3-3-10	21	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 5' of slotted screen at 14.4' and 9.4' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 14.4' with well installation materials.
				SPT-2	1.5 - 3.0	1.5	11-18-10	16	
				SPT-3	3.0 - 4.5	0.9	19-19-19	16	
				SPT-4	4.5 - 6.0	1.5	9-8-10	21	
				SPT-5	6.0 - 7.5	1.5	3-12-12	22	
1069.2	9.0			SPT-6	7.5 - 9.0	1.4	7-11-11	20	
		SOIL 2: Lean Clay, brown, stiff to hard, damp to moist		SPT-7	9.0 - 10.5	1.5	5-6-7	22	
				SPT-8	10.5 - 12.0	1.4	4-7-8	22	
				SPT-9	12.0 - 13.5	1.3	5-7-8	20	
				SPT-10	13.5 - 15.0	0.6	13-16-28	22	
1062.3	15.9			SPT-11	15.0 - 16.5	0.6	12-12-8	10	
1061.7	16.5	SOIL 6: Gravel with Sand, gray, brown, tan, medium grained, poorly graded, medium dense, subrounded, wet		SPT-12	16.5 - 18.0	0.8	4-9-30	20	
1060.2	18.0								
		Shale, brown to gray, soft, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 16.5 Elevation (1061.7)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038			Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-48	Total Depth		35.0 ft	
County		Hawkins			Surface Elevation		1101.3 ft				
Project Type		Geotechnical Exploration			Date Started		4/4/09	Completed		4/4/09	
Supervisor		R. Riker	Driller		M. Martin	Depth to Water		24.0 ft	Date/Time		4/4/09
Logged By		R. Mehnert			Depth to Water		--	Date/Time		--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1101.3	0.0	Top of Hole								
		SOIL 1: Lean Clay with Sand and Gravel, light brown, to brown, with occasional gray mottling, medium stiff to hard, damp to moist		SPT-1	0.0 - 1.5	0.7	1-2-3	16	Installed 34.3' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 35.0 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers	
				SPT-2	1.5 - 3.0	1.2	5-5-6	19		
				SPT-3	3.0 - 4.5	0.7	3-5-7	18		
				SPT-4	4.5 - 6.0	1.4	4-7-8	17		
				SPT-5	6.0 - 7.5	1.5	7-7-24	19		
1093.1	8.2	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to dense, dry to wet		SPT-6	7.5 - 9.0	1.5	12-24-22	27		
				SPT-7	9.0 - 10.5	1.1	3-7-8	27		
				SPT-8	10.5 - 12.0	1.5	2-3-5	27		
				SPT-9	12.0 - 13.5	1.0	2-2-4	22		
1087.8	13.5	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-10	13.5 - 15.0	1.2	1-1-1	37		
				SPT-11	15.0 - 16.5	0.4	WoH-1-1	29		
				SPT-12	16.5 - 18.0	0.4	WoH	39		
		SOIL 2: Lean Clay, brown, tan, gray, stiff, damp to moist		SPT-13	18.0 - 19.5	1.5	1-4-8	20		
				SPT-14	19.5 - 21.0	1.4	4-5-7	18		
				SPT-15	21.0 - 22.5	1.2	5-8-4	20		
			1077.9	23.4		SPT-16	22.5 - 24.0	1.5		1-4-9
		SOIL 6: Gravel with Sand, gray to brown to tan, poorly graded, loose to dense, moist to wet		SPT-17	24.0 - 25.5	0.5	2-2-18	23		
				SPT-18	25.5 - 27.0	1.2	8-15-14	11		
				SPT-19	27.0 - 28.5	0.9	16-18-15	11		
		Shale, dark brown to gray, moderately hard, very thin and vertical bedded, heavily weathered (augered)		SPT-20	28.5 - 30.0	1.2	11-11	25		
				0	1.0	0.0	0	31.0	Began Core	
1066.3	35.0			0	4.0	0.6	15	35.0		
		Bottom of Hole								

STANTEC\FM\LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ\FM\SM-GRAPHIC\LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-49		Total Depth		27.1 ft
County		Hawkins		Surface Elevation		1098.8 ft				
Project Type		Geotechnical Exploration		Date Started		4/29/09		Completed		4/29/09
Supervisor		A. Davis		Driller		G. Thompson		Depth to Water		6.0 ft
Logged By		R. Mehnert		Date/Time		4/29/09		Date/Time		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1098.8	0.0	Top of Hole								
1096.2	2.6	SOIL 1: Lean Clay, brown, tan, gray, medium stiff to stiff, damp, with gravel		SPT-1	0.0 - 1.5	1.3	2-3-4	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 25.5' and 18.5' of riser- protected with steel cover set in concrete pad. Boring backfilled from 0' to 27.1' with well installation materials.	
				SPT-2	1.5 - 3.0	1.1	3-4-7	21		
1092.8	6.0	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose, damp to wet		SPT-3	3.0 - 4.5	1.2	2-4-4	24		
				SPT-4	4.5 - 6.0	1.5	2-2-2	29		
1080.8	18.0	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		BAG-1	2.6 - 10.5	1.3	2-1-2	--		
				SPT-5	6.0 - 7.5			29		
				SPT-6	7.5 - 9.0	1.1	1-1-1	26		
				SPT-7	9.0 - 10.5	1.3	WoH-2-1	31		
				SPT-8	10.5 - 12.0	1.1	2-1-1	42		
				SPT-9	12.0 - 13.5	1.5	WoH	29		
				SPT-10	13.5 - 15.0	1.1	WoH	31		
				BAG-2	12.0 - 18.0			--		
				SPT-11	15.0 - 16.5	1.5	WoR	31		
				SPT-12	16.5 - 18.0	1.5	WoR	31		
1076.8	22.0	SOIL 2: Lean Clay, brown, tan, gray, medium stiff to stiff, damp		SPT-13	18.0 - 19.5	1.5	2-5-6	21		
				SPT-14	19.5 - 21.0	1.5	3-3-5	22		
				SPT-15	21.0 - 22.5	0.5	9-13-32	11		
1072.3	26.5	SOIL 6: Gravel with Sand, brown, medium grained, poorly graded, dense to very dense, wet		SPT-16	22.5 - 24.0	0.7	7-22-28	11		
				SPT-17	24.0 - 25.5	0.7	24-24- 50+	10		
				SPT-18	25.5 - 27.0	1.5	33-27-10	28		
1071.7	27.1	Shale, dark brown to gray, moderately hard, very thin bedded, heavily weathered (augered)		SPT-19	27.0 - 27.1	0.1	50+	9		
		No Refusal / Bottom of Hole								
		Top of Rock = 26.5 Elevation (1072.3)								

STANTEC\FM\LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ\FM\SM\GRAPHIC\LOG.GDT 1/23/10

Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	JS-50	Total Depth	66.3 ft	
County	Hawkins		Surface Elevation	1138.7 ft			
Project Type	Geotechnical Exploration		Date Started	4/20/09	Completed	4/21/09	
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	57.0 ft	Date/Time	4/21/09
Logged By	A. Davis		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1138.7	0.0	Top of Hole							
1137.4	1.3	SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, stiff, damp to wet		SPT-1	0.0 - 1.5	1.3	3-5-5	22	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 62' and 55' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 64' with well installation materials.
				SPT-2	1.5 - 3.0	1.5	10-20-30	19	
				SPT-3	3.0 - 4.5	1.5	16-37-37	18	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, dense to very dense, damp, with occasional clay seams		SPT-4	4.5 - 6.0	1.0	6-15-15	24	
				SPT-5	6.0 - 7.5	1.3	16-18-31	20	
				SPT-6	7.5 - 9.0	1.5	16-22-24	17	
				SPT-7	9.0 - 10.5	1.5	10-15-15	19	
				SPT-8	10.5 - 12.0	1.5	18-19-27	16	
				BAG-1	0.0 - 24.0			--	
				SPT-9	12.0 - 13.5	1.5	20-22-24	21	
				SPT-10	13.5 - 15.0	1.5	10-18-25	20	
				SPT-11	15.0 - 16.5	1.3	11-21-25	21	
				SPT-12	16.5 - 18.0	1.5	22-35-32	21	
				SPT-13	18.0 - 19.5	1.5	16-21-24	22	
				SPT-14	19.5 - 21.0	1.5	18-24-28	21	
				SPT-15	21.0 - 22.5	1.5	36-36-34	18	
				SPT-16	22.5 - 24.0	1.5	17-32-32	18	
1114.1	24.6			SPT-17	24.0 - 25.5	1.5	16-17-21	19	
		SOIL 1: Lean Clay, brown, hard, damp		SPT-18	25.5 - 27.0	1.4	17-22-35	20	
				SPT-19	27.0 - 28.5	1.3	16-24-25	23	
				SPT-20	28.5 - 30.0	1.2	12-19-37	21	
1108.4	30.3			SPT-21	30.0 - 31.5	1.5	36-25-42	19	
		SOIL 4: Compacted Fly Ash gray to dark gray, dense to very dense, damp to moist, with areas clay, bottom ash and gravel		SPT-22	31.5 - 33.0	1.5	35-40-26	21	
				SPT-23	33.0 - 34.5	1.2	25-25-33	20	
				SPT-24	34.5 - 36.0	1.2	19-19-18	24	

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMSM_GRAPHIC.LOG_GDT_1/23/10

Project Number		175569038			Location		Rogersville, TN			
Project Name		John Sevier Ash Disposal Areas			Boring No.		JS-50	Total Depth		66.3 ft
Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
		SOIL 4: Compacted Fly Ash gray to dark gray, dense to very dense, damp to moist, with areas clay, bottom ash and gravel (Continued)		SPT-25	36.0 - 37.5	1.3	11-12-9	23		
			SPT-26	37.5 - 39.0	1.5	9-12-17	22			
			SPT-27	39.0 - 40.5	1.5	13-16-23	24			
			SPT-28	40.5 - 42.0	1.5	10-12-26	24			
			SPT-29	42.0 - 43.5	1.5	20-33-40	20			
			SPT-30	43.5 - 45.0	1.4	19-26-30	21			
1091.7	47.0		SPT-31	45.0 - 46.5	1.5	11-12-9	24			
1090.7	48.0	SOIL 1: Lean Clay with Sand and Gravel, very stiff, moist	SPT-32	46.5 - 48.0	1.5	8-8-12	22			
			SPT-33	48.0 - 49.5	1.2	3-4-7	27			
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, very loose, to medium dense, wet	SPT-34	49.5 - 51.0	1.5	4-7-8	29			
			SPT-35	51.0 - 52.5	1.3	7-8-13	27			
			SPT-36	52.5 - 54.0	0.9	WoR- WoR-3	36			
			SPT-37	54.0 - 55.5	1.5	3-7-7	33			
			SPT-38	55.5 - 57.0	1.3	4-4-7	34			
1081.2	57.5	SOIL 2: Lean Clay, brown, stiff to very stiff, wet	SPT-39	57.0 - 58.5	1.5	5-4-8	25			
			SPT-40	58.5 - 60.0	1.3	9-10-13	18			
			SPT-41	60.0 - 61.5	1.4	4-7-13	19			
		SOIL 6: Gravel with Sand, gray to brown to tan, medium grained, medium dense to very dense, wet	SPT-42	61.5 - 63.0	1.3	20-25-20	14			
			SPT-43	63.0 - 64.5	0.7	4-20-34	15			
1072.8	65.9		SPT-44	64.5 - 66.0	0.7	35-50+	22			
1072.4	66.3	Shale, dark brown to gray, moderately hard, very thin bedded, heavily weathered (augered)	SPT-45	66.0 - 67.5	0.3	50+	14			
			No Refusal / Bottom of Hole							
		Top of Rock = 65.9 Elevation (1072.8)								

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-52	Total Depth	54.1 ft
County	Hawkins	Surface Elevation	1136.8 ft		
Project Type	Geotechnical Exploration	Date Started	6/1/09	Completed	6/1/09
Supervisor	R. Mehnert	Driller	G. Thompson	Depth to Water	31.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1136.8	0.0	Top of Hole							
1135.8	1.0	SOIL 1: Lean Clay, light brown to brown, damp, medium stiff		SPT-1	0.0 - 1.5	1.1	3-2-3	12	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 45' and 38' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 54.1' with well installation materials.
				SPT-2	1.5 - 3.0	1.0	8-8-9	18	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, damp to wet, very loose to medium dense, with areas of bottom ash and gravel		SPT-3	3.0 - 4.5	1.3	2-4-5	18	
				SPT-4	4.5 - 6.0	1.5	1-4-3	20	
				SPT-5	6.0 - 7.5	1.3	3-4-5	19	
				SPT-6	7.5 - 9.0	1.4	2-5-5	19	
				SPT-7	9.0 - 10.5	1.5	2-2-8	20	
				SPT-8	10.5 - 12.0	1.5	3-4-4	20	
				BAG-1	6.0 - 18.0	--	--	--	
				SPT-9	12.0 - 13.5	1.5	4-5-7	25	
				SPT-10	13.5 - 15.0	1.5	3-8-14	22	
				SPT-11	15.0 - 16.5	1.5	4-6-11	22	
				SPT-12	16.5 - 18.0	1.5	9-9-8	26	
				SPT-13	18.0 - 19.5	1.5	3-8-5	27	
				SPT-14	19.5 - 21.0	1.3	2-5-5	24	
				SPT-15	21.0 - 22.5	1.5	5-11-12	25	
				SPT-16	22.5 - 24.0	0.9	1-1-1	32	
				SPT-17	24.0 - 25.5	1.1	1-1-1	31	
				SPT-18	25.5 - 27.0	1.3	9-13-11	29	
1108.5	28.3			SPT-19	27.0 - 28.5	1.2	11-13-12	22	
		SOIL 1: Lean Clay, brown, damp, very stiff, with gravel		SPT-20	28.5 - 30.0	0.6	9-9-7	21	
1106.0	30.8			SPT-21	30.0 - 31.5	1.3	11-13-19	16	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, medium dense to dense, moist to wet, with areas of bottom ash, clay, and gravel		SPT-22	31.5 - 33.0	1.5	13-27-23	23	
				SPT-23	33.0 - 34.5	1.3	5-10-10	30	
				SPT-24	34.5 - 36.0	1.5	5-6-7	31	
				BAG-2	31.5 - 40.5	--	--	--	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-52</u> Total Depth <u>54.1 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1092.3	44.5	SOIL 4: Compacted Fly Ash, gray to dark gray to black, medium dense to dense, moist to wet, with areas of bottom ash, clay, and gravel <i>(Continued)</i>		SPT-25	36.0 - 37.5	1.5	4-8-17	28	
				SPT-26	37.5 - 39.0	1.3	12-15-18	28	
				SPT-27	39.0 - 40.5	1.5	4-11-13	28	
				SPT-28	40.5 - 42.0	1.5	4-10-9	27	
				SPT-29	42.0 - 43.5	1.5	5-10-10	26	
				SPT-30	43.5 - 45.0	1.5	3-8-10	34	
1082.7	54.1	Shale, dark brown to gray, moderately hard, very thin bedded, heavily weathered (augered)		SPT-31	45.0 - 46.5	1.1	4-8-7	32	
				SPT-32	50.0 - 51.5	1.3	8-12-13	33	
				SPT-33	51.5 - 53.0	1.4	19-12-13	33	
				SPT-34	53.0 - 54.1	1.0	19-20-	24	

No Refusal /
Bottom of Hole

50+

Top of Rock = 44.5
Elevation (1092.3)

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-53	Total Depth	13.9 ft
County	Hawkins	Surface Elevation	1081.4 ft		
Project Type	Geotechnical Exploration	Date Started	4/13/09	Completed	4/13/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	11.9 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1081.4	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown with occasional gray mottling, damp to moist, stiff to very stiff, with silty zones and manganese concretions. SOIL 2: Lean Clay, brown, stiff to hard, damp to moist		SPT-1	0.0 - 1.5	1.1	3-5-7	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 5' of slotted screen at 13.4' and 8.4' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 13.4' with well installation materials.
			SPT-2	1.5 - 3.0	1.4	11-9-14	20		
1077.5	3.9		SPT-3	3.0 - 4.5	1.5	16-18-22	17		
			SPT-4	4.5 - 6.0	0.6	16-15-17	20		
			SPT-5	6.0 - 7.5	1.5	7-10-14	20		
			SPT-6	7.5 - 9.0	1.2	12-8-11	22		
			SPT-7	9.0 - 10.5	0.5	4-7-11	19		
1069.4	12.0		SPT-8	10.5 - 12.0	1.2	12-7-6	25		
			SPT-9	12.0 - 13.5	1.5	7-8-11	30		
1067.5	13.9		SPT-10	13.5 - 13.9	0.4	50+	15		
		Shale, dark brown to gray, moderately hard, very thin and vertical bedded, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 12.0 Elevation (1069.4)							

STANTECFMISM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FISM-GRAPHIC.LOG.GDT_1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-54		Total Depth		35.0 ft
County		Hawkins		Surface Elevation		1100.2 ft				
Project Type		Geotechnical Exploration		Date Started		4/3/09		Completed		4/3/09
Supervisor		R. Riker		Driller		G. Thompson		Depth to Water		27.0 ft
Logged By		R. Riker		Date/Time		4/3/09		Date/Time		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1100.2	0.0	Top of Hole								
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, with gray mottling, medium stiff, with silty zones SOIL 8: Lean Clay with Silt and Sand, brown and gray, moist to wet, soft to very stiff, with sand and gravels		SPT-1	0.0 - 1.5	1.0	3-3-3	16	Installed 35' of slope inclinometer casing. Casing protected with flushmount manhole set in concrete pad. Boring grouted from 0 to 35.0 feet. Boring advanced with 4-1/4 I.D. Hollow Stem Augers	
			SPT-2	1.5 - 3.0	0.9	3-3-4	16			
			SPT-3	3.0 - 4.5	0.5	4-10-12	11			
			SPT-4	4.5 - 6.0	1.5	7-10-9	18			
			SPT-5	6.0 - 7.5	1.2	9-11-10	--			
			SPT-6	7.5 - 9.0	1.4	5-7-10	23			
			SPT-7	9.0 - 10.5	1.1	4-4-5	17			
			SPT-8	10.5 - 12.0	1.1	2-2-2	18			
			SPT-9	12.0 - 13.5	1.0	3-2-4	17			
			SPT-10	13.5 - 15.0	1.4	3-4-6	18			
1083.7	16.5			SPT-11	15.0 - 16.5	1.5	4-6-7	19		
		SOIL 2: Lean Clay, light brown to brown, stiff to hard, with sand and gravel		SPT-12	16.5 - 18.0	1.5	9-10-12	21		
			SPT-13	18.0 - 19.5	1.5	4-6-9	21			
			SPT-14	19.5 - 21.0	1.5	6-9-10	17			
			SPT-15	21.0 - 22.5	1.5	19-16-14	12			
			SPT-16	22.5 - 24.0	1.5	7-21-24	19			
			SPT-17	24.0 - 25.5	1.3	7-18-27	8			
1073.2	27.0			SPT-18	25.5 - 27.0	0.7	30-27-26	5		
1072.2	28.0		SOIL 6: Gravel with Sand, gray to brown to tan, medium grained, brown to dark brown, very dense		SPT-19	27.0 - 27.3	0.3	50+	3	
				SPT-20	27.3 - 28.0	0.5	27-50+	17		
		Shale, brown to gray, very thin to laminated bedding, slickensides on high(45 deg+) dip, few stingers and seams of Limestone		36	2.5	1.9	76	30.5	Began Core	
1065.2	35.0			100	4.5	4.5	100	35.0		
		Bottom of Hole								

STANTEC\FM\SM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FM\SM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-55		Total Depth		27.5 ft
County		Hawkins		Surface Elevation		1097.4 ft				
Project Type		Geotechnical Exploration		Date Started		4/29/09		Completed		4/29/09
Supervisor		A. Davis		Driller		G. Thompson		Depth to Water		3.0 ft
Logged By		R. Mehnert		Date/Time		4/29/09		Date/Time		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1097.4	0.0	Top of Hole							
1095.4	2.0	SOIL 1: Lean Clay, brown, tan, soft, damp, with gravel		SPT-1	0.0 - 1.5	0.9	2-2-2	20	Boring advanced with 4-1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 17' and 10' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 27.5' with well installation materials.
				SPT-2	1.5 - 3.0	1.3	2-4-5	28	
1092.9	4.5	SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose, damp to wet, with bottom ash layers		SPT-3	3.0 - 4.5	1.1	2-3-2	22	
				SPT-4	4.5 - 6.0	0.6	WoR	23	
				SPT-5	6.0 - 7.5	1.2	WoR	23	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-6	7.5 - 9.0	1.5	WoH	25	
				SPT-7	9.0 - 10.5	1.5	WoH	25	
				BAG-1	3.0 - 18.0	--	--	--	
				SPT-8	10.5 - 12.0	1.3	WoR	29	
				SPT-9	12.0 - 13.5	1.5	WoH	27	
				SPT-10	13.5 - 15.0	0.7	2-3-2	31	
				SPT-11	15.0 - 16.5	0.5	WoH	27	
				SPT-12	16.5 - 18.0	0.6	WoH	25	
1078.0	19.4			SPT-13	18.0 - 19.5	1.5	WoH	27	
		SOIL 2: Lean Clay, brown, tan, gray, soft to medium stiff, wet		SPT-14	19.5 - 21.0	1.1	WoH-1-2	29	
				SPT-15	21.0 - 22.5	1.0	3-3-3	22	
1074.2	23.2			SPT-16	22.5 - 24.0	0.8	3-18-30	13	
		SOIL 6: Gravel with Sand, gray to brown to tan, medium grained, dense, wet		SPT-17	24.0 - 25.5	0.8	5-15-15	27	
1072.1	25.3			SPT-18	25.5 - 27.0	0.7	5-12-14	27	
				SPT-19	27.0 - 27.3	0.5	50+	12	
1069.9	27.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 25.3 Elevation (1072.1)							

STANTEC\FM\LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FM\SM-GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-56	Total Depth	58.0 ft
County	Hawkins	Surface Elevation	1131.0 ft		
Project Type	Geotechnical Exploration	Date Started	4/18/09	Completed	4/18/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	50.5 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1131.0	0.0	Top of Hole							
1130.3	0.7	SOIL 1: Lean Clay with Sand, light brown to brown, stiff, damp		SPT-1	0.0 - 1.5	0.7	3-4-5	20	Boring advanced with 3-1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 57' and 50' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 58' with well installation materials.
				SPT-2	1.5 - 3.0	1.2	10-10-9	16	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, loose to very dense, damp to wet, with gravel and bottom ash zones		SPT-3	3.0 - 4.5	0.9	4-7-6	13	
				SPT-4	4.5 - 6.0	1.5	8-8-6	17	
				SPT-5	6.0 - 7.5	1.4	11-8-8	17	
				SPT-6	7.5 - 9.0	1.2	9-7-7	16	
				BAG-1	0.0 - 18.0	--	--	--	
				SPT-7	9.0 - 10.5	1.5	6-7-12	15	
				SPT-8	10.5 - 12.0	1.5	12-14-15	15	
				SPT-9	12.0 - 13.5	1.5	11-11-13	17	
				SPT-10	13.5 - 15.0	1.1	6-7-14	16	
				SPT-11	15.0 - 16.5	1.3	6-5-11	18	
				SPT-12	16.5 - 18.0	1.3	8-12-15	18	
				SPT-13	18.0 - 19.5	1.5	8-14-14	17	
				SPT-14	19.5 - 21.0	1.5	8-10-12	16	
				SPT-15	21.0 - 22.5	0.0	8-7-7	--	
				SPT-16	22.5 - 24.0	1.4	7-8-12	17	
				SPT-17	24.0 - 25.5	1.2	4-8-11	18	
				SPT-18	25.5 - 27.0	1.5	7-11-14	19	
				SPT-19	27.0 - 28.5	0.9	17-10-6	19	
				SPT-20	28.5 - 30.0	1.2	WoR- WoR-3	22	
				SPT-21	30.0 - 31.5	1.2	10-14-14	23	
				SPT-22	31.5 - 33.0	1.3	18-22-30	23	
				SPT-23	33.0 - 34.5	1.5	17-14-10	23	
				SPT-24	34.5 - 36.0	1.1	20-23-22	25	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1092.0	39.0			SPT-25	36.0 - 37.5	1.2	3-4-5	28	
				SPT-26	37.5 - 39.0	0.9	1-2-2	25	
1080.2	50.8	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-27	39.0 - 40.5	0.8	WoR	25	
				SPT-28	40.5 - 42.0	1.4	WoR	27	
				SPT-29	42.0 - 43.5	1.5	1-1-WoR	27	
				SPT-30	43.5 - 45.0	1.5	WoR	28	
				SPT-31	45.0 - 46.5	1.0	WoR-1-1	27	
				SPT-32	46.5 - 48.0	1.5	3-1-1	27	
				SPT-33	48.0 - 49.5	0.9	WoR	25	
				SPT-34	49.5 - 51.0	1.5	WoR- WoR-7	26	
				SPT-35	51.0 - 52.5	1.3	22-30-35	12	
				SPT-36	52.5 - 54.0	1.0	27-29-13	12	
1073.3	57.7	SOIL 6: Gravel with Sand, gray to brown to tan, medium grained, dense to very dense, wet		SPT-37	54.0 - 55.5	0.9	13-15-21	11	
				SPT-38	55.5 - 57.0	0.9	18-29-25	11	
				SPT-39	57.0 - 58.0	1.0	25-50+	12	
1073.0	58.0	Shale, brown to gray, moderately hard, very thin bedded, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 57.7 Elevation (1073.3)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FISM-GRAPHIC LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-57		Total Depth		54.9 ft
County		Hawkins		Surface Elevation		1130.1 ft				
Project Type		Geotechnical Exploration		Date Started		5/31/09		Completed		6/1/09
Supervisor		R. Mehnert		Driller		G. Thompson		Depth to Water		33.9 ft
Logged By		R. Mehnert		Date/Time		6/1/09		Depth to Water		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core						
1130.1	0.0	Top of Hole							
1129.0	1.1	SOIL 1: Lean Clay, light brown to brown, medium stiff, with gravel		SPT-1	0.0 - 1.5	1.2	4-3-3	14	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 48.3' and 41.3' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 54.9' with well installation materials.
				SPT-2	1.5 - 3.0	0.9	2-2-2	14	
		SOIL 4: Compacted Fly Ash, gray to dark gray to black, very loose to medium dense, damp to wet, with areas of bottom ash and clay seams		SPT-3	3.0 - 4.5	1.3	2-3-3	17	
				SPT-4	4.5 - 6.0	1.2	2-2-2	17	
				SPT-5	6.0 - 7.5	1.5	6-7-5	18	
				SPT-6	7.5 - 9.0	1.5	2-5-4	17	
				BAG-1	6.0 - 13.2	1.5	5-4-5	--	
				SPT-7	9.0 - 10.5	1.5	5-6-8	18	
				SPT-8	10.5 - 12.0	1.5	5-6-8	20	
				SPT-9	12.0 - 13.5	1.5	6-8-7	19	
				SPT-10	13.5 - 15.0	1.0	7-7-8	20	
				SPT-11	15.0 - 16.5	1.5	3-6-6	19	
				SPT-12	16.5 - 18.0	1.5	7-7-7	19	
				SPT-13	18.0 - 19.5	1.5	3-6-4	18	
				SPT-14	19.5 - 21.0	1.1	3-4-2	17	
				SPT-15	21.0 - 22.5	1.4	2-4-4	19	
				SPT-16	22.5 - 24.0	1.5	7-5-10	20	
				SPT-17	24.0 - 25.5	1.5	4-5-6	21	
				SPT-18	25.5 - 27.0	1.5	5-8-9	24	
				SPT-19	27.0 - 28.5	1.5	5-11-10	22	
				SPT-20	28.5 - 30.0	1.5	5-8-7	25	
				SPT-21	30.0 - 31.5	1.5	9-12-14	20	
1097.1	33.0			SPT-22	31.5 - 33.0	1.5	8-9-8	25	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose		SPT-23	33.0 - 34.5	1.5	2-2-1	27	
				SPT-24	34.5 - 36.0	1.3	WoR-1-1	25	

STANTEC\FM\LEGACY_JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FM\SM-GRAPHIC LOG.GDT_1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-57</u> Total Depth <u>54.9 ft</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1082.8	47.3	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose to loose <i>(Continued)</i>		SPT-25	36.0 - 37.5	1.0	3-3-2	26	
				SPT-26	37.5 - 39.0	1.5	WoH	26	
				SPT-27	39.0 - 40.5	1.5	WoR	28	
				SPT-28	40.5 - 42.0	1.0	WoR	29	
				SPT-29	42.0 - 43.5	1.0	WoR	27	
				SPT-30	43.5 - 45.0	1.5	WoR	31	
				SPT-31	45.0 - 46.5	1.5	WoR	29	
				SPT-32	46.5 - 48.0	1.5	WoR-2-5	32	
1077.6	52.5	SOIL 2: Lean Clay, brown to light brown, medium stiff to very stiff, moist to wet, with gravel and sand		SPT-33	48.0 - 49.5	1.5	7-10-9	15	
1076.9	53.2			SPT-34	49.5 - 51.0	1.5	3-4-5	21	
				SPT-35	51.0 - 52.5	1.4	6-5-7	17	
1075.2	54.9	SOIL 7: Sand, light brown to brown, very loose to medium dense, wet		SPT-36	52.5 - 54.0	1.1	WoR-2-2	25	
				SPT-37	54.0 - 54.9	0.8	11-50+	20	
		Shale, brown to gray, soft, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 53.2 Elevation (1076.9)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M-GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-58	Total Depth	27.5 ft
County	Hawkins	Surface Elevation	1100.2 ft		
Project Type	Geotechnical Exploration	Date Started	4/22/09	Completed	4/22/09
Supervisor	R. Riker	Driller	J. Felts	Depth to Water	10.5 ft
Logged By	R. Mehnert	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1100.2	0.0	Top of Hole							
1096.2	4.0	SOIL 1: Lean Clay with Gravel, brown, tan, medium stiff, damp							Boring advanced with 3-1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 27.5' and 20.5' of riser- protected with steel cover set in concrete pad. Boring backfilled from 0' to 27.5' with well installation materials. Boring JS-58X is located 3' south of JS-58
1095.6	4.6	SOIL 4: Compacted Fly Ash, gray to dark gray to black, very loose, damp to wet, with trace bottom ash							
1079.4	20.8	SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose							
1076.7	23.5	SOIL 2: Lean Clay, brown, tan, gray, very soft to medium stiff, wet, with sand							
1072.7	27.5	Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 23.4 Elevation (1076.8)							

STANTEC\FMSM_LEGACY_JOHN_SEVIER_ASH_DISPOSAL_AREAS.GPJ_FMSM_GRAPHIC.LOG_GDT_1/23/10

Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	JS-58X	Total Depth	27.3 ft	
County	Hawkins		Surface Elevation	1100.1 ft			
Project Type	Geotechnical Exploration		Date Started	4/21/09	Completed	4/22/09	
Supervisor	R. Riker	Driller	J. Felts	Depth to Water	10.5 ft	Date/Time	4/22/09
Logged By	R. Mehnert		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1100.1	0.0	Top of Hole							
		SOIL 1: Lean Clay with Gravel, brown, tan, medium stiff, damp		SPT-1	0.0 - 1.5	0.9	2-3-3	26	Boring advanced with 3-1/4 I.D. Hollow Stem Augers Perched zone from 4 to 6 feet Boring grouted from 0 to 27.3 feet.
				SPT-2	1.5 - 3.0	0.7	2-2-3	25	
1096.1	4.0			SPT-3	3.0 - 4.5	1.2	2-3-3	27	
1095.6	4.5	SOIL 4: Compacted Fly Ash, gray to dark gray to black, very loose, damp to wet, with trace bottom ash		SPT-4	4.5 - 6.0	0.4	1-1-1	27	
				SPT-5	6.0 - 7.5	1.2	1-1-1	26	
		SOIL 5: Sluiced Fly Ash, gray to dark gray, wet, very loose		SPT-6	7.5 - 9.0	0.8	2-1-1	25	
				BAG-1	4.0 - 15.0	1.0	1-WoH-1	--	
				SPT-7	9.0 - 10.5	1.0	1-1-1	29	
				SPT-8	10.5 - 12.0	0.3	1-1-1	25	
				SPT-9	12.0 - 13.5	1.5	WoR	25	
				SPT-10	13.5 - 15.0	1.5	WoR	28	
				SPT-11	15.0 - 16.5	1.1	WoR- WoH	27	
				SPT-12	16.5 - 18.0	1.3	1-1-1	29	
				SPT-13	18.0 - 19.5	1.5	WoR	28	
1079.4	20.7			SPT-14	19.5 - 21.0	1.2	WoR- WoH	26	
		SOIL 2: Lean Clay, brown, tan, gray, very soft to medium stiff, wet, with sand		SPT-15	21.0 - 22.5	1.4	2-2-3	24	
1076.7	23.4			SPT-16	22.5 - 24.0	1.3	2-5-6	24	
		Shale, brown to gray, soft to moderately hard, very thin bedded, water stained, heavily weathered (augered)		SPT-17	24.0 - 25.5	1.1	11-13-30	24	
1072.8	27.3								
		No Refusal / Bottom of Hole							
		Top of Rock = 23.4 Elevation (1076.7)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-59	Total Depth	28.9 ft
County	Hawkins	Surface Elevation	1099.3 ft		
Project Type	Geotechnical Exploration	Date Started	4/4/09	Completed	4/4/09
Supervisor	A. Davis	Driller	M. Martin	Depth to Water	27.5 ft
Logged By	A. Davis	Depth to Water	24.2 ft	Date/Time	4/8/09

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1099.3	0.0	Top of Hole							
1099.0	0.3	DGA and Topsoil		SPT-1	0.0 - 1.5	0.8	2-3-4	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 31.1' and 21.1' of riser protected with flushmount manhole set in concrete pad. Boring backfilled from 0' to 31.1' with well installation materials.
		SOIL 1: Lean Clay with Sand and Gravel, light brown to brown, medium stiff to hard, damp, with occasional gray mottling		SPT-2	1.5 - 3.0	0.8	5-7-7	20	
				SPT-3	3.0 - 4.5	1.3	3-5-5	23	
				SPT-4	4.5 - 6.0	1.1	3-4-5	18	
				SPT-5	6.0 - 7.5	1.1	5-7-7	19	
				SPT-6	7.5 - 9.0	1.0	5-12-7	20	
				SPT-7	9.0 - 10.5	0.9	6-17-16	16	
				SPT-8	10.5 - 12.0	1.3	13-12-9	16	
				SPT-9	12.0 - 13.5	1.3	8-11-9	17	
				SPT-10	13.5 - 15.0	1.1	4-3-2	19	
				SPT-11	15.0 - 16.5	1.1	2-3-4	22	
				SPT-12	16.5 - 18.0	1.4	6-10-12	22	
				SPT-13	18.0 - 19.5	1.0	6-12-14	21	
1079.1	20.2			SPT-14	19.5 - 21.0	1.5	7-7-7	21	
1076.8	22.5	SOIL 7: Sand, light brown to brown, damp to moist, medium dense, medium to coarse grained		SPT-15	21.0 - 22.5	1.3	7-11-12	10	
1074.9	24.4			SPT-16	22.5 - 24.0	1.3	8-11-10	21	
		SOIL 2: Lean Clay, brown, very stiff, moist to wet		SPT-17	24.0 - 25.5	1.5	7-10-11	33	
				SPT-18	25.5 - 27.0	0.1	50+	18	
1070.4	28.9	Shale, brown to gray, hard, very thin bedded, water stained, heavily weathered (augered)		SPT-19	27.0 - 28.5	0.4	19-62-22	12	
				SPT-20	28.5 - 30.0	0.4	50+	14	
		No Refusal / Bottom of Hole							
		Top of Rock = 24.4 Elevation (1074.9)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-60A	Total Depth	28.5 ft
County	Hawkins	Surface Elevation	1089.5 ft		
Project Type	Geotechnical Exploration	Date Started	8/24/09	Completed	8/24/09
Supervisor	A. Davis	Driller	S. Bradford	Depth to Water	21.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1089.5	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, medium stiff to very stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	0.8	2-3-2	21	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Boring Grouted from 0 to 28.5 feet
				SPT-2	1.5 - 3.0	0.6	3-10-6	17	
				SPT-3	3.0 - 4.5	1.2	6-5-7	19	
1083.4	6.1			SPT-4	4.5 - 6.0	1.1	3-4-5	20	
		SOIL 8: Lean Clay with Sand, light brown to brown-gray, moist, medium stiff to very stiff, with silt and some gravels		SPT-5	6.0 - 7.5	1.4	3-5-4	20	
				SPT-6	7.5 - 9.0	1.4	3-3-3	20	
				BAG-1	6.0 - 13.5	1.0	3-6-7	--	
				SPT-7	9.0 - 10.5			13	
				SPT-8	10.5 - 12.0	0.2	7-7-9	11	
				SPT-9	12.0 - 13.5	0.3	6-8-11	16	
				SPT-10	13.5 - 15.0	0.7	5-5-7	17	
1073.0	16.5		SPT-11	15.0 - 16.5	0.0	3-5-8	--		
		SOIL 2: Lean Clay with Sand, brown to tan, moist, medium stiff to very stiff, with rare manganese concretions		BAG-2	13.5 - 21.0	1.5	7-9-11	--	
				SPT-12	16.5 - 18.0			21	
				SPT-13	18.0 - 19.5	1.5	9-8-10	20	
				SPT-14	19.5 - 21.0	0.0	4-4-5	--	
				SPT-15	21.0 - 22.5	1.0	2-4-6	25	
				SPT-16	22.5 - 24.0	1.2	3-5-5	24	
				SPT-17	24.0 - 25.5	1.5	1-2-4	19	
1063.2	26.3			SPT-18	25.5 - 27.0	1.5	4-4-6	22	
1061.9	27.6	SOIL 7: Sand with Clay, light brown to brown, wet, loose, with gravels		SPT-19	27.0 - 28.5	1.5	8-10-21	18	
1061.0	28.5								
		Shale, brown to dark gray, thin bedded, weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 27.6 Elevation (1061.9)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10



SUBSURFACE LOG

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-60B	Total Depth	28.0 ft
County	Hawkins	Surface Elevation	1089.5 ft		
Project Type	Geotechnical Exploration	Date Started	8/24/09	Completed	8/24/09
Supervisor	A. Davis	Driller	S. Bradford	Depth to Water	21.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1089.5	0.0	Top of Hole							
1083.4	6.1	SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, medium stiff to very stiff, with silt, manganese concretions and gravels		ST-1	5.0 - 6.3	1.3		--	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
1073.0	16.5	SOIL 8: Lean Clay with Sand, light brown to brown-gray, moist, medium stiff to very stiff, with silt and some gravels							Installed Piezometer with 10' of slotted screen at 27' and 20' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 28' with well installation materials.
1063.2	26.3	SOIL 2: Lean Clay with Sand, brown to tan, moist, medium stiff to very stiff, with rare manganese concretions							
1061.9	27.6	SOIL 7: Sand with Clay, light brown to brown, wet, loose, with gravels							
1061.5	28.0	Shale, brown to dark gray, thin bedded, weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 27.6 Elevation (1061.9)							

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038		Location	Rogersville, TN			
Project Name	John Sevier Ash Disposal Areas		Boring No.	JS-61A	Total Depth	30.0 ft	
County	Hawkins		Surface Elevation	1089.7 ft			
Project Type	Geotechnical Exploration		Date Started	8/20/09	Completed	8/20/09	
Supervisor	A. Davis	Driller	S. Bradford	Depth to Water	18.0 ft	Date/Time	8/20/09
Logged By	A. Davis		Depth to Water	--	Date/Time	--	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1089.7	0.0	Top of Hole							
1084.4	5.3	SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, soft to stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	0.9	1-2-2	19	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 25.5' and 18.5' of riser protected with steel cover set in concrete pad. Boring backfilled from 0' to 30' with well installation materials.
				SPT-2	1.5 - 3.0	0.4	2-2-4	20	
				SPT-3	3.0 - 4.5	0.9	5-7-6	17	
				SPT-4	4.5 - 6.0	1.1	2-3-4	19	
			SPT-5	6.0 - 7.5	1.5	4-10-8	17		
			SPT-6	7.5 - 9.0	0.0	10-8-8	11		
			SPT-7	9.0 - 10.5	1.3	9-8-8	17		
			SPT-8	10.5 - 12.0	1.0	9-8-11	15		
			SPT-9	12.0 - 13.5	0.4	9-4-4	25		
			BAG-1	12.0 - 15.0	--	--	--		
			SPT-10	13.5 - 15.0	0.3	4-4-4	23		
1071.7	18.0	SOIL 8: Lean Clay with Sand and Silt, brown and gray, damp to moist, medium stiff to very stiff, with zones varying with more sand or silt		SPT-11	15.0 - 16.5	1.3	2-4-4	21	
				SPT-12	16.5 - 18.0	0.6	2-4-7	20	
				SPT-13	18.0 - 19.5	1.5	8-9-11	17	
				SPT-14	19.5 - 21.0	0.4	6-8-5	16	
				SPT-15	21.0 - 22.5	0.8	4-4-5	18	
				SPT-16	22.5 - 24.0	1.0	4-3-5	21	
				SPT-17	24.0 - 25.5	0.3	2-1-3	26	
				SPT-18	25.5 - 27.0	1.5	3-4-11	22	
1063.0	26.7	SOIL 2: Lean Clay, brown to tan, moist, soft to very stiff, with rare manganese concretions		SPT-19	27.0 - 28.5	1.5	9-12-7	16	
1061.3	28.4			SPT-20	28.5 - 30.0	0.7	10-12-21	27	
1059.7	30.0	SOIL 7: Sand with Clay, light brown to brown, wet, medium dense, with gravels							
		Shale, light brown to brown to gray, thin bedded, weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 28.4 Elevation (1061.3)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-61B	Total Depth	20.0 ft
County	Hawkins	Surface Elevation	1089.1 ft		
Project Type	Geotechnical Exploration	Date Started	8/20/09	Completed	8/20/09
Supervisor	A. Davis	Driller	S. Bradford	Depth to Water	18.0 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1089.1	0.0	Top of Hole							
1084.4	4.7	SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, soft to stiff, with silt, manganese concretions and gravels							Boring advanced with 3 1/4 I.D. Hollow Stem Augers
1071.1	18.0	SOIL 8: Lean Clay with Sand and Silt, brown and gray, damp to moist, medium stiff to very stiff, with zones varying with more sand or silt		ST-1	8.0 - 8.5	0.5		--	Boring Grouted from 0 to 20 feet
				ST-2	12.0 - 13.0	1.0		--	
				ST-3	15.0 - 17.0	2.0		--	
1069.1	20.0	SOIL 2: Lean Clay, brown to tan, moist, soft to very stiff, with rare manganese concretions							

No Refusal /
Bottom of Hole

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-62A		Total Depth		30.0 ft
County		Hawkins		Surface Elevation		1090.0 ft				
Project Type		Geotechnical Exploration		Date Started		8/19/09		Completed		8/19/09
Supervisor		A. Davis Driller S. Bradford		Depth to Water		22.0 ft		Date/Time		8/19/09
Logged By		A. Davis		Depth to Water		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1090.0	0.0	Top of Hole								
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, stiff to very stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	0.9	6-7-8	14	Boring advanced with 3 1/4 I.D. Hollow Stem Augers	
				SPT-2	1.5 - 3.0	1.0	7-6-10	15		
				BAG-1	0.0 - 4.5	--	--	--		
				SPT-3	3.0 - 4.5	1.1	7-8-10	15		
				SPT-4	4.5 - 6.0	1.3	7-6-8	18		
1082.5	7.5			SPT-5	6.0 - 7.5	1.3	7-8-10	20	Boring Grouted from 0 to 30 feet	
		SOIL 8: Lean Clay with Silt and Sand, light brown to brown to gray, damp, very stiff to stiff, with manganese concretions and gravels		SPT-6	7.5 - 9.0	1.5	10-9-12	17		
				SPT-7	9.0 - 10.5	1.5	4-4-7	17		
				SPT-8	10.5 - 12.0	1.4	7-8-9	22		
				SPT-9	12.0 - 13.5	1.5	6-6-7	18		
				SPT-10	13.5 - 15.0	1.4	5-5-9	21		
				SPT-11	15.0 - 16.5	1.3	4-6-7	17		
				SPT-12	16.5 - 18.0	0.0	9-10-11	--		
1071.1	18.9			SPT-13	18.0 - 19.5	1.5	8-8-8	18		
		SOIL 9: Lean Clay with Silt, dark brown and dark gray, moist to wet, medium stiff to very stiff, with manganese concretions and few gravels		SPT-14	19.5 - 21.0	1.3	3-3-5	18		
				SPT-15	21.0 - 22.5	1.3	5-5-5	23		
				SPT-16	22.5 - 24.0	1.4	4-4-6	32		
				SPT-17	24.0 - 25.5	1.5	5-6-11	32		
				SPT-18	25.5 - 27.0	1.5	2-5-4	30		
				SPT-19	27.0 - 28.5	1.3	4-6-20	21		
1061.5	28.5			SPT-20	28.5 - 30.0	1.0	11-11-26	28		
1060.0	30.0	Shale, brown and gray, thin bedded, weathered (augered)								
		No Refusal / Bottom of Hole								
		Top of Rock = 28.5 Elevation (1061.5)								

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-62B		Total Depth		30.0 ft
County		Hawkins		Surface Elevation		1090.0 ft				
Project Type		Geotechnical Exploration		Date Started		8/19/09		Completed		8/19/09
Supervisor		A. Davis		Driller		S. Bradford		Depth to Water		22.0 ft
Logged By		A. Davis		Date/Time		8/19/09		Depth to Water		--
Date/Time		--		Date/Time		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks	
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth		
1090.0	0.0	Top of Hole								
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, stiff to very stiff, with silt, manganese concretions and gravels		ST-1	3.0 - 4.0	1.0		--	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Installed Piezometer with 10' of slotted screen at 29.3' and 19.3' of riser protected with flushmount cover set in concrete pad. Boring backfilled from 0' to 30' with well installation materials.	
1082.5	7.5			ST-2	7.0 - 8.2	1.2		--		
		SOIL 8: Lean Clay with Silt and Sand, light brown to brown to gray, damp, very stiff to stiff, with manganese concretions and gravels								
				ST-3	14.0 - 16.0	2.0		--		
1071.1	18.9									
		SOIL 9: Lean Clay with Silt, dark brown and dark gray, moist to wet, medium stiff to very stiff, with manganese concretions and few gravels								
				ST-4	20.0 - 22.0	2.0		--		
				ST-5	23.0 - 25.0	2.0		--		
1061.5	28.5									
1060.0	30.0	Shale, brown and gray, thin bedded, weathered (augered)								
		No Refusal / Bottom of Hole								
		Top of Rock = 28.5 Elevation (1061.5)								

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN	
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-62C Total Depth 28.5 ft	
County		Hawkins		Surface Elevation		1088.2 ft	
Project Type		Geotechnical Exploration		Date Started		8/25/09 Completed 8/25/09	
Supervisor		A. Davis Driller S. Bradford		Depth to Water		25.0 ft Date/Time 8/25/09	
Logged By		A. Davis		Depth to Water		-- Date/Time --	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1088.2	0.0	Top of Hole							
1083.7	4.5	SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, stiff to very stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	1.3	3-4-5	17	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
				SPT-2	1.5 - 3.0	1.5	4-4-8	16	
				BAG-1	0.0 - 4.5	--	--	--	
1071.7	16.5	SOIL 8: Lean Clay with Silt and Sand, light brown to brown to gray, damp, medium stiff to stiff, with gravels		SPT-3	3.0 - 4.5	1.1	7-8-10	16	Boring Grouted from 0 to 28.5 feet
				SPT-4	4.5 - 6.0	1.5	4-6-8	19	
				SPT-5	6.0 - 7.5	1.2	6-8-9	17	
				BAG-2	6.0 - 9.0	--	--	--	
				SPT-6	7.5 - 9.0	1.3	8-6-8	21	
				SPT-7	9.0 - 10.5	1.5	3-4-5	20	
				SPT-8	10.5 - 12.0	1.5	5-6-6	18	
				SPT-9	12.0 - 13.5	1.3	4-6-6	22	
				SPT-10	13.5 - 15.0	1.3	4-6-7	20	
				SPT-11	15.0 - 16.5	1.0	3-3-4	20	
1061.4	26.8	SOIL 9: Lean Clay with Silt, dark brown and dark gray, moist, medium stiff to stiff, with trace sand		SPT-12	16.5 - 18.0	1.5	6-5-5	25	
				SPT-13	18.0 - 19.5	1.2	6-4-5	25	
				SPT-14	19.5 - 21.0	1.5	2-3-3	26	
				SPT-15	21.0 - 22.5	1.3	4-4-6	25	
				SPT-16	22.5 - 24.0	1.5	5-6-6	33	
				SPT-17	24.0 - 25.5	1.0	WOH-2-4	33	
				SPT-18	25.5 - 27.0	1.5	2-4-4	35	
				SPT-19	27.0 - 28.5	1.0	6-8-24	25	
1060.0	28.2	SOIL 7: Sand with Silt and Clay, wet, dark gray, dense, poorly sorted							
1059.7	28.5	Shale, brown and gray, thin bedded, weathered (Augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 28.2 Elevation (1060.0)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ_FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN	
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-63A Total Depth 27.0 ft	
County		Hawkins		Surface Elevation		1089.4 ft	
Project Type		Geotechnical Exploration		Date Started		8/18/09 Completed 8/18/09	
Supervisor		A. Davis Driller S. Bradford		Depth to Water		18.0 ft Date/Time 8/18/09	
Logged By		A. Davis		Depth to Water		-- Date/Time --	

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks		
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth			
1089.4	0.0	Top of Hole									
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, medium stiff to stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	1.0	2-5-6	23	Boring advanced with 3 1/4 I.D. Hollow Stem Augers		
				SPT-2	1.5 - 3.0	1.2	4-5-4	16			
				BAG-1	0.0 - 4.5			--			
				SPT-3	3.0 - 4.5	0.5	4-5-7	17			
				SPT-4	4.5 - 6.0	1.0	2-3-2	18			
1081.9	7.5			SPT-5	6.0 - 7.5	0.6	2-3-4	20		Boring Grouted from 0 to 27 feet	
			SOIL 8: Lean Clay with and Sand, light brown to brown to gray, damp, stiff to hard, with silt		SPT-6	7.5 - 9.0	1.5	5-5-7			19
					SPT-7	9.0 - 10.5	0.3	3-5-7			17
					SPT-8	10.5 - 12.0	1.0	8-11-14			21
					BAG-2	9.0 - 15.0					--
				SPT-9	12.0 - 13.5	1.5	12-14-16	20			
				SPT-10	13.5 - 15.0	0.7	8-10-13	20			
1072.9	16.5			SPT-11	15.0 - 16.5	0.8	6-8-10	19			
		SOIL 2: Lean Clay, brown to tan, moist, stiff to very stiff, with rare manganese concretions			SPT-12	16.5 - 18.0	0.7	6-8-7	18		
1070.2	19.2				SPT-13	18.0 - 19.5	1.1	6-7-17	22		
					SPT-14	19.5 - 21.0	0.7	50+	14		
			SOIL 6: Gravel with Sand and Clay, brown and gray, wet, loose to very dense, poorly sorted		SPT-15	21.0 - 22.5	0.8	56-36-10	19		
				SPT-16	22.5 - 24.0	0.0	10-13-7	--			
1063.3	26.1			SPT-17	24.0 - 25.5	0.0	2-3-2	--			
1062.4	27.0			SPT-18	25.5 - 27.0	1.5	6-50+-50+	24			
		Shale, brown and gray, thin bedded, weathered (Augered)									
		No Refusal / Bottom of Hole									
		Top of Rock = 26.1 Elevation (1063.3)									

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMSM_GRAPHIC.LOG.GDT 1/23/10

Project Number	175569038	Location	Rogersville, TN		
Project Name	John Sevier Ash Disposal Areas	Boring No.	JS-64	Total Depth	22.5 ft
County	Hawkins	Surface Elevation	1082.3 ft		
Project Type	Geotechnical Exploration	Date Started	8/25/09	Completed	8/25/09
Supervisor	A. Davis	Driller	S. Bradford	Depth to Water	19.5 ft
Logged By	A. Davis	Depth to Water	--	Date/Time	--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1082.3	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, medium stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	1.5	2-3-4	18	Boring advanced with 3 1/4 I.D. Hollow Stem Augers Boring Grouted from 0 to 22.5 feet
				SPT-2	1.5 - 3.0	0.8	3-3-4	18	
				BAG-1	0.0 - 4.5	--	--	--	
				SPT-3	3.0 - 4.5	0.8	3-4-3	20	
1075.4	6.9			SPT-4	4.5 - 6.0	1.3	3-3-4	20	
				SPT-5	6.0 - 7.5	1.3	4-4-4	21	
1072.7	9.6	SOIL 8: Lean Clay with Silt and Sand, light brown to brown to gray, damp to moist, medium stiff to stiff, with gravels		SPT-6	7.5 - 9.0	1.3	4-5-4	20	
				SPT-7	9.0 - 10.5	0.8	2-2-3	21	
				SPT-8	10.5 - 12.0	1.2	3-3-3	26	
		SOIL 9: Sandy Lean Clay with Silt, dark brown and dark gray, moist, soft to medium stiff, with sand and trace gravels		SPT-9	12.0 - 13.5	1.2	1-2-3	27	
				BAG-2	11.0 - 15.0	--	--	--	
				SPT-10	13.5 - 15.0	1.5	3-3-3	28	
				SPT-11	15.0 - 16.5	1.3	1-1-2	33	
				SPT-12	16.5 - 18.0	1.5	2-2-3	32	
1062.9	19.4			SPT-13	18.0 - 19.5	1.5	3-4-4	39	
1061.1	21.2	SOIL 6: Gravel with Sand, brown and gray, wet, dense, poorly sorted		SPT-14	19.5 - 21.0	0.8	17-26-14	15	
1059.8	22.5			SPT-15	21.0 - 22.5	1.0	12-10-8	25	
		Shale, brown and gray, thin bedded, weathered (augered)							
		No Refusal / Bottom of Hole							
		Top of Rock = 21.2 Elevation (1061.1)							

STANTECFM5M_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ F5M5M_GRAPHIC.LOG.GDT 1/23/10

Project Number		175569038		Location		Rogersville, TN				
Project Name		John Sevier Ash Disposal Areas		Boring No.		JS-65A		Total Depth		36.5 ft
County		Hawkins		Surface Elevation		1095.1 ft				
Project Type		Geotechnical Exploration		Date Started		8/25/09		Completed		8/26/09
Supervisor		A. Davis Driller S. Bradford		Depth to Water		24.0 ft		Date/Time		8/25/09
Logged By		A. Davis		Depth to Water		--		Date/Time		--

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1095.1	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, medium stiff to very stiff, with silt, manganese concretions and gravels		SPT-1	0.0 - 1.5	1.1	4-5-6	14	
				SPT-2	1.5 - 3.0	1.3	3-4-5	17	
				SPT-3	3.0 - 4.5	0.7	4-8-12	16	
				SPT-4	4.5 - 6.0	1.0	2-2-3	21	
				SPT-5	6.0 - 7.5	1.0	4-7-8	18	
1086.8	8.3			SPT-6	7.5 - 9.0	1.5	7-10-11	16	
		SOIL 8: Lean Clay with Silt and Sand, brown and gray, moist to wet, medium stiff to very stiff, with sand and gravels		SPT-7	9.0 - 10.5	1.5	3-4-5	20	
				SPT-8	10.5 - 12.0	1.5	7-8-6	19	
				SPT-9	12.0 - 13.5	1.5	9-9-9	14	
				SPT-10	13.5 - 15.0	1.0	7-7-8	17	
				SPT-11	15.0 - 16.5	1.5	2-4-7	19	
				SPT-12	16.5 - 18.0	0.9	9-7-7	20	
				SPT-13	18.0 - 19.5	1.5	5-7-8	22	
1074.4	20.7				SPT-14	19.5 - 21.0	1.5	2-2-3	21
		SOIL 9: Lean CLay, brown to dark brown, gray, medium stiff to very stiff, moist to wet, with sand and gravel		SPT-15	21.0 - 22.5	1.0	2-3-5	27	
				SPT-16	22.5 - 24.0	1.0	4-7-8	26	
				SPT-17	24.0 - 25.5	0.9	4-7-9	26	
				SPT-18	25.5 - 27.0	1.2	7-8-9	25	
				SPT-19	27.0 - 28.5	1.2	10-10-12	23	
				ST-1	28.5 - 30.5			--	
				SPT-20	30.5 - 32.0	1.5	6-8-11	27	
				SPT-21	32.0 - 33.5	1.5	9-11-7	25	
1059.4	35.7				SPT-22	33.5 - 35.0	0.2	21-11-13	20
1058.6	36.5	Shale, brown and gray,		SPT-23	35.0 - 36.5	1.5	17-27-19	28	

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10

Project Number <u>175569038</u>	Location <u>Rogersville, TN</u>
Project Name <u>John Sevier Ash Disposal Areas</u>	Boring No. <u>JS-65B</u> Total Depth <u>16.0 ft</u>
County <u>Hawkins</u>	Surface Elevation <u>1094.7 ft</u>
Project Type <u>Geotechnical Exploration</u>	Date Started <u>8/25/09</u> Completed <u>8/25/09</u>
Supervisor <u>A. Davis</u> Driller <u>S. Bradford</u>	Depth to Water <u>24.0 ft</u> Date/Time <u>8/25/09</u>
Logged By <u>A. Davis</u>	Depth to Water <u>--</u> Date/Time <u>--</u>

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
1094.7	0.0	Top of Hole							
		SOIL 1: Lean Clay with Sand, light brown to brown with some reddish tint, damp, medium stiff to very stiff, with silt, manganese concretions and gravels		ST-1	5.0 - 7.0	2.0		--	Boring advanced with 3 1/4 I.D. Hollow Stem Augers
1086.8	7.9								Boring Grouted from 0 to 15 feet
		SOIL 8: Lean Clay with Silt and Sand, brown and gray, moist to wet, medium stiff to very stiff, with sand and gravels		ST-2	10.0 - 11.5	1.5		--	
1078.7	16.0			ST-3	15.0 - 16.0	1.0		--	

No Refusal /
Bottom of Hole

STANTECFMISM_LEGACY JOHN SEVIER ASH DISPOSAL AREAS.GPJ FMISM_GRAPHIC.LOG.GDT 1/23/10