Agreement Log #: KRP-11-006

Non-Time-Critical Concurrence

Area: The North Embayment Grids 5-N, 5-J, 5-H, 5-A, 6-C, 6-B, 6-A, 6-J, 6-H, 6-G, 7-E, 7-D, 7-C, 7-B & 7-A

Agreement:

All practical ash removal has been completed or was not required in the North Embayment area delineated by the portions of North Embayment Grids 5-N, 5-J, 5-H, 5-A, 6-C, 6-B, 6-A, 6-J, 6-H, 6-G, 7-E, 7-D, 7-C, 7-B & 7-A

During ash removal operations, daily quality assurance was performed to visually determine the removal of the ash, progress was photo documented and operational soil sampling was conducted prior to releasing the area for concurrence sampling and removing the area from excavation and cleaning operations. Concurrence samples were submitted to RJ Lee Laboratory for determination of ash content by polarized light microscopy. Sample results ranged from non-detect to a maximum of 22% ash content and are attached as an EQuIS Summary table. Operational sampling detected three hot spots where additional cleaning was performed prior to the final concurrence sampling. The location of the samples and the boundary of the area cleared are shown on the attached Figure 1.

No further action is needed to remove ash from this area.

Attachments:
Attachment 1, North Embayment Sampling Status Table
Attachment 2, Polarized Light Microscopy Results from RJ Lee Laboratory, EQuIS Summary Table
Attachment 3, RJ Lee laboratory Level 4 Report # TOH1009525-133
Attachment 4, RJ Lee laboratory Level 4 Report # TOH1009525-134
Attachment 5, Daily Quality Assurance Reports
Attachment 6, RSI Sampling Field Logs

Figures:
Figure 1, North Embayment Grids - Cleared
Figure 2, Area Photo Log and Representative Photos
FIG-NESAM-02, North Embayment Sample Grid Locations

Concurrence Comments:

Jacobs Project Manager — 11-17-2011 Date

Tennessee Valley Authority — 11/17/11 Date

U. S. Environmental Protection Agency — 12/07/11 Date

Attachment 1

North Embayment Sampling Status Table

North Embayment Sampling

Sample ID	Grid Point	CP Released	Cell Sample date	TVA Lab	RJ Lee Lab	Clean
KIF-NEMBAY_5A1-SED-082211-B	5A1	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5A2-SED-082211-B	5A2	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5A3-SED-082211-B	5A3	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5A4_A-SED-082211-B	5A4	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5A4-SED-082211-B	5A4	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_6A3-SED-082211-B	6A3	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_6G2-SED-082211-B	6G2	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_6G3-SED-082211-B	6G3	Y	08/22/2011	<50%	<50%	Passed
KIF-NEMBAY_7E2-SED-082511-B	7E2	Y	08/25/2011	<50%	<50%	Passed
KIF-NEMBAY_7E3-SED-082511-B	7E3	Y	08/25/2011	<50%	<50%	Passed
KIF-NEMBAY_7E4-SED-082511-B	7E4	Y	08/25/2011	<50%	<50%	Passed
KIF-NEMBAY_7D1-SED-090111-B	7D1	Y	09/01/2011	<50%	<50%	Passed
KIF-NEMBAY_7D4-SED-090111-B	7D4	Y	09/01/2011	<50%	<50%	Passed
KIF-NEMBAY_5J1-SED-092111-B	5J1	Y	09/21/2011	<50%	<50%	Passed
KIF-NEMBAY_5J2-SED-092111-B	5J2	Y	09/21/2011	<50%	<50%	Passed
KIF-NEMBAY_5J3-SED-092111-B	5J3	Y	09/21/2011	<50%	<50%	Passed
KIF-NEMBAY_5J4-SED-092111-B	5J4	Y	09/21/2011	<50%	<50%	Passed
KIF-NEMBAY_5H1-SED-092211-B	5H1	N	09/22/2011	>50%	N/A	Failed
KIF-NEMBAY_5H2-SED-092211-B	5H2	Y	09/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5H3-SED-092211-B	5H3	Y	09/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5H4-SED-092211-B	5H4	Y	09/22/2011	<50%	<50%	Passed
KIF-NEMBAY_5H1-SED-100311-B	**5H1**	**Y**	**10/03/2011**	**<50%**	<50%	Passed
KIF-NEMBAY_6C1-SED-100311-B	6C1	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6C2-SED-100311-B	6C2	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6C3-SED-100311-B	6C3	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6C4-SED-100311-B	6C4	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6A1-SED-100311-B	6A1	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6A4-SED-100311-B	6A4	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6B1-SED-100311-B	6B1	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6B2-SED-100311-B	6B2	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6B3-SED-100311-B	6B3	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6B4-SED-100311-B	6B4	Y	10/03/2011	<50%	<50%	Passed
KIF-NEMBAY_6J1-SED-100411-B	6J1	Y	10/04/2011	<50%	<50%	Passed
KIF-NEMBAY_6J2-SED-100411-B	6J2	Y	10/04/2011	<50%	<50%	Passed
KIF-NEMBAY_6J3-SED-100411-B	6J3	Y	10/04/2011	<50%	<50%	Passed
KIF-NEMBAY_6J4-SED-100411-B	6J4	Y	10/04/2011	<50%	<50%	Passed
KIF-NEMBAY_7C1-SED-101011-B	7C1	Y	10/10/2011	<50%	<50%	Passed
KIF-NEMBAY_7C2-SED-101011-B	7C2	Y	10/10/2011	<50%	<50%	Passed
KIF-NEMBAY_7C3-SED-101011-B	7C3	Y	10/10/2011	<50%	<50%	Passed
KIF-NEMBAY_7C4-SED-101011-B	7C4	Y	10/10/2011	<50%	<50%	Passed
KIF-NEMBAY_7D2-SED-101011-B	7D2	Y	10/10/2011	<50%	<50%	Passed
KIF-NEMBAY_7D3-SED-101011-B	7D3	Y	10/10/2011	<50%	<50%	Passed
KIF-NEMBAY_6H1-SED-101211-B	6H1	Y	10/12/2011	<50%	<50%	Passed
KIF-NEMBAY_6H2-SED-101211-B	6H2	Y	10/12/2011	<50%	<50%	Passed
KIF-NEMBAY_6H3-SED-101211-B	6H3	Y	10/12/2011	<50%	<50%	Passed
KIF-NEMBAY_6H4-SED-101211-B	6H4	Y	10/12/2011	<50%	<50%	Passed
KIF-NEMBAY_7B1-SED-101711-B	7B1	Y	10/17/2011	<50%	<50%	Passed
KIF-NEMBAY_7B2-SED-101711-B	7B2	Y	10/17/2011	<50%	<50%	Passed
KIF-NEMBAY_7B4-SED-101711-B	7B4	Y	10/17/2011	<50%	<50%	Passed
KIF-NEMBAY_7B4_A-SED-101711-B	7B4	Y	10/17/2011	<50%	<50%	Passed
KIF-NEMBAY_6A2-SED-102011-B	6A2	Y	10/20/2011	<50%	<50%	Passed
KIF-NEMBAY_6G1-SED-102411-B	6G1	Y	10/24/2011	<50%	<50%	Passed
KIF-NEMBAY_6G4-SED-102411-B	6G4	Y	10/24/2011	<50%	<50%	Passed
KIF-NEMBAY_7A1-SED-102411-B	7A1	Y	10/24/2011	<50%	<50%	Passed
KIF-NEMBAY_7A2-SED-102411-B	7A2	Y	10/24/2011	<50%	<50%	Passed
KIF-NEMBAY_7A2_A-SED-102411-B	7A2	Y	10/24/2011	>50%	N/A	Failed
KIF-NEMBAY_7A4-SED-102411-B	7A4	Y	10/24/2011	<50%	<50%	Passed
KIF-NEMBAY_7B3-SED-102411-B	7B3	Y	10/24/2011	>50%	N/A	Failed
KIF-NEMBAY_7B3_A-SED-102411-B	7B3	Y	10/24/2011	<50%	<50%	Passed
KIF-NEMBAY_7A2-SED-102711-B	**7A2**	**Y**	**10/27/2011**	**<50%**	<50%	Passed
KIF-NEMBAY_7B3-SED-102711-B	**7B3**	**Y**	**10/27/2011**	**<50%**	<50%	Passed

Attachment 2

Polarized Light Microscopy Results from RJ Lee Laboratory EQuIS Database Summary Table

chain_of_custody	sys_loc_code	sample_name	sample_type_code	start_depth	end_depth	depth_unit	field_matrix_code	task_code	field_sdg	analysis_location	lab_sample_id	lab_name_code	analytic_method	analysis_date	fraction	test_type	basis	lab_sdg	test_id	cas_rn	organic_yn	report_result_text	report_result_value	report_result_unit	report_result_limit	reportable_result	detect_flag	validator_qualifiers	lab_qualifiers	reporting_detection_limit	result_text	result_numeric	result_unit	result_type_code	sample_reason	EDD_Status	sample_date	sample_method	dilution_factor	result_remarks
NTCSED0822Y11B	NEMBAY_5A1	KIF-NEMBAY_5A1-SED-082211-B	N	0	12	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164221	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390316	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Brown granular sediment
NTCSED0822Y11B	NEMBAY_5A1	QC2_KIF-NEMBAY_5A1-SED-082211-B	LR	0	12	in	SED	NTCSED0822Y11B		LB	10164226	RJL	PLM	9/7/2011	N	INITIAL	Dry	TOH1009525-110	390317	%ASH	N	2	2	%	1	Y	Y			1	2	2	%	TRG		Final-Verified	8/22/2011		1	Tan granular sediment
NTCSED0822Y11B	NEMBAY_5A2	KIF-NEMBAY_5A2-SED-082211-B	N	0	12	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164220	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390318	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Brown granular sediment
NTCSED0822Y11B	NEMBAY_5A3	KIF-NEMBAY_5A3-SED-082211-B	N	0	9	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164217	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390319	%ASH	N	4	4	%	1	Y	Y			1	4	4	%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Brown granular sediment
NTCSED0822Y11B	NEMBAY_5A4	KIF-NEMBAY_5A4_A-SED-082211-B	N	4	12	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164219	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390320	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Brown granular sediment
NTCSED0822Y11B	NEMBAY_5A4	KIF-NEMBAY_5A4-SED-082211-B	N	0	4	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164218	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390321	%ASH	N	5	5	%	1	Y	Y			1	5	5	%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Brown granular sediment
NTCSED1003Y11B	NEMBAY_5H1	KIF-NEMBAY_5H1-SED-100311-B	N	0	12	in	SED	NTCSED1003Y11B	TOH1009525-125	LB	10170846	RJL	PLM	10/14/2011	N	INITIAL	Dry	TOH1009525-125	399301	%ASH	N	7	7	%	1	Y	Y			1	7	7	%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan sediment.
NTCSED0922Y11B	NEMBAY_5H2	KIF-NEMBAY_5H2-AED-092211-B	FD	0	12	in	SED	NTCSED0922Y11B	TOH1009525-123	LB	10168562	RJL	PLM	10/4/2011	N	INITIAL	Dry	TOH1009525-123	397829	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	9/22/2011	GRAB	1	Tan sediment.
NTCSED0922Y11B	NEMBAY_5H2	KIF-NEMBAY_5H2-SED-092211-B	N	0	12	in	SED	NTCSED0922Y11B	TOH1009525-123	LB	10168561	RJL	PLM	10/4/2011	N	INITIAL	Dry	TOH1009525-123	397830	%ASH	N	2	2	%	1	Y	Y			1	2	2	%	TRG	Investigatory	Final-Verified	9/22/2011	GRAB	1	Tan granular sediment
NTCSED0922Y11B	NEMBAY_5H3	KIF-NEMBAY_5H3-SED-092211-B	N	0	12	in	SED	NTCSED0922Y11B	TOH1009525-123	LB	10168563	RJL	PLM	10/4/2011	N	INITIAL	Dry	TOH1009525-123	397831	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	9/22/2011	GRAB	1	Light brown orange granular sediment
NTCSED0922Y11B	NEMBAY_5H4	KIF-NEMBAY_5H4-SED-092211-B	N	0	12	in	SED	NTCSED0922Y11B	TOH1009525-123	LB	10168564	RJL	PLM	10/4/2011	N	INITIAL	Dry	TOH1009525-123	397832	%ASH	N	3	3	%	1	Y	Y			1	3	3	%	TRG	Investigatory	Final-Verified	9/22/2011	GRAB	1	Light brown granular sediment
NTCSED0921Y11B	NEMBAY_5J1	KIF-NEMBAY_5J1-AED-092111-B	FD	0	12	in	SED	NTCSED0921Y11B	TOH1009525-122	LB	10168422	RJL	PLM	10/3/2011	N	INITIAL	Dry	TOH1009525-122	397824	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	9/21/2011	GRAB	1	Tan granular sediment.
NTCSED0921Y11B	NEMBAY_5J1	KIF-NEMBAY_5J1-SED-092111-B	N	0	12	in	SED	NTCSED0921Y11B	TOH1009525-122	LB	10168421	RJL	PLM	10/3/2011	N	INITIAL	Dry	TOH1009525-122	397825	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	9/21/2011	GRAB	1	Tan granular sediment.
NTCSED0921Y11B	NEMBAY_5J2	KIF-NEMBAY_5J2-SED-092111-B	N	0	12	in	SED	NTCSED0921Y11B	TOH1009525-122	LB	10168424	RJL	PLM	10/3/2011	N	INITIAL	Dry	TOH1009525-122	397826	%ASH	N	2	2	%	1	Y	Y			1	2	2	%	TRG	Investigatory	Final-Verified	9/21/2011	GRAB	1	Light orange granular sediment
NTCSED0921Y11B	NEMBAY_5J3	KIF-NEMBAY_5J3-SED-092111-B	N	0	12	in	SED	NTCSED0921Y11B	TOH1009525-122	LB	10168423	RJL	PLM	10/3/2011	N	INITIAL	Dry	TOH1009525-122	397827	%ASH	N	5	5	%	1	Y	Y			1	5	5	%	TRG	Investigatory	Final-Verified	9/21/2011	GRAB	1	Brown granular sediment.
NTCSED0921Y11B	NEMBAY_5J4	KIF-NEMBAY_5J4-SED-092111-B	N	0	12	in	SED	NTCSED0921Y11B	TOH1009525-122	LB	10168420	RJL	PLM	10/3/2011	N	INITIAL	Dry	TOH1009525-122	397828	%ASH	N	2	2	%	1	Y	Y			1	2	2	%	TRG	Investigatory	Final-Verified	9/21/2011	GRAB	1	Light orange granular sediment
NTCSED0719Y11B	NEMBAY_5N1	KIF-NEMBAY_5N1-SED-071911-B	N	0	12	in	SED	NTCSED0719Y11B	TOH1009525-93	LB	10161062	RJL	PLM	8/4/2011	N	INITIAL	Dry	TOH1009525-93	380251	%ASH	N	50	50	%	1	Y	Y			1	50	50	%	TRG	Investigatory	Final-Verified	7/19/2011	GRAB	1	Gray granular sediment.
NTCSED1011Y11B	NEMBAY_5N1	KIF-NEMBAY_5N1-SED-101111-B	N	0	12	in	SED	NTCSED1011Y11B	TOH1009525-130	LB	10171479	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-130	400513	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	10/11/2011	GRAB	1	Brown granular sediment.
NTCSED0719Y11B	NEMBAY_5N2	KIF-NEMBAY_5N2-SED-071911-B	N	0	12	in	SED	NTCSED0719Y11B	TOH1009525-93	LB	10161064	RJL	PLM	8/4/2011	N	INITIAL	Dry	TOH1009525-93	380252	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	7/19/2011	GRAB	1	Tan granular sediment.
NTCSED0719Y11B	NEMBAY_5N3	KIF-NEMBAY_5N3-SED-071911-B	N	0	12	in	SED	NTCSED0719Y11B	TOH1009525-93	LB	10161065	RJL	PLM	8/4/2011	N	INITIAL	Dry	TOH1009525-93	380253	%ASH	N	4	4	%	1	Y	Y			1	4	4	%	TRG	Investigatory	Final-Verified	7/19/2011	GRAB	1	Gray granular sediment.
NTCSED0719Y11B	NEMBAY_5N3	QC1-KIF-NEMBAY_5N3-SED-071911-B	LR	0	12	in	SED	NTCSED0719Y11B		LB	10161079	RJL	PLM	8/8/2011	N	INITIAL	Dry	TOH1009525-93	380254	%ASH	N	5	5	%	1	Y	Y			1	5	5	%	TRG		Final-Verified	7/19/2011		1	Gray-brown sediment
NTCSED0719Y11B	NEMBAY_5N4	KIF-NEMBAY_5N4-SED-071911-B	N	0	12	in	SED	NTCSED0719Y11B	TOH1009525-93	LB	10161063	RJL	PLM	8/4/2011	N	INITIAL	Dry	TOH1009525-93	380255	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	7/19/2011	GRAB	1	Tan granular sediment.
NTCSED1003Y11D	NEMBAY_6A1	KIF-NEMBAY_6A1-SED-100311-D	N	0	12	in	SED	NTCSED1003Y11D	TOH1009525-126	LB	10170859	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399401	%ASH	N	14	14	%	1	Y	Y			1	14	14	%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Brown granular sediment.
NTCSED1003Y11D	NEMBAY_6A1	QC_KIF-NEMBAY_6A1-SED-100311-D	LR	0	12	in	SED	NTCSED1003Y11D		LB	10170862	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399402	%ASH	N	12	12	%	1	Y	Y			1	12	12	%	TRG		Final-Verified	10/3/2011		1	Brown granular sediment.
NTCSED0822Y11B	NEMBAY_6A3	KIF-NEMBAY_6A3-SED-082211-B	N	0	12	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164222	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390324	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Orange-tan granular sediment
NTCSED1003Y11D	NEMBAY_6A4	KIF-NEMBAY_6A4-SED-100311-D	N	0	12	in	SED	NTCSED1003Y11D	TOH1009525-126	LB	10170860	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399403	%ASH	N	12	12	%	1	Y	Y			1	12	12	%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Brown granular sediment.
NTCSED1003Y11D	NEMBAY_6B1	KIF-NEMBAY_6B1-SED-100311-D	N	0	12	in	SED	NTCSED1003Y11D	TOH1009525-126	LB	10170856	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399404	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan granular sediment.
NTCSED1003Y11D	NEMBAY_6B2	KIF-NEMBAY_6B2-SED-100311-D	N	0	12	in	SED	NTCSED1003Y11D	TOH1009525-126	LB	10170858	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399405	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan sediment.
NTCSED1003Y11D	NEMBAY_6B3	KIF-NEMBAY_6B3-SED-100311-D	N	0	12	in	SED	NTCSED1003Y11D	TOH1009525-126	LB	10170857	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399406	%ASH	N	3	3	%	1	Y	Y			1	3	3	%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Brown granular sediment.
NTCSED1003Y11D	NEMBAY_6B4	KIF-NEMBAY_6B4-SED-100311-D	N	0	12	in	SED	NTCSED1003Y11D	TOH1009525-126	LB	10170861	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-126	399407	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan granular sediment.
NTCSED1003Y11B	NEMBAY_6C1	KIF-NEMBAY_6C1-SED-100311-B	N	0	12	in	SED	NTCSED1003Y11B	TOH1009525-125	LB	10170845	RJL	PLM	10/14/2011	N	INITIAL	Dry	TOH1009525-125	399303	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan sediment.
NTCSED1003Y11B	NEMBAY_6C2	KIF-NEMBAY_6C2-AED-100311-B	FD	0	12	in	SED	NTCSED1003Y11B	TOH1009525-125	LB	10170849	RJL	PLM	10/14/2011	N	INITIAL	Dry	TOH1009525-125	399304	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan granular sediment.
NTCSED1003Y11B	NEMBAY_6C2	KIF-NEMBAY_6C2-SED-100311-B	N	0	12	in	SED	NTCSED1003Y11B	TOH1009525-125	LB	10170848	RJL	PLM	10/14/2011	N	INITIAL	Dry	TOH1009525-125	399305	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan granular sediment.
NTCSED1003Y11B	NEMBAY_6C3	KIF-NEMBAY_6C3-SED-100311-B	N	0	12	in	SED	NTCSED1003Y11B	TOH1009525-125	LB	10170851	RJL	PLM	10/14/2011	N	INITIAL	Dry	TOH1009525-125	399306	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan sediment.
NTCSED1003Y11B	NEMBAY_6C4	KIF-NEMBAY_6C4-SED-100311-B	N	0	12	in	SED	NTCSED1003Y11B	TOH1009525-125	LB	10170850	RJL	PLM	10/14/2011	N	INITIAL	Dry	TOH1009525-125	399307	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/3/2011	GRAB	1	Tan granular sediment.
NTCSED0822Y11B	NEMBAY_6G2	KIF-NEMBAY_6G2-SED-082211-B	N	0	12	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164223	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390325	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Orange-brown granular sediment
NTCSED0822Y11B	NEMBAY_6G3	KIF-NEMBAY_6G3-SED-082211-B	N	0	7	in	SED	NTCSED0822Y11B	TOH1009525-110	LB	10164224	RJL	PLM	9/6/2011	N	INITIAL	Dry	TOH1009525-110	390326	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/22/2011	GRAB	1	Orange-brown granular sediment
NTCSED1012Y11B	NEMBAY_6H1	KIF-NEMBAY_6H1-SED-101211-B	N	0	12	in	SED	NTCSED1012Y11B		LB	10171480	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-131	400508	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Draft	10/12/2011	GRAB	1	Tan granular sediment.
NTCSED1012Y11B	NEMBAY_6H2	KIF-NEMBAY_6H2-SED-101211-B	N	0	12	in	SED	NTCSED1012Y11B		LB	10171481	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-131	400509	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Draft	10/12/2011	GRAB	1	Red tan granular sediment.
NTCSED1012Y11B	NEMBAY_6H2	QC_KIF-NEMBAY_6H2-SED-101211-B	LR	0	12	in	SED	NTCSED1012Y11B		LB	10171484	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-131	400510	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG		Draft	10/12/2011		1	Red tan granular sediment.
NTCSED1012Y11B	NEMBAY_6H3	KIF-NEMBAY_6H3-SED-101211-B	N	0	12	in	SED	NTCSED1012Y11B		LB	10171482	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-131	400511	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Draft	10/12/2011	GRAB	1	Red tan granular sediment.
NTCSED1012Y11B	NEMBAY_6H4	KIF-NEMBAY_6H4-SED-101211-B	N	0	12	in	SED	NTCSED1012Y11B		LB	10171483	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-131	400512	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Draft	10/12/2011	GRAB	1	Red tan granular sediment.
NTCSED1004Y11B	NEMBAY_6J1	KIF-NEMBAY_6J1-SED-100411-B	N	0	12	in	SED	NTCSED1004Y11B	TOH1009525-127	LB	10170863	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-127	399501	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/4/2011	GRAB	1	Tan sediment.
NTCSED1004Y11B	NEMBAY_6J2	KIF-NEMBAY_6J2-SED-100411-B	N	0	12	in	SED	NTCSED1004Y11B	TOH1009525-127	LB	10170864	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-127	399502	%ASH	N	2	2	%	1	Y	Y			1	2	2	%	TRG	Investigatory	Final-Verified	10/4/2011	GRAB	1	Tan sediment.
NTCSED1004Y11B	NEMBAY_6J3	KIF-NEMBAY_6J3-SED-100411-B	N	0	12	in	SED	NTCSED1004Y11B	TOH1009525-127	LB	10170866	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-127	399503	%ASH	N	9	9	%	1	Y	Y			1	9	9	%	TRG	Investigatory	Final-Verified	10/4/2011	GRAB	1	Gray sediment.
NTCSED1004Y11B	NEMBAY_6J4	KIF-NEMBAY_6J4-SED-100411-B	N	0	12	in	SED	NTCSED1004Y11B	TOH1009525-127	LB	10170865	RJL	PLM	10/13/2011	N	INITIAL	Dry	TOH1009525-127	399504	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/4/2011	GRAB	1	Tan sediment.
NTCSED1027Y11B	NEMBAY_7A2	KIF-NEMBAY_7A2-SED-102711-B	N	0	12	in	SED		TOH1009525-139	LB	10173371	RJL	PLM	11/3/2011	N	INITIAL	Dry	TOH1009525-139	407301	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG		Draft	10/27/2011	GRAB	1	Red tan granular sediment.
NTCSED1017Y11B	NEMBAY_7B1	KIF-NEMBAY_7B1-SED-101711-B	N	0	12	in	SED	NTCSED1017Y11B	TOH1009525-132	LB	10171661	RJL	PLM	10/20/2011	N	INITIAL	Dry	TOH1009525-132	400514	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/17/2011	GRAB	1	Red tan granular sediment.
NTCSED1017Y11B	NEMBAY_7B2	KIF-NEMBAY_7B2-AED-101711-B	FD	0	12	in	SED	NTCSED1017Y11B	TOH1009525-132	LB	10171663	RJL	PLM	10/20/2011	N	INITIAL	Dry	TOH1009525-132	400515	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/17/2011	GRAB	1	Tan granular sediment.
NTCSED1017Y11B	NEMBAY_7B2	KIF-NEMBAY_7B2-SED-101711-B	N	0	12	in	SED	NTCSED1017Y11B	TOH1009525-132	LB	10171662	RJL	PLM	10/20/2011	N	INITIAL	Dry	TOH1009525-132	400516	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/17/2011	GRAB	1	Tan granular sediment.
NTCSED1027Y11B	NEMBAY_7B3	KIF-NEMBAY_7B3-SED-102711-B	N	0	12	in	SED		TOH1009525-139	LB	10173372	RJL	PLM	11/3/2011	N	INITIAL	Dry	TOH1009525-139	407302	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG		Draft	10/27/2011	GRAB	1	Tan granular sediment.
NTCSED1017Y11B	NEMBAY_7B4	KIF-NEMBAY_7B4_A-SED-101711-B	N	2	12	in	SED	NTCSED1017Y11B	TOH1009525-132	LB	10171665	RJL	PLM	10/20/2011	N	INITIAL	Dry	TOH1009525-132	400517	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/17/2011	GRAB	1	Tan granular sediment.
NTCSED1017Y11B	NEMBAY_7B4	KIF-NEMBAY_7B4-SED-101711-B	N	0	2	in	SED	NTCSED1017Y11B	TOH1009525-132	LB	10171664	RJL	PLM	10/20/2011	N	INITIAL	Dry	TOH1009525-132	400518	%ASH	N	22	22	%	1	Y	Y			1	22	22	%	TRG	Investigatory	Final-Verified	10/17/2011	GRAB	1	Gray granular sediment.
NTCSED1010Y11B	NEMBAY_7C1	KIF-NEMBAY_7C1-SED-101011-B	N	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171472	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-129	400501	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Tan hard sediment.
NTCSED1010Y11B	NEMBAY_7C2	KIF-NEMBAY_7C2-SED-101011-B	N	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171473	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-129	400502	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Tan granular sediment.
NTCSED1010Y11B	NEMBAY_7C3	KIF-NEMBAY_7C3-SED-101011-B	N	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171474	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-129	400503	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Tan granular sediment.
NTCSED1010Y11B	NEMBAY_7C4	KIF-NEMBAY_7C4-AED-101011-B	FD	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171478	RJL	PLM	10/18/2011	N	INITIAL	Dry	TOH1009525-129	400504	%ASH	N	2	2	%	1	Y	Y			1	2	2	%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Gray hard sediment.
NTCSED1010Y11B	NEMBAY_7C4	KIF-NEMBAY_7C4-SED-101011-B	N	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171475	RJL	PLM	10/19/2011	N	INITIAL	Dry	TOH1009525-129	400505	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Gray hard sediment.
NTCSED0901Y11B	NEMBAY_7D1	KIF-NEMBAY_7D1-SED-090111-B	N	0	12	in	SED	NTCSED0901Y11B	TOH1009525-116	LB	10166210	RJL	PLM	9/15/2011	N	INITIAL	Dry	TOH1009525-116	392807	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	9/1/2011	GRAB	1	Dark brown sediment.
NTCSED1010Y11B	NEMBAY_7D2	KIF-NEMBAY_7D2-SED-101011-B	N	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171476	RJL	PLM	10/19/2011	N	INITIAL	Dry	TOH1009525-129	400506	%ASH	N	3	3	%	1	Y	Y			1	3	3	%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Gray hard sediment.
NTCSED1010Y11B	NEMBAY_7D3	KIF-NEMBAY_7D3-SED-101011-B	N	0	12	in	SED	NTCSED1010Y11B	TOH1009525-129	LB	10171477	RJL	PLM	10/19/2011	N	INITIAL	Dry	TOH1009525-129	400507	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	10/10/2011	GRAB	1	Dark brown sediment.
NTCSED0901Y11B	NEMBAY_7D4	KIF-NEMBAY_7D4-SED-090111-B	N	0	12	in	SED	NTCSED0901Y11B	TOH1009525-116	LB	10166211	RJL	PLM	9/15/2011	N	INITIAL	Dry	TOH1009525-116	392808	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	9/1/2011	GRAB	1	Dark gray sediment.
NTCSED0825Y11B	NEMBAY_7E2	KIF-NEMBAY_7E2-SED-082511-B	N	0	12	in	SED	NTCSED0825Y11B	TOH1009525-113	LB	10165681	RJL	PLM	9/12/2011	N	INITIAL	Dry	TOH1009525-113	392404	%ASH	N	1	1	%	1	Y	Y			1	1	1	%	TRG	Investigatory	Final-Verified	8/25/2011	GRAB	1	Gray-brown granular sediment
NTCSED0825Y11B	NEMBAY_7E3	KIF-NEMBAY_7E3-SED-082511-B	N	0	12	in	SED	NTCSED0825Y11B	TOH1009525-113	LB	10165683	RJL	PLM	9/9/2011	N	INITIAL	Dry	TOH1009525-113	392405	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/25/2011	GRAB	1	Tan granular sediment
NTCSED0825Y11B	NEMBAY_7E4	KIF-NEMBAY_7E4-SED-082511-B	N	0	12	in	SED	NTCSED0825Y11B	TOH1009525-113	LB	10165684	RJL	PLM	9/12/2011	N	INITIAL	Dry	TOH1009525-113	392406	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG	Investigatory	Final-Verified	8/25/2011	GRAB	1	Orange-brown granular sediment
NTCSED0825Y11B	NEMBAY_7E4	QC_KIF-NEMBAY_7E4-SED-082511-B	LR	0	12	in	SED	NTCSED0825Y11B		LB	10165689	RJL	PLM	9/13/2011	N	INITIAL	Dry	TOH1009525-113	392407	%ASH	N	< 1	1	%	1	Y	N	U	U	1			%	TRG		Final-Verified	8/25/2011		1	Red tan granular sediment.

Attachment 3

RJ Lee laboratory Level 4 Report # TOH1009525-133

RJ LeeGroup, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

November 9, 2011

Dr. William Rogers
Kingston Fossil Plant
714 Swan Pond Road
Harriman, TN 37748

RE: Tennessee Valley Authority – Analytical Report
RJ Lee Group Project Number TOH1009525-133

The RJ Lee Group, Inc. Monroeville laboratory received six samples on October 26, 2011 associated with Tennessee Valley Authority (TVA) Chain of Custody (COC) number NTCSED1020Y11B. The samples were logged into RJ Lee Group project number TOH1009525-133 and assigned RJLG sample numbers as indicated in Appendix A.

The samples were received in good condition with all custody seals in place and intact. Attached in Appendix A is the signed sample receipt confirmation form, COC, and sample receipt check list.

If you have any question or comments regarding the information contained in this report, please feel free to contact us.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.

Sincerely,

Matt S

Matthew S. Sanchez
Manager Optical and XRD Groups

Attachments: Chain of Custody Forms
Mineral Identification Report
Polarized Light Microscopy Images, Bench Sheets,
QC Tabulation (when applicable)

Appendix A

Chain of Custody Forms

RJ LeeGroup, Inc.
www.rjlg.com

Chain Of Custody

RJ Lee Group Work Order #: TOH1009525-133

Project Name / Case #: KIF

Received From:	Relinquished To:
Jesse Morris Kingston Fossil Plant/TVA 189 Lakeshore Drive Harriman, TN 37748 United States Email: accountspayable@tva.gov Main: 304-685-8364	RJLee Group, Inc. 350 Hochberg Road Monroeville, PA 15146 United States Main: 724-325-1776 Fax: 724-325-1775

Delivery Comments:

1-Cooler was received from Kingston Fossil Plant/TVA in good condition with no evidence of tampering. All custody seals were intact and in place.

Sample ID	Customer COC ID	Client Sample ID	Date Received
10172778	NTCSED1020Y11B	KIF-NEMBAY_6A2-SED-102011-B	10/26/2011 7:50 AM EDT
10172779	NTCSED1020Y11B	KIF-NEMBAY_7J1-SED-102011-B	10/26/2011 7:50 AM EDT
10172780	NTCSED1020Y11B	KIF-NEMBAY_7J2-SED-102011-B	10/26/2011 7:50 AM EDT
10172781	NTCSED1020Y11B	KIF-NEMBAY_7J2-AED-102011-B	10/26/2011 7:50 AM EDT
10172782	NTCSED1020Y11B	KIF-NEMBAY_7J3-SED-102011-B	10/26/2011 7:50 AM EDT
10172783	NTCSED1020Y11B	KIF-NEMBAY_7J4-SED-102011-B	10/26/2011 7:50 AM EDT
10172784	NTCSED1020Y11B	QC_KIF-NEMBAY_7J4-SED-102011-B	10/26/2011 7:50 AM EDT

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

	Received From: Jesse Morris	*Method of Shipment: UPS*	
	Company: Kingston Fossil Plant/TVA		**Date:** 10/26/2011
	Received By: Monica Carse	*Package Condition Upon Receipt: Sealed*	
	Company: RJ Lee Group, Inc.		**Date:** 10/26/2011

	Relinquished	*Method of Shipment:*	
	Company:		**Date:**
	Received By:	*Package Condition Upon Receipt:*	
	Company:		**Date:**

	Relinquished	*Method of Shipment:*	
	Company:		**Date:**
	Received By:	*Package Condition Upon Receipt:*	
	Company:		**Date:**

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJ Lee Group
Sample Receipt and Log in Check List

Client:	TVA	Date Received:	10/26/2011	Log in Date:	10/26/2011
Time Received:	7:50 AM	By:	Monica Carse	COC# :	NTCSED1020Y11B
Project:	TOH1009525-133	# Coolers Received	1	Means of Shipment:	UPS
Air Bill:	1Z 939 EX2 15 9345 4270				

As Received Screen	Yes	No	Comments
Were the Coolers received in good condition?	✓		
Was there evidence of tampering?		✓	
Are Custody Seals intact and in good condition?	✓		
Were Coolers received between 2 and 4 degrees C?	N/A		
Were all samples intact?	✓		
Were all samples accurately labeled?	✓		
Was the COC received in good condition?	✓		
Did the sample ID on COC match the ID on the sample jars?	✓		
Were there any discrepancies among samples and COC?		✓	
Is the COC completely filled out?	✓		
Was the COC relinquished properly?	✓		

List any anomalies associated with Sample Receipt

N/A

Analyst Signature: M Carse 10-28-11

Manager Signature: [illegible] 10-28-11

RECORD COPY

TCH1009525_133

TENNESSEE VALLEY AUTHORITY

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Page: 1 of 1
Cooler # 1 of 1

TVA-KIF-NTC-NEMB-003

B

COC # NTCSED1020Y11B

Required Ship to Lab:

Lab Name	RJ Lee Group, Inc.
Address:	350 Hochberg Road, Monroeville, PA 15146
Lab PM	Keith Rickabaugh
Phone/Fax:	(724) 387-1841
Lab PM email	
Applicable Lab Quote #	

Required Project Information:

Site ID #:	KIF
Project #	Kingston Fossil Plant
Site Address	714 Swan Pond Rd
City	Harriman
State, Zip	TN, 37748
Site PM Name	Bill Rogers
Phone/Fax:	865.717.1627
Site PM Email:	wrogers@tva.gov

Required Sampler Information:

Sampler	Greg Schwartz
Sampling Company	Restoration Services, Inc.
Address:	
City/State	
Phone #:	
Reimbursement project?	
Non-reimbursement project?	Mark one
Send EDD to	NA
CC Hardcopy report to	
CC Hardcopy report to	

TAT: Standard 5 day X Rush Mark One

ITEM #	SAMPLE ID (Samples IDs MUST BE UNIQUE) EXAMPLE: KIF-NEMBAY_XYZ-SED-MMDDYY-A	SAMPLE LOCATION EXAMPLE: NEMBAY_XYZ	Sample Depth Start Depth (Depth Unit: inches)	Sample Depth End Depth	MATRIX CODE	G=GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	Comments/Lab Sample I.D.	Filtered: NA	Preserve: none	Analysis: PLM_ASB_B
1	KIF-NEMBAY_GA2-SED-102011-B	NEMBAY_GA2	0.0	12.0	SED	G	N	102011	11 00	1				X
2	KIF-NEMBAY_TJ1-SED-102011-B	NEMBAY_TJ1	0.0	12.0	SED	G	N	102011	1815 ~~1351~~	1				X
3	KIF-NEMBAY_TJ2-SED-102011-B	NEMBAY_TJ2	0.0	12.0	SED	G	N	102011	1330	1				X
4	KIF-NEMBAY_TJ2-AED-102011-B	NEMBAY_TJ2	0.0	12.0	SED	G	N	102011	1330	1				X
5	KIF-NEMBAY_TJ3-SED-102011-B	NEMBAY_TJ3	0.0	12.0	SED	G	N	102011	1345	1				X
6	KIF-NEMBAY_TJ4-SED-102011-B	NEMBAY_TJ4	0.0	12.0	SED	G	N	102011	1355	1				X
7	QC 102011										AA 102011			

Additional Comments/Special Instructions:

Sample Team:
Greg Schwartz (RSI)
EJ Arnold (RSI)
Steve Pinkley (RSI)
Russ Vance (RSI)

SAMPLE REASON (check only one)

- X Investigatory
- Split Comparison
- Split Legal
- Special Study
- Plant Ops
- Oth:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] / RSI	102411	0735	Anna Marie / RSI	102411	0735
Anna Marie / RSI	102511	1530	[signature]	102011	0750

SHIPPING METHOD: (mark as appropriate) UPS COURIER / FEDEX US MAIL

SAMPLER NAME AND SIGNATURE: Greg Schwartz [signature] Date Signed 102011 Time: 1400

Sample Receipt Conditions

	Temp in 0C	Samples on Ice?	Sample intact?	Trip Blank?
		Y/N	Y/N	Y/N
MA		Y/N	Y/N	Y/N
		Y/N	Y/N	Y/N
		Y/N	Y/N	Y/N

Environmental Standards, Inc-LastUpdated-031609

Tracking 1Z939E215934542 7 0

RJ LeeGroup, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

Appendix B

Mineral Identification Report

RJLG RJ LeeGroup, Inc.

Mineral Identification

Polarized Light Microscopy (PLM) Laboratory Report

Dr. Bill Rogers
Tennessee Valley Authority
Kingston Fossil Plant
714 Swan Pond Road
Harriman, TN 37748 United States
Email: wjrogers@tva.gov
Main: 256-762-6904

Report Date: 11/01/2011
Sample Received Date: 10/26/2011
RJLG Project: TOH1009525-133
Customer COC: NTCSED1020Y11B
Purchase Order: 87083
Analytical Method: Fly Ash Determination by PLM

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
KIF-NEMBAY_6A2-SED-102011-B	10172778	10/31/2011	11/20/2011	1%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Brown granular sediment.
KIF-NEMBAY_7J1-SED-102011-B	10172779	10/31/2011	11/20/2011	5%	Clay Diatoms Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Dark brown granular sediment.
KIF-NEMBAY_7J2-AED-102011-B	10172781	10/31/2011	11/20/2011	1%	Amphibole Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Gray hard sediment.

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
KIF-NEMBAY_7J2-SED-102011-B	10172780	10/31/2011	11/20/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Gray hard sediment.
KIF-NEMBAY_7J3-SED-102011-B	10172782	10/31/2011	11/20/2011	2%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Tan hard sediment.
KIF-NEMBAY_7J4-SED-102011-B	10172783	10/31/2011	11/20/2011	2%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Red tan granular sediment.
QC_KIF-NEMBAY_7J4-SED-102011-B	10172784	10/31/2011	11/20/2011	3%	NA	Red tan granular sediment.

Authorized Signature: Matt

Matthew Sanchez
Manager Optical Group

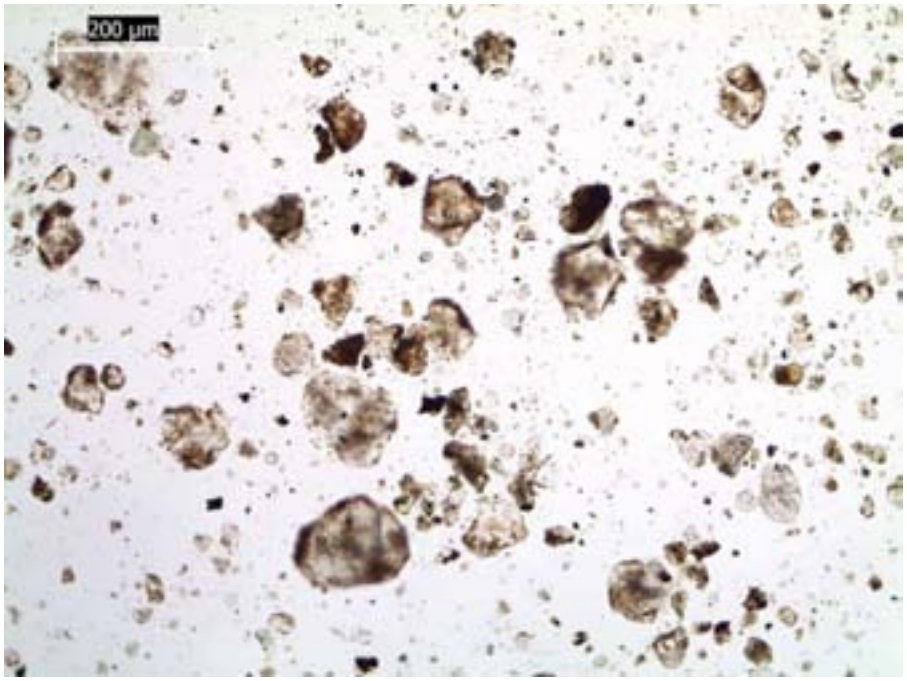
Disclaimer Notes
* Samples will be returned to client immediately upon the release of final report.
* These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
* This test report relates to the items tested.
* Any reproduction of this document must include the entire document in order for the report to be valid.
* This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA # 100364, NVLAP # 101208-0, NY ELAP # 10884) facility.
* If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results is limited to the reported values.
* For the purposes of this method, Fly Ash is defined as any particle consistent with Coal Ash.
* The method reporting level is 1% and anything <1% is considered a not-detected.

Quartz – Angular anisotropic particulate with low relief.
Feldspar – Angular to blocky anisotropic particulate, low to moderate relief, biaxial, can have polysynthetic twinning.
Clay – Sheet silicates with polycrystalline or display non-uniform extinction with low to moderate relief, and zero to low birefringence. Clay also refers to particles that are less than 2.0 microns.
Opaques – Opaque is a generic term for a particle that does not transmit light. Opaque minerals are distinguished from opaque bottom ash based on morphology of fracture.
Fly Ash – Isotropic to opaque spheres, agglomeration of spheres, and angular ash particles.
Organic Particulate – Pollen, plant and insect matter, and carbonaceous matter.
Carbonates – High birefringent, can be rhombohedral, with high relief.
Diatoms – Silica rich isotropic particles with various morphologies.
Mica – Sheet silicate with moderate to high relief and low birefringence, mono-crystalline, and normal extinction.
Miscellaneous Silicate – Isotropic and anisotropic silicates, with low to high relief, identification unsure and beyond the scope of the method to identify.
Amphibole – Elongated anisotropic particulate with moderate to high relief.
Coal – Irregular to angular particles with moderate opacity, edges and thin particles are reddish brown in color.
<1% Fly Ash – Fly Ash observed, none counted.
ND – No Fly Ash detected.

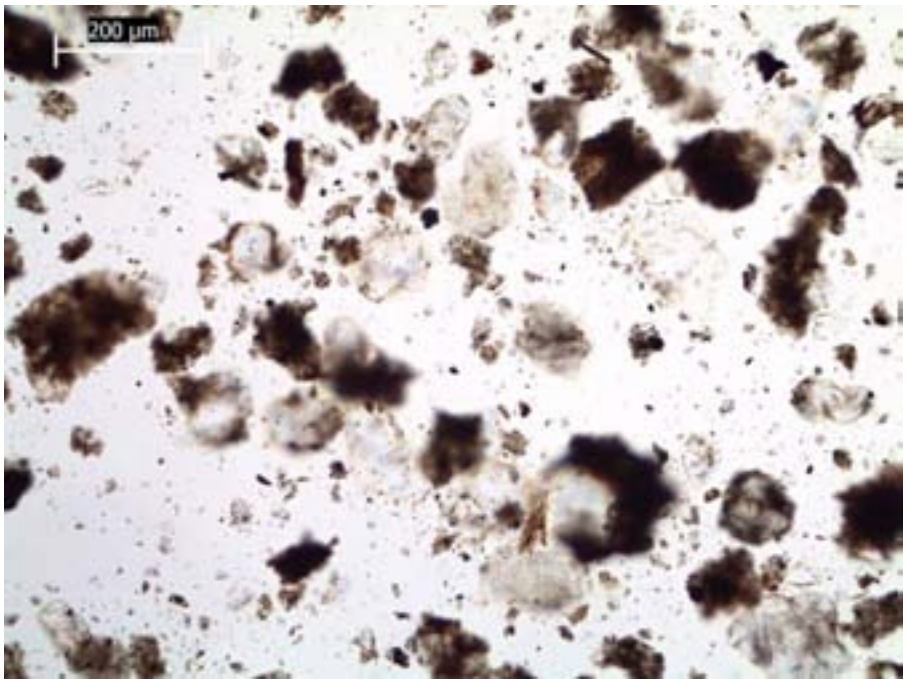
RJ LeeGroup, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

Appendix C

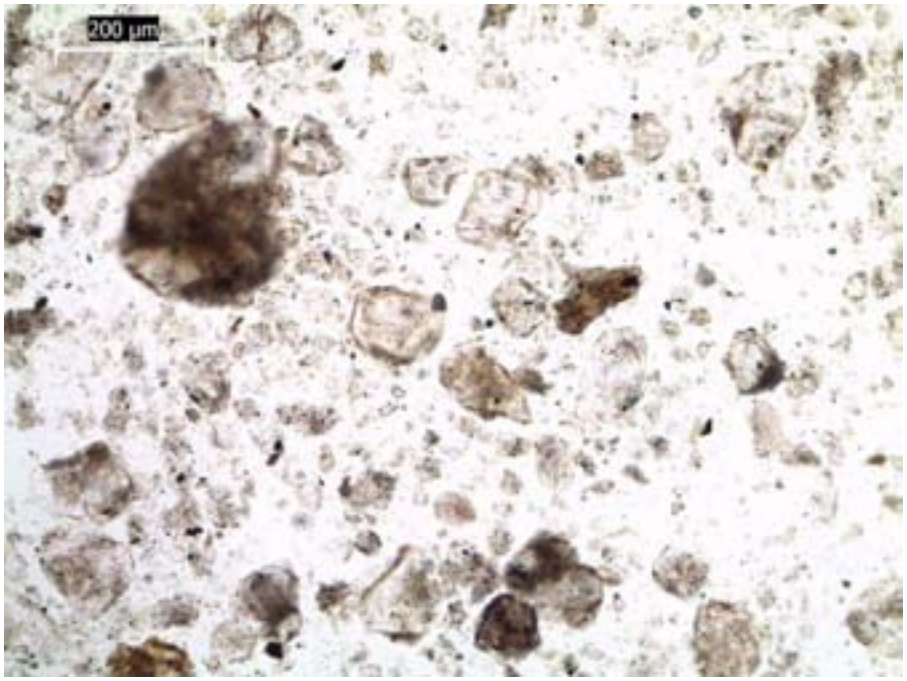
Polarized Light Microscopy Images
Bench Sheets
QC Tabulation



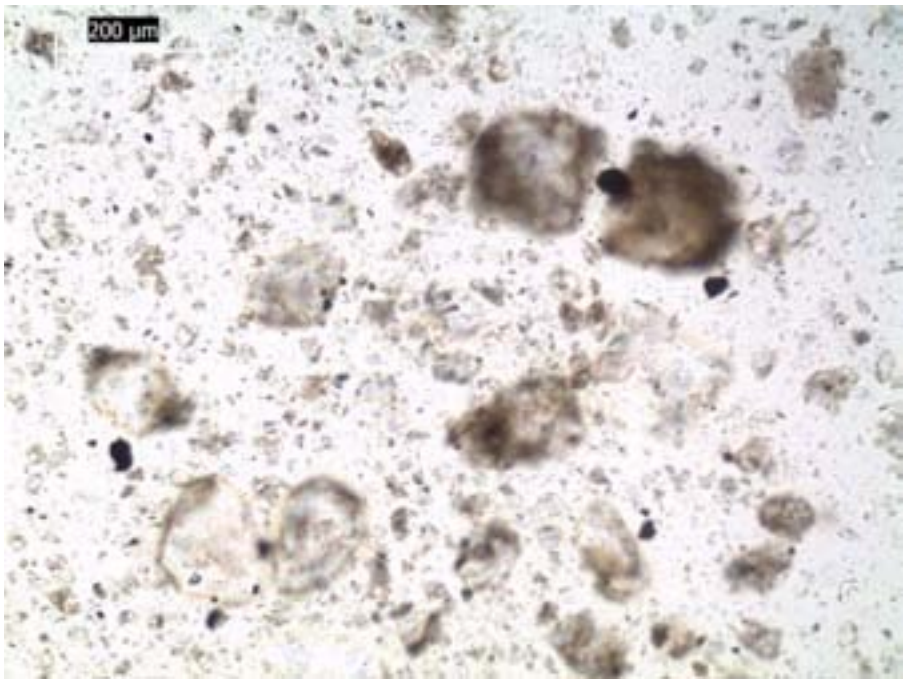
KIF-NEMBAY_6A2-SED-102011-B. RJLG ID 10172778.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



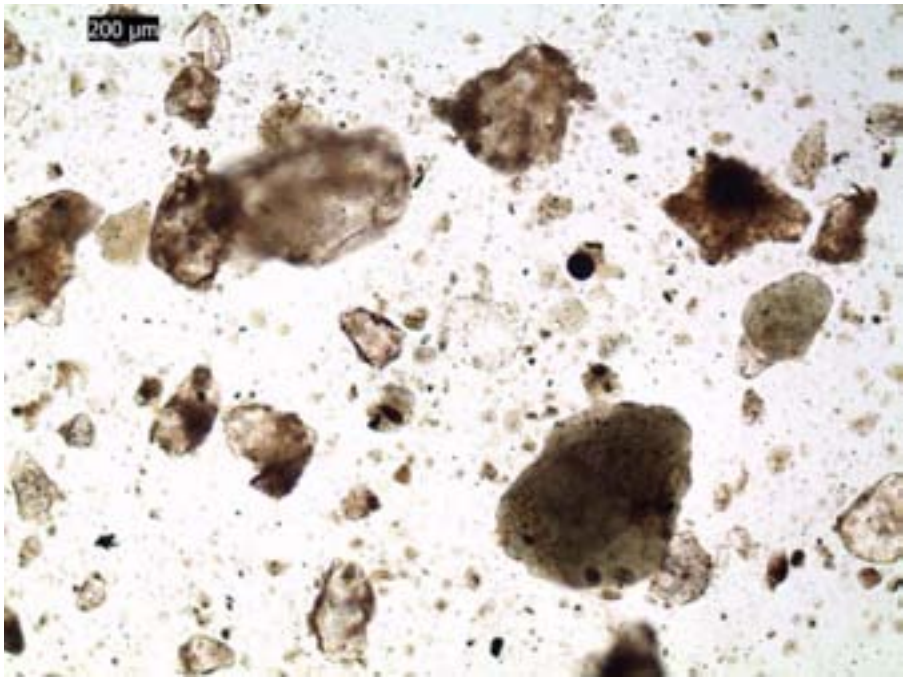
KIF-NEMBAY_7J1-SED-102011-B. RJLG ID 10172779.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



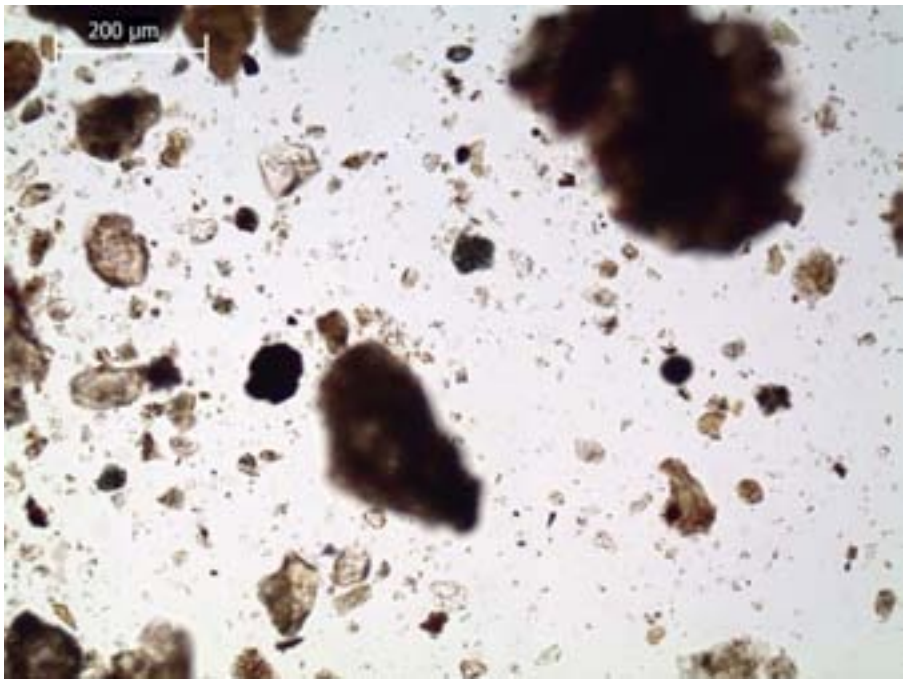
KIF-NEMBAY_7J2-SED-102011-B. RJLG ID 10172780.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



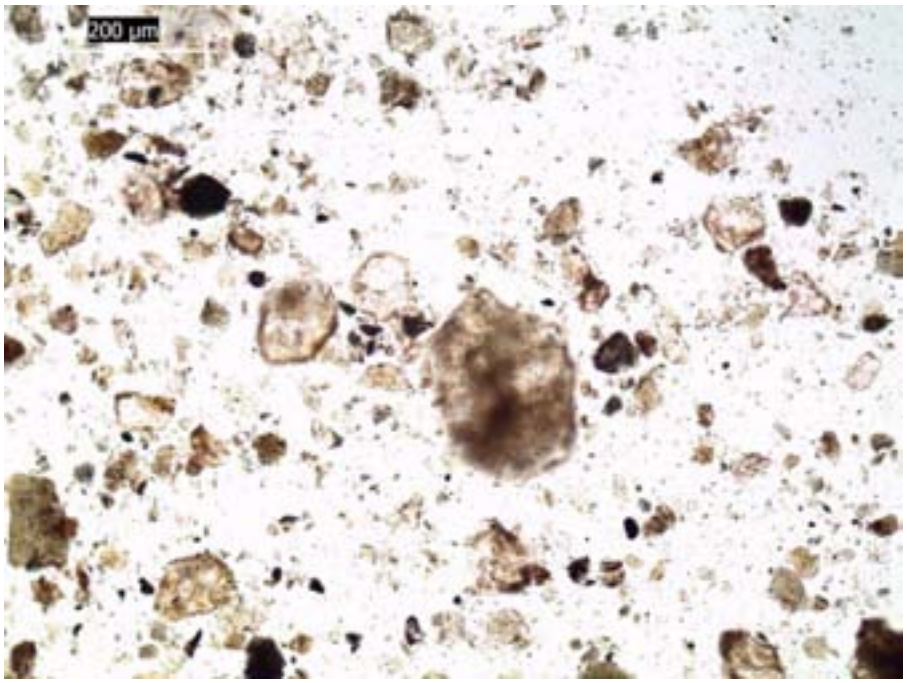
KIF-NEMBAY_7J2-AED-102011-B. RJLG ID 10172781.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



KIF-NEMBAY_7J3-SED-102011-B. RJLG ID 10172782.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



KIF-NEMBAY_7J4-SED-102011-B. RJLG ID 10172783.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



QC_KIF-NEMBAY_7J4-SED-102011-B. RJLG ID 10172784.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172778

Customer Sample # : KIF-NEMBAY_6A2-SED-102011-B

Slide 1:	1	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	1%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Brown granular sediment.

Analysis Date:	2011-10-31	Analysis Time:	14:43
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 14:43:24.91

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-133\10172778.jpg

Initials: JCH

Date: 10-31-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172779

Customer Sample # : KIF-NEMBAY_7J1-SED-102011-B

Slide 1:	2	Slide 2:	2	Slide 3:	1	Slide 4:	0	Fly Ash %	5%

Non-Fly Ash Components
- Clay
- Diatoms
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Dark brown granular sediment.

Analysis Date:	2011-10-31	Analysis Time:	14:22
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 14:22:36.227

Images:

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Initials: JCH

Date: 10-31-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172780

Customer Sample # : KIF-NEMBAY_7J2-SED-102011-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Gray hard sediment.

Analysis Date:	2011-10-31	Analysis Time:	14:02
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 14:02:43.447

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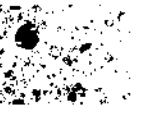

Initials: JCH

Date: 10-31-11

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Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172781

Customer Sample # : KIF-NEMBAY_7J2-AED-102011-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	1	Fly Ash %	1%

Non-Fly Ash Components
- Amphibole
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Gray hard sediment.

Analysis Date:	2011-10-31	Analysis Time:	13:15
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 13:15:25.207

Images:

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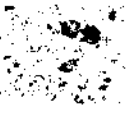

Initials: JCH

Date: 10-31-11

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RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172782

Customer Sample # : KIF-NEMBAY_7J3-SED-102011-B

Slide 1:	0	Slide 2:	1	Slide 3:	0	Slide 4:	1	Fly Ash %	2%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Tan hard sediment.

Analysis Date:	2011-10-31	Analysis Time:	13:36
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 13:36:19.64

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-133\10172782.jpg

Initials: JCH

Date: 10-31-11

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Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172783

Customer Sample # : KIF-NEMBAY_7J4-SED-102011-B

Slide 1:	1	Slide 2:	0	Slide 3:	0	Slide 4:	1	Fly Ash %	2%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Red tan granular sediment.

Analysis Date:	2011-10-31	Analysis Time:	11:44
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 13:05:39.623

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-133\10172783.jpg

Initials: JCH

Date: 10-31-11

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Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172784

Customer Sample # : QC_KIF-NEMBAY_7J4-SED-102011-B

Slide 1:	1	Slide 2:	1	Slide 3:	1	Slide 4:	0	Fly Ash %	3%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Red tan granular sediment.

Analysis Date:	2011-10-31	Analysis Time:	12:49
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 12:49:35.777

Images:

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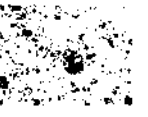


Initials: JCH

Date: 10-31-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJ Lee Group, Inc.

FLY ASH
10% Quality Control Record

Form OPT-023A
Rev. 00
CMR PA-10033

Laboratory RJLG Optical
TOH1009525-133

Date	Job #	Original Sample #	QC Sample #	Original Analyst	Original Result	QC Analyst	QC Result	Retest? (Y or N)	RSD	CV Value	Comments
11/09/11	TOH1009525-133	KIF-NEMBAY_7J4-SED-102011-B	10172784	JCH	2%	JCH	3%	Pass	24.69	0.35	

Attachment 4

RJ Lee laboratory Level 4 Report # TOH1009525-134

RJ LeeGroup, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

November 9, 2011

Dr. William Rogers
Kingston Fossil Plant
714 Swan Pond Road
Harriman, TN 37748

RE: Tennessee Valley Authority – Analytical Report
RJ Lee Group Project Number TOH1009525-134

The RJ Lee Group, Inc. Monroeville laboratory received 14 samples on October 26, 2011 associated with Tennessee Valley Authority (TVA) Chain of Custody (COC) number NTCSED1024Y11B. The samples were logged into RJ Lee Group project number TOH1009525-134 and assigned RJLG sample numbers as indicated in Appendix A.

The samples were received in good condition with all custody seals in place and intact. Attached in Appendix A is the signed sample receipt confirmation form, COC, and sample receipt check list.

If you have any question or comments regarding the information contained in this report, please feel free to contact us.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.

Sincerely,

Matt S

Matthew S. Sanchez
Manager Optical and XRD Groups

Attachments: Chain of Custody Forms
Mineral Identification Report
Polarized Light Microscopy Images, Bench Sheets,
QC Tabulation (when applicable)

Appendix A

Chain of Custody Forms

RJ LeeGroup, Inc.
www.rjlg.com

Chain Of Custody

RJ Lee Group Work Order #: TOH1009525-134

Project Name / Case #: KIF

Received From:	Relinquished To:
Jesse Morris Kingston Fossil Plant/TVA 189 Lakeshore Drive Harriman, TN 37748 United States Email: accountspayable@tva.gov Main: 304-685-8364	RJLee Group, Inc. 350 Hochberg Road Monroeville, PA 15146 United States Main: 724-325-1776 Fax: 724-325-1775

Delivery Comments:

1-Cooler was received from Kingston Fossil Plant/TVA in good condition with no evidence of tampering. All custody seals were intact and in place.

Sample ID	Customer COC ID	Client Sample ID	Date Received
10172785	NTCSED1024Y11B	KIF-NEMBAY_7A2-SED-102411-B	10/26/2011 7:50 AM EDT
10172786	NTCSED1024Y11B	KIF-NEMBAY_7A1-SED-102411-B	10/26/2011 7:50 AM EDT
10172787	NTCSED1024Y11B	KIF-NEMBAY_7A4-SED-102411-B	10/26/2011 7:50 AM EDT
10172788	NTCSED1024Y11B	KIF-NEMBAY_7B3_A-SED-102411-B	10/26/2011 7:50 AM EDT
10172789	NTCSED1024Y11B	KIF-NEMBAY_6G4-SED-102411-B	10/26/2011 7:50 AM EDT
10172790	NTCSED1024Y11B	KIF-NEMBAY_6G1-SED-102411-B	10/26/2011 7:50 AM EDT
10172791	NTCSED1024Y11B	KIF-NEMBAY_7H3_A-SED-102411-B	10/26/2011 7:50 AM EDT
10172792	NTCSED1024Y11B	KIF-NEMBAY_7H4-SED-102411-B	10/26/2011 7:50 AM EDT
10172793	NTCSED1024Y11B	KIF-NEMBAY_7H1-SED-102411-B	10/26/2011 7:50 AM EDT
10172794	NTCSED1024Y11B	KIF-NEMBAY_7H2-SED-102411-B	10/26/2011 7:50 AM EDT
10172795	NTCSED1024Y11B	KIF-NEMBAY_7G4-SED-102411-B	10/26/2011 7:50 AM EDT
10172796	NTCSED1024Y11B	KIF-NEMBAY_7G1-SED-102411-B	10/26/2011 7:50 AM EDT
10172797	NTCSED1024Y11B	KIF-NEMBAY_7A1-AED-102411-B	10/26/2011 7:50 AM EDT
10172798	NTCSED1024Y11B	KIF-NEMBAY_6G4-AED-102411-B	10/26/2011 7:50 AM EDT
10172799	NTCSED1024Y11B	QC_KIF-NEMBAY_7H2-SED-102411-B	10/26/2011 7:50 AM EDT

	Received From: Jesse Morris	*Method of Shipment: UPS*	
	Company: Kingston Fossil Plant/TVA		**Date:** 10/26/2011
	Received By: Monica Carse	*Package Condition Upon Receipt: Sealed*	
	Company: RJ Lee Group, Inc.		**Date:** 10/26/2011

	Relinquished	*Method of Shipment:*	
	Company:		**Date:**
	Received By:	*Package Condition Upon Receipt:*	
	Company:		**Date:**

	Relinquished	*Method of Shipment:*	
	Company:		**Date:**
	Received By:	*Package Condition Upon Receipt:*	
	Company:		**Date:**

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJ Lee Group
Sample Receipt and Log in Check List

Client:	TVA	Date Received:	10/26/2011	Log in Date:	10/26/2011
Time Received:	7:50 AM	By:	Monica Carse	COC# :	NTCSED1024Y11B
Project:	TOH1009525-134	# Coolers Received	1	Means of Shipment:	UPS
Air Bill:	1Z 939 EX2 15 9345 4270				

As Received Screen	Yes	No	Comments
Were the Coolers received in good condition?	✓		
Was there evidence of tampering?		✓	
Are Custody Seals intact and in good condition?	✓		
Were Coolers received between 2 and 4 degrees C?	N/A		
Were all samples intact?	✓		
Were all samples accurately labeled?	✓		
Was the COC received in good condition?	✓		
Did the sample ID on COC match the ID on the sample jars?	✓		
Were there any discrepancies among samples and COC?		✓	
Is the COC completely filled out?	✓		
Was the COC relinquished properly?	✓		

List any anomalies associated with Sample Receipt

N/A

Analyst Signature: M. Carse 10-28-11

Manager Signature: Matt 10-28-11

TOH1009525-134

RECORD COPY

TENNESSEE VALLEY AUTHORITY

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

TVA-KIF-NTC-NEMB-003

B

Page: 1 of 3
Cooler # 1 - of 1

COC # NTCSED1024Y11B

Required Ship to Lab:

Lab Name:	RJ Lee Group, Inc.
Address:	350 Hochberg Road Monroeville, PA 15146
Lab PM:	Keith Rickabaugh
Phone/Fax:	(724) 387-1841
Lab PM email	
Applicable Lab Quote #	

Required Project Information:

Site ID#:	KIF
Project #:	Kingston Fossil Plant
Site Address	714 Swan Pond Rd
City	Harriman
State, Zip	TN, 37748
Site PM Name	Bill Rogers
Phone/Fax:	865 717 1627
Site PM Email:	wrogers@tva.gov

Required Sampler Information:

Sampler:	Greg Schwartz
Sampling Company	Restoration Services, Inc.
Address:	
City/State	
Phone #:	
Reimbursement project?	
Non-reimbursement project?	
Mark one	
Send EDD to	NA
CC Hardcopy report to	
CC Hardcopy report to	

TAT: Standard 5 day | X | Rush | | Mark One

ITEM #	SAMPLE ID Samples IDs MUST BE UNIQUE EXAMPLE: KIF-NEMBAY_XYZ-SED-MMDDYY-A	SAMPLE LOCATION EXAMPLE: NEMBAY_XYZ	Sample Depth Depth Unit: inches Start Depth	End Depth	MATRIX CODE	G=GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	Comments/Lab Sample I.D.	Filtered: NA	Preserve: none	Analysis: PLM_ASH_B
1	KIF-NEMBAY_7A2-SED-102411-B	NEMBAY_7A2	0.0	8.0	SED	G	N	10/24/2011	0935	1				X
2	~~KIF-NEMBAY_7A2_A-SED-102411-B~~	~~NEMBAY_7A2~~	~~8.0~~	~~12.0~~	~~SED~~	~~G~~	~~N~~	~~10/24/2011~~	~~935~~	~~1~~				X
3	KIF-NEMBAY_7A1-SED-102411-B	NEMBAY_7A1	0.0	12.0	SED	G	N	10/24/2011	0950	1				X
4	KIF-NEMBAY_7A4-SED-102411-B	NEMBAY_7A4	0.0	12.0	SED	G	N	10/24/2011	1055	1				X
5	~~KIF-NEMBAY_7B3-SED-102411-B~~	~~NEMBAY_7B3~~	~~0.0~~	~~4.0~~	~~SED~~	~~G~~	~~N~~	~~10/24/2011~~	~~1110~~	~~1~~				X
6	KIF-NEMBAY_7B3_A-SED-102411-B	NEMBAY_7B3	4.0	12.0	SED	G	N	10/24/2011	1110	1				X
7	KIF-NEMBAY_6G4-SED-102411-B	NEMBAY_6G4	0.0	12.0	SED	G	N	10/24/2011	1335	1				X
8	KIF-NEMBAY_6G1-SED-102411-B	NEMBAY_6G1	0.0	12.0	SED	G	N	10/24/2011	1340	1				X

Additional Comments/Special Instructions:

Sample Team:
Greg Schwartz (RSI)
BJ Arnold (RSI)
Steve Binkley (RSI)
Rick Vance (RSI)

Line items #2 and 5 ~~[illegible]~~
COC# NTCSED1025Y11C pl of 1

SAMPLE REASON (check only one)

- X Investigatory
- Split Comparison
- Split Legal
- Special Study
- Plant Ops
- Oth:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] RSI	10-25-11	0700	[signature] RSI	10/25/11	0700
[signature] RSI	10/25/11	1330	Megan Thomas RJLeeGroup	10/26/11	0750

Sample Receipt Conditions

	Temp in 0C	Samples on Ice?	Sample Intact?	Trip Blank?
	Y/N	Y/N	Y/N	Y/N
NA	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N

SHIPPING METHOD (mark as appropriate): UPS | COURIER \ FEDEX | US MAIL

SAMPLER NAME AND SIGNATURE: Greg Schwartz

Date Signed: 10/24/11 Time: 1600

Tracking: 1Z989X215934542 70

Environmental Standards, Inc-Last Updated-031609

TCH1009525-134

RECORD COPY

TENNESSEE VALLEY AUTHORITY

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

TVA-KIF-NTC-NEMB-003

B

Page: 2 of 3
Cooler # 1 of 1

COC # NTCSED1024Y11B

Required Ship to Lab:

Lab Name:	RJ Lee Group, Inc.
Address:	350 Hochberg Road, Monroeville, PA 15146
Lab PM:	Keith Rickabaugh
Phone/Fax:	(724) 387-1841
Lab PM email	
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	KIF
Project #	Kingston Fossil Plant
Site Address	714 Swan Pond Rd
City	Harriman
State, Zip	TN, 37748
Site PM Name	Bill Rogers
Phone/Fax:	865 717 1627
Site PM Email:	wrrogers@tva.gov

Required Sampler Information:

Sampler	Greg Schwartz
Sampling Company	Restoration Services, Inc.
Address:	
City/State	
Phone #:	
Reimbursement project?	
Non-reimbursement project?	
Mark one	
Send EDD to	N/A
CC Hardcopy report to:	
CC Hardcopy report to:	

TAT: Standard 5 day | X | Rush | | Mark One

ITEM #	SAMPLE ID (Samples IDs MUST BE UNIQUE; EXAMPLE: KIF-NEMBAY_XYZ-SED-MMDDYY-A)	SAMPLE LOCATION (EXAMPLE: NEMBAY_XYZ)	Sample Depth Start Depth (Depth Unit: inches)	Sample Depth End Depth	MATRIX CODE	G=GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	Comments/Lab Sample I.D.	Filtered: N/A	Preserve: none	Analysis: PLM_ASH_B
1	~~KIF-NEMBAY_7H3-SED-102411-A~~	~~NEMBAY_7H3~~	~~0.0~~	~~6.0~~	~~SED~~	~~G~~	~~N~~	~~10/24/2011~~	~~1405~~	~~1~~				~~X~~
2	KIF-NEMBAY_7H3_A-SED-102411-A	NEMBAY_7H3	6.0	12.0	SED	G	N	10/24/2011	1405	1				X
3	KIF-NEMBAY_7H4-SED-102411-A	NEMBAY_7H4	0.0	12.0	SED	G	N	10/24/2011	1425	1				X
4	KIF-NEMBAY_7H1-SED-102411-A	NEMBAY_7H1	0.0	12.0	SED	G	N	10/24/2011	1430	1				X
5	KIF-NEMBAY_7H2-SED-102411-A	NEMBAY_7H2	0.0	12.0	SED	G	N	10/24/2011	1440	1				X
6	KIF-NEMBAY_7G4-SED-102411-A	NEMBAY_7G4	0.0	12.0	SED	G	N	10/24/2011	1445	1				X
7	KIF-NEMBAY_7G1-SED-102411-A	NEMBAY_7G1	0.0	12.0	SED	G	N	10/24/2011	1455	1				X
8											GS 102511			GS 102511

Additional Comments/Special Instructions:

Sample Team:
Greg Schwartz (RSI)
RJ Arnold (RSI)
Russ Vance (RSI)
Steve Buckley (RSI)

Line items 1-7 analyzed for TCH NTCSED1025Y11C (pl) 10/25/11

SAMPLE REASON (check only one)

- X Investigatory
- Split Comparison
- Split Legal
- Special Study
- Plant Ops
- Oth:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
RSI	102511	0720	Jesse Morris/RSI	102511	0720
Jesse Morris/RSI	102511	1330	Morgan James Rilacorp	102511	0750

Sample Receipt Conditions

	Temp in OC	Samples on Ice?	Sample intact?	Trip Blank?
	Y/N	Y/N	Y/N	Y/N
N/A	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N

SHIPPING METHOD: (mark as appropriate) UPS / COURIER \ FEDEX / US MAIL

SAMPLER NAME AND SIGNATURE: Greg Schwartz

Date Signed: 10-24-11 Time: 1600

Tracking: 1Z939D215934542700

RECORD COPY

TCH1009525-134

TENNESSEE VALLEY AUTHORITY

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

TVA-KIF-NTC-AEMS-003

B

Page: 3 of 3
Cooler # 1 of 1

COC # NTCSED1024Y11B

Required Ship to Lab:

Lab Name:	RJ Lee Group, Inc.
Address:	350 Hochberg Road Monroeville, PA 15146
Lab PM:	Keith Rickabaugh
Phone/Fax:	(724) 387-1841
Lab PM email:	
Applicable Lab Quote #:	

Required Project Information:

Site ID #	KIF		
Project #	Kingston Fossil Plant		
Site Address	714 Swan Pond Rd		
City	Harriman	State, Zip	TN, 37748
Site PM Name	Bill Rogers		
Phone/Fax:	865.717.1627		
Site PM Email:	wrogers@tva.gov		

Required Sampler Information:

Sampler	Greg Schwartz		
Sampling Company	Restoration Services, Inc.		
Address:			
City/State		Phone #:	
Reimbursement project?		Non-reimbursement project?	Mark one
Send EDD to	NA		
CC Hardcopy report to			
CC Hardcopy report to			

TAT: Standard 5 day | X | Rush | | Mark One

ITEM #	SAMPLE ID Samples IDs MUST BE UNIQUE EXAMPLE: KIF-NEMBAY_XYZ-SED-MMDDYY-A	SAMPLE LOCATION EXAMPLE: NEMBAY_XYZ	Sample Depth: Depth Unit: inches Start Depth	End Depth	MATRIX CODE	G=GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	Comments/Lab Sample I.D.
1	KIF-NEMBAY_7A1-AED-102411-B	NEMBAY_7A1	0.0	12.0	SED	G	N	10/24/2011	0950	1	
2	KIF-NEMBAY_6G4-AED-102411-B	NEMBAY_6G4	0.0	12.0	SED	G	N	10/24/2011	1335	1	
3											
4											
5											
6											
7											
8											

Analysis							
Filtered	NA						
Preserve	none						
	PLM_ABI_B						
	X						
	X						

Additional Comments/Special Instructions:

Sample Team:
Greg Schwartz (RSI)
Steve Buckley (RSI)
EJ Arnold (RSI)
Russ Vance (RSI)

SAMPLE REASON (check only one)

- X Investigatory
- Split Comparison
- Split Legal
- Special Study
- Plant Ops
- Oth:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] / RSI	10/25/11	0730	[signature] (RSI)	10/25/11	0730
[signature] (RSI)	10/25/11	1330	[signature] Thermo Alliance	10/26/11	0750

SHIPPING METHOD (mark as appropriate): UPS | COURIER | FEDEX | US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Greg Schwartz
SIGNATURE of SAMPLER: [signature]
DATE Signed: 10/24/11
Time: 1650

Sample Receipt Conditions	Temp in DC	Samples on Ice?	Sample intact?	Trip Blank?
	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N	Y/N

Tracking: 1Z939X215934542

RJ LeeGroup, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

Appendix B

Mineral Identification Report

RJ LeeGroup, Inc.

Mineral Identification

Polarized Light Microscopy (PLM) Laboratory Report

Dr. Bill Rogers
Tennessee Valley Authority
Kingston Fossil Plant
714 Swan Pond Road
Harriman, TN 37748 United States
Email: wjrogers@tva.gov
Main: 256-762-6904

Report Date: 11/02/2011
Sample Received Date: 10/26/2011
RJLG Project: TOH1009525-134
Customer COC: NTCSED1024Y11B
Purchase Order: 87083
Analytical Method: Fly Ash Determination by PLM

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
KIF-NEMBAY_6G1-SED-102411-B	10172790	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Tan granular sediment.
KIF-NEMBAY_6G4-AED-102411-B	10172798	10/31/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Brown granular sediment.
KIF-NEMBAY_6G4-SED-102411-B	10172789	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Tan granular sediment.

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
KIF-NEMBAY_7A1-AED-102411-B	10172797	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Red tan granular sediment.
KIF-NEMBAY_7A1-SED-102411-B	10172786	11/01/2011	10/24/2011	2%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Tan granular sediment.
KIF-NEMBAY_7A2-SED-102411-B	10172785	11/01/2011	10/24/2011	6%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Red tan granular sediment.
KIF-NEMBAY_7A4-SED-102411-B	10172787	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Red tan granular sediment.
KIF-NEMBAY_7B3_A-SED-102411-B	10172788	11/01/2011	10/24/2011	1%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Tan granular sediment.

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
KIF-NEMBAY_7G1-SED-102411-B	10172796	10/31/2011	10/24/2011	2%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Red tan granular sediment.
KIF-NEMBAY_7G4-SED-102411-B	10172795	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Red tan granular sediment.
KIF-NEMBAY_7H1-SED-102411-B	10172793	11/01/2011	10/24/2011	1%	Clay Diatoms Feldspar Mica Misc. Silicates Opaques Organic Particulate Quartz	Hard gray sediment.
KIF-NEMBAY_7H2-SED-102411-B	10172794	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Hard tan sediment.
KIF-NEMBAY_7H3_A-SED-102411-B	10172791	11/01/2011	10/24/2011	ND	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Hard tan sediment.

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
KIF-NEMBAY_7H4-SED-102411-B	10172792	11/01/2011	10/24/2011	4%	Clay Feldspar Misc. Silicates Opaques Organic Particulate Quartz	Tan sediment.
QC_KIF-NEMBAY_7H2-SED-102411-B	10172799	11/01/2011	10/24/2011	ND	NA	Hard tan sediment.

Authorized Signature: _____

Matthew Sanchez
Manager Optical Group

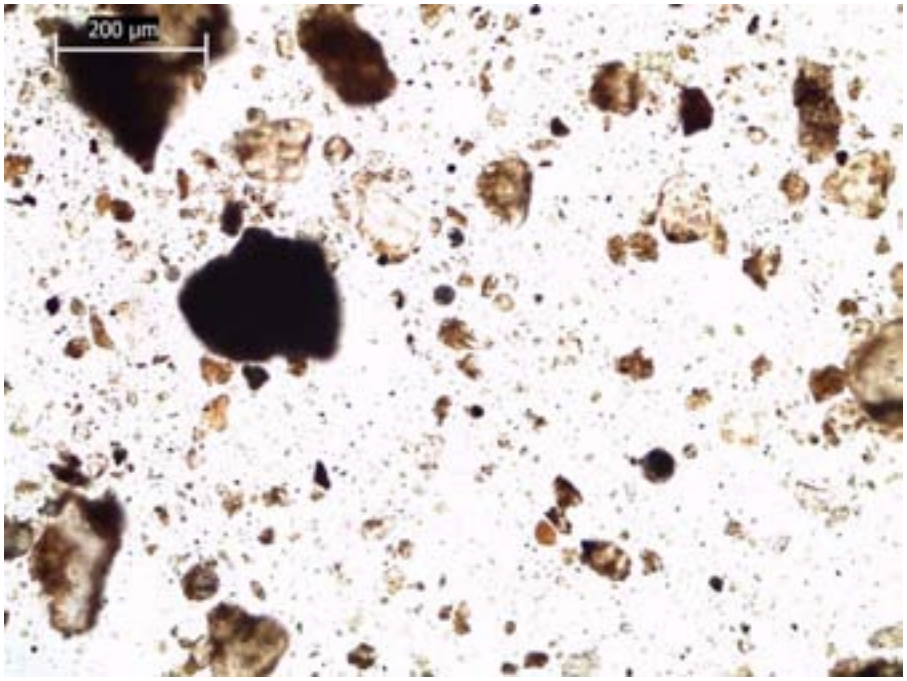
Disclaimer Notes
* Samples will be returned to client immediately upon the release of final report.
* These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
* This test report relates to the items tested.
* Any reproduction of this document must include the entire document in order for the report to be valid.
* This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA # 100364, NVLAP # 101208-0, NY ELAP # 10884) facility.
* If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results is limited to the reported values.
* For the purposes of this method, Fly Ash is defined as any particle consistent with Coal Ash.
* The method reporting level is 1% and anything <1% is considered a not-detected.

Quartz – Angular anisotropic particulate with low relief.
Feldspar – Angular to blocky anisotropic particulate, low to moderate relief, biaxial, can have polysynthetic twinning.
Clay – Sheet silicates with polycrystalline or display non-uniform extinction with low to moderate relief, and zero to low birefringence. Clay also refers to particles that are less than 2.0 microns.
Opaques – Opaque is a generic term for a particle that does not transmit light. Opaque minerals are distinguished from opaque bottom ash based on morphology of fracture.
Fly Ash – Isotropic to opaque spheres, agglomeration of spheres, and angular ash particles.
Organic Particulate – Pollen, plant and insect matter, and carbonaceous matter.
Carbonates – High birefringent, can be rhombohedral, with high relief.
Diatoms – Silica rich isotropic particles with various morphologies.
Mica – Sheet silicate with moderate to high relief and low birefringence, mono-crystalline, and normal extinction.
Miscellaneous Silicate – Isotropic and anisotropic silicates, with low to high relief, identification unsure and beyond the scope of the method to identify.
Amphibole – Elongated anisotropic particulate with moderate to high relief.
Coal – Irregular to angular particles with moderate opacity, edges and thin particles are reddish brown in color.
<1% Fly Ash – Fly Ash observed, none counted.
ND – No Fly Ash detected.

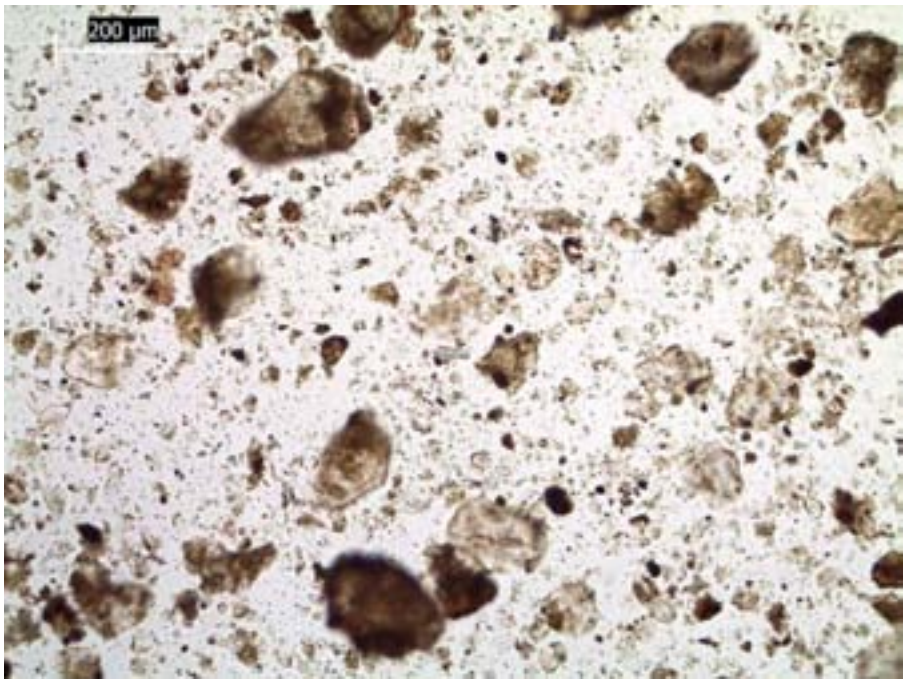
RJ LeeGroup, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

Appendix C

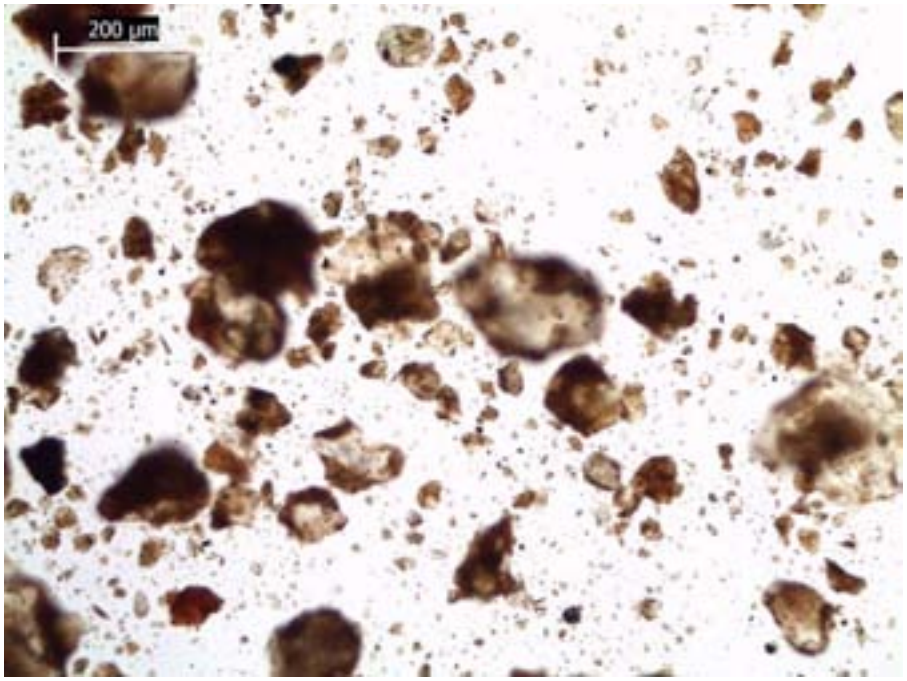
Polarized Light Microscopy Images
Bench Sheets
QC Tabulation



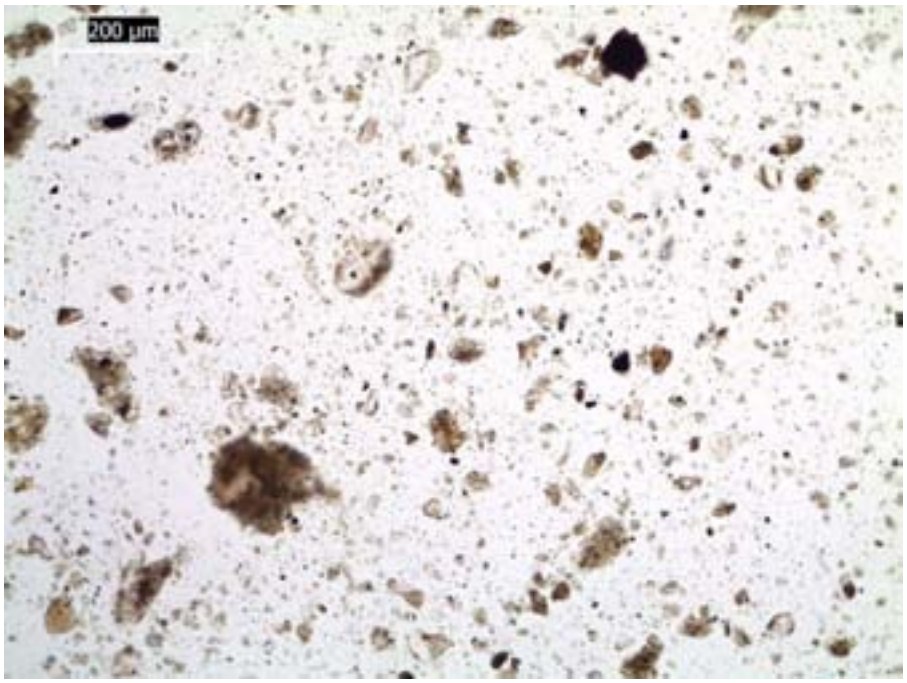
KIF-NEMBAY_7A2-SED-102411-B. RJLG ID 10172785.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



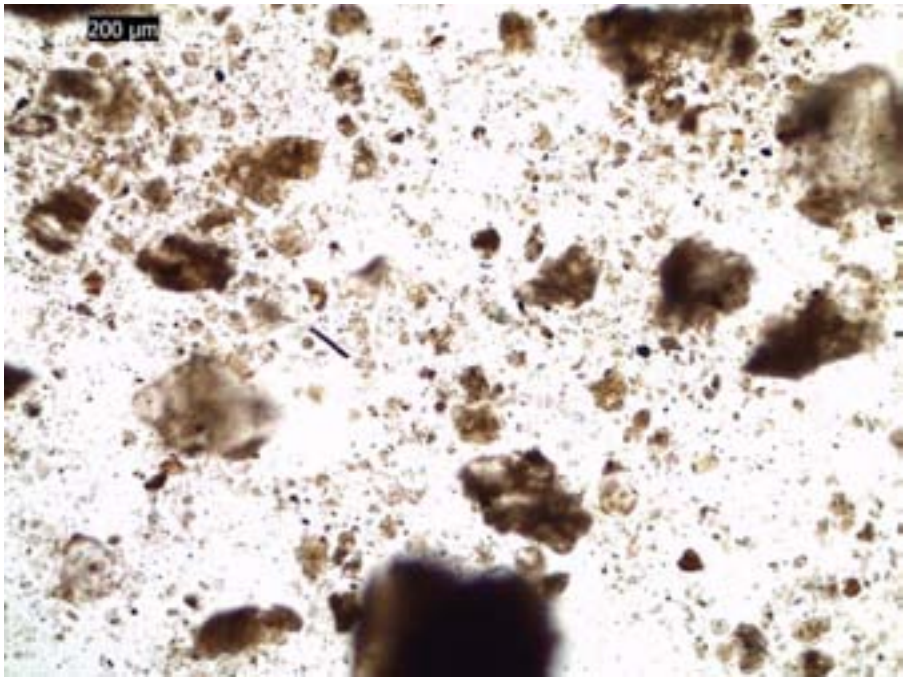
KIF-NEMBAY_7A1-SED-102411-B. RJLG ID 10172786.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



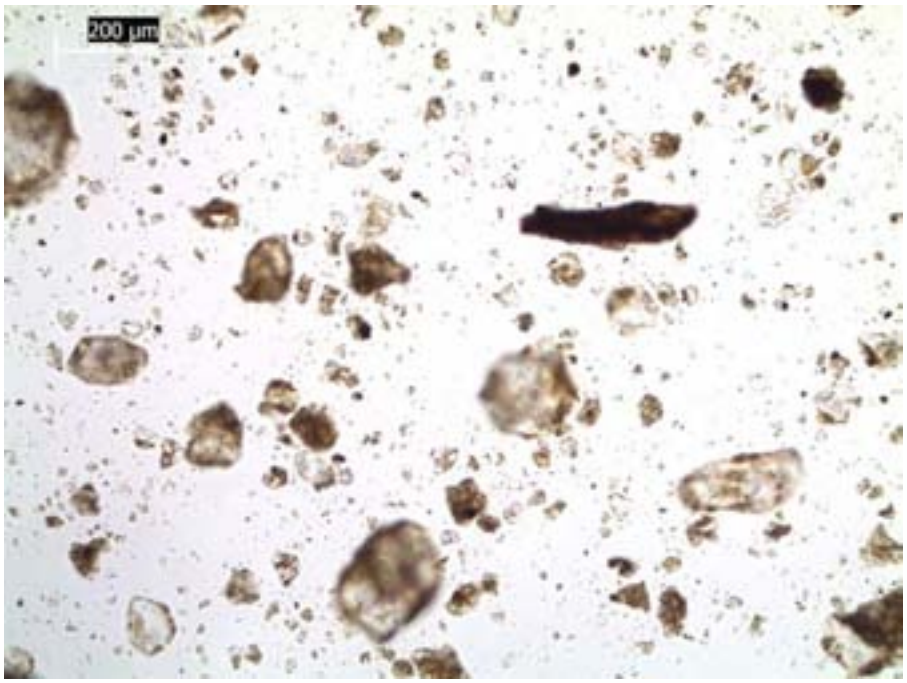
KIF-NEMBAY_7A4-SED-102411-B. RJLG ID 10172787.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



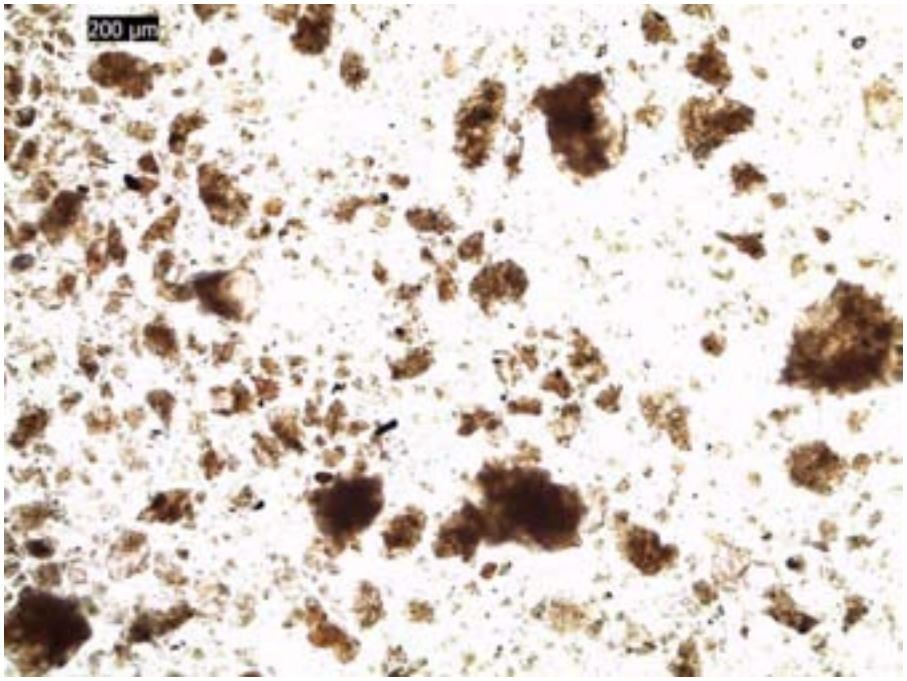
KIF-NEMBAY_7B3_A-SED-102411-B. RJLG ID 10172788.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



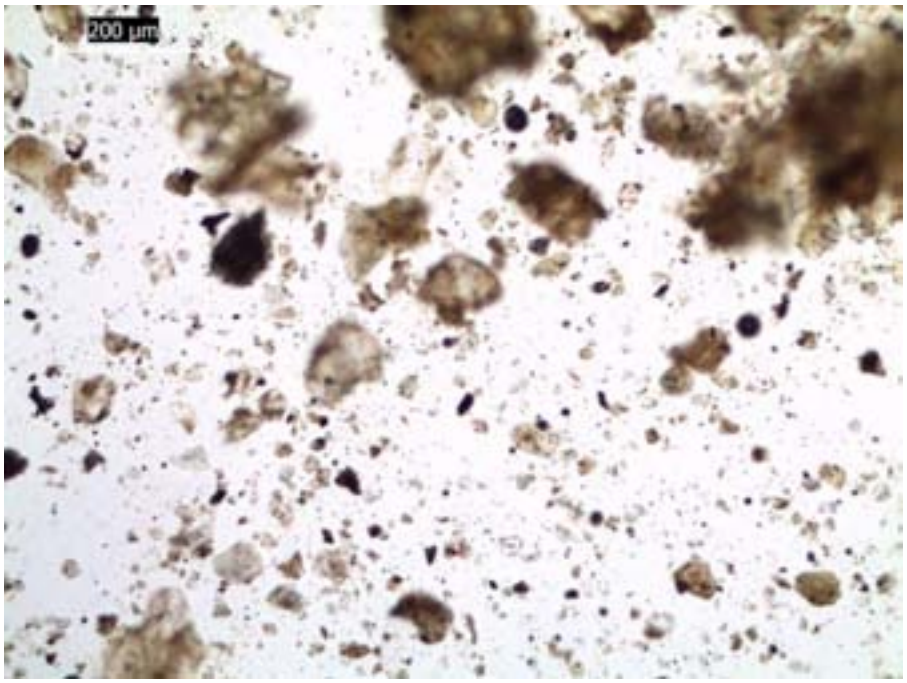
KIF-NEMBAY_6G4-SED-102411-B. RJLG ID 10172789.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



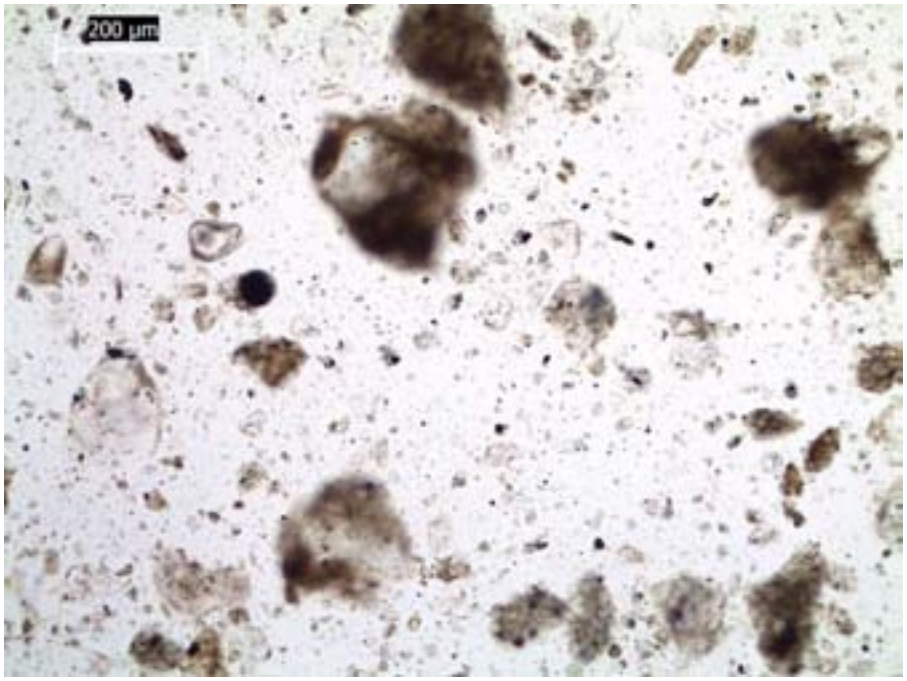
KIF-NEMBAY_6G1-SED-102411-B. RJLG ID 10172790.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



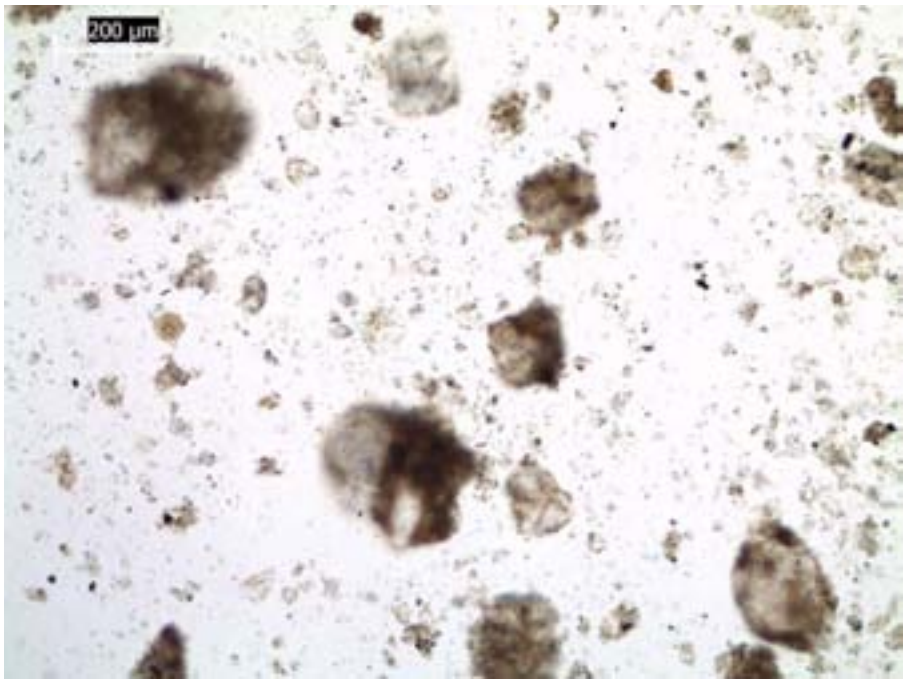
KIF-NEMBAY_7H3_A-SED-102411-B. RJLG ID 10172791.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



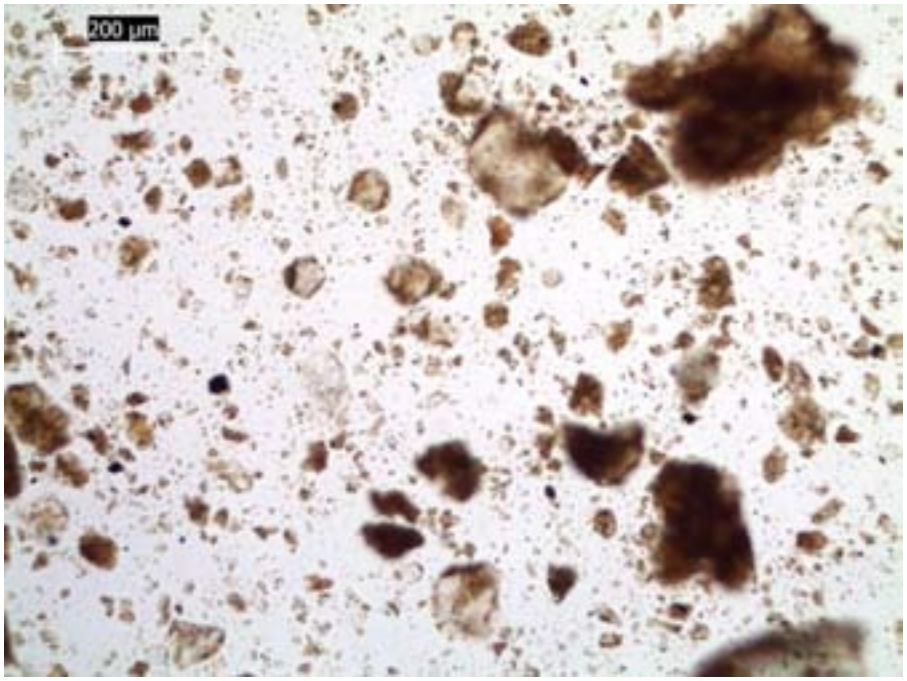
KIF-NEMBAY_7H4-SED-102411-B. RJLG ID 10172792.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



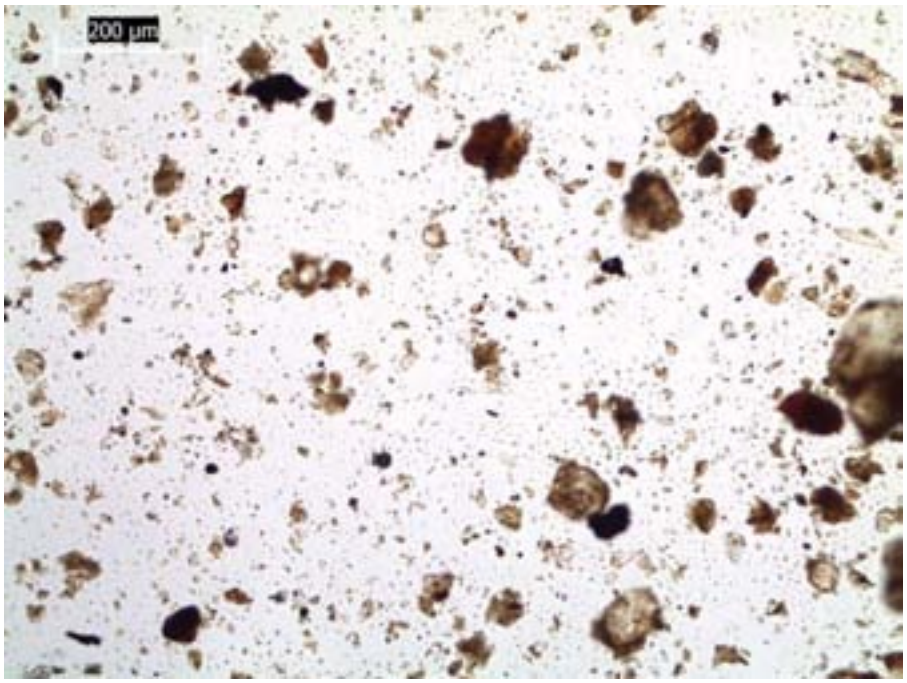
KIF-NEMBAY_7H1-SED-102411-B. RJLG ID 10172793.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



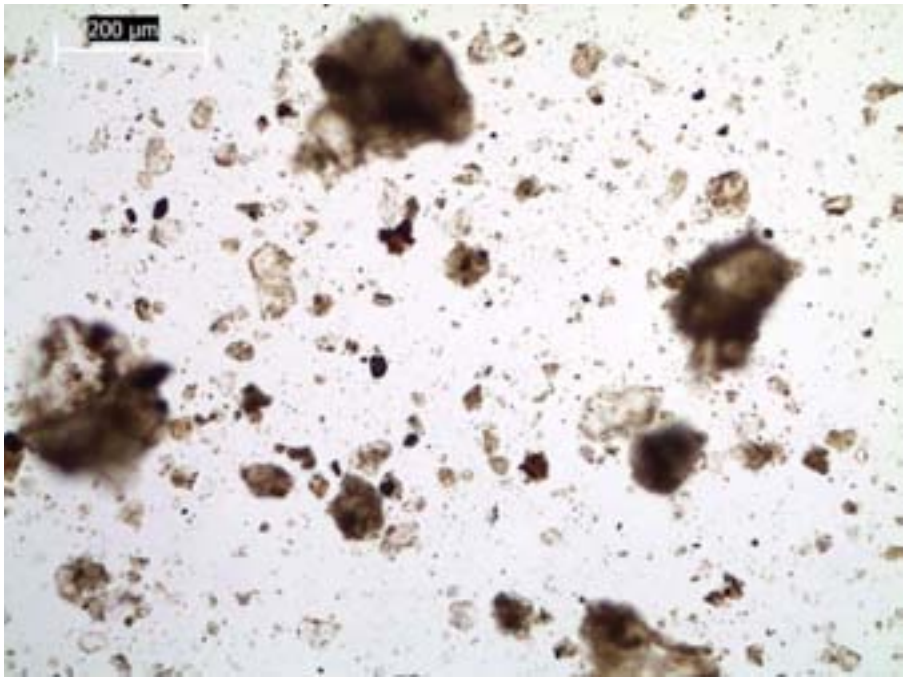
KIF-NEMBAY_7H2-SED-102411-B. RJLG ID 10172794.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



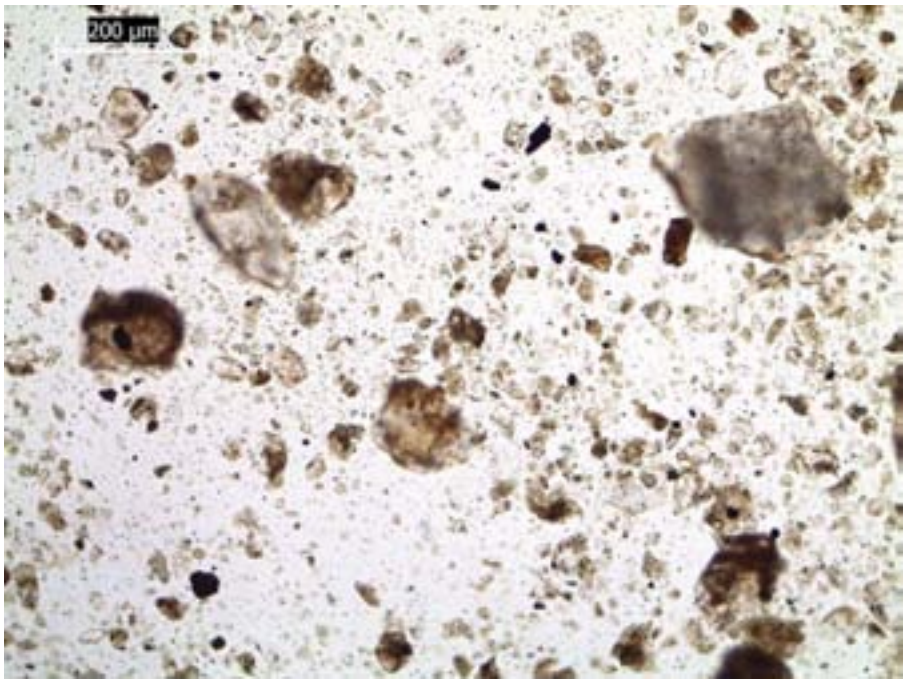
KIF-NEMBAY_7G4-SED-102411-B. RJLG ID 10172795.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



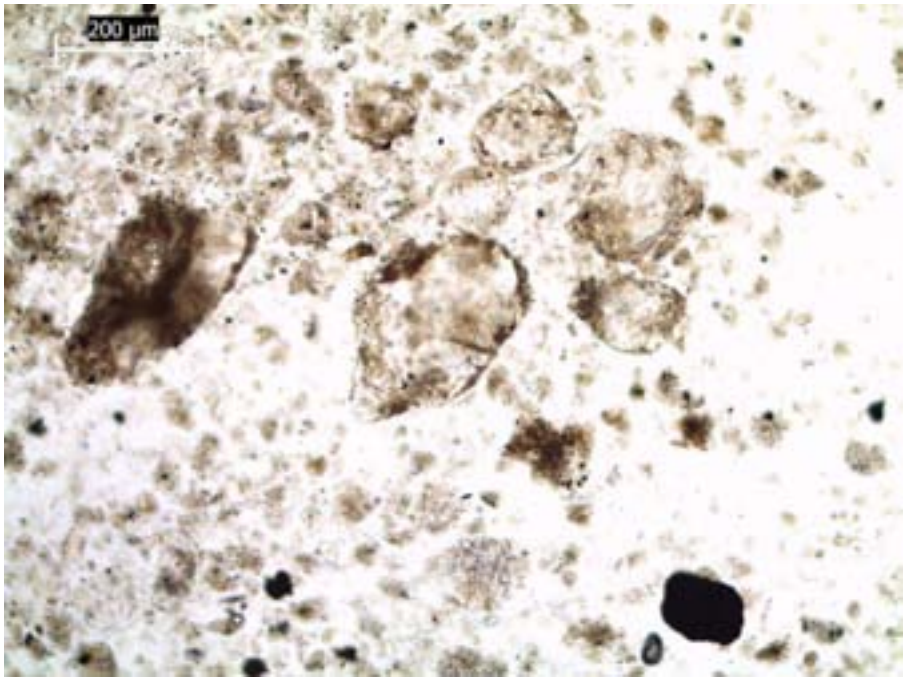
KIF-NEMBAY_7G1-SED-102411-B. RJLG ID 10172796.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



KIF-NEMBAY_7A1-AED-102411-B. RJLG ID 10172797.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



KIF-NEMBAY_6G4-AED-102411-B. RJLG ID 10172798.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



QC_KIF-NEMBAY_7H2-SED-102411-B. RJLG ID 10172799.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172785

Customer Sample # : KIF-NEMBAY_7A2-SED-102411-B

Slide 1:	2	Slide 2:	0	Slide 3:	2	Slide 4:	2	Fly Ash %	6%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

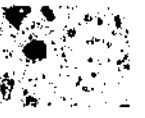
Results Comments:

Red tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	13:37
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 13:37:04.953

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172785.jpg



Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172786

Customer Sample # : KIF-NEMBAY_7A1-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	2	Slide 4:	0	Fly Ash %	2%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	14:11
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 14:11:47.887

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172786.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172787

Customer Sample # : KIF-NEMBAY_7A4-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Red tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	10:33
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 10:33:14.31

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172787.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172788

Customer Sample # : KIF-NEMBAY_7B3_A-SED-102411-B

Slide 1:	0	Slide 2:	1	Slide 3:	0	Slide 4:	0	Fly Ash %	1%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	09:54
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 09:54:58.477

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172788.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172789

Customer Sample # : KIF-NEMBAY_6G4-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	11:05
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 11:05:47.027

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172789.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172790

Customer Sample # : KIF-NEMBAY_6G1-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	13:16
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 13:16:05.793

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172790.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172791

Customer Sample # : KIF-NEMBAY_7H3_A-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Hard tan sediment.

Analysis Date:	2011-11-01	Analysis Time:	14:28
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 14:28:10.627

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172791.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172792

Customer Sample # : KIF-NEMBAY_7H4-SED-102411-B

Slide 1:	2	Slide 2:	0	Slide 3:	0	Slide 4:	2	Fly Ash %	4%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Tan sediment.

Analysis Date:	2011-11-01	Analysis Time:	09:31
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 09:31:05.483

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172792.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172793

Customer Sample # : KIF-NEMBAY_7H1-SED-102411-B

Slide 1:	1	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	1%

Non-Fly Ash Components
- Clay
- Diatoms
- Feldspar
- Mica
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Hard gray sediment.

Analysis Date:	2011-11-01	Analysis Time:	08:45
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 08:45:22.18

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172793.jpg

Initials: JCN

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172794

Customer Sample # : KIF-NEMBAY_7H2-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Hard tan sediment.

Analysis Date:	2011-11-01	Analysis Time:	11:41
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 11:41:55.043

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172794.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172795

Customer Sample # : KIF-NEMBAY_7G4-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components

- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Red tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	08:59
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 08:59:55.663

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172795.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172796

Customer Sample # : KIF-NEMBAY_7G1-SED-102411-B

Slide 1:	1	Slide 2:	0	Slide 3:	1	Slide 4:	0	Fly Ash %	2%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

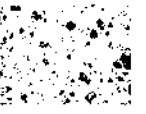
Results Comments:

Red tan granular sediment.

Analysis Date:	2011-10-31	Analysis Time:	15:47
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 15:47:48.2

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172796.jpg



Initials: JCH

Date: 10-31-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172797

Customer Sample # : KIF-NEMBAY_7A1-AED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Red tan granular sediment.

Analysis Date:	2011-11-01	Analysis Time:	11:17
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 11:17:14.557

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172797.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172798

Customer Sample # : KIF-NEMBAY_6G4-AED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

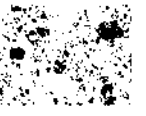
Results Comments:

Brown granular sediment.

Analysis Date:	2011-10-31	Analysis Time:	15:24
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-10-31 15:24:00.523

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172798.jpg



Initials: JCH

Date: 10-31-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJLG RJ LeeGroup, Inc.

Fly Ash Bench Sheet

RJLG ID: 10172799

Customer Sample # : QC_KIF-NEMBAY_7H2-SED-102411-B

Slide 1:	0	Slide 2:	0	Slide 3:	0	Slide 4:	0	Fly Ash %	0%

Non-Fly Ash Components
- Clay
- Feldspar
- Misc. Silicates
- Opaques
- Organic Particulate
- Quartz

Other Components:

Results Comments:

Hard tan sediment.

Analysis Date:	2011-11-01	Analysis Time:	13:00
Result Last Modified By:	Craig Huntington	Result Last Modified On:	2011-11-01 13:00:24.657

Images:

Image Path: \\mscluster\litigation\TOHData\1009525\Optical\TOH1009525-134\10172799.jpg

Initials: JCH

Date: 11-01-11

350 Hochberg Road, Monroeville, PA 15146
Phone: (724) 325-1776 | Fax: (724) 733-1799

RJ Lee Group, Inc.

FLY ASH
10% Quality Control Record

Form OPT-023A
Rev. 00
CMR PA-10033

Laboratory RJLG Optical
TOH1009525-134

Date	Job #	Original Sample #	QC Sample #	Original Analyst	Original Result	QC Analyst	QC Result	Retest? (Y or N)	RSD	CV Value	Comments
11/09/11	TOH1009525-134	KIF-NEMBAY_7H2-SED-102411-B	10172799	JCH	0%	JCH	0%	Pass	#DIV/0!	#DIV/0!	

Attachment 5

Daily Quality Assurance Reports

Kingston Ash Recovery Project (KRP)
Quality Assurance
Daily Report

REPORT DATE & DAY OF WEEK: 10-22-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- Observed and documented rock and ash removal in grid 7-K; 43 tandem truck loads of ash were removed from underneath rock pad; Ash was hauled on Swan Pd rd and then dumped into the exclusion zone from the MAPP asphalt pad; Trucks did not enter the exclusion zone

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS): None

QA ISSUES: (Specify if assistance is needed to resolve issue)

None on this date

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 10-22-11**

[Type text]

Kingston Ash Recovery Project (KRP)
Quality Assurance
Daily Report

REPORT DATE & DAY OF WEEK: 10-21-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- Observed and documented rock and ash removal in grid 7-K; 4 tandem truck loads of ash were removed from underneath rock pad; Ash was hauled on Swan Pond rd and then dumped into the exclusion zone from the MAPP asphalt pad; Trucks did not enter the exclusion zone; Photos 1663-1669 show clean areas, 1670-1678 show a 2'-3' ash seam under rock pad

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS): None

QA ISSUES: (Specify if assistance is needed to resolve issue)

None on this date

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 10-21-11**

[Type text]

Kingston Ash Recovery Project (KRP)
Quality Assurance
Daily Report

REPORT DATE & DAY OF WEEK: 10-10-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- Observed and documented North Embayment excavations; RSI sampled 7-C and 7-D points 2&3; Met with Civil Projects foremen discussed sequencing for the close out of the North Embayment

Middle Embayment- TVA surveyed 4 geo-probe locations, elevations were recorded onto the concurrence spreadsheet; Those holes were bored on Sunday 10/9.

*Conditions are damp and muddy in the North Embayment

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS): None

QA ISSUES: (Specify if assistance is needed to resolve issue)

None on this date

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 10-10-11**

[Type text]

Kingston Ash Recovery Project (KRP)
Quality Assurance
Daily Report

REPORT DATE & DAY OF WEEK: 10-04-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- Observed and documented North Embayment excavations; RSI was released to sample 6-J and 6-K points 2&3, these samples were collected today; 6 concurrence samples collected; Swan Pond Rd bank project was observed and documented; 1 sample collected -6" ash; 8 Operational samples were collect in grids 4-F and 5-B (wood chip piles);

Sample 1 84 30' 50.08" 6" ash- >50%
35 55' 02.22"

Geo-con- Discussed internally NCR issues

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS): None

QA ISSUES: (Specify if assistance is needed to resolve issue)

None on this date

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 10-04-11**

[Type text]

Kingston Ash Recovery Project (KRP)
Quality Assurance
Daily Report

REPORT DATE & DAY OF WEEK: 9-29-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- Observed and documented rock placement along Swan Pond Circle; 3 operational samples collected near grid point 7-E, <50% ash observed; Observed and documented Civil Projects cleaning grid points 5K-4 and 5-H1

Middle Embayment- RSI sampled in the Middle Embayment using a geo-probe for ash depths, grid point 10E2 cored

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS): None

QA ISSUES: (Specify if assistance is needed to resolve issue)

None

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP; Observe Rock Placement along Swan Pond Circle.

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 9-29-11**

[Type text]

Kingston Ash Recovery Project (KRP)
Quality Assurance
Daily Report

REPORT DATE & DAY OF WEEK: 8-22-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- RSI sampled 16 grid points, 2 of 16 are retest; 16 operational samples collected today to coincide with concurrence samples; Grids: 5-A, 4-J, 6-A1,2,&3, 6-G2&3, 4-K2&3, 5-F1, and 5-G3; Received Level 4 RJ Lee data from sectors 1-3

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS):

QA ISSUES: (Specify if assistance is needed to resolve issue)

No issues

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 8-22-11**

[Type text]

TVA JACOBS	**Kingston Ash Recovery Project (KRP)** **Quality Assurance** **Daily Report**

REPORT DATE & DAY OF WEEK: 10-24-2011

ACTIVITIES OBSERVED IN CONFORMANCE WITH WORK REQUIREMENTS (Safety, SOP, Work Package, QC Plan , Drawings and Specifications, Removal Action Work Plan, etc.): (Identify activities by Contractor and area)

Activities in compliance with work plans.

North Embayment- RSI collected 12 PLM points, grids-7B3, 6G1&4, 7A1,2,&4, 7G1&4, and 7H; 7"-8" of ash observed in 7A2, Civil Projects decided to go ahead and excavate this point; Photos document the excavation of 7A2, Civil Projects chased the ash seam approximately 50' and then dug 3 additional test holes, coordinates are available; 3 operational samples collected (7A2 area)

MATERIAL / EQUIPMENT RECEIPT INSPECTION: Receipt Form Completed (Reference RIR #)?

N/A

NONCONFORMING WORK: (Identify by Contractor and area). NCR Issued (Reference NCR #)?

N/A

SORs (SAFETY OBSERVATION REPORTS): None

QA ISSUES: (Specify if assistance is needed to resolve issue)

None on this date

PLANNED ACTIVITIES (Identify activities by Contractor and area)

Continue to excavate ash and sample as requested by CP

SHOP INSPECTIONS: N/A

DOCUMENT REVIEWS: (SOPs, Work Package, QC Plan, Drawings and Specifications, Removal Action Work Plan, etc)

N/A

SUBMITTED BY: Walter R. Burns **DATE: 10-24-11**

Attachment 6

RSI Sampling Field Logs

JACOBS

Date: 10/24/2011 Weather: Sunny 73*F

North Embayment

Crew: Greg Schwartz, Ed Arnold, Russ Vance, Steve Bunkely (All RSI)

Core #	Core Coordinates		Time	Core Description	Interval (in)	TVA Field PLM Laboratory Results	Lab Method
NEMBAY_7A2	N:	E:	935	Orange clay fill	0.0-8.0	7A2 Brown soil.	Visual
Sample ID: KIF_NEMBAY_7A2-SED-102411-A & B				Ash	8.0-12.5	7A2_A There are lots of ash.	PLM
KIF_NEMBAY_7A2_A-SED-102411-A & B							
				Total Depth	12.5		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7A1	N:	E:	950	Orange and brown loam fill	0.0-21.0		
Sample ID: KIF_NEMBAY_7A1-SED-102411-A & B							
KIF_NEMBAY_7A1-AED-102411-A & B							
				Total Depth	21		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7A4	N:	E:	1055	Orange clay fill w/ streaks of ash and fine sand	0.0-14.0		
Sample ID: KIF_NEMBAY_7A4-SED-102411-A & B							
				Total Depth	14		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7B3	N:	E:	1110	Ash	0.0-4.0		
Sample ID: KIF_NEMBAY_7B3-SED-102411-A & B				Clay fill with trace ash	4.0-17.0		
KIF_NEMBAY_7B3_A-SED-102411-A & B							
				Total Depth	17		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_6G4	N:	E:	1335	Orange clay fill	0.0-20.0		
Sample ID: KIF_NEMBAY_6G4-SED-102411-A & B							
KIF-NEMBAY_6G4-AED-102411-B							
				Total Depth	20		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_6G1	N:	E:	1340	Orange clay fill	0.0-14.0		
Sample ID: KIF_NEMBAY_6G1-SED-102411-A & B							
				Total Depth	14		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7H3	N:	E:	1405	Gray clay and ash	0.0-6.0		
Sample ID: KIF-NEMBAY_7H3-SED-102411-A & B				Orange silty clay fil	6.0-13.0		
KIF-NEMBAY_7H3_A-SED-102411-A & B							
				Total Depth			
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7H4	N:	E:	1425	Silty clay loam w/ ash	0.0-12.0		
Sample ID: KIF_NEMBAY_7H4-SED-102411-A & B							
				Total Depth	12		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7H1	N:	E:	1430	Clay fill w/ native fines	0-18		
Sample ID: KIF_NEMBAY_7H1-SED-102411-A & B							
				Total Depth	18		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7H2	N:	E:	1440	Residual shale and silt	0.0-16.0		
Sample ID: KIF_NEMBAY_7H2-SED-102411-A & B							
				Total Depth	16		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7G4	N:	E:	1445	Orange clay fill	0.0-22.0		
Sample ID: KIF_NEMBAY_7G4-SED-102411-A & B							
				Total Depth	22		
Core #	Core Coordinates		Time	Core Description	Interval (in)		
NEMBAY_7G1	N:	E:	1440	Orange clay fill w/ trace ash	0.0-18.0		
Sample ID: KIF_NEMBAY_7G1-SED-102411-A & B							
				Total Depth	18		

JACOBS

Date: 10/17/2011 Weather: Cloudy, 82 deg F

North Embayment

Crew: Greg Schwartz, Eddie Arnold, Steve Bunkley, Russ Vance (All RSI)

Core #	Core Coordinates	Time	Core Description	Interval (in)	Ash	TVA Field PLM Laboratory Results	Lab Method
NEMBAY_6A2	N: 559240.46 E: 2440337.15	1100	Clay loam w/ shot and fines	0.0-17.0			
Sample ID: KIF-NEMBAY_6A2-SED-102011-A & B							
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7J1	N: E:	1315	Brown silt loam fill w/ organics	0.0-18.0			
Sample ID: KIF-NEMBAY_7J1-SED-102011-A & B							
			Total Depth	18			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7J2	N: E:	1330	Gray clay & silt loam fill	0.0-15.0			
Sample ID: KIF-NEMBAY_7J2-SED-102011-A & B, KIF-NEMBAY_7J2-AED-102011-B							
			Total Depth	15.0			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7J3	N: E:	1345	Brown silty loam fill	0.0-13.0			
Sample ID: KIF-NEMBAY_7J3-SED-102011-A & B			Gray and brown shale	13.0-17.0			
			Total Depth	17.0			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7J4	N: E:	1355	Red and brown clay fill	0.0-18.0			
Sample ID: KIF-NEMBAY_7J4-SED-102011-A & B							
			Total Depth	18.0			

JACOBS

Date: 10/17/2011	Weather: Cloudy, 82 deg F	North Embayment			Ash	TVA Field PLM Laboratory Results	Lab Method
Crew: Greg Schwartz, Eddie Arnold, Steve Bunkley (All RSI)							
Core #	Core Coordinates	Time	Core Description	Interval (in)			Visual
NEMBAY_7B1	N: E:	940	Orange and gray clay loam fill	0.0-16.0			
Sample ID: KIF-NEMBAY_7B1-SED-101711-A & B							
			Total Depth	16.0			
Core #	Core Coordinates	Time	Core Description	Interval (in)			Visual
NEMBAY_7B2	N: E:	945	Orange silty clay fill	0.0-18.5			
Sample ID: KIF-NEMBAY_7B2-SED-101711-A & B KIF-NEMBAY_7B2-AED-101711-B							
			Total Depth	18.5			
Core #	Core Coordinates	Time	Core Description	Interval (in)			Visual
NEMBAY_7B4	N: E:	1445	Orange silty clay fill	0.0-2.0			
Sample ID: KIF-NEMBAY_7B4-SED-101211-A & B, KIF-NEMBAY_7B4_A-SED-101711- A&B				2.0-22.0			
			Total Depth	22.0			

JACOBS

Date: 10/12/2011	Weather: Cloudy, 74 deg F	North Embayment			Ash	TVA Field PLM Laboratory Results	Lab Method
Crew: Greg Schwartz, Gib Frye, Travis Walls, Russ Vance (All RSI)						KM-NE-1053-01	
Core #	Core Coordinates	Time	Core Description	Interval (in)	<50%	Visual: Reddish brown soil.	Visual
NEMBAY_6H1	N: E:	1418	Orange silty clay fill	0.0-20.0			
Sample ID: KIF-NEMBAY_6H1-SED-101211-A & B							
			Total Depth	20.0			
Core #	Core Coordinates	Time	Core Description	Interval (in)	<50%	KM-NE-1053-02	
NEMBAY_6H2	N: E:	1430	Orange silty clay fill	0.0-18.5		Visual: Reddish brown soil.	Visual
Sample ID: KIF-NEMBAY_6H2-SED-101211-A & B							
			Total Depth	18.5			
Core #	Core Coordinates	Time	Core Description	Interval (in)	<50%	KM-NE-1053-03	
NEMBAY_6H3	N: E:	1445	Orange silty clay fill	0.0-19.0		Visual: Reddish brown soil.	Visual
Sample ID: KIF-NEMBAY_6H3-SED-101211-A & B							
			Total Depth	19.0			
Core #	Core Coordinates	Time	Core Description	Interval (in)	<50%	KM-NE-1053-04	
NEMBAY_7C4	N: E:	1500	Orange silty clay fill	0.0-21.0		Visual: Reddish brown soil.	Visual
Sample ID: KIF-NEMBAY_6H4-SED-101211-A & B							
			Total Depth	21.0			

JACOBS

Date: 10/11/2011	Weather: Cloudy with rain, 67 deg F		North Embayment		Ash	**TVA Field PLM Laboratory Results**	Lab Method
Crew: Greg Schwartz, Gib Frye, Travis Walls, Russ Vance (All RSI)						KM-NE-1052-01	
Core #	Core Coordinates	Time	Core Description	Interval (in)	<50%	Visual: Brown soil.	Visual
NEMBAY_5N1	N: 559402.78 E: 2439092.05	1400	Brown silty loam and clay fill	0.0-21.0			
Sample ID: KIF-NEMBAY_5N1-SED-101111-A & B							
Concurrence sampling							
			Total Depth	21.0			

JACOBS

Date: 10/10/2011 Weather: Cloudy, 78 deg F

Crew: Greg Schwartz, Russ Vance, Ed Arnold (All RSI)

North Embayment

Core #	Core Coordinates		Time	Core Description	Interval (in)	Ash	TVA Field PLM Laboratory Results	Lab Method
NEMBAY_7C1	N:	E:	1044	Gray silty clay	0.0-13.0	<50%	KM-NE-1051-01 Visual: Tan sandy clay.	Visual
Sample ID: KIF-NEMBAY_7C1-SED-101011-A & B								
				Total Depth	13.0			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_7C2	N:	E:	1055	Gray and orange silty clay fill w/ organics	0.0-15.0	<50%	KM-NE-1051-02 Visual: Brown soil.	Visual
Sample ID: KIF-NEMBAY_7C2-SED-101011-A & B								
				Total Depth	15.0			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_7C3	N:	E:	1108	Gray and orange clay fill	0.0-22.0	<50%	KM-NE-1051-03 Visual: Tan sandy clay.	Visual
Sample ID: KIF-NEMBAY_7C3-SED-101011-A & B								
				Total Depth	22.0			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_7C4	N:	E:	1418	Brown silty fill w/ organics	0.0-14.0	<50%	KM-NE-1051-04 Visual: Dark gray mud. PLM: There is no ash.	PLM
Sample ID: KIF-NEMBAY_7C4-SED-101011-A & B KIF-NEMBAY_7C4-AED-101011-B								
				Total Depth	14.0			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_7D2	N:	E:	1430	Brown clay with silt w/ organics	0.0-19.0	<50%	KM-NE-1051-05 Visual: Black sediment. PLM: There is very little ash.	PLM
Sample ID: KIF_NEMBAY_7D2-SED-101011-A & B								
				Total Depth	19.0			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_7D3	N:	E:	1445	Brown silt and clay w/ organics	0.0-13.5	<50%	KM-NE-1051-06 Visual: Dark gray mud. PLM: There is no ash.	PLM
Sample ID: KIF_NEMBAY_7D3-SED-101011-A & B								
				Total Depth	13.5			

JACOBS

Date: 10/04/2011 Weather: Sunny, 78 deg F

Crew: Greg Schwartz, Gib Frye, Russ Vance, Ed Arnold (All RSI)

North Embayment

Core #	Core Coordinates		Time	Core Description	Interval (in)	Ash	TVA Field PLM Laboratory Results	Lab Method
Nembay_6J1	N:	E:	1231	Gray clay with loam fill	0-15	<50%	KM-NE-1050-01 Visual: Greenish gray soil	Visual
Sample ID: KIF_NEMBAY_6J1-SED-100411-A & B				Total Depth	15			
NEMBAY_6J2	N:	E:	1242	Orange clay and gray clay	0-18.5	<50%	KM-NE-1050-02 Visual: Brown Clay	Visual
Sample ID: KIF_NEMBAY_6J2-SED-100411-A & B				Total Depth	18.5			
NEMBAY_6J4	N:	E:	1255	Orange clay and gray clay	0-19	<50%	KM-NE-1050-03 Visual: Gray Clay	Visual
Sample ID: KIF_NEMBAY_6J44-SED-100411-A & B				Total Depth	19			
NEMBAY_6J3	N:	E:	1303	Brown loam fill with pockets of ash	0-13	<50%	KN-NE-1050-04 Visual: Dark Gray soil. PLM: There are some ash	PLM
Sample ID: KIF_NEMBAY_6J3-SED-100411-A & B				Oange clay and gray clay	13-20.5			
				Total Depth	20.5			
NEMBAY_6K2	N:	E:	1323	Light brown loam with clay fill	0-12	<50%	KM-NE-1050-05 Visual: Light gray soil	Visual
Sample ID: KIF_NEMBAY_6K2-SED-100411-A & B				Gray and orange clay fill	12-22			
				Total Depth	22			
NEMBAY_6K3	N:	E:	1340	Light brown loam with clay fill	0-15	<50%	KM-NE-1050-06 Visual: Gray soil. PLM: There are some ash.	PLM
Sample ID: KIF_NEMBAY_6K3-SED-100411-A & B				Total Depth	15			

JACOBS

Date: 10/03/2011 Weather: Sunny, 71 deg F

North Embayment

Crew: Greg Schwartz, Josh Kerr, Russ Vance, Ed Arnold (All RSI)

Core #	Core Coordinates		Time	Core Description	Interval (in)	Ash	TVA Field PLM Laboratory Results	Lab Method
Nembay_6C1	N:	E:	1011	Orange loam fill material mixed with gray clay	0-17	<50%	KM-NE-1048-01 Visual: Brown soil.	Visual
Sample ID: KIF_NEMBAY_6C1-SED-100311-A & B								
				Total Depth	17			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1048-02	
NEMBAY_5H1	N:	E:	1020	Orange loam fill material mixed with gray clay	0-19		Visual: Grayish brown soil.	Visual
Sample ID: KIF_NEMBAY_5H1-SED-100311-A & B								
				Total Depth	19			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1048-03	
NEMBAY_5K4	N:	E:	1026	Gray clay with fine sand	0-15		Visual: gray sandy soil. PLM: There is no ash.	PLM
Sample ID: KIF_NEMBAY_5K4-SED-100311-A & B								
				Total Depth	15			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1048-04	
NEMBAY_6C2	N:	E:	1050	Orange loam fill and gray clay	0-17		Visual: Brown soil.	Visual
Sample ID: KIF_NEMBAY_6C2-SED-100311-A & B, KIF_NEMBAY_6C2-AED-100311 B								
				Total Depth	17			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1048-05	
NEMBAY_6C4	N:	E:	1100	Orange loam fill with trace sands	0-17		Visual: Brown soil.	Visual
Sample ID: KIF_NEMBAY_6C4-SED-100311-A & B								
				Total Depth	17			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1048-06	
NEMBAY_6C3	N:	E:	1110	Orange loam fill and gray clay	0-18		Visual: Brown clay.	Visual
Sample ID: KIF_NEMBAY_6C3-SED-100311-A & B								
				Total Depth	18			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1049-01	
NEMBAY_6B1	N:	E:	1425	Orange loam fill and gray clay with trace sands	0-16.5		Visual: Grayish soil. PLM: There is no ash.	PLM
Sample ID: KIF_NEMBAY_6B1-SED-100311-A & B								
				Total Depth	16.5			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1049-02	
NEMBAY_6B3	N:	E:	1436	Brown loam fill with trace ash	0-22		Visual: Brown soil.	Visual
Sample ID: KIF_NEMBAY_6B3-SED-100311-A & B								
				Total Depth	22			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1049-03	
NEMBAY_6B2	N:	E:	1445	Brown loam fill and gray clay with trace sand	0-21		Visual: Grayish mud.	Visual
Sample ID: KIF_NEMBAY_6B2-SED-100311-A & B								
				Total Depth	21			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1049-04	
NEMBAY_6A1	N:	E:	1523	Loam fill with pockets of ash	0-18.5		Visual: Dark brown soil.	Visual
Sample ID: KIF_NEMBAY_5B3-SED-100311-A & B								
				Total Depth	18.5			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1049-05	
NEMBAY_6A4	N:	E:	1535	Loam fill with pokets of ash	0-15		Visual: Dark brown soil.	Visual
Sample ID: KIF_NEMBAY_6A4-SED-100311-A & B								
				Total Depth	15			
Core #	Core Coordinates		Time	Core Description	Interval (in)	<50%	KM-NE-1049-06	
NEMBAY_6B4	N:	E:	1542	Orange loam fill and gray clay	0-16		Visual: Reddish brown soil.	Visual
Sample ID: KIF_NEMBAY_6B4-SED-100311-A & B								
				Total Depth	16			

JACOBS

Date: 09/22/2011 Weather: Mostly cloudy, high 81°F, winds NE 5mph

North Embayment

Crew: Mark Greer, Josh Kerr, Russ Vance, Greg Schwartz (All RSI)

Core #	Core Coordinates	Time	Core Description	Interval (in)		TVA Field PLM Laboratory Results	Lab Method
NEMBAY_6D1	N: 559217.12 E: 2439685.24	950	Brown loam fill with minor organics	0-5			Visual
Sample ID: KIF_NEMBAY_6D1-SED-092211-A & B, KIF_NEMBAY_6D1_A-SED-092211-A & B			Grey silty sand with fine to medium grained sands tan mottles	5-17			
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6D4	N: 559117.19 E: 2439689.01	1017	Greyish medium to fine grain sands with brown mottles in silt pockets	0-14			Visual
Sample ID: KIF_NEMBAY_6D4-SED-092211-A & B, KIF_NEMBAY_6D4-AED-092211-A & B			Grey silt loam (almost gleyed)	14-17			
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6D2	N: 559220.88 E: 2439785.17	1029	Red mottled clay fill mixed with approximately 70% ash	0-5			Visual
Sample ID: KIF_NEMBAY_6D2-SED-092211-A & B, KIF_NEMBAY_6D2_A-SED-092211-A & B			Red sandy clay loam with brown and grey mottles - few small rock frags.	5-19			
			Total Depth	19			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6D3	N: 559120.96 E: 2439788.94	1042	Light brown medium to fine grained sands with some silts	0-3			Visual
Sample ID: KIF_NEMBAY_6D3-SED-092211-A & B, KIF_NEMBAY_6D3_A-SED-092211-A & B			Grey/gleyed silty sand	3-14			
			Red clay loam with 50% grey mottles (no ash seen)	14-19			
			Total Depth	19			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5H2	N: 559416.29 E: 2440169.58	1258	Reddish brown sandy clay loam with dark red mottles and grey mottles	0-24			Visual
Sample ID: KIF_NEMBAY_5H2-SED-092211-A & B, KIF_NEMBAY_5H2_AED-092211-A & B							
			Total Depth	24			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5H3	N: 559335.88 E: 2440181.12	1313	reddish brown sandy clay loam with pockets of red clay showing grey mottling - little to no visible ash	0-23			Visual
Sample ID: KIF_NEMBAY_5H3-SED-092211-A & B							
			Total Depth	23			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5H4	N: 559332.11 E: 2440081.19	1325	Grey loam with brown mottles - medium and fine grained sands	0-19			Visual
Sample ID: KIF_NEMBAY_5H4-SED-092211-A & B							
			Total Depth	19			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5H1	N: 559432.04 E: 2440077.43	1337	Brown fill - mostly clay and silt with lens of decaying organics	0-15			Visual
Sample ID: KIF_NEMBAY_5H4-SED-092211-A & B							
			Total Depth	15			

JACOBS

Date: 09/20/2011 Weather: Cloudy w/ high of 79°F

North Embayment

Crew: Ramona Josefczyk, Josh Kerr, Russ Vance, Greg Schwartz (All RSI)

Core #	Core Coordinates		Time	Core Description	Interval (in)		TVA Field PLM Laboratory Results	Lab Method
NEMBAY_5JF	N:	E:	1031	Red silty clay with trace ash	0-17			Visual
Sample ID: KIF_NEMBAY_5J4-SED-092011-A & B								
				Total Depth	17			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_5J1	N:	E:	1053	Silt clay mixed w/ trace ash	0-14			Visual
Sample ID: KIF_NEMBAY_5J1-SED-092011-A & B				Red silty clay with trace ash	14-21			
KIF_NEMBAY_5J1-AED-092011 - B								
				Total Depth	21			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_5J3	N:	E:	1105	Red brown silty clay w/ pockets of ash	0-14			Visual
Sample ID: KIF_NEMBAY_5J3-SED-092011-A & B				Red brown silty clay	14-21			
				Total Depth	21			
Core #	Core Coordinates		Time	Core Description	Interval (in)			
NEMBAY_5J2	N:	E:	1116	Silty clay fill w/ trace ash	0-21.5			Visual
Sample ID: KIF_NEMBAY_5J2-SED-092011-A & B								
				Total Depth	21.5			

JACOBS

Date: 09/01/2011 Weather: Mostly sunny, high 96 °F

Crew: Ramona Josefczyk, Liz Burton Josh Kerr (All RSI)

North Embayment

Core #	Core Coordinates	Time	Core Description	Interval (in)		TVA Field PLM Laboratory Results	Lab Method
NEMBAY_6K1	N: 559017.26 E: 2439692.77	1045	Ash mixed with brown silt loam	0-3			Visual
Sample ID: KIF_NEMBAY_6K1-SED-090111-A & B, KIF_NEMBAY_6K1_A-SED-090111-A & B			grey mixed clay and some ash	3-19			
			Total Depth	19			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6L2	N: 559008.13 E: 2439624.35	1101	tan grey silts and clays	0-13			Visual
Sample ID: KIF_NEMBAY_6L2-SED-083011-A & B			tan wet sands with no visible ash	10-17			
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6K4	N: 558917.33 E: 2439696.54	1112	greyish brown silts mixed with ash	0-5			Visual
Sample ID: KIF_NEMBAY_6K4-SED-090111-A & B			grey clay and silts	5-15			
			Total Depth	15			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7D4	N: 558717.47 E: 2439704.07	1130	dark brown clays and silts with abundant organic material	0-12			Visual
Sample ID: KIF_NEMBAY_7D4-SED-090111-A & B			tan and grey layered fine grained sands and silts - no visible ash	12-22			
			Total Depth	22			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7D1	N: 558817.4 E: 2439700.3	1139	brownish grey silts and clays with pockets of medium to coarse grained sands, minor organics and trace amounts of ash	0-16			Visual
Sample ID: KIF_NEMBAY_7D1-SED-090111-A & B							
			Total Depth	16			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5L3	N: 559313.28 E: 2439581.55	1433	brownish grey mixed fine and medium grained sands with some clay and silt	0-12			Visual
Sample ID: KIF_NEMBAY_5L3-SED-090111-A & B, KIF_NEMBAY_5L3-AED-090111-A & B							
			Total Depth	12			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5L4	N: 559309.52 E: 2439481.62	1447	Brown silt loam with pockets of fine sand, limestone gravel and some	0-20			Visual
Sample ID: KIF_NEMBAY_5L4-SED-090111-A & B							
			Total Depth	20			

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Date: 08/25/2011 Weather: Mostly sunny, high 88F, winds N5mph North Embayment

Crew: Ramona Josefczyk, Liz Burton, Mark Greer, Gib Frye, Josh Kerr (All RSI)

Core #	Core Coordinates	Time	Core Description	Interval (in)		TVA Field PLM Laboratory Results	Lab Method
NEMBAY_7L3	N: 558514.88 E: 2439644.9	916	brown loamy fill with small lens of ash grading into weathered shale	0-17			Visual
Sample ID: KIF_NEMBAY_7L3-SED-082511-A & B			red fat/stiff clay	17-25			
			Total Depth	25			
NEMBAY_7L4	N: 558526.98 E: 2439621.38	925	mix of fill (clays, sands, silts, and weathered material)	0-24			Visual
Sample ID: KIF_NEMBAY_7L4-SED-082511-A & B							
			Total Depth	24			
NEMBAY_7E2	N: 558816.76 E: 2439617.75	936	grey silty sand with <50% ash	0-13			Visual
Sample ID: KIF_NEMBAY_7E2-SED-082511-A & B			tan sandy clay loam with red and grey mottles	13-21			
			Total Depth	21			
NEMBAY_7L2	N: 558622.72 E: 2439640.84	946	red clay with sand fill - no visible ash	0-11			Visual
Sample ID: KIF_NEMBAY_7L2-SED-082511-A & B Refusal met							
			Total Depth	11			
NEMBAY_7E3	N: 558716.83 E: 2439621.52	949	light grey sand with silt and a small amount of chert	0-18			Visual
Sample ID: KIF_NEMBAY_7E3-SED-082511-A & B							
			Total Depth	18			
NEMBAY_7E4	N: 558714.81 E: 2439568.02	957	red loam to clay loam with medium grained sands, few chert fragments, Iron concentrations, and brown mottling	0-18			Visual
Sample ID: KIF_NEMBAY_7E4-SED-082511-A & B							
			Total Depth				
NEMBAY_7L1	N: 558620.71 E: 2439587.34	1000	>50% ash	0-3			Visual
Sample ID: KIF_NEMBAY_7L1-SED-082511-A & B, KIF_NEMBAY_7L1_A-SED-082511-A & B			red clay loam with chert fragments	3-23			
			Total Depth	23			
NEMBAY_6L2	N: 559014.97 E: 2439596.66	1400	>50% ash mixed with dark grey silts	0-2			Visual
Sample ID: KIF_NEMBAY_6L2-SED-082511-A & B, KIF_NEMBAY_6L2_A-SED-082511-A & B			light grey clays and silts grading into coarser material	2-10			
			Sandy silts grading into coarse sands and gravels	10-17			
			Total Depth	17			
NEMBAY_5M1	N: 559401.92 E: 2439277.99	1419	red brown fill mixed with lens of ash	0-12			Visual
Sample ID: KIF_NEMBAY_5M1-SED-082511-A & B			brownish grey fat clay with minor organics	12-18			
			Total Depth	18			
NEMBAY_5M2	N: 559405.68 E: 2439377.92	1431	Dark brown clays and silts with major organics	0-12			Visual
Sample ID: KIF_NEMBAY_5M2-SED-082511-A & B							
			Total Depth	12			

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Date: 08/22/2011 Weather: Mostly sunny with a high near 90°F

North Embayment

Crew: Ramona Josefczyk, Russ Vance, Mark Greer, and Josh Kerr (All RSI)

Core #	Core Coordinates	Time	Core Description	Interval (in)		TVA Field PLM Laboratory Results	Lab Method
NEMBAY_5F1	N: 559601.77 E: 2439270.46	919	Red clay loam fill mixed with bands of ash (approx. 50% ash)	0-12			Visual
Sample ID: KIF_NEMBAY_5F1-SED-082211-A & B			brown silt loam with no visible ash	12-26			
			Total Depth	26			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5G3	N: 559498.08 E: 2439174.3	928	Multi-colored clay loam fill mixed with <50% ash	0-13			Visual
Sample ID: KIF_NEMBAY_5G3-SED-082211-A & B			Dark grey brown clay loam with soft chert - no visible ash	13-23			
			Total Depth	23			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_4J2	N: 559812.93 E: 2439562.72	950	Red lean clay with some visible ash at surface (<50%)	0-19			Visual
Sample ID: KIF_NEMBAY_4J2-SED-082211-A & B							
			Total Depth				
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_4J3	N: 559713 E: 2439566.49	1003	grey silty sand loam with some visible ash	0-15			Visual
Sample ID: KIF_NEMBAY_4J3-SED-082211-A & B							
			Total Depth	15			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_4J4	N: 559709.23 E: 2439466.56	1017	mix of ash and grey silt loam	0-22			Visual
Sample ID: KIF_NEMBAY_4J4-SED-082211-A & B							
			Total Depth	22			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_4J1	N: 559809.16 E: 2439462.79	1026	grey silt loam mixed with ash	0-4			Visual
Sample ID: KIF_NEMBAY_4J1-SED-082211-A & B,			grey fine sands with some silts	4-17			
KIF_NEMBAY_4J1_A-SED-082211-A & B							
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_4K3	N: 559705.47 E: 2439366.63	1039	greyish brown silt loam with ash and trace organics	0-4			Visual
Sample ID: KIF_NEMBAY_4K3-SED-082211-A & B,			greyish brown silt loam with sand and some ash	4-18			
KIF_NEMBAY_4K3_A-SED-082211-A & B							
			Total Depth	18			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_4K2	N: 559805.4 E: 2439362.86	1037	grey silt loam with oxidized root channels	0-18			Visual
Sample ID: KIF_NEMBAY_4K2-SED-082211-A & B,							
			Total Depth	18			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5A3	N: 559349.66 E: 2440292.96	1338	red to brown silt loam mixed with limeston gravel and organics	0-9			Visual
Sample ID: KIF_NEMBAY_5A3-SED-082211-A & B, refusal encountered							
Location offset due to accessibility.							
			Total Depth	9			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5A4	N: 559425.77 E: 2440258.91	1350	brown clay loam mixed with lenses of ash	0-4			Visual
Sample ID: KIF_NEMBAY_5A4-SED-082211-A & B,			red fat clay	4-13			
KIF_NEMBAY_5A4_A-SED-082211-A & B							
Location offset due to accessibility.							
			Total Depth	13			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5A2	N: 559604.66 E: 2440261.65	1409	red to brown silt loam with organics	0-18			Visual
Sample ID: KIF_NEMBAY_5A2-SED-082211-A & B,							
			Total Depth	18			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_5A1	N: 559603.97 E: 2440243.32	1416	brown loam dry and crum like with red mottles	0-17			Visual
Sample ID: KIF_NEMBAY_5A1-SED-082211-A & B,							
			Total Depth	17			

Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6A2	N: 559233.83 E: 2440326.15	1436	NA	NA			Visual
Sample ID: Refusal at surface through 6 attempts - NO SAMPLE Location offset due to accessibility.							
			Total Depth	0			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6A3	N: 559143 E: 2440326.15	1445	red silty clay loam with abundant liimestone gravel	0-17			Visual
Sample ID: KIF_NEMBAY_6A3-SED-082211-A & B, Location offset due to accessibility.							
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6G2	N: 5589044 E: 2440381.49	1505	red clay with minor organics and gravel	0-17			Visual
Sample ID: KIF_NEMBAY_6G2-SED-082211-A & B, Location offset due to accessibility.							
			Total Depth	17			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_6G3	N: 558955.39 E: 2440405.18	1515	compacted red clay loam high in silt with gravels	0-7			Visual
Sample ID: KIF_NEMBAY_6G3-SED-082211-A & B Refusal Met. Location offset due to accessibility.							
			Total Depth	7			

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Date: 07/19/2011 Weather: Mostly sunny with a high near 91° North Embayment

Crew: Mark Greer, Ramona Josefczyk, Greg Schwartz, Steve Bunkley (All RSI)

Core #	Core Coordinates	Time	Core Description	Interval (in)	TVA Field PLM Laboratory Results	Lab Method
NEMBAY_4L1	N: 559794.1 E: 2439063.07	920	Red clay loam with few light brown mottles throughout	0-22		Visual
Notes: samples : KIF-NEMBAY_4L1-SED-071911-A & KIF-NEMBAY_4L1-SED-071911-B			Total Depth	22		
NEMBAY_4L4	N: 559694.17 E: 2439066.84	938	Red fine loamy with dark brown streaks of decaying O.M. One small inclusion of ash at 8 inches.	0-12		Visual
Notes: samples : KIF-NEMBAY_4L4-SED-071911-A & KIF-NEMBAY_4L4-SED-071911-B			Red clay loam - refusal met	12-17		
			Total Depth	17		
NEMBAY_5G1	N: 559594.24 E: 2439070.61	954	Mottled red clay loam fill material	0-8		Visual
Notes: samples : KIF-NEMBAY_5G1-SED-071911-A, KIF-NEMBAY_5G1_A-SED-071911-A, KIF-NEMBAY_5G1_A-SED-071911-B & KIF-NEMBAY_5G1-SED-071911-B			Fine loamy with few fine roots - dominant brown color with ash mixed	8-12		
			Total Depth	12		
NEMBAY_5G4	N: 559494.31 E: 2439074.37	1009	Red clay loam with some rippable rock in lower part	0-13		Visual
Notes: samples : KIF-NEMBAY_5G4-SED-071911-A & KIF-NEMBAY_5G4-SED-071911-B			Cr material from shale	13-16		
			Total Depth	16		
NEMBAY_5N1	N: 559394.39 E: 2439078.14	1025	Brown and grey fine loamy fill material with few fine roots and visible ash mixed throughout	0-13		Visual
Notes: samples : KIF-NEMBAY_5N1-SED-071911-A & KIF-NEMBAY_5N1-SED-071911-B			Brown fine loamy fill	13-14		
			Total Depth	14		
NEMBAY_5N4	N: 559299.03 E: 2439081.73	1040	Red clay loam mixed the few dark brown fine loamy inclusions. Gravel (shot rock) in upper part	0-13		Visual
Notes: samples : KIF-NEMBAY_5N4-SED-071911-A & KIF-NEMBAY_5N4-SED-071911-B			Brown gravelly fill	13-16		
			Total Depth	16		
NEMBAY_5N2	N: 559398.15 E: 2439178.07	1350	Reddish brown clay loam fill material with mottles	0-14		Visual
Notes: samples : KIF-NEMBAY_5N2-SED-071911-A & KIF-NEMBAY_5N2-SED-071911-B			Grey loam fill high in moisture	14-17		
			Total Depth	17		
NEMBAY_5N3	N: 559305.47 E: 2439181.56	1358	Refusal met. Dark brown very gravelly (shot rock) loam fill material	0-14		Visual
Notes: samples : KIF-NEMBAY_5N3-SED-071911-A & KIF-NEMBAY_5N3-SED-071911-B			Total Depth	14		
NEMBAY_1B1	N: 561337.84 E: 2439400.81	1422	Red fine loamy fill	0-13		Visual
Notes: samples : KIF-NEMBAY_1B1-SED-071911-A & KIF-NEMBAY_1B1-SED-071911-B			Dark bown fine loamy (original surface soil)	13-16		
			Light brown gravelly fine loamy with red mottles	16-25		
			Total Depth	25		
NEMBAY_1B4	N: 561279.16 E: 2439344.98	1436	Brown fine loamy with gravels	0-15		Visual
Notes: samples : KIF-NEMBAY_1B4-SED-071911-A & KIF-NEMBAY_1B4-SED-071911-B			Red clay loam with dark red mottles and few chert rocks	15-30		
			Total Depth	30		
NEMBAY_1B2	N: 561317.9 E: 2439494.88	1444	Brown clay loam fill mixed with ash	0-15		Visual
Notes: samples : KIF-NEMBAY_1B2-SED-071911-A & KIF-NEMBAY_1B2-SED-071911-B			Brown clay loam with gleyed mottles and some ash mixed (strong odor)	15-22		
			Total Depth	22		
NEMBAY_1B3	N: 561284.86 E: 2439496.13	1502	Brown very gravelly fine loamy	0-12		Visual
Notes: samples : KIF-NEMBAY_1B3-SED-071911-A & KIF-NEMBAY_1B3-SED-071911-B			Sand loam - grey with slight amount of ash mixed	12-15		
			Very gravelly sand loam	15-22		
			Total Depth	22		

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Date: 10/27/2011 Weather: Cloudy, 64 deg F

North Embayment

Crew: Greg Schwartz, Eddie Arnold, Russ Vance (All RSI)

Core #	Core Coordinates	Time	Core Description	Interval (in)	Ash	TVA Field PLM Laboratory Results	Lab Method
NEMBAY_7A2	N: 558840.67 E: 2440379.35	1210	Silty clay loam fill	0.0-21.0	<50%	KM-NE-1058-01 Visual: Light brown soil.	Visual
KIF-NEMBAY_7A2-SED-102711- A & B							
			Total Depth	21.0			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7B3	N: E:	1435	Weathered shale and clay	0.0-14.5			
KIF-NEMBAY_7B3-SED-102711- A & B							
			Total Depth	14.5			
Core #	Core Coordinates	Time	Core Description	Interval (in)			
NEMBAY_7H3	N: E:	1500	Fill with ash	0.0-4.0			
KIF-NEMBAY_7H3-SED-102711- A&B			Silty clay loam fill	4.0-17.5			
KIF-NEMBAY_7H3_A-SED-102711- A&B							
			Total Depth	17.5-0.0			

Figure 1

North Embayment Grids - Cleared

North Embayment Sampling - Cleared Grids - Concurrence #6

1 RJ LEE SAMPLE RESULTS SATISFACTORY

1 KRP SAMPLE RESULTS SATISFACTORY / RJ LEE RESULTS PENDING

1 SAMPLE RESULTS UNSATISFACTORY

1 TO BE SAMPLED

CONCURRENCE BOUNDARY

N

0 100 200 400

SCALE IN FEET

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11/16/11	Figure 1

Figure 2

Area Photo Log and Representative Photos

Ash Removal from Sectors 5&6

Ash Removal

Sectors 5&6 after cleaning

Areas that had to be cleaned again due to recontamination

Hot Spot located near clean water ditch

Clean Soil Profile and hot spot cleaning

Ash removed along clean water ditch

FIG-NESAM-02

North Embayment Sample Grid Locations

1 RJ LEE SAMPLE RESULTS SATISFACTORY

1 KRP SAMPLE RESULTS SATISFACTORY / RJ LEE RESULTS PENDING

1 SAMPLE RESULTS UNSATISFACTORY

1 TO BE SAMPLED

CONCURRENCE BOUNDARY

SEAL

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KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY

NORTH EMBAYMENT SAMPLE GRID

	11/14/11	NORTH EMBAYMENT CONCURRENCE (B)			