

January 10, 2019

Roy Quinn
TVA Cumberland Fossil Plant
815 Cumberland City Road
Cumberland City, TN 37050

RE: John Sevier Fossil Plant Project – Analytical Report
RJ Lee Group Project Number AOH1052409-0

Dear Mr. Quinn,

RJ Lee Group, Inc. (RJLG) Monroeville laboratory received 22 samples on December 21, 2018 associated with Tennessee Valley Authority (TVA) John Sevier Fossil Plant. The samples were logged into RJ Lee Group project number AOH1052409-0 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, revised COC and sample receipt check list.

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. Unless notified to return the samples covered in this report, RJ Lee Group will store them for a period of ninety (90) days before discarding.

Should you have any questions regarding this information, please do not hesitate to contact us.

Sincerely,



Bryan R. Bandli, PhD
Principal Investigator

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

Appendix A
Chain of Custody Forms

Chain of Custody
RJ Lee Group Work Order #: AOH1052409-0
Project Name/Case #: John Sevier Fossil Plant

Received From:	Relinquished To:
Tyler Baker Tennessee Valley Authority TVA Chickamauga Power Service Center 4601 N. Access Road Chattanooga, TN 37415 United States Main: 423-876-6733	RJLee Group, Inc. 350 Hochberg Road Monroeville, PA 15146 United States Main: 724-325-1776 Fax: 724-325-1775

Sample ID	Client Sample ID	Date Received
10459417	JSF-SED-PB03-CORLB-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459418	JSF-SED-PB03-CORLB-0.5/1.4-20181218	12/21/2018 10:52 AM EST
10459419	JSF-SED-PB03-CORCC-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459420	JSF-SED-PB03-CORCC-0.5/1.2-20181218	12/21/2018 10:52 AM EST
10459421	JSF-SED-PB03-CORRB-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459422	JSF-SED-PB03-CORRB-0.5/1.6-20181218	12/21/2018 10:52 AM EST
10459423	JSF-SED-PB02-CORCC-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459424	JSF-SED-PB02-CORCC-0.5/2.5-20181218	12/21/2018 10:52 AM EST
10459425	JSF-SED-PB01-CORCC-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459426	JSF-SED-PB04-CORLB-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459427	JSF-SED-PB04-CORLB-0.5/1.0-20181218	12/21/2018 10:52 AM EST
10459428	JSF-SED-PB04-CORCC-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459429	JSF-SED-PB04-CORCC-0.5/1.8-20181218	12/21/2018 10:52 AM EST
10459430	JSF-SED-PB04-CORRB-0.0/0.5-20181218	12/21/2018 10:52 AM EST
10459431	JSF-SED-PB04-CORRB-0.5/1.2-20181218	12/21/2018 10:52 AM EST
10459432	JSF-SED-PB03-DUP01-20181218	12/21/2018 10:52 AM EST
10459433	JSF-SED-PB05-CORCC-0.0/0.5-20181219	12/21/2018 10:52 AM EST
10459434	JSF-SED-PB05-CORCC-0.5/0.9-20181219	12/21/2018 10:52 AM EST
10459435	JSF-SED-PB09-CORCC-0.0/0.5-20181219	12/21/2018 10:52 AM EST
10459436	JSF-SED-PB06-CORCC-0.0/0.5-20181219	12/21/2018 10:52 AM EST
10459437	JSF-SED-PB07-CORCC-0.0/0.5-20181219	12/21/2018 10:52 AM EST
10459438	JSF-SED-PB08-CORCC-0.0/0.5-20181219	12/21/2018 10:52 AM EST
10459439	QC01_JS F-SED-PB03-CORRB-0.5/1.6-20181218	12/21/2018 10:52 AM EST
10459440	QC02_JS F-SED-PB09-CORCC-0.0/0.5-20181219	12/21/2018 10:52 AM EST

	Received From: Tyler Baker	<i>Method of Shipment:</i> Federal Express
	Company: Tennessee Valley Authority	Date: 12/21/2018
	Received By: Monica Carse	<i>Package Condition Upon Receipt:</i> Sealed
	Company: RJ Lee Group, Inc.	Date: 12/21/2018

	Relinquished	<i>Method of Shipment:</i>
	Company:	Date:
	Received By:	<i>Package Condition Upon Receipt:</i>
	Company:	Date:

	Relinquished	<i>Method of Shipment:</i>
	Company:	Date:
	Received By:	<i>Package Condition Upon Receipt:</i>
	Company:	Date:

RJ Lee Group
Sample Receipt and Log in Check List

Client:	TVA	Date Received:	12/21/2018	Log in Date:	12/21/2018
Time Received:	10:52 AM	By:	Monica Carse	COC# :	JSF_SED_20181218_1C
Project:	AOH1052409-0	# Coolers Received	1	Means of Shipment:	FedEx
Air Bill:	7845 8532 3427				

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 12-21-18

Manager Signature: [Signature] 12/21/18



TVA Environmental Investigations

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

COOLER No.:		of	
COC No:	JSF SED 20181218 1C		
1 of 2 Pages			
Task Desc:	JSF SED		

Required Ship to Lab:			Required Project Information:			Required Sampler Information									
Lab Name:	RJ Lee Group, Inc.		Site ID #:	JOHN SEVIER FOSSIL PLANT		Sampler: Tyler Baker									
Lab Address:	350 Hochberg Road Monroeville, PA 15146		Project #:	426800		Sampling Company: TVA									
Lab Manager Contact Information			Site Address	611 Old Highway 70 S		Address: TVA Chickamauga Power Service Center, 4601 N. Access Road									
			City	Rogersville	State, Zip:	TN, 37857	City/State: Chattanooga, TN		Phone: 423-876-6733						
			Site PM Name:	Roy Quinn		Sampling Team Number: 1									
Lab PM:	Monica Carse		Phone/Fax:	423-751-3753		Send EDD/Hard Copy to: tva-ei@envsld.com									
Phone/Fax:	724.325.1776		Site PM Email:	rquinn@tva.gov											
Lab Email:	MCarse@rjleegroup.com														
						Analysis Turnaround Time									
						<input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below _____									
						<input type="checkbox"/> 24 Hours <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 5 Business Days <input checked="" type="checkbox"/> 10 Business Days (Standard)									
ITEMS #	SAMPLE ID Samples IDs MUST BE UNIQUE	SAMPLE LOCATION	Sample Depth		MATRIX CODE	G= GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	Comments/ Lab Sample I.D.	MS/MSD	Analysis USE_SEGMENT_PLM	Filtered N	Preserve None
			Depth Unit	Feet											
1	JSF-SED-PB03-CORLB-0.0/0.5-20181218	PB03	0	0.5	SED	G	N	12/18/2018	1050	1		<input type="checkbox"/>	X		
2	JSF-SED-PB03-CORLB-0.5/1.4-20181218	PB03	0.5	1.4	SED	G	N	12/18/2018	1050	1		<input type="checkbox"/>	X		
3	JSF-SED-PB03-CORCC-0.0/0.5-20181218	PB03	0	0.5	SED	G	N	12/18/2018	1105	1		<input type="checkbox"/>	X		
4	JSF-SED-PB03-CORCC-0.5/1.2-20181218	PB03	0.5	1.2	SED	G	N	12/18/2018	1105	1		<input type="checkbox"/>	X		
5	JSF-SED-PB03-CORRB-0.0/0.5-20181218	PB03	0	0.5	SED	G	N	12/18/2018	1125	1		<input type="checkbox"/>	X		
6	JSF-SED-PB03-CORRB-0.5/1.6-20181218	PB03	0.5	1.6	SED	G	N	12/18/2018	1125	2		<input type="checkbox"/>	X		
7	JSF-SED-PB02-CORCC-0.0/0.5-20181218	PB02	0	0.5	SED	G	N	12/18/2018	1140	1		<input type="checkbox"/>	X		
8	JSF-SED-PB02-CORCC-0.5/2.5-20181218	PB02	0.5	2.5	SED	G	N	12/18/2018	1140	1		<input type="checkbox"/>	X		
9	JSF-SED-PB01-CORCC-0.0/0.5-20181218	PB01	0	0.5	SED	G	N	12/18/2018	1235	1		<input type="checkbox"/>	X		
10	JSF-SED-PB04-CORLB-0.0/0.5-20181218	PB04	0	0.5	SED	G	N	12/18/2018	1540	1		<input type="checkbox"/>	X		
11	JSF-SED-PB04-CORLB-0.5/1.0-20181218	PB04	0.5	1	SED	G	N	12/18/2018	1540	1		<input type="checkbox"/>	X		
12												<input type="checkbox"/>			
13												<input type="checkbox"/>			
Additional Comments/Special Instructions:			RELINQUISHED BY / AFFILIATION			DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions			
Additional volume can be used for Laboratory Duplicate.			Tyler Baker / TVA			12-20-18	1400	M. Carse / RJ Lee Group		12-21-18	10:52	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes
												<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No
												<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Samples designated "Hold" should not be analyzed until directed otherwise.												<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
												<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
												<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
												<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
												<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
												<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
												<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
												<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
												<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes

TVA Environmental Investigations



Tennessee Valley Authority

Chain-of-Custody / Analytical Request Document

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

COOLER No.:		of	
COC No:	JSF_SED 20181218_1C		
2 of 2 Pages			
Task Desc:	JSF_SED		

Required Ship to Lab:			Required Project Information:				Required Sampler Information:										
Lab Name:	RJ Lee Group, Inc.		Site ID #:	JOHN SEVIER FOSSIL PLANT			Sampler:	Tyler Baker									
Lab Address:	350 Hochberg Road Monroeville, PA 15146		Project #:	426800			Sampling Company:	TVA									
Lab Manager Contact Information			Site Address:	611 Old Highway 70 S			Address:		TVA Chickamauga Power Service Center, 4601 N. Access Road								
			City:	Rogersville	State:	TN	Zip:	37857	City/State:	Chattanooga, TN	Phone:	423-876-6733					
Lab PM:			Site PM Name:	Roy Quinn			Sampling Team Number:		1								
Phone/Fax:			Phone/Fax:	423-751-3753			Send EDD/Hard Copy to:		tva-el@envystd.com								
Lab Email:			Site PM Email:	rquinn@tva.gov													
Analysis Turnaround Time																	
<input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below _____																	
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 5 Business Days <input checked="" type="checkbox"/> 10 Business Days (Standard)																	
ITEMS #	SAMPLE ID Samples IDs MUST BE UNIQUE	SAMPLE LOCATION	Sample Depth		MATRIX CODE	G= GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	Comments/ Lab Sample I.D.	MSMSD	Analysis	Filtered	Preserve	Notes	
			Start Depth	End Depth													
1	JSF-SED-PB04-CORCC-0.0/0.5-20181218	PB04	0	0.5	SED	G	N	12/18/2018	1554	1							
2	JSF-SED-PB04-CORCC-0.5/1.8-20181218	PB04	0.5	1.8	SED	G	N	12/18/2018	1554	1							
3	JSF-SED-PB04-CORRB-0.0/0.5-20181218	PB04	0	0.5	SED	G	N	12/18/2018	1615	1							
4	JSF-SED-PB04-CORRB-0.5/1.2-20181218	PB04	0.5	1.2	SED	G	N	12/18/2018	1615	1							
5	JSF-SED-PB03-DUP01-20181218	PB03	NA	NA	SED	G	N	12/18/2018	NA	1	Duplicate						
6	JSF-SED-PB05-CORCC-0.0/0.5-20181219	PB05	0	0.5	SED	G	N	12/19/2018	0920	1							
7	JSF-SED-PB05-CORCC-0.5/0.9-20181219	PB05	0.5	0.9	SED	G	N	12/19/2018	0920	1							
8	JSF-SED-PB09-CORCC-0.0/0.5-20181219	PB09	0	0.5	SED	G	N	12/19/2018	1040	1							
9	JSF-SED-PB06-CORCC-0.0/0.5-20181219	PB06	0	0.5	SED	G	N	12/19/2018	1155	1							
10	JSF-SED-PB07-CORCC-0.0/0.5-20181219	PB07	0	0.5	SED	G	N	12/19/2018	1230	1							
11	JSF-SED-PB08-CORCC-0.0/0.5-20181219	PB08	0	0.5	SED	G	N	12/19/2018	1255	1							
12																	
13																	

Additional Comments/Special Instructions:

Additional volume can be used for Laboratory Duplicate.

Samples designated "Hold" should not be analyzed until directed otherwise.

RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions			
Tyler Baker / TVA		12-20-18	1400	M. Carse / RJ Lee Group		12-21-18	10:52	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
								<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No
								<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
								<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
								<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
								<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No
								<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
								<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No

SHIPPING METHOD:		SAMPLER NAME AND SIGNATURE	
Fed-ex		Tyler Baker	

A011052409-0

TVA Environmental Investigations



Tennessee Valley Authority

Chain-of-Custody / Analytical Request Document

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COOLER No.:		of	1
COC No.:	JSF SED 20181218 1C		
1 of 2 Pages			
Task Desc:	JSF SED		

Rev 1

DL 12/20/18

Required Ship to Lab:			Required Project Information:				Required Sampler Information:						
Lab Name:	R.J. Lee Group, Inc.		Site ID #:	JOHN SEVIER FOSSIL PLANT			Sampler:	Tyler Baker					
Lab Address:	350 Hochberg Road Monroeville, PA 15146		Project #:	426800			Sampling Company:	TVA					
Lab Manager Contact Information:			Site Address:	611 Old Highway 70 S			Address: TVA Chickamauga Power Service Center, 4601 N. Access Road						
Lab PM:	Monica Carse		City:	Rogersville	State:	TN	City/State:	Chattanooga, TN	Phone:	423-876-8733			
Phone/Fax:	724.325.1776		Site PM Name:	Roy Quinn			Sampling Team Number:	1					
Lab Email:	MCarse@rjlee.com		Phone/Fax:	423-751-3753			Send EDD/Hard Copy to:	tva-el@envsvald.com					
			Site PM Email:	lquinn@tva.gov									
Analysis Turnaround Time													
<input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below: _____													
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 5 Business Days <input checked="" type="checkbox"/> 10 Business Days (Standard)													
ITEM #	SAMPLE ID Samples IDs MUST BE UNIQUE	SAMPLE LOCATION	Sample Depth		MATRIX CODE	G= GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	Comments/ Lab Sample I.D.	MSMSD	Analysis Statement File
			Start Depth Unit	End Depth Feet									
1	JSF-SED-PB03-CORLB-0.0/0.5-20181218	PB03	0	0.5	SED	G	N	12/18/2018	1050	1		<input type="checkbox"/>	X
2	JSF-SED-PB03-CORLB-0.5/1.4-20181218	PB03	0.5	1.4	SED	G	N	12/18/2018	1050	1		<input type="checkbox"/>	X
3	JSF-SED-PB03-CORCC-0.0/0.5-20181218	PB03	0	0.5	SED	G	N	12/18/2018	1105	1		<input type="checkbox"/>	X
4	JSF-SED-PB03-CORCC-0.5/1.2-20181218	PB03	0.5	1.2	SED	G	N	12/18/2018	1105	1		<input type="checkbox"/>	X
5	JSF-SED-PB03-CORRB-0.0/0.5-20181218	PB03	0	0.5	SED	G	N	12/18/2018	1125	1		<input type="checkbox"/>	X
6	JSF-SED-PB03-CORRB-0.5/1.6-20181218	PB03	0.5	1.6	SED	G	N	12/18/2018	1125	2		<input type="checkbox"/>	X
7	JSF-SED-PB02-CORCC-0.0/0.5-20181218	PB02	0	0.5	SED	G	N	12/18/2018	1140	1		<input type="checkbox"/>	X
8	JSF-SED-PB02-CORCC-0.5/2.5-20181218	PB02	0.5	2.5	SED	G	N	12/18/2018	1140	1		<input type="checkbox"/>	X
9	JSF-SED-PB01-CORCC-0.0/0.5-20181218	PB01	0	0.5	SED	G	N	12/18/2018	1235	1		<input type="checkbox"/>	X
10	JSF-SED-PB04-CORLB-0.0/0.5-20181218	PB04	0	0.5	SED	G	N	12/18/2018	1540	1		<input type="checkbox"/>	X
11	JSF-SED-PB04-CORLB-0.5/1.0-20181218	PB04	0.5	1	SED	G	N	12/18/2018	1540	1		<input type="checkbox"/>	X
12												<input type="checkbox"/>	
13												<input type="checkbox"/>	

Additional Comments/Special Instructions:

Additional volume can be used for Laboratory Duplicate.

Samples designated "Hold" should not be analyzed until directed otherwise.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions			
Tyler Baker / TVA	12-20-18	1400	M. Carse / R.J. Lee Group	12-21-18	10:52	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
						<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
						<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
						<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

SHIPPING METHOD:	SAMPLER NAME AND SIGNATURE	Temperature in °C	Sample on Ice?	Sample Intact?	Trip Blank?
Fed-EX	Tyler Baker				

TVA Environmental Investigations



Tennessee Valley Authority

Chain-of-Custody / Analytical Request Document

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COOLER No.:		of	
COC No.:	JSF SED 20181218 1C		
2 of 2 Pages			
Task Desc:	JSF SED		

Rev-1
DL 12/20/18

Required Ship to Lab:		Required Project Information:		Required Sampler Information	
Lab Name:	RJ Lee Group, Inc.	Site ID #:	JOHN SEVIER FOSSIL PLANT	Sampler:	Tyler Baker
Lab Address:	350 Hochberg Road Monroeville, PA 15146	Project #:	426800	Sampling Company:	TVA
		Site Address	611 Old Highway 70 S	Address:	TVA Chickamauga Power Service Center, 4601 N. Access Road
		City	Rogersville	State, Zip:	TN, 37857
		City/State:	Chattanooga, TN	Phone:	423-676-6733
Lab Manager Contact Information		Site PM Name:	Roy Quinn		
Lab PM:	Monica Carse	Phone/Fax:	423-751-3753	Sampling Team Number:	1
Phone/Fax:	724.325.1776	Site PM Email:	raulm@tva.gov	Send EDD/Hard Copy to:	tva-eh@envsrd.com
Lab Email:	MCarse@rjleegroup.com				
				Analysis Turnaround Time	

								<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS				
								TAT if different from Below _____				
								<input type="checkbox"/> 24 Hours <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 5 Business Days <input checked="" type="checkbox"/> 10 Business Days (Standard)				
ITEM#	SAMPLE ID Samples IDs MUST BE UNIQUE	SAMPLE LOCATION	Sample Depth		MATRIX CODE	G= GRAB C=COMP	SAMPLE TYPE	SAMPLE DATE	SAMPLE TIME	# OF CONTAINERS	Comments/ Lab Sample I.D.	MIS/MSD
			Depth Unit	Feet								
			Start Depth	End Depth								
1	JSF-SED-PB04-CORCC-0.0/0.5-20181218	PB04	0	0.5	SED	G	N	12/18/2018	1554	1		<input type="checkbox"/>
2	JSF-SED-PB04-CORCC-0.5/1.8-20181218	PB04	0.5	1.8	SED	G	N	12/18/2018	1554	1		<input type="checkbox"/>
3	JSF-SED-PB04-CORRB-0.0/0.5-20181218	PB04	0	0.5	SED	G	N	12/18/2018	1615	1		<input type="checkbox"/>
4	JSF-SED-PB04-CORRB-0.5/1.2-20181218	PB04	0.5	1.2	SED	G	N	12/18/2018	1615	1		<input type="checkbox"/>
5	JSF-SED-PB03-DUP01-20181218	PB03	NA	NA	SED	G	N	12/18/2018	NA	1	Duplicate	<input type="checkbox"/>
6	JSF-SED-PB05-CORCC-0.0/0.5-20181219	PB05	0	0.5	SED	G	N	12/19/2018	0920	1		<input type="checkbox"/>
7	JSF-SED-PB05-CORCC-0.5/0.9-20181219	PB05	0.5	0.9	SED	G	N	12/19/2018	0920	1		<input type="checkbox"/>
8	JSF-SED-PB09-CORCC-0.0/0.5-20181219	PB09	0	0.5	SED	G	N	12/19/2018	1040	1		<input type="checkbox"/>
9	JSF-SED-PB06-CORCC-0.0/0.5-20181219	PB06	0	0.5	SED	G	N	12/19/2018	1155	1		<input type="checkbox"/>
10	JSF-SED-PB07-CORCC-0.0/0.5-20181219	PB07	0	0.5	SED	G	N	12/19/2018	1230	1		<input type="checkbox"/>
11	JSF-SED-PB08-CORCC-0.0/0.5-20181219	PB08	0	0.5	SED	G	N	12/19/2018	1255	1		<input type="checkbox"/>
12												<input type="checkbox"/>
13												<input type="checkbox"/>

Additional Comments/Special Instructions:	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions			
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Additional volume can be used for Laboratory Duplicate.	<i>Tyler Baker / TVA</i>	12-20-18	1400	<i>W. Can. of RJL Group</i>	12-21-18	10:52	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Samples designated "Hold" should not be analyzed until directed otherwise.	SHIPPING METHOD:			SAMPLER NAME AND SIGNATURE			Temperature in °C	Sample on Ice?	Sample Intact?	Trip Blank?
	<i>Fed-Ex</i>			<i>Tyler Baker Tyler Baker</i>						

Monica Carse

From: Danielle Coles <dcoles@envstd.com>
Sent: Friday, December 28, 2018 8:09 AM
To: Monica Carse; TVA-EI; TVA_Deliverables
Cc: Amanda Cover
Subject: RE: SRC Report AOH1052409-0
Attachments: JSF_SED_20181218_1C_REV 1.pdf

Hi Monica,

A revised COC is attached to update the sample type for the field duplicate sample on page 2 of 2.

Thanks!

Danielle Coles
Staff Chemist I
Environmental Standards, Inc.
1140 Valley Forge Road • PO Box 810 • Valley Forge, PA 19482
610.935.5577 x419 • www.envstd.com • dcoles@envstd.com

Emergency Response Quality Assurance Hotline: 855.374.7272



From: Monica Carse [<mailto:MCarse@rjleegroup.com>]
Sent: Wednesday, December 26, 2018 8:49 AM
To: TVA-EI <tva-ei@envstd.com>; TVA_Deliverables <tva_deliverables@envstd.com>
Subject: SRC Report AOH1052409-0

Good Morning,

Attached is the sample receipt confirmation report for the samples I received on Friday, December 21st. If I can be of further assistance, please don't hesitate to contact me.

Have a Great Day!
Monica

Monica Carse

Project Coordinator, TEM Department
RJ Lee Group

724.325.1776 Office

724.387.1927 Direct

MCarse@rjleegroup.com

[Website](#) | [Lab Services](#) | [Shop](#) | [Pay My Bill](#)

350 Hochberg Road | Monroeville, PA 15146

RJ Lee Group will be closed December 24th and 25th for the Christmas holiday, and January 1st New Years Day. Please note this may affect project turnaround times. Have a very happy holiday season!

How are we doing? Take the [Customer Survey](#).

The information contained in this e-mail message, together with any attachments thereto, is intended only for the personal and confidential use of the addressee[s] named above. The message and the attachments are or may be an attorney-client or other privileged or protected communication. If you are not the intended recipient of this message, or authorized to receive it for the intended recipient, you have received this message in error. You are not to review, use, disseminate, distribute or copy this message, any attachments thereto, or their contents. If you have received this message in error, please immediately notify us by return e-mail message, and delete the original message. Thank you for your assistance.

Appendix B
Mineral Identification Report

Mineral Identification

Polarized Light Microscopy (PLM) Laboratory Report

Roy Quinn
TVA Cumberland Fossil Plant
815 Cumberland City Road
Cumberland City, TN 37050 United States
Email: jrquinn@tva.gov
Main: 423-751-3753

Report Date: 12/26/2018
Sample Received Date: 12/21/2018
RJLG Project: AOH1052409-0
Customer COC: JSF_SED_20181218_1C
Purchase Order:
Analytical Method: Fly Ash Determination by PLM

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
JSF-SED-PB01-CORCC-0.0/0.5-20181218	10459425	12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB02-CORCC-0.0/0.5-20181218	10459423	12/30/2018	12/18/2018	1%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB02-CORCC-0.5/2.5-20181218	10459424	12/30/2018	12/18/2018	1%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB03-CORCC-0.0/0.5-20181218	10459419	12/30/2018	12/18/2018	2%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB03-CORCC-0.5/1.2-20181218	10459420	12/30/2018	12/18/2018	2%	Opaques Quartz	Beige Sediment.
JSF-SED-PB03-CORLB-0.0/0.5-20181218	10459417	12/30/2018	12/18/2018	2%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB03-CORLB-0.5/1.4-20181218	10459418	12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
JSF-SED-PB03-CORRB-010459421 .0/0.5-20181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB03-CORRB-010459422 .5/1.6-20181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB03-DUP01-2 10459432 0181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB04-CORCC- 10459428 0.0/0.5-20181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB04-CORCC- 10459429 0.5/1.8-20181218		12/30/2018	12/18/2018	1%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB04-CORLB-0 10459426 .0/0.5-20181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB04-CORLB-0 10459427 .5/1.0-20181218		12/30/2018	12/18/2018	2%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB04-CORRB-010459430 .0/0.5-20181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB04-CORRB-010459431 .5/1.2-20181218		12/30/2018	12/18/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB05-CORCC- 10459433 0.0/0.5-20181219		12/30/2018	12/19/2018	ND	Carbonate Opaques Quartz	Beige Sediment.

Customer Sample # :	RJLG ID	Date Analyzed	Date Collected	Area % Fly Ash	Non-Fly Ash Components	Comments
JSF-SED-PB05-CORCC- 0.5/0.9-20181219	10459434	12/30/2018	12/19/2018	4%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB06-CORCC- 0.0/0.5-20181219	10459436	12/30/2018	12/19/2018	7%	Carbonate Opaques Quartz	Beige Sediment.
JSF-SED-PB07-CORCC- 0.0/0.5-20181219	10459437	12/30/2018	12/19/2018	5%	Carbonate Opaques Quartz	Gray Sediment.
JSF-SED-PB08-CORCC- 0.0/0.5-20181219	10459438	12/30/2018	12/19/2018	2%	Carbonate Opaques Quartz	Tan Sediment.
JSF-SED-PB09-CORCC- 0.0/0.5-20181219	10459435	12/30/2018	12/19/2018	ND	Carbonate Opaques Quartz	Beige Sediment.
QC01_JS-F-SED-PB03-C ORRB-0.5/1.6-20181218	10459439	12/30/2018	12/18/2018	ND	NA	Beige Sediment.
QC02_JS-F-SED-PB09-C ORCC-0.0/0.5-20181219	10459440	12/30/2018	12/19/2018	ND	NA	Beige Sediment.

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 Lab Code 101208-0 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.

Opakes – 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.

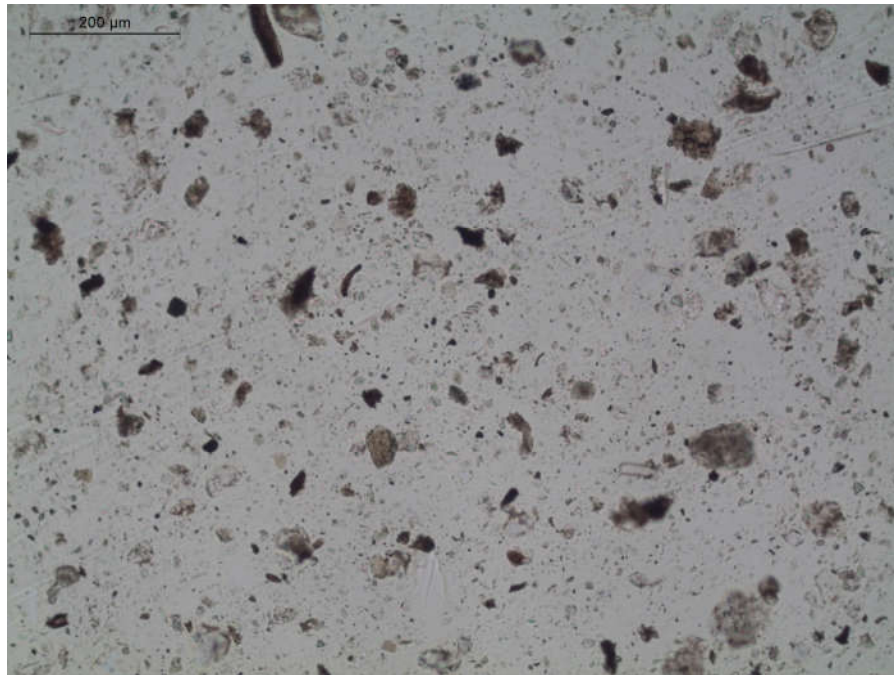
ND – No Fly Ash detected.

Appendix C

Polarized Light Microscopy Images

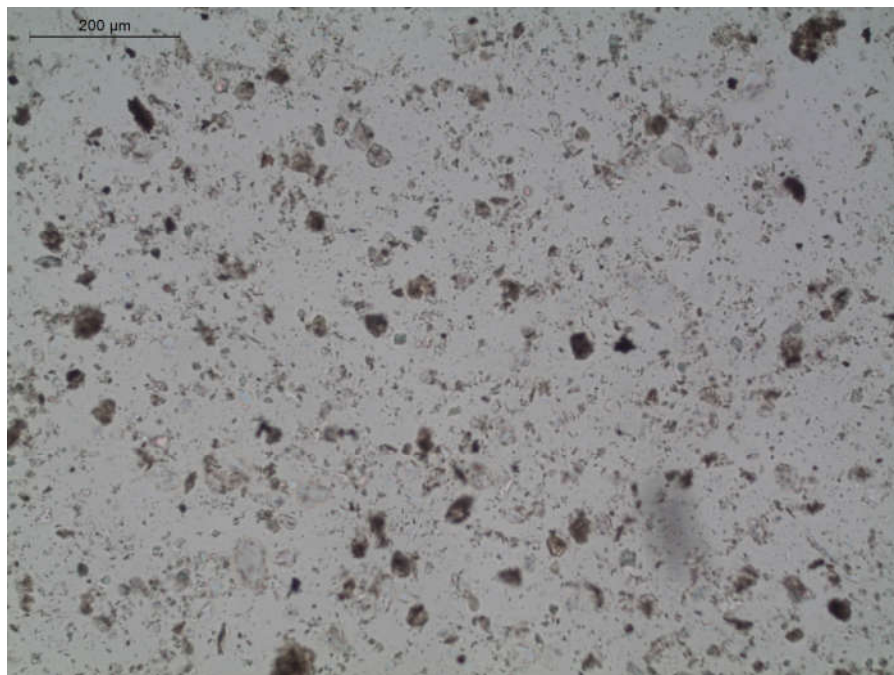
Bench Sheets

QC Tabulation



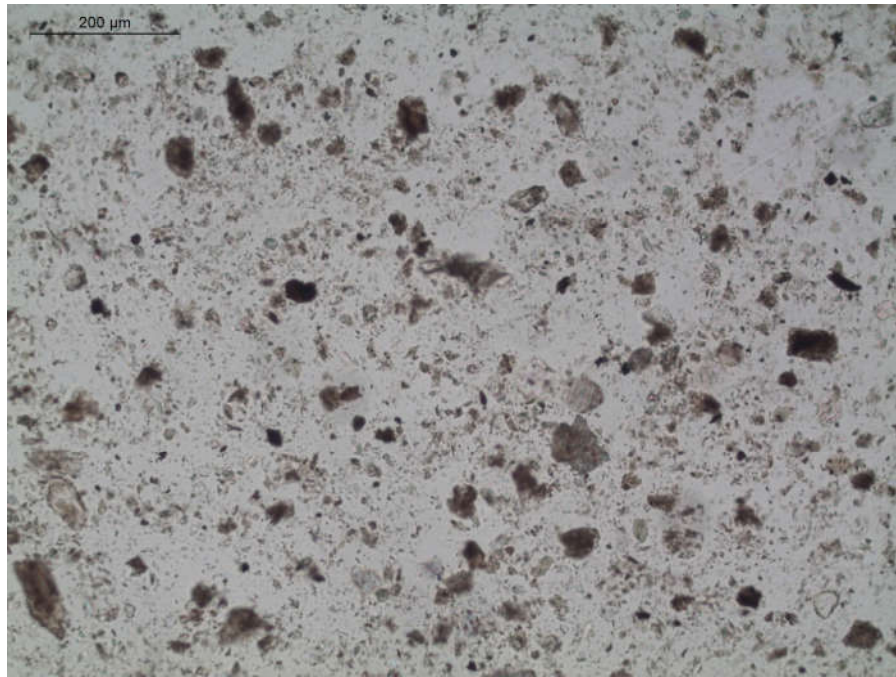
Sample #JSF-SED-PB03-CORLB-0.0/0.5-20181218. RJLG ID 10459417.

Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



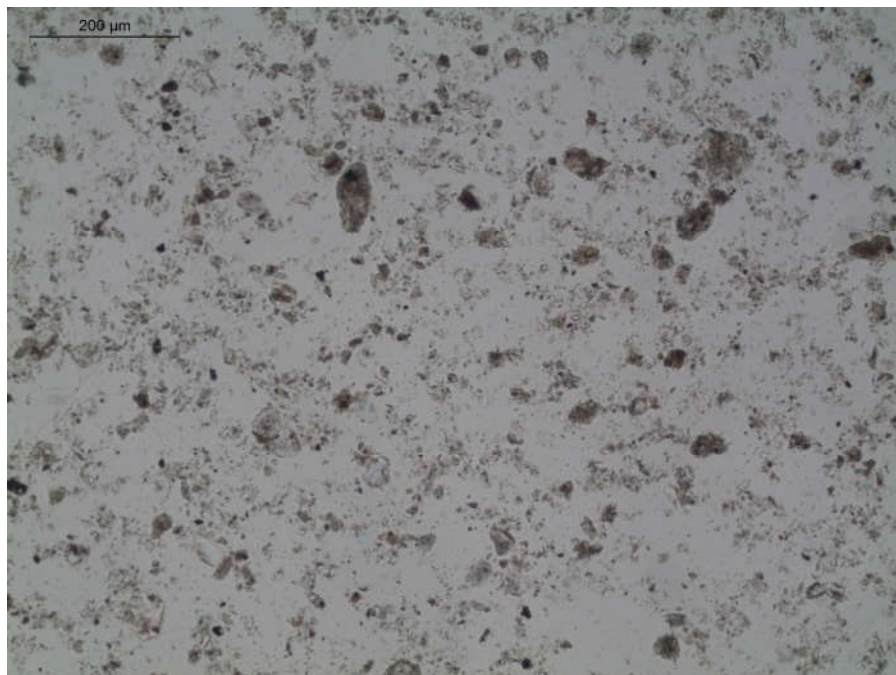
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



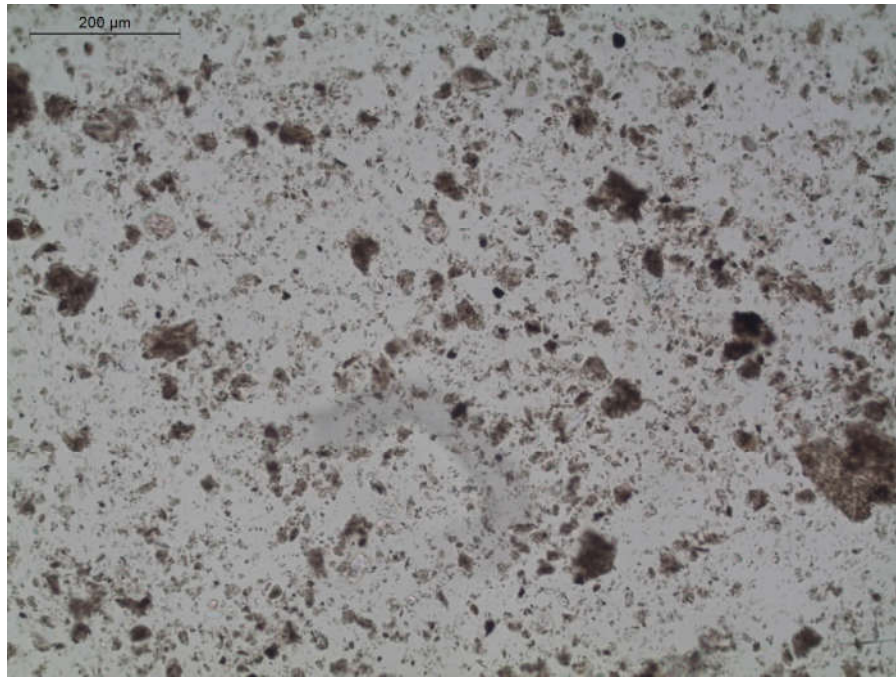
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



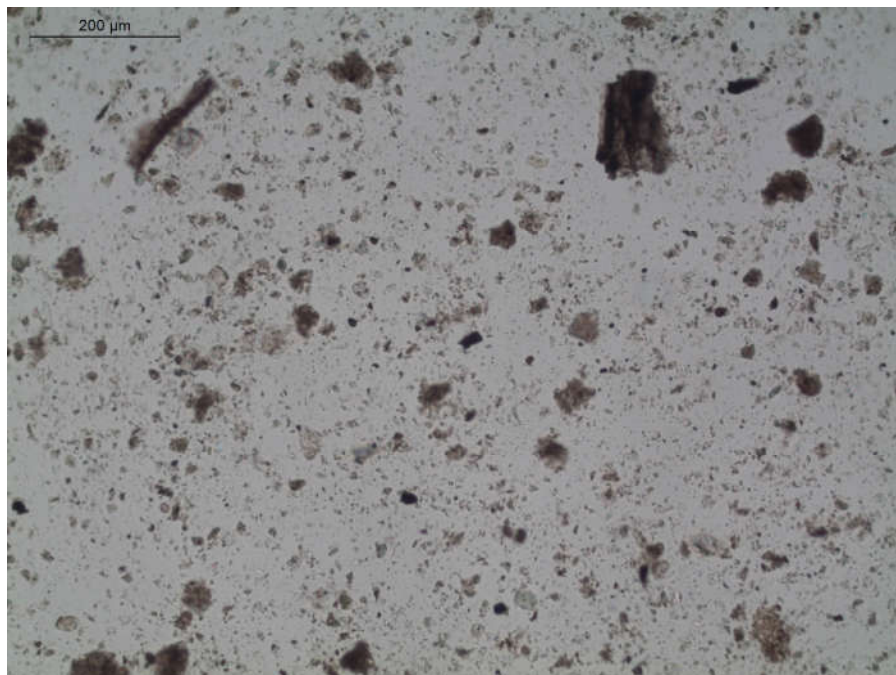
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



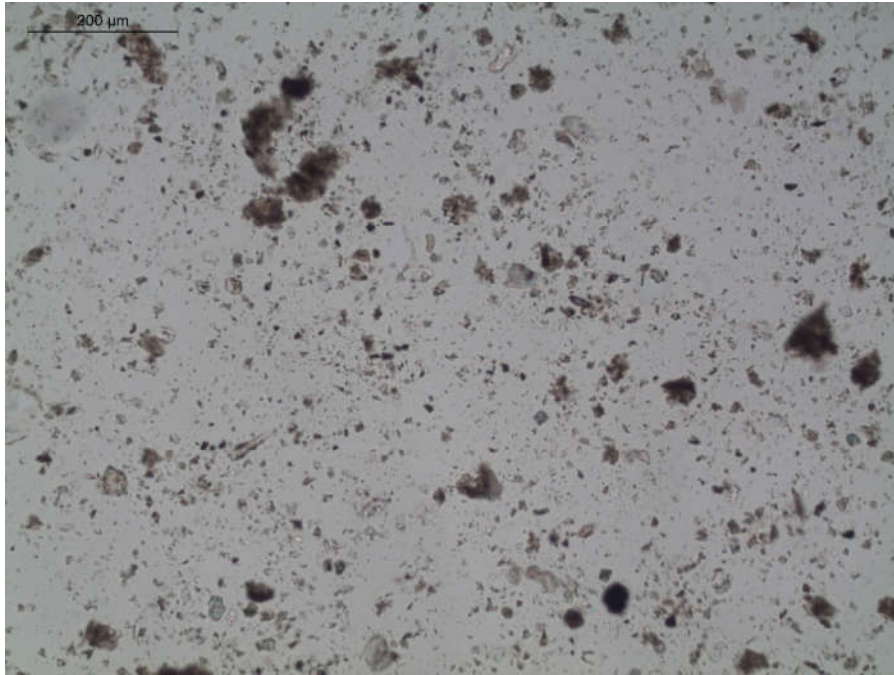
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



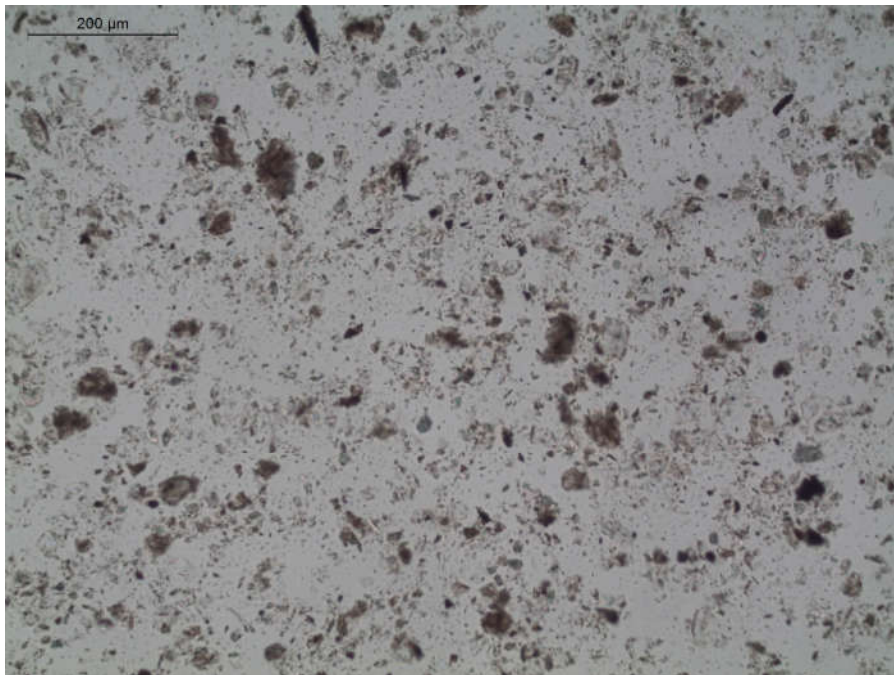
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



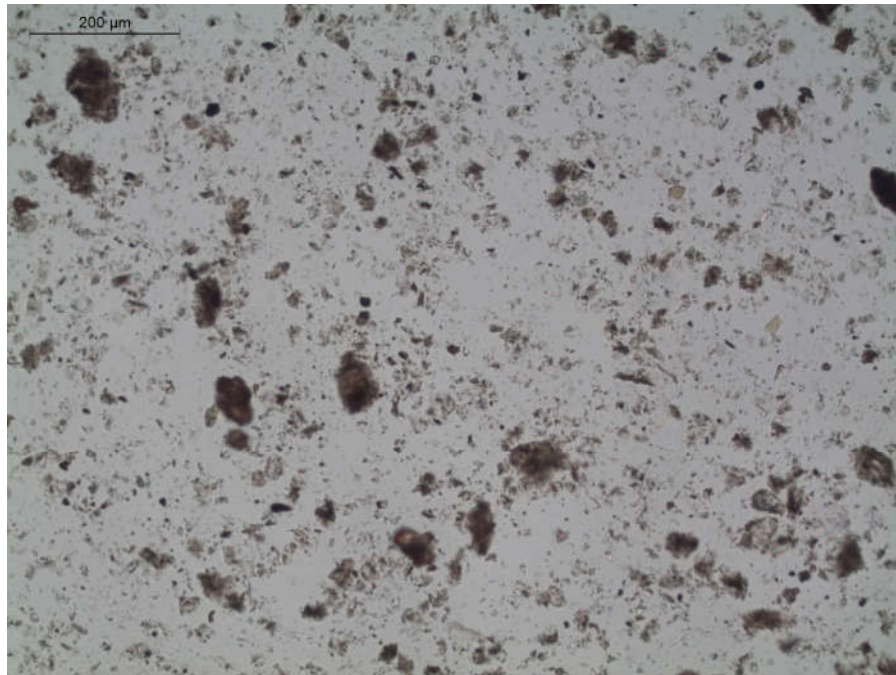
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



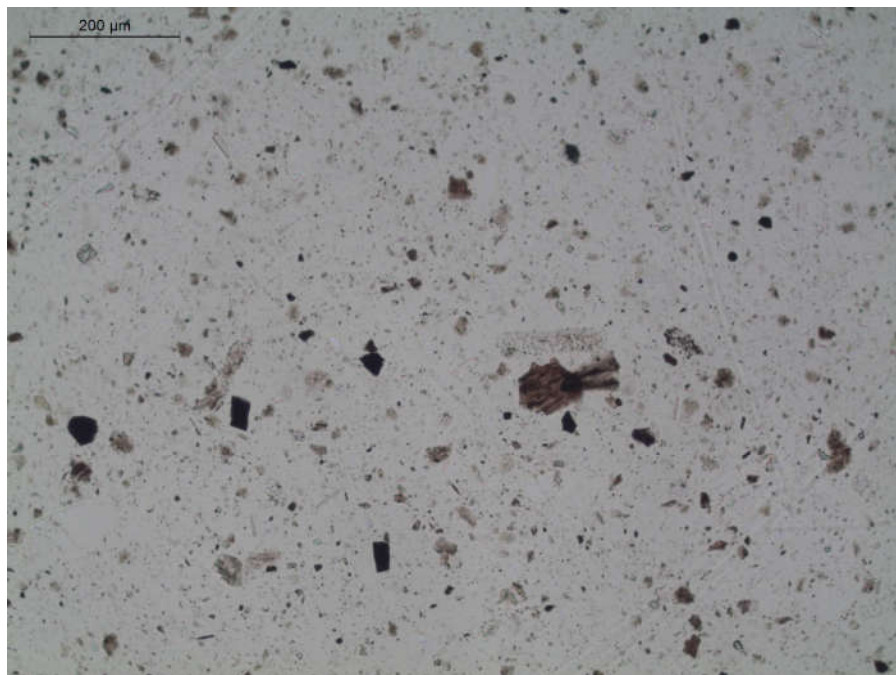
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



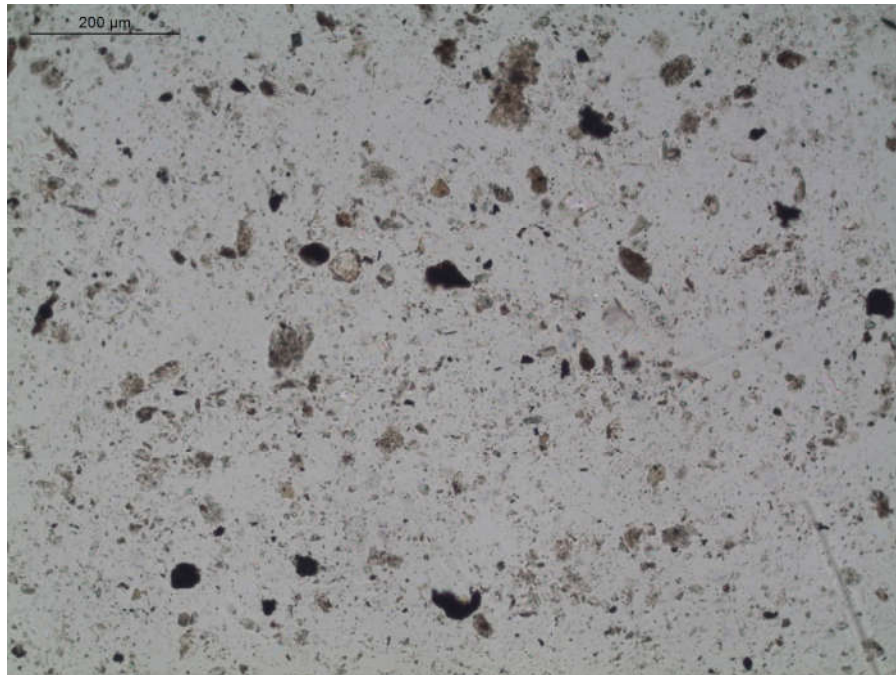
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



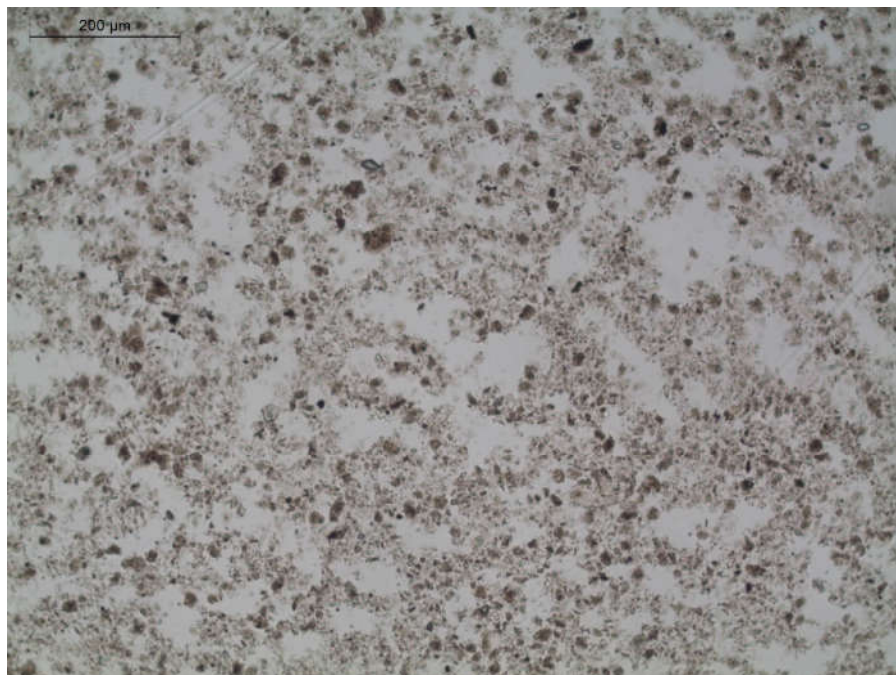
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



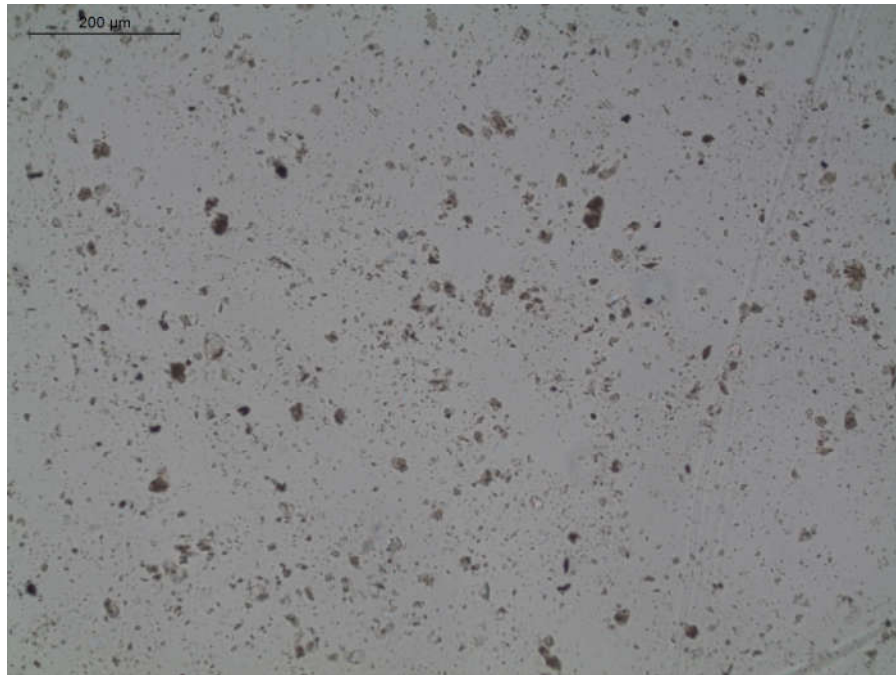
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



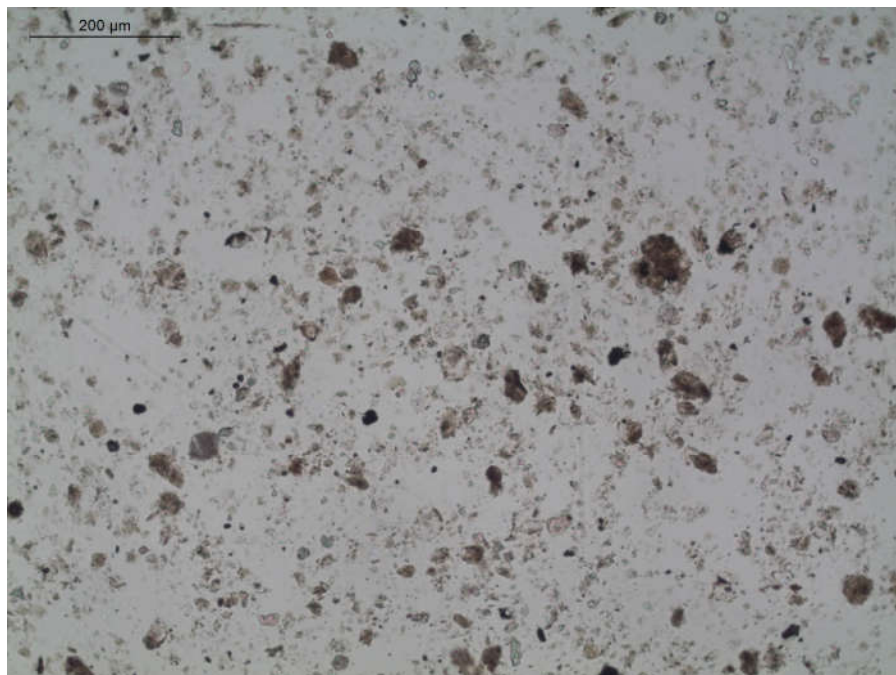
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



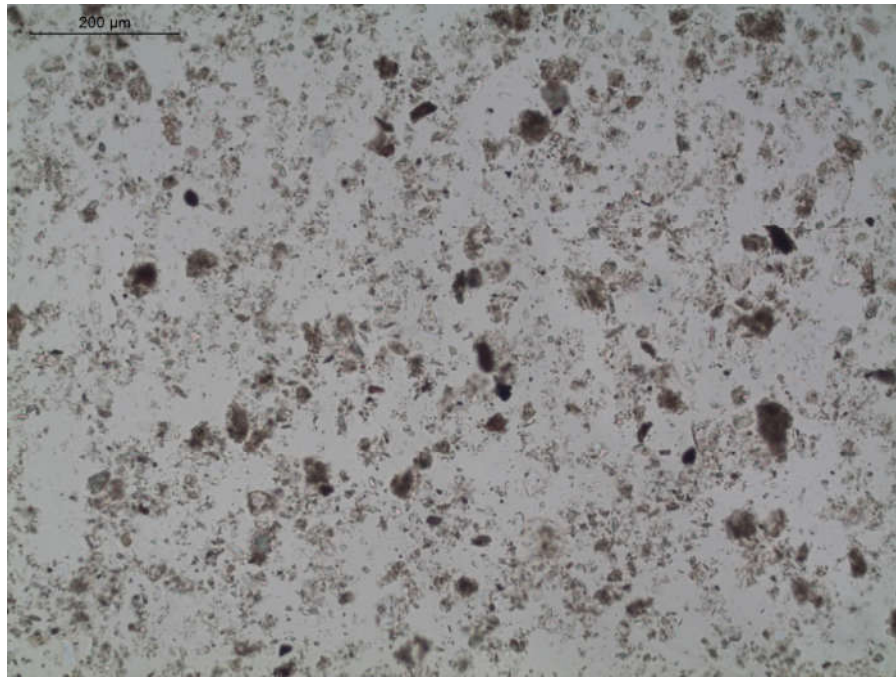
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



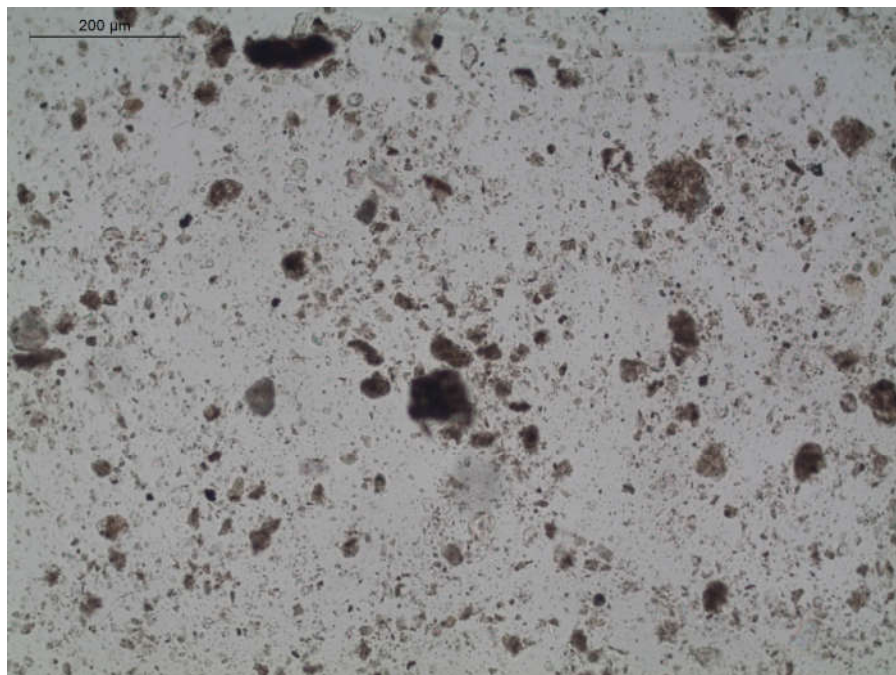
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



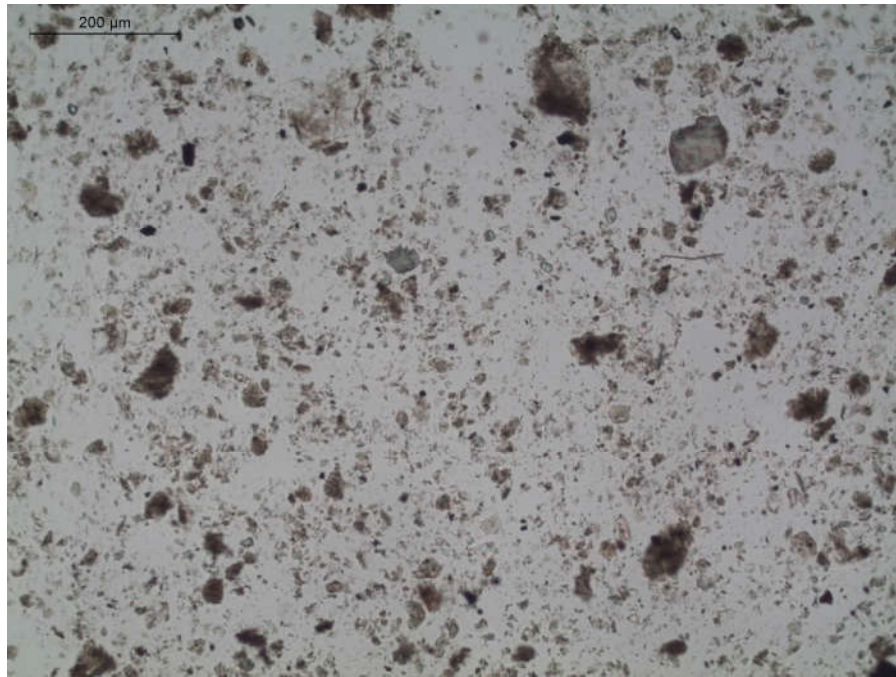
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



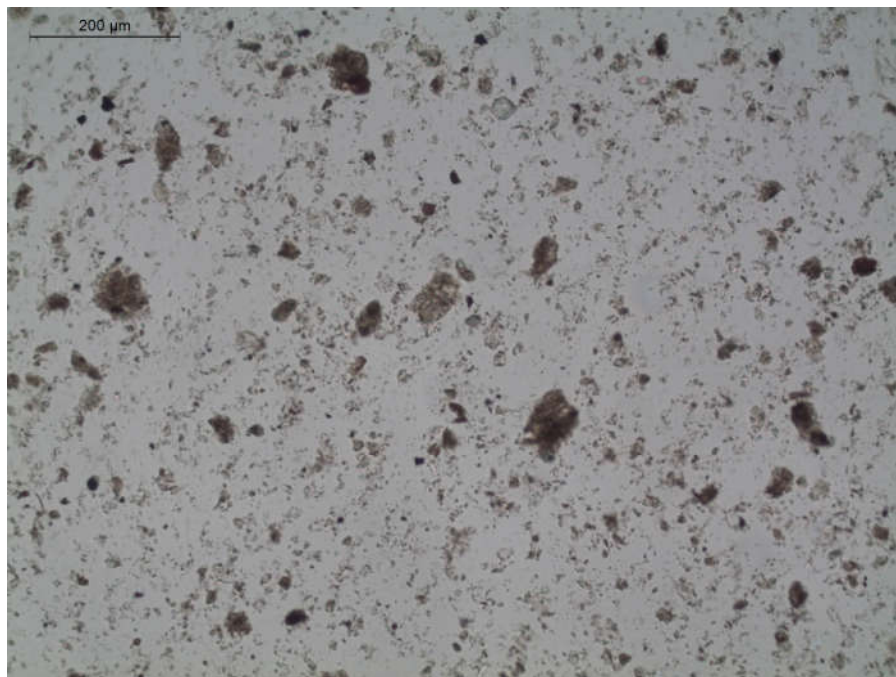
Sample #JSF-SED-PB03-DUP01-20181218. RJLG ID 10459432.

Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



Sample #JSF-SED-PB05-CORCC-0.0/0.5-20181219. RJLG ID 10459433.

Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



Sample #JSF-SED-PB05-CORCC-0.5/0.9-20181219. RJLG ID 10459434.

Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



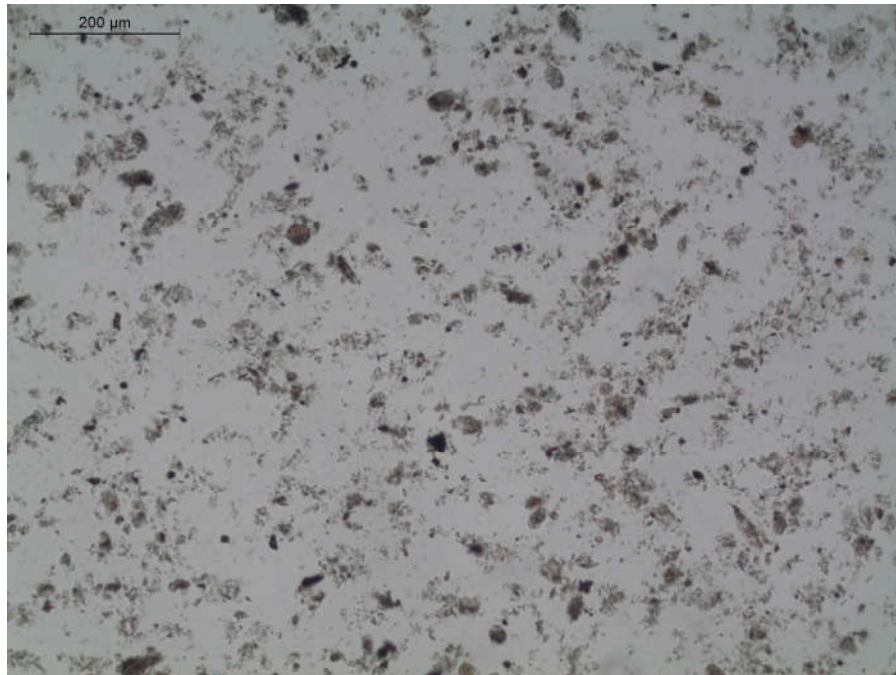
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



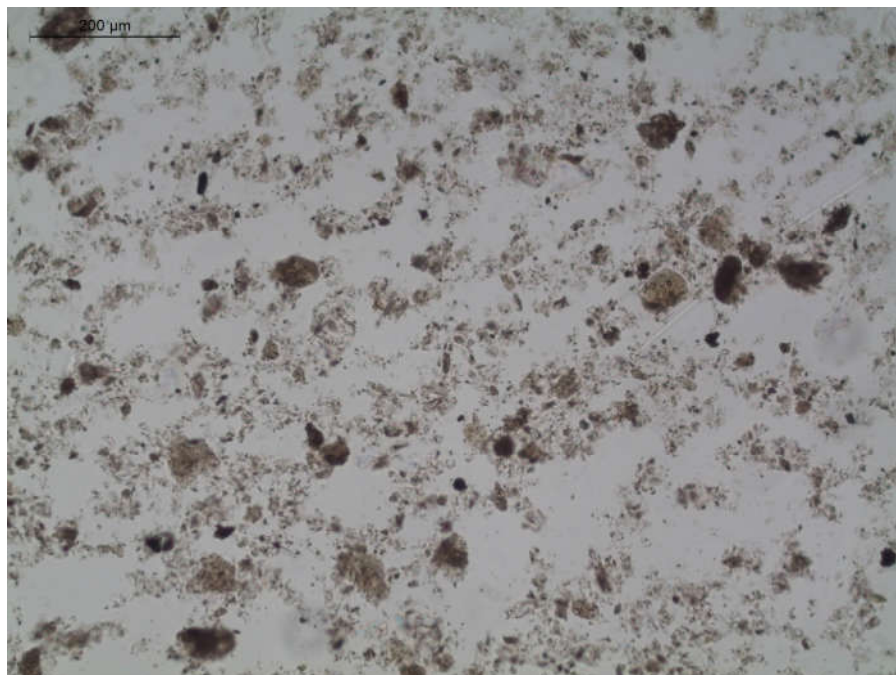
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



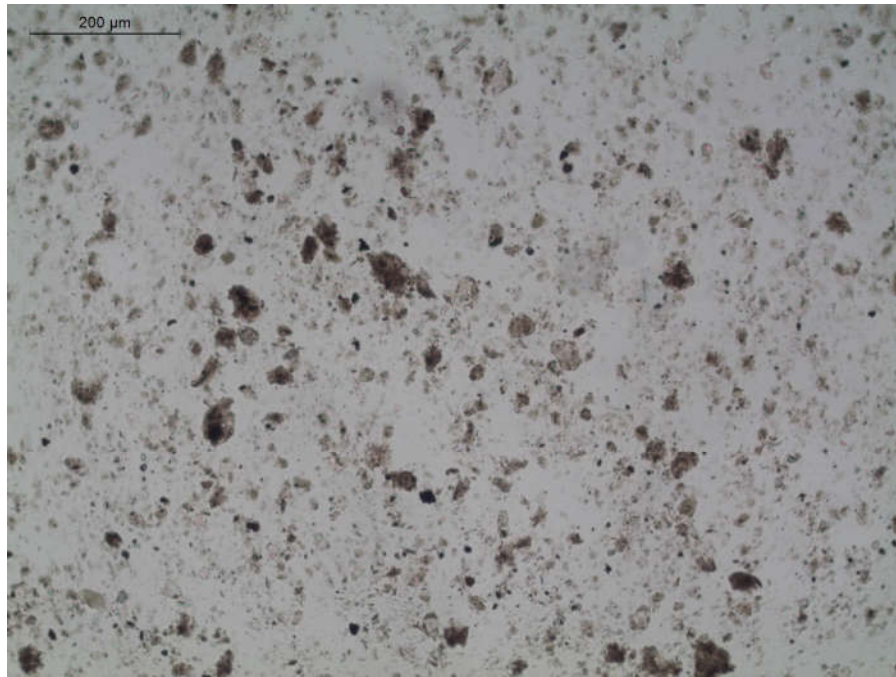
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Photomicrograph of sample in plane polarized light illustrating overall sample appearance.

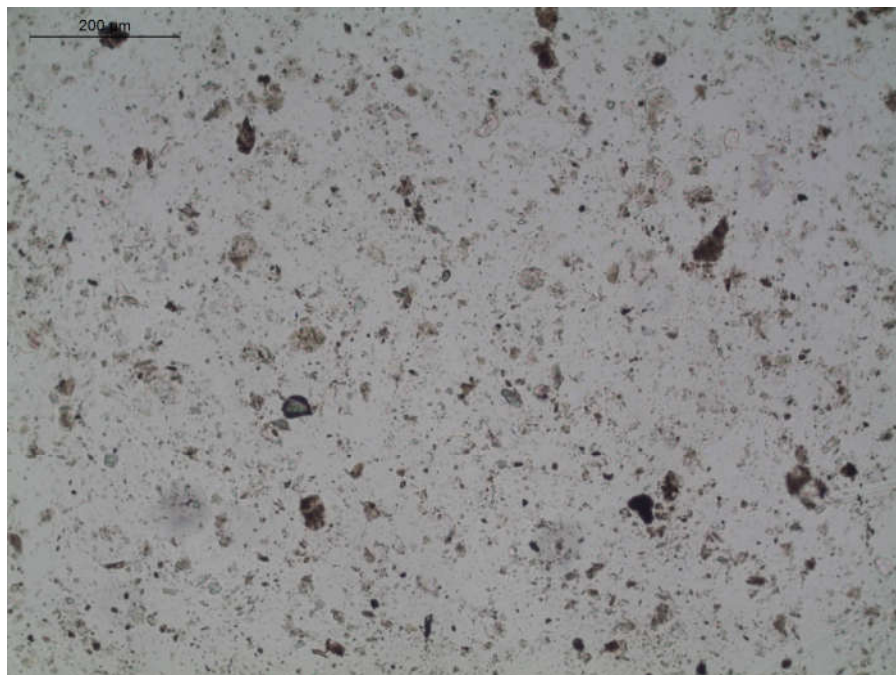


Sample #JSF-SED-PB08-CORCC-0.0/0.5-20181219. RJLG ID 10459438.

Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



Sample #QC01_JSF-SED-PB03-CORRB-0.5/1.6-20181218. RJLG ID 10459439.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.



Sample #QC02_JSF-SED-PB09-CORCC-0.0/0.5-20181219. RJLG ID 10459440.
Photomicrograph of sample in plane polarized light illustrating overall sample appearance.

Fly Ash Bench Sheet

RJLG ID: 10459417

Customer Sample # : JSF-SED-PB03-CORLB-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:04

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:04:38.697

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459418

Customer Sample # : JSF-SED-PB03-CORLB-0.5/1.4-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:06

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:06:34.977

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459419

Customer Sample # : JSF-SED-PB03-CORCC-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:07

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:07:57.397

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459420

Customer Sample #: JSF-SED-PB03-CORCC-0.5/1.2-20181218

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

Non-Fly Ash
Components

Opakes
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:09

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:09:11.197

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459421

Customer Sample # : JSF-SED-PB03-CORRB-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:10

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:10:21.4

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459422

Customer Sample # : JSF-SED-PB03-CORRB-0.5/1.6-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:11

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:11:35.203

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459423

Customer Sample # : JSF-SED-PB02-CORCC-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

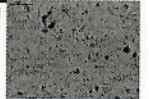
Analysis Time: 13:12

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:12:45.223

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459424

Customer Sample # : JSF-SED-PB02-CORCC-0.5/2.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:13

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:13:56.987

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459425

Customer Sample #: JSF-SED-PB01-CORCC-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:15

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:15:08.59

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459426

Customer Sample # : JSF-SED-PB04-CORLB-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:16

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:16:44.59

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459427

Customer Sample # : JSF-SED-PB04-CORLB-0.5/1.0-20181218

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

Non-Fly Ash
Components

Carbonate
Opakes
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:18

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:18:02.773

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459428

Customer Sample #: JSF-SED-PB04-CORCC-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:19

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:19:21.65

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459429

Customer Sample # : JSF-SED-PB04-CORCC-0.5/1.8-20181218

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:20

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:20:36.843

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459430

Customer Sample #: JSF-SED-PB04-CORRB-0.0/0.5-20181218

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

Non-Fly Ash
Components

Carbonate
Opakes
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

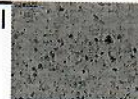
Analysis Time: 13:21

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:21:47.453

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459431

Customer Sample #: JSF-SED-PB04-CORRB-0.5/1.2-20181218

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:22

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:22:56.94

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459432

Customer Sample # : JSF-SED-PB03-DUP01-20181218

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

Non-Fly Ash
Components

Carbonate
Opakes
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:24

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:24:07.613

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459433

Customer Sample # : JSF-SED-PB05-CORCC-0.0/0.5-20181219

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

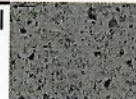
Analysis Time: 13:25

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:25:12.117

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459434

Customer Sample #: JSF-SED-PB05-CORCC-0.5/0.9-20181219

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:26

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:26:27.253

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459435

Customer Sample # : JSF-SED-PB09-CORCC-0.0/0.5-20181219

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:27

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:27:39.74

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459436

Customer Sample # : JSF-SED-PB06-CORCC-0.0/0.5-20181219

Slide 1: 1 Slide 2: 2 Slide 3: 3 Slide 4: 1 Fly Ash % 7%

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:28

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:28:59.437

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459437

Customer Sample # : JSF-SED-PB07-CORCC-0.0/0.5-20181219

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Gray Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:31

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:31:54.417

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Fly Ash Bench Sheet

RJLG ID: 10459438

Customer Sample # : JSF-SED-PB08-CORCC-0.0/0.5-20181219

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Tan Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:33

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:33:36.893

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459439

Customer Sample # : QC01_JSF-SED-PB03-CORRB-0.5/1.6-20181218

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

Non-Fly Ash
Components

Carbonate
Opagues
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:34

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:34:46.99

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

RJLG ID: 10459440

Customer Sample # : QC02_JSF-SED-PB09-CORCC-0.0/0.5-20181219

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

Non-Fly Ash
Components

Carbonate
Opaques
Quartz

Other Components:

Results Comments:

Beige Sediment.

Analysis Date: 2018-12-30

Analysis Time: 13:37

Result Last Modified By: Wei Tseng

Result Last Modified On: 2018-12-30 13:37:40.103

Images:

Image Path: \\hq.rjlg.com\dfs\Department\pool28-PA_Optical\2018 Completed Projects\TVA_John Sevier Fossil



Initials: WT

Date: 12/30/18

Laboratory_____ PLM

RSD:_____

Job #	Sample #	Analyst	Result	QC Analyst	Result	Pass or Fail	Retest? (Y or N)	CV Value	RSD	Comments
AOH1052409-0	JSF-SED-PB03-CORRB-0.5/1.6-20181218	WT	0	WT	0	Pass	No	#DIV/0!	#DIV/0!	
	JSF-SED-PB09-CORCC-0.0/0.5-20181219	WT	0	WT	0	Pass	No	#DIV/0!	#DIV/0!	