

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of the:

John Sevier Fish

Data Verification was performed in accordance with the Tennessee Valley Authority Environmental Investigation Plan, John Sevier Fossil Plant (JSF EIP; Revision 3, October 2018). This review was performed with guidance from the National Functional Guidelines for Inorganic Data Review (US EPA, October 2004); the US EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); and the US EPA Region IV Data Validation Standard Operating Procedures. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

40197846

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Unit
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Arsenic	T	0.059	J	RL	0.029	0.096	MG/KG
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Barium	T	0.11	J	M-	0.029	0.096	MG/KG
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Cobalt	T	0.031	J	RL	0.018	0.096	MG/KG
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Copper	T	0.74	J	RL	0.27	0.91	MG/KG
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Molybdenum	T	0.037	J	RL	0.034	0.11	MG/KG
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Strontium	T	0.33	J	M-	0.15	0.52	MG/KG
JSF-FH-RS-O-DUP01-20190430	JSF-HRU	FD	SW-846 7473	Mercury	T		U*	BL	0.018	0.025	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Arsenic	T	0.69	J	FD	0.060	0.20	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Barium	T	0.38	J	M-	0.061	0.20	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Calcium	T	164	J	RL	50.8	169	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Cobalt	T	0.078	J	RL	0.038	0.20	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Copper	T	1.2	J	RL	0.57	1.9	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Strontium	T	0.43	J	M-	0.32	1.1	MG/KG
JSF-FH-RS-O-DUP02-20190515	JSF-HRA2	FD	SW-846 7473	Mercury	T		U*	BL	0.024	0.025	MG/KG
JSF-FH-RS-HRA1-L-20190515	JSF-HRA1	N	SW-846 6020A	Barium	T		UJ	M-	0.056	0.18	MG/KG
JSF-FH-RS-HRA1-L-20190515	JSF-HRA1	N	SW-846 6020A	Cadmium	T	0.053	J	RL	0.020	0.18	MG/KG
JSF-FH-RS-HRA1-L-20190515	JSF-HRA1	N	SW-846 6020A	Calcium	T		U*	BE	83.3	154	MG/KG
JSF-FH-RS-HRA1-L-20190515	JSF-HRA1	N	SW-846 6020A	Strontium	T		UR	M-	0.29	0.98	MG/KG
JSF-FH-RS-HRA1-L-20190515	JSF-HRA1	N	SW-846 6020A	Vanadium	T	0.19	J	RL	0.061	0.20	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Arsenic	T	0.086	J	FD	0.059	0.20	MG/KG

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Unit
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Barium	T	0.11	J	M-	0.060	0.20	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Cadmium	T	0.039	J	RL	0.021	0.20	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Calcium	T		U*	BE	103	166	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Cobalt	T	0.17	J	RL	0.037	0.20	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Copper	T	1.1	J	FD	0.56	1.9	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Molybdenum	T	0.13	J	RL	0.070	0.24	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Selenium	T	1.8	J	FD	0.099	0.33	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Strontium	T		UR	M-	0.32	1.1	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 6020A	Vanadium	T	0.066	J	RL	0.065	0.22	MG/KG
JSF-FH-RS-HRA2-L-20190507	JSF-HRA2	N	SW-846 7473	Mercury	T		U*	BL	0.076	0.076	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Arsenic	T	0.095	J	RL	0.057	0.19	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Barium	T	0.083	J	M-	0.058	0.19	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Cadmium	T	0.081	J	RL	0.021	0.19	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Calcium	T		U*	BE	66.1	159	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Cobalt	T	0.15	J	RL	0.036	0.19	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Copper	T	1.0	J	RL	0.53	1.8	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Molybdenum	T	0.12	J	RL	0.067	0.23	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Strontium	T		UR	M-	0.30	1.0	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Thallium	T	0.028	J	RL	0.024	0.19	MG/KG
JSF-FH-RS-HRD-L-20190430	JSF-HRD	N	SW-846 6020A	Vanadium	T	0.14	J	RL	0.063	0.21	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Barium	T		UJ	M-	0.057	0.19	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Cadmium	T	0.074	J	RL	0.021	0.19	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Calcium	T		U*	BE	87.0	159	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Cobalt	T	0.11	J	RL	0.036	0.19	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Copper	T	1.2	J	RL	0.53	1.8	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Molybdenum	T	0.15	J	RL	0.067	0.23	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Strontium	T		UR	M-	0.30	1.0	MG/KG
JSF-FH-RS-HRU-L-20190430	JSF-HRU	N	SW-846 6020A	Vanadium	T	0.19	J	RL	0.062	0.21	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Arsenic	T	0.11	J	RL	0.059	0.20	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Barium	T		UJ	M-	0.060	0.20	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Cadmium	T	0.035	J	RL	0.022	0.20	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Calcium	T		U*	BE	78.8	167	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Cobalt	T	0.13	J	RL	0.037	0.20	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Copper	T	1.2	J	RL	0.56	1.9	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Molybdenum	T	0.14	J	RL	0.070	0.24	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Strontium	T		UR	M-	0.32	1.1	MG/KG
JSF-FH-RS-L-DUP01-20190430	JSF-HRU	FD	SW-846 6020A	Vanadium	T	0.15	J	RL	0.066	0.22	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Arsenic	T	1.2	J	FD	0.060	0.20	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Barium	T	0.25	J	M-	0.061	0.20	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Cadmium	T	0.12	J	RL	0.022	0.20	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Calcium	T		U*	BE	90.8	168	MG/KG

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Unit
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Copper	T	8.4	J	FD	0.56	1.9	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Molybdenum	T	0.18	J	RL	0.071	0.24	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Selenium	T	3.3	J	FD	0.10	0.34	MG/KG
JSF-FH-RS-L-DUP02-20190515	JSF-HRA2	FD	SW-846 6020A	Strontium	T		UR	M-	0.32	1.1	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 6020A	Barium	T	4.9	J	M-	0.15	0.50	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 6020A	Cobalt	T	0.18	J	RL	0.095	0.50	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 6020A	Lead	T	0.28	J	RL	0.15	0.50	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 6020A	Selenium	T	0.39	J	RL	0.25	0.85	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 6020A	Strontium	T	15.6	J	M-	0.80	2.7	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 6020A	Zinc	T	19.8	J	RL	7.0	23.3	MG/KG
JSF-FH-SH-HRA1-WF-20190430	JSF-HRA1	N	SW-846 7473	Mercury	T		U*	BL	0.039	0.039	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 6020A	Barium	T	3.2	J	M-	0.15	0.48	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 6020A	Cobalt	T	0.17	J	RL	0.092	0.48	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 6020A	Lead	T		U*	BE	0.18	0.48	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 6020A	Selenium	T	0.38	J	RL	0.25	0.82	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 6020A	Strontium	T	11.6	J	M-	0.78	2.6	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 6020A	Zinc	T	15.1	J	RL	6.8	22.6	MG/KG
JSF-FH-SH-HRA2-WF-20190430	JSF-HRA2	N	SW-846 7473	Mercury	T		U*	BL	0.034	0.034	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Arsenic	T	0.15	J	RL	0.14	0.47	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Barium	T	4.3	J	M-	0.14	0.47	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Chromium	T	0.54	J	RL	0.42	1.4	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Cobalt	T	0.24	J	RL	0.090	0.47	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Lead	T	0.40	J	RL	0.14	0.47	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Lithium	T	0.16	J	RL	0.10	0.47	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Nickel	T	0.23	J	RL	0.19	0.66	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Selenium	T	0.37	J	RL	0.24	0.80	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Strontium	T	14.3	J	M-	0.76	2.6	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Vanadium	T	0.21	J	RL	0.16	0.52	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 6020A	Zinc	T	20.0	J	RL	6.6	22.0	MG/KG
JSF-FH-SH-HRD-WF-20190430	JSF-HRD	N	SW-846 7473	Mercury	T		U*	BL	0.038	0.038	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Barium	T	5.0	J	M-	0.15	0.49	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Chromium	T	0.89	J	RL	0.43	1.4	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Cobalt	T	0.36	J	RL	0.093	0.49	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Copper	T	1.5	J	RL	1.4	4.7	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Lead	T	0.40	J	RL	0.15	0.49	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Lithium	T	0.34	J	RL	0.10	0.49	MG/KG

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Unit
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Nickel	T	0.41	J	RL	0.20	0.69	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Selenium	T	0.31	J	RL	0.25	0.83	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Strontium	T	7.2	J	M-	0.79	2.6	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Vanadium	T	0.22	J	RL	0.16	0.54	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 6020A	Zinc	T	17.0	J	RL	6.9	22.8	MG/KG
JSF-FH-SH-HRU-WF-20190430	JSF-HRU	N	SW-846 7473	Mercury	T		U*	BL	0.034	0.034	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Barium	T	3.6	J	M-	0.15	0.50	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Cobalt	T	0.19	J	RL	0.095	0.50	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Lead	T	0.21	J	RL	0.15	0.50	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Lithium	T	0.14	J	RL	0.11	0.50	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Selenium	T	0.32	J	RL	0.25	0.85	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Strontium	T	12.4	J	M-	0.80	2.7	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 6020A	Zinc	T	18.3	J	RL	7.0	23.2	MG/KG
JSF-FH-SH-WF-DUP01-20190430	JSF-HRA2	FD	SW-846 7473	Mercury	T		U*	BL	0.035	0.035	MG/KG

Data Qualifiers

U*	This result should be considered "not-detected" because it was detected in a rinsate blank or laboratory blank at a similar level.
UR	Unreliable reporting limit; analyte may or may not be present in sample.
R	Unreliable positive result; analyte may or may not be present in sample.
J	Quantitation is approximate due to limitations identified during data validation.
UJ	This analyte was not detected, but the reporting limit may or may not be higher due to a bias identified during data validation.

Reason Codes and Explanations

BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
H	Holding time exceeded.
L	LCS and LCSD recoveries outside of acceptance limits, indeterminate bias.
L+	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased high.
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits, indeterminate bias.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.
MP	MS/MSD imprecision.
Q	Chemical Preservation issue.
RL	Reported Results between the MDL and RL.

T	Temperature preservation issue.
X	Percent solids < 50%.
Y+	Chemical Yield outside of acceptance limits. The result may be biased high.
Y-	Chemical yield outside of acceptance limits. The result may be biased low.

				Lab Sample ID	40197846001									
				Sys Sample Code	JSF-FH-RS-O-DUP01-20190430									
				Sample Name	JSF-FH-RS-O-DUP01-20190430									
				Sample Date	4/30/2019 12:00:00 AM									
				Location	JSF-HRU									
				Sample Type	FD									
				Parent Sample	JSF-FH-RS-HRU-O-20190430									
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	64.8			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.020	0.020	0.096	N	Yes	1	WET
	Arsenic	7440-38-2	T	MG/KG	0.059	J	RL	0.029	0.029	0.096	Y	Yes	1	WET
	Barium	7440-39-3	T	MG/KG	0.11	J	M-	0.029	0.029	0.096	Y	Yes	1	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.032	0.032	0.11	N	Yes	1	WET
	Boron	7440-42-8	T	MG/KG		U		0.67	0.67	2.2	N	Yes	1	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.010	0.010	0.096	N	Yes	1	WET
	Calcium	7440-70-2	T	MG/KG	175			24.3	24.3	80.9	Y	Yes	1	WET
	Chromium	7440-47-3	T	MG/KG		U		0.085	0.085	0.28	N	Yes	1	WET
	Cobalt	7440-48-4	T	MG/KG	0.031	J	RL	0.018	0.018	0.096	Y	Yes	1	WET
	Copper	7440-50-8	T	MG/KG	0.74	J	RL	0.27	0.27	0.91	Y	Yes	1	WET
	Lead	7439-92-1	T	MG/KG		U		0.029	0.029	0.096	N	Yes	1	WET
	Lithium	7439-93-2	T	MG/KG		U		0.020	0.020	0.096	N	Yes	1	WET
	Molybdenum	7439-98-7	T	MG/KG	0.037	J	RL	0.034	0.034	0.11	Y	Yes	1	WET
	Nickel	7440-02-0	T	MG/KG		U		0.039	0.039	0.13	N	Yes	1	WET
	Selenium	7782-49-2	T	MG/KG	0.92			0.048	0.048	0.16	Y	Yes	1	WET
	Silver	7440-22-4	T	MG/KG		U		0.011	0.011	0.048	N	Yes	1	WET
	Strontium	7440-24-6	T	MG/KG	0.33	J	M-	0.15	0.15	0.52	Y	Yes	1	WET
	Thallium	7440-28-0	T	MG/KG		U		0.012	0.012	0.096	N	Yes	1	WET
	Vanadium	7440-62-2	T	MG/KG		U		0.032	0.032	0.11	N	Yes	1	WET
	Zinc	7440-66-6	T	MG/KG	30.7			1.3	1.3	4.5	Y	Yes	1	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.018	0.018	0.025	N	Yes	1	WET

				Lab Sample ID	40197846002									
				Sys Sample Code	JSF-FH-RS-O-DUP02-20190515									
				Sample Name	JSF-FH-RS-O-DUP02-20190515									
				Sample Date	5/15/2019 12:00:00 AM									
				Location	JSF-HRA2									
				Sample Type	FD									
				Parent Sample	JSF-FH-RS-HRA2-O-20190507									
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	61.4			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.042	0.042	0.20	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	0.69	J	FD	0.060	0.060	0.20	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG	0.38	J	M-	0.061	0.061	0.20	Y	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.066	0.066	0.22	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.4	1.4	4.7	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.022	0.022	0.20	N	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG	164	J	RL	50.8	50.8	169	Y	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.18	0.18	0.58	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.078	J	RL	0.038	0.038	0.20	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	1.2	J	RL	0.57	0.57	1.9	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.060	0.060	0.20	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.042	0.042	0.20	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.072	0.072	0.24	N	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.082	0.082	0.28	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	1.8			0.10	0.10	0.34	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.022	0.022	0.10	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG	0.43	J	M-	0.32	0.32	1.1	Y	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG		U		0.026	0.026	0.20	N	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG		U		0.067	0.067	0.22	N	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	33.0			2.8	2.8	9.3	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.024	0.024	0.025	N	Yes	1	WET

				Lab Sample ID	40197846003									
				Sys Sample Code	JSF-FH-RS-HRA1-L-20190515									
				Sample Name	JSF-FH-RS-HRA1-L-20190515									
				Sample Date	5/15/2019 6:30:00 PM									
				Location	JSF-HRA1									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	80.1			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.038	0.038	0.18	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	0.61			0.055	0.055	0.18	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG		UU	M-	0.056	0.056	0.18	N	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.060	0.060	0.20	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.3	1.3	4.2	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG	0.053	J	RL	0.020	0.020	0.18	Y	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG		U*	BE	83.3	83.3	154	N	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.16	0.16	0.53	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.54			0.035	0.035	0.18	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	2.2			0.52	0.52	1.7	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.055	0.055	0.18	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.039	0.039	0.18	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG	0.27			0.065	0.065	0.22	Y	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.075	0.075	0.25	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	2.1			0.092	0.092	0.31	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.020	0.020	0.091	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG		UR	M-	0.29	0.29	0.98	N	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG		U		0.024	0.024	0.18	N	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG	0.19	J	RL	0.061	0.061	0.20	Y	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	20.5			2.5	2.5	8.5	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG	0.15			0.0074	0.0074	0.025	Y	Yes	1	WET

				Lab Sample ID	40197846004									
				Sys Sample Code	JSF-FH-RS-HRA2-L-20190507									
				Sample Name	JSF-FH-RS-HRA2-L-20190507									
				Sample Date	5/7/2019 6:07:00 PM									
				Location	JSF-HRA2									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	79.3			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.041	0.041	0.20	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	0.086	J	FD	0.059	0.059	0.20	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG	0.11	J	M-	0.060	0.060	0.20	Y	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.065	0.065	0.22	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.4	1.4	4.6	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG	0.039	J	RL	0.021	0.021	0.20	Y	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG		U*	BE	103	103	166	N	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.17	0.17	0.57	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.17	J	RL	0.037	0.037	0.20	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	1.1	J	FD	0.56	0.56	1.9	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.059	0.059	0.20	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.042	0.042	0.20	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG	0.13	J	RL	0.070	0.070	0.24	Y	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.081	0.081	0.27	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	1.8	J	FD	0.099	0.099	0.33	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.022	0.022	0.098	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG		UR	M-	0.32	0.32	1.1	N	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG		U		0.025	0.025	0.20	N	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG	0.066	J	RL	0.065	0.065	0.22	Y	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	19.0			2.7	2.7	9.1	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.076	0.076	0.076	N	Yes	1	WET

				Lab Sample ID	40197846005									
				Sys Sample Code	JSF-FH-RS-HRD-L-20190430									
				Sample Name	JSF-FH-RS-HRD-L-20190430									
				Sample Date	4/30/2019 5:35:00 PM									
				Location	JSF-HRD									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	79.9			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.039	0.039	0.19	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	0.095	J	RL	0.057	0.057	0.19	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG	0.083	J	M-	0.058	0.058	0.19	Y	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.062	0.062	0.21	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.3	1.3	4.4	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG	0.081	J	RL	0.021	0.021	0.19	Y	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG		U*	BE	66.1	66.1	159	N	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.17	0.17	0.55	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.15	J	RL	0.036	0.036	0.19	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	1.0	J	RL	0.53	0.53	1.8	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.056	0.056	0.19	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.040	0.040	0.19	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG	0.12	J	RL	0.067	0.067	0.23	Y	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.077	0.077	0.26	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	1.9			0.095	0.095	0.32	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.021	0.021	0.094	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG		UR	M-	0.30	0.30	1.0	N	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG	0.028	J	RL	0.024	0.024	0.19	Y	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG	0.14	J	RL	0.063	0.063	0.21	Y	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	17.4			2.6	2.6	8.8	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG	0.12			0.0073	0.0073	0.024	Y	Yes	1	WET

				Lab Sample ID	40197846006									
				Sys Sample Code	JSF-FH-RS-HRU-L-20190430									
				Sample Name	JSF-FH-RS-HRU-L-20190430									
				Sample Date	4/30/2019 11:00:00 AM									
				Location	JSF-HRU									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	79.7			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.039	0.039	0.19	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	0.27			0.057	0.057	0.19	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG		UU	M-	0.057	0.057	0.19	N	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.062	0.062	0.21	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.3	1.3	4.4	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG	0.074	J	RL	0.021	0.021	0.19	Y	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG		U*	BE	87.0	87.0	159	N	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.17	0.17	0.54	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.11	J	RL	0.036	0.036	0.19	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	1.2	J	RL	0.53	0.53	1.8	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.056	0.056	0.19	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.040	0.040	0.19	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG	0.15	J	RL	0.067	0.067	0.23	Y	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.077	0.077	0.26	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	1.7			0.095	0.095	0.32	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.021	0.021	0.094	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG		UR	M-	0.30	0.30	1.0	N	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG		U		0.024	0.024	0.19	N	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG	0.19	J	RL	0.062	0.062	0.21	Y	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	20.3			2.6	2.6	8.7	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG	0.16			0.0071	0.0071	0.024	Y	Yes	1	WET

				Lab Sample ID	40197846007									
				Sys Sample Code	JSF-FH-RS-L-DUP01-20190430									
				Sample Name	JSF-FH-RS-L-DUP01-20190430									
				Sample Date	4/30/2019 12:00:00 AM									
				Location	JSF-HRU									
				Sample Type	FD									
				Parent Sample	JSF-FH-RS-HRU-L-20190430									
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	80.4			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.041	0.041	0.20	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	0.11	J	RL	0.059	0.059	0.20	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG		UU	M-	0.060	0.060	0.20	N	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.065	0.065	0.22	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.4	1.4	4.6	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG	0.035	J	RL	0.022	0.022	0.20	Y	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG		U*	BE	78.8	78.8	167	N	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.17	0.17	0.57	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.13	J	RL	0.037	0.037	0.20	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	1.2	J	RL	0.56	0.56	1.9	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.059	0.059	0.20	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.042	0.042	0.20	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG	0.14	J	RL	0.070	0.070	0.24	Y	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.081	0.081	0.28	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	1.2			0.10	0.10	0.33	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.022	0.022	0.098	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG		UR	M-	0.32	0.32	1.1	N	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG		U		0.026	0.026	0.20	N	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG	0.15	J	RL	0.066	0.066	0.22	Y	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	19.2			2.8	2.8	9.2	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG	0.12			0.0075	0.0075	0.025	Y	Yes	1	WET

				Lab Sample ID	40197846008									
				Sys Sample Code	JSF-FH-RS-L-DUP02-20190515									
				Sample Name	JSF-FH-RS-L-DUP02-20190515									
				Sample Date	5/15/2019 12:00:00 AM									
				Location	JSF-HRA2									
				Sample Type	FD									
				Parent Sample	JSF-FH-RS-HRA2-L-20190507									
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	80.4			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.042	0.042	0.20	N	Yes	2	WET
	Arsenic	7440-38-2	T	MG/KG	1.2	J	FD	0.060	0.060	0.20	Y	Yes	2	WET
	Barium	7440-39-3	T	MG/KG	0.25	J	M-	0.061	0.061	0.20	Y	Yes	2	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.066	0.066	0.22	N	Yes	2	WET
	Boron	7440-42-8	T	MG/KG		U		1.4	1.4	4.6	N	Yes	2	WET
	Cadmium	7440-43-9	T	MG/KG	0.12	J	RL	0.022	0.022	0.20	Y	Yes	2	WET
	Calcium	7440-70-2	T	MG/KG		U*	BE	90.8	90.8	168	N	Yes	2	WET
	Chromium	7440-47-3	T	MG/KG		U		0.18	0.18	0.58	N	Yes	2	WET
	Cobalt	7440-48-4	T	MG/KG	0.27			0.038	0.038	0.20	Y	Yes	2	WET
	Copper	7440-50-8	T	MG/KG	8.4	J	FD	0.56	0.56	1.9	Y	Yes	2	WET
	Lead	7439-92-1	T	MG/KG		U		0.060	0.060	0.20	N	Yes	2	WET
	Lithium	7439-93-2	T	MG/KG		U		0.042	0.042	0.20	N	Yes	2	WET
	Molybdenum	7439-98-7	T	MG/KG	0.18	J	RL	0.071	0.071	0.24	Y	Yes	2	WET
	Nickel	7440-02-0	T	MG/KG		U		0.082	0.082	0.28	N	Yes	2	WET
	Selenium	7782-49-2	T	MG/KG	3.3	J	FD	0.10	0.10	0.34	Y	Yes	2	WET
	Silver	7440-22-4	T	MG/KG		U		0.022	0.022	0.099	N	Yes	2	WET
	Strontium	7440-24-6	T	MG/KG		UR	M-	0.32	0.32	1.1	N	Yes	2	WET
	Thallium	7440-28-0	T	MG/KG		U		0.026	0.026	0.20	N	Yes	2	WET
	Vanadium	7440-62-2	T	MG/KG	0.38			0.066	0.066	0.22	Y	Yes	2	WET
	Zinc	7440-66-6	T	MG/KG	22.3			2.8	2.8	9.2	Y	Yes	2	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG	0.17			0.0073	0.0073	0.024	Y	Yes	1	WET

				Lab Sample ID	40197846009									
				Sys Sample Code	JSF-FH-SH-HRA1-WF-20190430									
				Sample Name	JSF-FH-SH-HRA1-WF-20190430									
				Sample Date	4/30/2019 1:04:00 PM									
				Location	JSF-HRA1									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	77.4			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.10	0.10	0.50	N	Yes	5	WET
	Arsenic	7440-38-2	T	MG/KG		U		0.15	0.15	0.50	N	Yes	5	WET
	Barium	7440-39-3	T	MG/KG	4.9	J	M-	0.15	0.15	0.50	Y	Yes	5	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.17	0.17	0.55	N	Yes	5	WET
	Boron	7440-42-8	T	MG/KG		U		3.5	3.5	11.6	N	Yes	5	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.055	0.055	0.50	N	Yes	5	WET
	Calcium	7440-70-2	T	MG/KG	17200			507	507	1690	Y	Yes	20	WET
	Chromium	7440-47-3	T	MG/KG		U		0.44	0.44	1.4	N	Yes	5	WET
	Cobalt	7440-48-4	T	MG/KG	0.18	J	RL	0.095	0.095	0.50	Y	Yes	5	WET
	Copper	7440-50-8	T	MG/KG		U		1.4	1.4	4.7	N	Yes	5	WET
	Lead	7439-92-1	T	MG/KG	0.28	J	RL	0.15	0.15	0.50	Y	Yes	5	WET
	Lithium	7439-93-2	T	MG/KG		U		0.11	0.11	0.50	N	Yes	5	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.18	0.18	0.60	N	Yes	5	WET
	Nickel	7440-02-0	T	MG/KG		U		0.21	0.21	0.70	N	Yes	5	WET
	Selenium	7782-49-2	T	MG/KG	0.39	J	RL	0.25	0.25	0.85	Y	Yes	5	WET
	Silver	7440-22-4	T	MG/KG		U		0.056	0.056	0.25	N	Yes	5	WET
	Strontium	7440-24-6	T	MG/KG	15.6	J	M-	0.80	0.80	2.7	Y	Yes	5	WET
	Thallium	7440-28-0	T	MG/KG		U		0.065	0.065	0.50	N	Yes	5	WET
	Vanadium	7440-62-2	T	MG/KG		U		0.17	0.17	0.55	N	Yes	5	WET
	Zinc	7440-66-6	T	MG/KG	19.8	J	RL	7.0	7.0	23.3	Y	Yes	5	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.039	0.039	0.039	N	Yes	1	WET

				Lab Sample ID	40197846010									
				Sys Sample Code	JSF-FH-SH-HRA2-WF-20190430									
				Sample Name	JSF-FH-SH-HRA2-WF-20190430									
				Sample Date	4/30/2019 2:39:00 PM									
				Location	JSF-HRA2									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	79.0			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.10	0.10	0.48	N	Yes	5	WET
	Arsenic	7440-38-2	T	MG/KG		U		0.15	0.15	0.48	N	Yes	5	WET
	Barium	7440-39-3	T	MG/KG	3.2	J	M-	0.15	0.15	0.48	Y	Yes	5	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.16	0.16	0.53	N	Yes	5	WET
	Boron	7440-42-8	T	MG/KG		U		3.4	3.4	11.3	N	Yes	5	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.053	0.053	0.48	N	Yes	5	WET
	Calcium	7440-70-2	T	MG/KG	9660			123	123	410	Y	Yes	5	WET
	Chromium	7440-47-3	T	MG/KG		U		0.43	0.43	1.4	N	Yes	5	WET
	Cobalt	7440-48-4	T	MG/KG	0.17	J	RL	0.092	0.092	0.48	Y	Yes	5	WET
	Copper	7440-50-8	T	MG/KG		U		1.4	1.4	4.6	N	Yes	5	WET
	Lead	7439-92-1	T	MG/KG		U*	BE	0.18	0.18	0.48	N	Yes	5	WET
	Lithium	7439-93-2	T	MG/KG		U		0.10	0.10	0.48	N	Yes	5	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.17	0.17	0.58	N	Yes	5	WET
	Nickel	7440-02-0	T	MG/KG		U		0.20	0.20	0.68	N	Yes	5	WET
	Selenium	7782-49-2	T	MG/KG	0.38	J	RL	0.25	0.25	0.82	Y	Yes	5	WET
	Silver	7440-22-4	T	MG/KG		U		0.054	0.054	0.24	N	Yes	5	WET
	Strontium	7440-24-6	T	MG/KG	11.6	J	M-	0.78	0.78	2.6	Y	Yes	5	WET
	Thallium	7440-28-0	T	MG/KG		U		0.063	0.063	0.48	N	Yes	5	WET
	Vanadium	7440-62-2	T	MG/KG		U		0.16	0.16	0.53	N	Yes	5	WET
	Zinc	7440-66-6	T	MG/KG	15.1	J	RL	6.8	6.8	22.6	Y	Yes	5	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.034	0.034	0.034	N	Yes	1	WET

Lab Sample ID	40197846011
Sys Sample Code	JSF-FH-SH-HRD-WF-20190430
Sample Name	JSF-FH-SH-HRD-WF-20190430
Sample Date	4/30/2019 5:35:00 PM
Location	JSF-HRD
Sample Type	N
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	78.6			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.099	0.099	0.47	N	Yes	5	WET
	Arsenic	7440-38-2	T	MG/KG	0.15	J	RL	0.14	0.14	0.47	Y	Yes	5	WET
	Barium	7440-39-3	T	MG/KG	4.3	J	M-	0.14	0.14	0.47	Y	Yes	5	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.16	0.16	0.52	N	Yes	5	WET
	Boron	7440-42-8	T	MG/KG		U		3.3	3.3	11.0	N	Yes	5	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.052	0.052	0.47	N	Yes	5	WET
	Calcium	7440-70-2	T	MG/KG	12000			120	120	400	Y	Yes	5	WET
	Chromium	7440-47-3	T	MG/KG	0.54	J	RL	0.42	0.42	1.4	Y	Yes	5	WET
	Cobalt	7440-48-4	T	MG/KG	0.24	J	RL	0.090	0.090	0.47	Y	Yes	5	WET
	Copper	7440-50-8	T	MG/KG		U		1.3	1.3	4.5	N	Yes	5	WET
	Lead	7439-92-1	T	MG/KG	0.40	J	RL	0.14	0.14	0.47	Y	Yes	5	WET
	Lithium	7439-93-2	T	MG/KG	0.16	J	RL	0.10	0.10	0.47	Y	Yes	5	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.17	0.17	0.57	N	Yes	5	WET
	Nickel	7440-02-0	T	MG/KG	0.23	J	RL	0.19	0.19	0.66	Y	Yes	5	WET
	Selenium	7782-49-2	T	MG/KG	0.37	J	RL	0.24	0.24	0.80	Y	Yes	5	WET
	Silver	7440-22-4	T	MG/KG		U		0.053	0.053	0.24	N	Yes	5	WET
	Strontium	7440-24-6	T	MG/KG	14.3	J	M-	0.76	0.76	2.6	Y	Yes	5	WET
	Thallium	7440-28-0	T	MG/KG		U		0.061	0.061	0.47	N	Yes	5	WET
	Vanadium	7440-62-2	T	MG/KG	0.21	J	RL	0.16	0.16	0.52	Y	Yes	5	WET
	Zinc	7440-66-6	T	MG/KG	20.0	J	RL	6.6	6.6	22.0	Y	Yes	5	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.038	0.038	0.038	N	Yes	1	WET

				Lab Sample ID	40197846012									
				Sys Sample Code	JSF-FH-SH-HRU-WF-20190430									
				Sample Name	JSF-FH-SH-HRU-WF-20190430									
				Sample Date	4/30/2019 11:00:00 AM									
				Location	JSF-HRU									
				Sample Type	N									
				Parent Sample										
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	76.7			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.10	0.10	0.49	N	Yes	5	WET
	Arsenic	7440-38-2	T	MG/KG		U		0.15	0.15	0.49	N	Yes	5	WET
	Barium	7440-39-3	T	MG/KG	5.0	J	M-	0.15	0.15	0.49	Y	Yes	5	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.16	0.16	0.54	N	Yes	5	WET
	Boron	7440-42-8	T	MG/KG		U		3.4	3.4	11.4	N	Yes	5	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.054	0.054	0.49	N	Yes	5	WET
	Calcium	7440-70-2	T	MG/KG	8110			125	125	415	Y	Yes	5	WET
	Chromium	7440-47-3	T	MG/KG	0.89	J	RL	0.43	0.43	1.4	Y	Yes	5	WET
	Cobalt	7440-48-4	T	MG/KG	0.36	J	RL	0.093	0.093	0.49	Y	Yes	5	WET
	Copper	7440-50-8	T	MG/KG	1.5	J	RL	1.4	1.4	4.7	Y	Yes	5	WET
	Lead	7439-92-1	T	MG/KG	0.40	J	RL	0.15	0.15	0.49	Y	Yes	5	WET
	Lithium	7439-93-2	T	MG/KG	0.34	J	RL	0.10	0.10	0.49	Y	Yes	5	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.18	0.18	0.59	N	Yes	5	WET
	Nickel	7440-02-0	T	MG/KG	0.41	J	RL	0.20	0.20	0.69	Y	Yes	5	WET
	Selenium	7782-49-2	T	MG/KG	0.31	J	RL	0.25	0.25	0.83	Y	Yes	5	WET
	Silver	7440-22-4	T	MG/KG		U		0.055	0.055	0.25	N	Yes	5	WET
	Strontium	7440-24-6	T	MG/KG	7.2	J	M-	0.79	0.79	2.6	Y	Yes	5	WET
	Thallium	7440-28-0	T	MG/KG		U		0.064	0.064	0.49	N	Yes	5	WET
	Vanadium	7440-62-2	T	MG/KG	0.22	J	RL	0.16	0.16	0.54	Y	Yes	5	WET
	Zinc	7440-66-6	T	MG/KG	17.0	J	RL	6.9	6.9	22.8	Y	Yes	5	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.034	0.034	0.034	N	Yes	1	WET

Lab Sample ID	40197846013
Sys Sample Code	JSF-FH-SH-WF-DUP01-20190430
Sample Name	JSF-FH-SH-WF-DUP01-20190430
Sample Date	4/30/2019 12:00:00 AM
Location	JSF-HRA2
Sample Type	FD
Parent Sample	JSF-FH-SH-HRA2-WF-20190430

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ASTM D2974-87	Percent Moisture	MOISTURE	N	%	78.4			0.10	0.10	0.10	Y	Yes	1	WET
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.10	0.10	0.50	N	Yes	5	WET
	Arsenic	7440-38-2	T	MG/KG		U		0.15	0.15	0.50	N	Yes	5	WET
	Barium	7440-39-3	T	MG/KG	3.6	J	M-	0.15	0.15	0.50	Y	Yes	5	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.16	0.16	0.55	N	Yes	5	WET
	Boron	7440-42-8	T	MG/KG		U		3.5	3.5	11.6	N	Yes	5	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.055	0.055	0.50	N	Yes	5	WET
	Calcium	7440-70-2	T	MG/KG	10700			126	126	422	Y	Yes	5	WET
	Chromium	7440-47-3	T	MG/KG		U		0.44	0.44	1.4	N	Yes	5	WET
	Cobalt	7440-48-4	T	MG/KG	0.19	J	RL	0.095	0.095	0.50	Y	Yes	5	WET
	Copper	7440-50-8	T	MG/KG		U		1.4	1.4	4.7	N	Yes	5	WET
	Lead	7439-92-1	T	MG/KG	0.21	J	RL	0.15	0.15	0.50	Y	Yes	5	WET
	Lithium	7439-93-2	T	MG/KG	0.14	J	RL	0.11	0.11	0.50	Y	Yes	5	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.18	0.18	0.60	N	Yes	5	WET
	Nickel	7440-02-0	T	MG/KG		U		0.20	0.20	0.70	N	Yes	5	WET
	Selenium	7782-49-2	T	MG/KG	0.32	J	RL	0.25	0.25	0.85	Y	Yes	5	WET
	Silver	7440-22-4	T	MG/KG		U		0.056	0.056	0.25	N	Yes	5	WET
	Strontium	7440-24-6	T	MG/KG	12.4	J	M-	0.80	0.80	2.7	Y	Yes	5	WET
	Thallium	7440-28-0	T	MG/KG		U		0.065	0.065	0.50	N	Yes	5	WET
	Vanadium	7440-62-2	T	MG/KG		U		0.17	0.17	0.55	N	Yes	5	WET
	Zinc	7440-66-6	T	MG/KG	18.3	J	RL	7.0	7.0	23.2	Y	Yes	5	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U*	BL	0.035	0.035	0.035	N	Yes	1	WET

	Lab Sample ID	40197846014												
	Sys Sample Code	RINSE BLANK B 11-18-19												
	Sample Name	RINSE BLANK B 11-18-19												
	Sample Date	11/18/2019 12:00:00 AM												
	Location													
	Sample Type	RB												
	Parent Sample													
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
SW-846 6020A	Antimony	7440-36-0	T	MG/KG		U		0.020	0.020	0.095	N	Yes	1	WET
	Arsenic	7440-38-2	T	MG/KG		U		0.029	0.029	0.095	N	Yes	1	WET
	Barium	7440-39-3	T	MG/KG		U		0.029	0.029	0.095	N	Yes	1	WET
	Beryllium	7440-41-7	T	MG/KG		U		0.032	0.032	0.10	N	Yes	1	WET
	Boron	7440-42-8	T	MG/KG		U		0.66	0.66	2.2	N	Yes	1	WET
	Cadmium	7440-43-9	T	MG/KG		U		0.010	0.010	0.095	N	Yes	1	WET
	Calcium	7440-70-2	T	MG/KG		U		24.2	24.2	80.6	N	Yes	1	WET
	Chromium	7440-47-3	T	MG/KG		U		0.084	0.084	0.28	N	Yes	1	WET
	Cobalt	7440-48-4	T	MG/KG		U		0.018	0.018	0.095	N	Yes	1	WET
	Copper	7440-50-8	T	MG/KG		U		0.27	0.27	0.90	N	Yes	1	WET
	Lead	7439-92-1	T	MG/KG		U		0.029	0.029	0.095	N	Yes	1	WET
	Lithium	7439-93-2	T	MG/KG		U		0.020	0.020	0.095	N	Yes	1	WET
	Molybdenum	7439-98-7	T	MG/KG		U		0.034	0.034	0.11	N	Yes	1	WET
	Nickel	7440-02-0	T	MG/KG		U		0.039	0.039	0.13	N	Yes	1	WET
	Selenium	7782-49-2	T	MG/KG		U		0.048	0.048	0.16	N	Yes	1	WET
	Silver	7440-22-4	T	MG/KG		U		0.011	0.011	0.048	N	Yes	1	WET
	Strontium	7440-24-6	T	MG/KG		U		0.15	0.15	0.51	N	Yes	1	WET
	Thallium	7440-28-0	T	MG/KG		U		0.012	0.012	0.095	N	Yes	1	WET
	Vanadium	7440-62-2	T	MG/KG		U		0.032	0.032	0.10	N	Yes	1	WET
	Zinc	7440-66-6	T	MG/KG		U		1.3	1.3	4.4	N	Yes	1	WET
SW-846 7473	Mercury	7439-97-6	T	MG/KG		U		0.0075	0.0075	0.025	N	Yes	1	WET