Table A-1a: Analytical Soil Profiling Results - Total RCRA Regulated Metals - Nanue Bridge (page 1 of 3)

								Sample Identifier	NAN_DU1_0-3			NAN_DU1_3-6			NAN_DU1_6-9			NAN_DU2_0-3		
								Sample Date	5-Mar-2024			5-Mar-2024			5-Mar-2024			6-Mar-2024		
								Sample Depth (inches bgs)	0-3			3-6			6-9			0-3		
Analyte	Analytical Method	Units	**20 x Regulatory Limits for TCLP Metals+**	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial / Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**		**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Resource Conservation and Recovery Act (RCRA) Regulated Metals																				
Arsenic	EPA 6020B	mg/kg	**100**	**24**	**23**	**95**	**110**		**26**		0.47	**23**		0.49	**17**		0.48	**14**		0.47
Barium	EPA 6020B	mg/kg	**2000**	**1,000**	**3,100**	**4,300**	**4,300**		**263**		0.95	**287**		0.98	**307**		0.96	**200**		0.95
Cadmium	EPA 6020B	mg/kg	**20**	**14**	**14**	**72**	**72**		0.39	J	0.76	0.39	J	0.78	0.34	J	0.77	0.41	J	0.76
Chromium	EPA 6020B	mg/kg	**100**	**1,100**	**NS**	**NS**	**NS**		**190**		0.95	**190**		0.98	**187**		0.96	**180**		0.95
Lead	EPA 6020B	mg/kg	**100**	**200**	**200**	**800**	**800**		**1,133**		0.47	**930**		0.49	**577**		0.48	**1,200**		0.47
Mercury	EPA 7471A	mg/kg	**4**	**4.7**	**4.7**	**61**	**130**		**0.14**		0.020	**0.15**		0.021	**0.14**		0.021	**0.15**		0.022
Selenium	EPA 6020B	mg/kg	**20**	**78**	**78**	**1,000**	**2,200**		**7.7**		1.4	**8.9**		1.5	**9.4**		1.4	**8.3**		1.4
Silver	EPA 6020B	mg/kg	**100**	**78**	**78**	**1,000**	**2,200**		0.059	J	0.19	0.053	J	0.20	0.044	J	0.19	0.077	J	0.19

								Sample Identifier	NAN_DU2_3-6			NAN_DU2_6-9			NAN_DU3_0-3			NAN_DU3_3-6		
								Sample Date	6-Mar-2024			6-Mar-2024			6-Mar-2024			6-Mar-2024		
								Sample Depth (feet bgs)	3-6			6-9			0-3			3-6		
Analyte	Analytical Method	Units	**20 x Regulatory Limits for TCLP Metals+**	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial / Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**		**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Resource Conservation and Recovery Act (RCRA) Regulated Metals																				
Arsenic	EPA 6020B	mg/kg	**100**	**24**	**23**	**95**	**110**		**12**		0.48	**14**		0.47	**13**		0.46	**15**		0.47
Barium	EPA 6020B	mg/kg	**2000**	**1,000**	**3,100**	**4,300**	**4,300**		**190**		0.95	**210**		0.95	**130**	J1	0.92	**140**		0.95
Cadmium	EPA 6020B	mg/kg	**20**	**14**	**14**	**72**	**72**		0.37	J	0.76	0.40	J	0.76	0.30	J	0.74	0.33	J	0.76
Chromium	EPA 6020B	mg/kg	**100**	**1,100**	**NS**	**NS**	**NS**		**170**		0.95	**190**		0.95	**130**	J1	0.92	**140**		0.95
Lead	EPA 6020B	mg/kg	**100**	**200**	**200**	**800**	**800**		**1,000**		0.48	**1,400**		0.47	**1,200**	J1	0.46	**1,200**		0.47
Mercury	EPA 7471A	mg/kg	**4**	**4.7**	**4.7**	**61**	**130**		**0.15**		0.021	**0.18**		0.020	**0.15**		0.024	**0.16**		0.022
Selenium	EPA 6020B	mg/kg	**20**	**78**	**78**	**1,000**	**2,200**		**7.8**		1.4	**9.2**		1.4	**6.6**		1.4	**6.8**		1.4
Silver	EPA 6020B	mg/kg	**100**	**78**	**78**	**1,000**	**2,200**		0.060	J	0.19	0.054	J	0.19	0.047	J	0.18	0.048	J	0.19

Notes:

+ If the total concentration of a RCRA metal exceeds 20 times the RCRA regulated toxicity characteristic concentrations then TCLP analysis is required for acceptance at a RCRA regulated waste disposal facility.

** This value represents the result of the Relative Percent Difference replicate comparison result (see Table 2-1a).

1 State of Hawaii Department of Health Tier I EALs, Residential Land-Use Scenario presented in Table I-1 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

2 State of Hawaii Department of Health Tier I EALs, Commercial / Industrial Land-Use Scenario presented in Table I-2 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

3 State of Hawaii Department of Health Tier I EALs, Construction/Trench Worker Exposure Scenario presented in Table I-3 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

bgs = below ground surface

mg/kg = milligram(s) per kilogram

RL = reporting limit

Q = qualifier

J = The analyte was positively identified; the quantitation is an estimation

J1 = The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria

Table A-1a: Analytical Soil Profiling Results - Total RCRA Regulated Metals - Nanue Bridge (page 2 of 3)

								Sample Identifier	NAN_DU3_6-9			NAN_DU8_0-3			NAN_DU8_3-6			NAN_DU8_6-9		
								Sample Date	6-Mar-2024			3-Mar-2024			3-Mar-2024			3-Mar-2024		
								Sample Depth (inches bgs)	6-9			0-3			3-6			6-9		
Analyte	Analytical Method	Units	**20 x Regulatory Limits for TCLP Metals+**	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial / Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**		**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Resource Conservation and Recovery Act (RCRA) Regulated Metals																				
Arsenic	EPA 6020B	mg/kg	**100**	**24**	**23**	**95**	**110**		**14**		0.48	**20**		0.47	**20**		0.48	**32**		0.47
Barium	EPA 6020B	mg/kg	**2000**	**1,000**	**3,100**	**4,300**	**4,300**		**140**		0.96	**150**		0.95	**200**		0.95	**180**		0.95
Cadmium	EPA 6020B	mg/kg	**20**	**14**	**14**	**72**	**72**		0.28	J	0.77	0.56	J	0.76	0.62	J	0.76	0.66	J	0.76
Chromium	EPA 6020B	mg/kg	**100**	**1,100**	**NS**	**NS**	**NS**		**130**		0.96	**170**		0.95	**180**		0.95	**180**		0.95
Lead	EPA 6020B	mg/kg	**100**	**200**	**200**	**800**	**800**		**1,500**		0.48	**4,300**		0.47	**3,100**		0.48	**2,900**		0.47
Mercury	EPA 7471A	mg/kg	**4**	**4.7**	**4.7**	**61**	**130**		**0.16**		0.022	**0.31**		0.022	**0.30**		0.021	**0.34**		0.020
Selenium	EPA 6020B	mg/kg	**20**	**78**	**78**	**1,000**	**2,200**		**7.3**		1.4	**5.8**		1.4	**6.8**		1.4	**7.1**		1.4
Silver	EPA 6020B	mg/kg	**100**	**78**	**78**	**1,000**	**2,200**		0.053	J	0.19	0.088	J	0.19	0.072	J	0.19	0.073	J	0.19

								Sample Identifier	NAN_DU9_0-3			NAN_DU9_3-6			NAN_DU9_6-9			NAN_DU10_0-3		
								Sample Date	9-Mar-2024			9-Mar-2024			9-Mar-2024			9-Mar-2024		
								Sample Depth (feet bgs)	0-3			3-6			6-9			0-3		
Analyte	Analytical Method	Units	**20 x Regulatory Limits for TCLP Metals+**	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial / Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**		**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Resource Conservation and Recovery Act (RCRA) Regulated Metals																				
Arsenic	EPA 6020B	mg/kg	**100**	**24**	**23**	**95**	**110**		**24**		0.48	**25**		0.48	**24**		0.48	**9.6**		0.46
Barium	EPA 6020B	mg/kg	**2000**	**1,000**	**3,100**	**4,300**	**4,300**		**100**		0.96	**110**		0.96	**110**		0.95	**120**	J1	0.92
Cadmium	EPA 6020B	mg/kg	**20**	**14**	**14**	**72**	**72**		0.67	J	0.77	0.67	J	0.77	0.59	J	0.76	0.4	J	0.74
Chromium	EPA 6020B	mg/kg	**100**	**1,100**	**NS**	**NS**	**NS**		**160**		0.96	**190**		0.96	**180**		0.95	**150**	J1	0.92
Lead	EPA 6020B	mg/kg	**100**	**200**	**200**	**800**	**800**		**6,400**		48	**6,200**		48	**6,000**		48	**8,500**	J1	46
Mercury	EPA 7471A	mg/kg	**4**	**4.7**	**4.7**	**61**	**130**		**0.28**		0.024	**0.26**		0.027	**0.26**		0.026	**0.12**		0.023
Selenium	EPA 6020B	mg/kg	**20**	**78**	**78**	**1,000**	**2,200**		**4.9**		1.4	**5.1**		1.4	**6.7**		1.4	**5.8**		1.4
Silver	EPA 6020B	mg/kg	**100**	**78**	**78**	**1,000**	**2,200**		0.085	J	0.19	0.089	J	0.19	0.095	J	0.19	0.088	J	0.18

Notes:

+ If the total concentration of a RCRA metal exceeds 20 times the RCRA regulated toxicity characteristic concentrations then TCLP analysis is required for acceptance at a RCRA regulated waste disposal facility.

** This value represents the result of the Relative Percent Difference replicate comparison result (see Table 2-1a).

1 State of Hawaii Department of Health Tier I EALs, Residential Land-Use Scenario presented in Table I-1 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

2 State of Hawaii Department of Health Tier I EALs, Commercial / Industrial Land-Use Scenario presented in Table I-2 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

3 State of Hawaii Department of Health Tier I EALs, Construction/Trench Worker Exposure Scenario presented in Table I-3 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

bgs = below ground surface

mg/kg = milligram(s) per kilogram

RL = reporting limit

Q = qualifier

J = The analyte was positively identified; the quantitation is an estimation

J1 = The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria

Table A-1a: Analytical Soil Profiling Results - Total RCRA Regulated Metals - Nanue Bridge (page 3 of 3)

								Sample Identifier	NAN_DU10_3-6			NAN_DU10_6-9			NAN_DU11_0-3			NAN_DU11_3-6		
								Sample Date	9-Mar-2024			9-Mar-2024			10-Mar-2024			10-Mar-2024		
								Sample Depth (inches bgs)	3-6			6-9			0-3			3-6		
Analyte	Analytical Method	Units	**20 x Regulatory Limits for TCLP Metals+**	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial / Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**		**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Resource Conservation and Recovery Act (RCRA) Regulated Metals																				
Arsenic	EPA 6020B	mg/kg	**100**	**24**	**23**	**95**	**110**		**8.7**		0.47	**7.9**		0.47	**11**		0.47	**10.0**		0.48
Barium	EPA 6020B	mg/kg	**2000**	**1,000**	**3,100**	**4,300**	**4,300**		**130**		0.95	**160**		0.94	**110**		0.95	**100**		0.95
Cadmium	EPA 6020B	mg/kg	**20**	**14**	**14**	**72**	**72**		0.39	J	0.76	0.35	J	0.76	0.37	J	0.76	0.40	J	0.76
Chromium	EPA 6020B	mg/kg	**100**	**1,100**	**NS**	**NS**	**NS**		**160**		0.95	**170**		0.94	**130**		0.95	**150**		0.95
Lead	EPA 6020B	mg/kg	**100**	**200**	**200**	**800**	**800**		**9,700**		47	**8,100**		47	**4,300**		47	**6,400**		48
Mercury	EPA 7471A	mg/kg	**4**	**4.7**	**4.7**	**61**	**130**		**0.16**		0.007	**0.13**		0.024	**0.10**		0.025	**0.12**		0.027
Selenium	EPA 6020B	mg/kg	**20**	**78**	**78**	**1,000**	**2,200**		**6.9**		1.4	**7.8**		1.4	**4.8**		1.4	**6.2**		1.4
Silver	EPA 6020B	mg/kg	**100**	**78**	**78**	**1,000**	**2,200**		0.10	J	0.19	0.078	J	0.19	0.081	J	0.19	0.086	J	0.19

								Sample Identifier	NAN_DU11_6-9			NAN_DU12_0-3			NAN_DU12_3-6			NAN_DU12_6-9		
								Sample Date	10-Mar-2024			10-Mar-2024			10-Mar-2024			10-Mar-2024		
								Sample Depth (feet bgs)	6-9			0-3			3-6			6-9		
Analyte	Analytical Method	Units	**20 x Regulatory Limits for TCLP Metals+**	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial / Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**		**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Resource Conservation and Recovery Act (RCRA) Regulated Metals																				
Arsenic	EPA 6020B	mg/kg	**100**	**24**	**23**	**95**	**110**		**8.7**		0.46	**16**		0.46	**11**		0.46	**10**		0.47
Barium	EPA 6020B	mg/kg	**2000**	**1,000**	**3,100**	**4,300**	**4,300**		**110**		0.92	**79**		0.92	**50**		0.92	**69**		0.94
Cadmium	EPA 6020B	mg/kg	**20**	**14**	**14**	**72**	**72**		0.39	J	0.74	0.4	J	0.74	0.29	J	0.74	0.30	J	0.75
Chromium	EPA 6020B	mg/kg	**100**	**1,100**	**NS**	**NS**	**NS**		**150**		0.92	**130**		0.92	**87**		0.92	**90**		0.94
Lead	EPA 6020B	mg/kg	**100**	**200**	**200**	**800**	**800**		**6,000**		0.46	**6,300**		0.46	**7,900**		0.46	**6,500**		0.47
Mercury	EPA 7471A	mg/kg	**4**	**4.7**	**4.7**	**61**	**130**		**0.16**		0.025	**0.09**		0.023	**0.12**		0.022	**0.12**		0.023
Selenium	EPA 6020B	mg/kg	**20**	**78**	**78**	**1,000**	**2,200**		**6.3**		1.4	**2.8**		1.4	**3.4**		1.4	**3.6**		1.4
Silver	EPA 6020B	mg/kg	**100**	**78**	**78**	**1,000**	**2,200**		0.083	J	0.18	0.088	J	0.18	0.086	J	0.18	0.068		0.19

Notes:

+ If the total concentration of a RCRA metal exceeds 20 times the RCRA regulated toxicity characteristic concentrations then TCLP analysis is required for acceptance at a RCRA regulated waste disposal facility.

** This value represents the result of the Relative Percent Difference replicate comparison result (see Table 2-1a).

1 State of Hawaii Department of Health Tier I EALs, Residential Land-Use Scenario presented in Table I-1 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

2 State of Hawaii Department of Health Tier I EALs, Commercial / Industrial Land-Use Scenario presented in Table I-2 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

3 State of Hawaii Department of Health Tier I EALs, Construction/Trench Worker Exposure Scenario presented in Table I-3 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

bgs = below ground surface

mg/kg = milligram(s) per kilogram

RL = reporting limit

Q = qualifier

J = The analyte was positively identified; the quantitation is an estimation

J1 = The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria

Table A-1b: Replicate Sample Results Comparison - Total RCRA Regulated Metals - Nanue Bridge (page 1 of 3)

Analyte	EPA Method	Sample Identification	Sample Type	Result (mg/kg)	Relative Percent Difference		Mean	Standard Deviation*	Relative Standard Deviation	Comment
					Primary and Duplicate	Primary and Triplicate				
Arsenic	EPA 6020B	NAN_DU1_0-3_A	Primary	28	0%	24%	26.0	3.5	13%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is less than 20 x regulatory limits for TCLP metals, but above HDOH Tier 1 EAL.
		NAN_DU1_0-3_B	Duplicate	28						
		NAN_DU1_0-3_C	Triplicate	22						
Barium	EPA 6020B	NAN_DU1_0-3_A	Primary	260	4%	7%	263.3	15.3	6%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_0-3_B	Duplicate	250						
		NAN_DU1_0-3_C	Triplicate	280						
Cadmium	EPA 6020B	NAN_DU1_0-3_A	Primary	0.37	13%	3%	0.390	0.026	7%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_0-3_B	Duplicate	0.42						
		NAN_DU1_0-3_C	Triplicate	0.38						
Chromium	EPA 6020B	NAN_DU1_0-3_A	Primary	180	5%	11%	190	10.0	5%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is above 20 x regulatory limits for TCLP metals. Mean concentration is below HDOH Tier 1 EAL.
		NAN_DU1_0-3_B	Duplicate	190						
		NAN_DU1_0-3_C	Triplicate	200						
Lead	EPA 6020B	NAN_DU1_0-3_A	Primary	1100	9%	0%	1,133	57.7	5%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is above 20 x regulatory limits for TCLP metal and above HDOH Tier 1 EAL.
		NAN_DU1_0-3_B	Duplicate	1200						
		NAN_DU1_0-3_C	Triplicate	1100						
Mercury	EPA 7471A	NAN_DU1_0-3_A	Primary	0.15	14%	0%	0.143	0.012	8%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_0-3_B	Duplicate	0.13						
		NAN_DU1_0-3_C	Triplicate	0.15						
Selenium	EPA 6020B	NAN_DU1_0-3_A	Primary	8.1	8%	9%	7.67	0.38	5%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_0-3_B	Duplicate	7.5						
		NAN_DU1_0-3_C	Triplicate	7.4						
Silver	EPA 6020B	NAN_DU1_0-3_A	Primary	0.064	17%	10%	0.0587	0.0050	9%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_0-3_B	Duplicate	0.054						
		NAN_DU1_0-3_C	Triplicate	0.058						

Notes:

* Standard Deviation: If < 50% use the arithmatic mean, if < 50% then use the max of the replicate group.

Result below HDOH Tier 1 EAL

Result above 20 x Regulatory Limits for TCLP Metals

Table A-1b: Replicate Sample Results Comparison - Total RCRA Regulated Metals - Nanue Bridge (page 2 of 3)

Analyte	EPA Method	Sample Identification	Sample Type	Result (mg/kg)	Relative Percent Difference		Mean	Standard Deviation*	Relative Standard Deviation	Comment
					Primary and Duplicate	Primary and Triplicate				
Arsenic	EPA 6020B	NAN_DU1_3-6_A	Primary	24	4%	9%	23.0	1.0	4%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is less than 20 x regulatory limits for TCLP, but above HDOH Tier 1 EAL.
		NAN_DU1_3-6_B	Duplicate	23						
		NAN_DU1_3-6_C	Triplicate	22						
Barium	EPA 6020B	NAN_DU1_3-6_A	Primary	270	11%	7%	286.7	15.3	5%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_3-6_B	Duplicate	300						
		NAN_DU1_3-6_C	Triplicate	290						
Cadmium	EPA 6020B	NAN_DU1_3-6_A	Primary	0.42	13%	13%	0.387	0.029	7%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_3-6_B	Duplicate	0.37						
		NAN_DU1_3-6_C	Triplicate	0.37						
Chromium	EPA 6020B	NAN_DU1_3-6_A	Primary	190	0%	0%	190	0.0	0%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is above 20 x regulatory limits for TCLP metals. Mean concentration is below HDOH Tier 1 EAL.
		NAN_DU1_3-6_B	Duplicate	190						
		NAN_DU1_3-6_C	Triplicate	190						
Lead	EPA 6020B	NAN_DU1_3-6_A	Primary	980	2%	14%	930	70.0	8%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is above 20 x regulatory limits for TCLP metal and above HDOH Tier 1 EAL.
		NAN_DU1_3-6_B	Duplicate	960						
		NAN_DU1_3-6_C	Triplicate	850						
Mercury	EPA 7471A	NAN_DU1_3-6_A	Primary	0.16	0%	21%	0.150	0.017	12%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_3-6_B	Duplicate	0.16						
		NAN_DU1_3-6_C	Triplicate	0.13						
Selenium	EPA 6020B	NAN_DU1_3-6_A	Primary	9.6	11%	12%	8.90	0.61	7%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_3-6_B	Duplicate	8.6						
		NAN_DU1_3-6_C	Triplicate	8.5						
Silver	EPA 6020B	NAN_DU1_3-6_A	Primary	0.057	19%	4%	0.0530	0.0053	10%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_3-6_B	Duplicate	0.047						
		NAN_DU1_3-6_C	Triplicate	0.055						

Notes:

* Standard Deviation: If < 50% use the arithmatic mean, if < 50% then use the max of the replicate group.

Result below HDOH Tier 1 EAL

Result above 20 x Regulatory Limits for TCLP Metals

Table A-1b: Replicate Sample Results Comparison - Total RCRA Regulated Metals - Nanue Bridge (page 3 of 3)

Analyte	EPA Method	Sample Identification	Sample Type	Result (mg/kg)	Relative Percent Difference		Mean	Standard Deviation*	Relative Standard Deviation	Comment
					Primary and Duplicate	Primary and Triplicate				
Arsenic	EPA 6020B	NAN_DU1_6-9_A	Primary	17	0%	6%	17.3	0.6	3%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_6-9_B	Duplicate	17						
		NAN_DU1_6-9_C	Triplicate	18						
Barium	EPA 6020B	NAN_DU1_6-9_A	Primary	340	3%	31%	306.7	49.3	16%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_6-9_B	Duplicate	330						
		NAN_DU1_6-9_C	Triplicate	250						
Cadmium	EPA 6020B	NAN_DU1_6-9_A	Primary	0.32	14%	0%	0.337	0.029	9%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_6-9_B	Duplicate	0.37						
		NAN_DU1_6-9_C	Triplicate	0.32						
Chromium	EPA 6020B	NAN_DU1_6-9_A	Primary	190	5%	11%	186.7	15.3	8%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is above 20 x regulatory limits for TCLP metals. Mean concentration is below HDOH Tier 1 EAL.
		NAN_DU1_6-9_B	Duplicate	200						
		NAN_DU1_6-9_C	Triplicate	170						
Lead	EPA 6020B	NAN_DU1_6-9_A	Primary	640	3%	31%	576.7	92.9	16%	RSD is less than 50% so the mean concentration is used as the reported concentration. The result is above 20 x regulatory limits for TCLP metal and above HDOH Tier 1 EAL.
		NAN_DU1_6-9_B	Duplicate	620						
		NAN_DU1_6-9_C	Triplicate	470						
Mercury	EPA 7471A	NAN_DU1_6-9_A	Primary	0.15	6%	22%	0.143	0.021	15%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_6-9_B	Duplicate	0.16						
		NAN_DU1_6-9_C	Triplicate	0.12						
Selenium	EPA 6020B	NAN_DU1_6-9_A	Primary	10.0	3%	16%	9.40	0.79	8%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_6-9_B	Duplicate	9.7						
		NAN_DU1_6-9_C	Triplicate	8.5						
Silver	EPA 6020B	NAN_DU1_6-9_A	Primary	0.043	13%	5%	0.0443	0.0042	9%	RSD is less than 50% so the mean concentration is used as the reported concentration.The mean concentration is below HDOH Tier 1 EAL and less than 20x regulatory limits for TCLP metals.
		NAN_DU1_6-9_B	Duplicate	0.049						
		NAN_DU1_6-9_C	Triplicate	0.041						

Notes:

* Standard Deviation: If < 50% use the arithmatic mean, if < 50% then use the max of the replicate group.

Result below HDOH Tier 1 EAL

Result above 20 x Regulatory Limits for TCLP Metals

Table A-1c: Analytical Soil Profiling Results - Polychlorinated Biphenyls - Nanue Bridge (page 1 of 1)

							Sample Identifier			Sample Identifier			Sample Identifier		
							Sample Date			Sample Date			Sample Date		
							Sample Depth (inches bgs)			Sample Depth (inches bgs)			Sample Depth (inches bgs)		
Analyte	Analytical Method	Units	**HDOH Tier 1 EALs* (Unrestricted Use)**	**HDOH Tier 1 EALs (Residential Direct-Exposure)1**	**HDOH Tier 1 EALs (Commercial/Industrial Direct-Exposure)2**	**HDOH Tier 1 EALs (Construction Worker Direct-Exposure)3**	**Results**	Q	RL	**Results**	Q	RL	**Results**	Q	RL
Polychlorinated Biphenyls (PCBs)															
PCB-1016	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	ND	M	0.019	ND		0.019	0.017	M	0.019
PCB-1221	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	ND		0.019	ND		0.019	0.017		0.019
PCB-1232	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	ND		0.019	ND		0.019	0.017		0.019
PCB-1242	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	ND	M	0.019	ND		0.019	0.017	M	0.019
PCB-1248	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	ND	M	0.019	ND		0.019	0.017	M	0.019
PCB-1254	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	**0.055**	M	0.019	**0.037**	J1 M	0.019	**0.20**	M	0.019
PCB-1260	EPA 8082A/3546	mg/kg	**1.2**	**1.2**	**8.6**	**25**	ND	J1 M	0.019	ND	M	0.019	0.017	M	0.019

Notes:

* State of Hawaii Department of Health Tier I Environmental Action Levels (EALs), Groundwater is a Current or Potential Source of Drinking Water (<150 meter to surface water body) presented in Table A of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

1 State of Hawaii Department of Health Tier I EALs, Residential Land-Use Scenario presented in Table I-1 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

2 State of Hawaii Department of Health Tier I EALs, Commercial / Industrial Land-Use Scenario presented in Table I-2 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

3 State of Hawaii Department of Health Tier I EALs, Construction/Trench Worker Exposure Scenario presented in Table I-3 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

M = Manual integrated compound.

mg/kg = milligram(s) per kilogram

ND = not detected in concentrations above the laboratories method reporting limit

RL = reporting limit

Q = qualifier

J1 = The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria

bgs = below ground surface