Faro Mine Complex Site-wide Sampling Definition 2013–2014, Faro Mine Remediation Project

PREPARED FOR: Government of Yukon

PREPARED BY: CH2M HILL Canada Limited

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Task Authorization 006(F), Site Wide Engineering, provides for CH2M HILL Canada Limited (CH2M HILL) to work with the Government of Yukon (YG) in preparing a comprehensive listing of sampling and laboratory test programs planned for the 2013–2014 fiscal year at the Faro Mine Complex (FMC). This technical memorandum (TM) summarizes the sampling programs; sampling locations, frequencies, matrices, and methods; analytes; and laboratory reporting limits.

In addition to CH2M HILL, YG and multiple contractors will collect samples. The samples will be submitted for geochemical, geotechnical, soil fertility, air monitoring, and bioassay testing. This summary of the FMC sampling and analysis activities will help stakeholders understand the program, which should promote efficient use of resources, identify sampling schedule conflicts, reduce duplication, and provide an understanding of the overall plan. This work will also assist in developing the data quality objectives and a site-wide quality assurance project plan, which are planned for completion under a separate task authorization.

Faro Mine Complex Sampling Definition

Table 1 summarizes the following three sampling programs for fiscal year 2013 (tables are located at the end of this TM):

- **Care and Maintenance Program (C&MP):** A compliance monitoring and sampling program and an FMC operational program in support of the expired water use licence.
- **Confirmatory Monitoring Program (CMP):** A compliance program performed by the Government of Yukon (YG), Assessment and Abandoned Mines (AAM). This is AAM's due diligence program.
- **Non-Care and Maintenance (NMP):** Includes activities that are not part of C&MP or the CMP. These include investigations and studies that support YG's submittal of the Project Proposal to the Yukon Environmental and Socio-economic Assessment Board. CH2M HILL, or their subcontractors, will manage and perform most of the activities. The Pelly Aquatics Program (PAP) and the groundwater sampling program for project design are exceptions. These two programs are managed by Environmental Dynamics Inc. (EDI). PAP was designed to support the collection of baseline environmental assessment and characterization data. PAP was also intended to be an independent downstream water quality monitoring and capacity-building program performed by the Selkirk First Nation (SFN). SFN was unable to continue the program for the last few years. YG maintained the program, recognizing that data gathered by PAP would be valuable for multiple reasons, including supporting the Project Proposal. Plans are underway to re-involve SFN.

Care and Maintenance Program 2013–2014

Kaori Torigai/AAM manages the C&MP. AAM contracts Tlicho Engineering and Environmental Services (TEES) to support the sampling and testing; Maxxam performs laboratory analyses under contract with TEES. TEES can perform limited analytical testing in an onsite laboratory. TEES collects groundwater, surface water, and seep

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water samples from 55 locations at various frequencies (weekly to quarterly). Attachment 1, Table 1-1 lists the sampling locations, including coordinates, matrices, sampling frequencies, and required analyses for samples collected from each sampling location. Meteorology, flow, and water levels are also measured on a routine basis.

Tables 1-A and 1-B describe the locations for the meteorological, flow, and water level measurements, and indicate how often they were measured.

Attachment 1, Table 1-1 lists codes, by location, that reference Attachment 1, Tables 1-4 through 1-14. These tables list the analytes, sampling methods, and the minimum and preferred method detection limits (MDL) for samples from each location.

TABLE 1
Sampling Summary for the 2013-2014 Season
Faro Mine Remediation Project

Program	Contractor	Program Summary
Care and Maintenance Program	TEES	Surface water quality for compliance
		Groundwater quality for compliance
		Meteorological, flow, and water level measurements
Confirmatory Monitoring Program	AAM	Surface water quality for compliance
Non-care and Maintenance	EDI	PAP (surface water quality) for baseline environmental assessment and characterization
		Groundwater sampling program for project design
	CH2M HILL	Seep water and WRD groundwater and air monitoring
		Borrow source investigation
		Faro Pit Lake sampling
		Down valley interim hydraulic upgrades
		Cross Valley Dam SIS
		Vangorda Creek Diversion

Notes:
SIS = seepage interception system
WRD = waste rock dump(s)

TABLE 1-1A
Faro Mine Care and Maintenance Flow/Water Level Monitoring: Locations, Frequency, and Purpose
Faro Mine Remediation Project

Station Name	Location Description	Flow/Level[a] Frequency	Purpose
Surface Water			
LCD	Little Creek Dam Pond at old pump house	C	Int
V1	Vangorda Creek, upstream mine and Blind Creek Road	C	Ref
V2	Grum Creek, upstream of confluence with Vangorda Creek. Main stem of Grum Creek, below Tributary A.	2M M	Per
V2A	Grum Creek, upstream of confluence with Moose Pond. Adjacent to Tributary A, downgradient from V15.	2M M	Per

TABLE 1-1A

Faro Mine Care and Maintenance Flow/Water Level Monitoring: Locations, Frequency, and Purpose

Faro Mine Remediation Project

Station Name	Location Description	Flow/Level[a] Frequency	Purpose
V4	Shrimp Creek, upstream Vangorda Creek confluence.	M	Per
V5	West Fork of Vangorda Creek at gravel pit.	M	Rec
V8	Lower Vangorda Creek at the footbridge.	C	Rec
V22	Vangorda Pit at pumping barge.	C	Int
V23	Grum Pit at Haul Road.	M	Int
V24	Influent to Water Treatment Plant.	WD	Int
V25	Effluent from Vangorda clarifying pond.	WD	Int
V25BSP	Grum Interceptor Ditch below Sheep Pad Pond.	WD/M	Per
V27	Vangorda Creek, just upstream Shrimp Creek.	C	Rec
Seepage			
Moose Seep	Between Moose Pond and Vangorda Creek.	2M M	Per
V14	Grum Dump Toe Access Road, downgradient of SRK-GD05. This station appears to have changed locations during the monitoring period, and may also have been monitored on the road upgradient of Sheep Creek, and upstream of V15 at the dump toe.	SF	Per
V15	Outlet of the Tributary A sedimentation pond.	2M	Per
V16	Ditch adjacent to the Grum Toe Access Road between V15 and Grum Creek.	SF	Per
V29	Vangorda Dump drain #2 - SRK VD02.	SF	Int
V30	Vangorda Dump drain #3 - SRK VD03.	SF	Int
V31	Vangorda Dump drain #4 - SRK VD10.	SF	Int
V32	Vangorda Dump drain #5 - SRK VD04.	SF	Int
V33	Vangorda Dump drain #6 - SRK VE05.	SF	Int

Legend

Frequency - SF=Spring and Fall, 2M=Twice Monthly, M=Monthly, QL=Quarterly, WD/M=Weekly when Discharging/Monthly Otherwise, W=Weekly, C=Continuous, MD=Monthly when Discharging, MO=Monthly During Open Water (May to October), WS=Winter and Summer, 3X=Three times/year including 2nd 1/2 of March (low flow), 2nd 1/2 of May (freshet), and October (mid-range flow).

Parameter Suite - S LDL=Surface Water Low Detection Limit; S=Surface Water Standard DL; G=Groundwater: G LDL=Groundwater Low DL; Red/Reduced refers to reduced suite for groundwater, see Groundwater Parameters Table; SE LDL=Seepage Low DL; SE=Seepage Standard DL; LC50-Q=Quarterly 96hr LC50; S2 and S2 LDL see footnotes on Surface Water Parameters Table.

Purpose - Rec=Receiving Water, Ref=Reference, Int=Internal, Per=Perimeter

Notes

[a] Zero flow or flows that cannot be sampled (i.e., trace, subsurface, glaciation) are to be recorded and reported for all required sampling events.

TABLE 1-1B

Faro Mine Care and Maintenance Flow/Water Level Monitoring: Locations, Frequency, and Purpose

Faro Mine Remediation Project

Station Name	Location Description	Flow/Level[1] Frequency	Purpose
Surface Water			
FAROCR	Outlet of Faro Creek Channel.	M	Per
FCO	Old Faro Creek, upstream of Faro Valley Dump.	M	Int
GDHSECK	Guardhouse Creek at Intermediate Dam Pond.	3X	Int
NF2	North Fork Rose Creek Site 2, downstream of Haul Road.	M	Per
R7	North Fork of Rose Creek above Faro Creek Diversion.	C	Ref
R8	North Fork of Rose Creek, 100 m downstream of confluence with Faro Creek Diversion.		Rec
R9	North Fork of Rose Creek, adjacent to Zone 2 Rock Dumps.		Rec
R10	North Fork of Rose Creek, downstream of Zone 2 Rock Dumps and 100 m downstream of R9.		Rec
X2	North Fork Rose Creek upstream of Mine Access Road.	C	Rec
X3	South Fork Rose Creek at the Pumphouse Pond.	M	Rec
X3A	Rose Creek, downstream of confluence of north and south forks.	M	Rec
X4	Intermediate Dam Pond Decant (when discharging)/Intermediate Dam Pond at Spillway (when not discharging).	C M	Int
X5	Cross Valley Pond Decant.	C	Per
X5P	Cross Valley Pond.	M	Int
X7	Old Faro Creek Channel downstream of Mine Access Road.	SF	Int
X10	Rose Creek Diversion below weirs.	M	Per
X14	Rose Creek downstream of the Rose Creek Diversion.	C	Rec
X22b	Faro Main Pit at Pumping Barge.	C	Int
	ETA Combined Collection from Pumping System.	C	Int
	ETA Bypass Below Collection System.	M	Int
	Intermediate Dam Pond Pumping Barge.	C	Int
Seepage			
A30	Seep Flow to Main Pit from Faro Valley Dump - SRKFD40.		Int
SP5-6	Ditch to Main Pit from Northeast Dumps - SRK FD26.	SF	Int
Weir 3	Cross Valley Dam Central Seep.	W	Int

TABLE 1-1B
Faro Mine Care and Maintenance Flow/Water Level Monitoring: Locations, Frequency, and Purpose
Faro Mine Remediation Project

Station Name	Location Description	Flow/Level[1] Frequency	Purpose
X11	Cross Valley Dam North Seep.	W	Int
X12	Cross Valley Dam South Seep.	W	Int
X13	Cross Valley Dam Combined Seepage.	W	Per
X23	Old Faro Creek Channel near the toe of the main (southwest) rock dumps. SRK FD9, FD10, FD12, FD31	W	Int
Groundwater			
Zone 2 Pit			
X26	Faro Zone II Pit Pumped Discharge.	C	Int
PW-10-06	New Zone II Well.	M	Int
SRK08-SPW1	S-Wells Operational pumping well - Deep Aquifer.	C	Int
SRK08-SPW2	S-Wells Operational pumping well - Deep Aquifer.	C	Int
SRK08-SPW3	S-Wells Operational pumping well - Shallow Aquifer Sump.	C	Int

Legend

Frequency - SF=Spring and Fall, 2M=Twice Monthly, M=Monthly, Q=Quarterly, WD/M=Weekly when Discharging/Monthly Otherwise, W=Weekly, C=Continuous, MD=Monthly when Discharging, WS=Winter and Summer, 3X=Three times/year including 2nd 1/2 of March (low flow), 2nd 1/2 of May (freshet), and October (mid-range flow).

Parameter Suite - S LDL=Surface Water Low Detection Limit; S=Surface Water Standard DL; G=Groundwater; SE LDL=Seepage Low DL; SE=Seepage Standard DL; LC50-Q=Quarterly 96hr LC50; S2 and S2 LDL see footnotes on Surface Water Parameters Table.

Purpose - Rec=Receiving Water, Ref=Reference, Int=Internal, Per=Perimeter

Notes
[1] Zero flow or flows that cannot be sampled (i.e., trace, subsurface, glaciation) are to be recorded and reported for all required sampling events.

Confirmatory Monitoring Program 2013–2014

Adrienne Turcotte/AAM manages the CMP. AAM collects samples and contracts ALS to perform laboratory analyses. AAM collects surface water samples from six locations each month from May through September. Attachment 1, Table 1-2 lists the sampling locations, including coordinates, matrixes, sampling frequencies, and required analyses for samples from each location.

Attachment 1, Table 1-2 lists codes, by location, that reference Attachment 1, Tables 1-4 through 1-11. These tables list analytes, methods, and the minimum and preferred MDLs for samples from each location.

Non-care and Maintenance Program 2013–2014

The NMP comprises three components: (1) groundwater sampling to support project design, managed by EDI, (2) PAP (surface water quality) for baseline environmental assessment and characterization managed by EDI, and (3) sampling managed by CH2M HILL in support of the Project Proposal.

Surface Water and Groundwater Sampling in Support of Project Design

Surface water and groundwater sampling in support of project design is managed by Adrienne Turcotte/AAM. EDI collects samples, and EDI contracts with ALS to perform laboratory analyses. EDI collects samples from

groundwater and surface water from 122 locations at various frequencies (twice monthly to annually). Attachment 1, Table 1-3 lists the sampling locations, coordinates, matrixes, sampling frequencies, and required analyses for samples collected from each location.

Attachment 1, Table 1-3 lists codes, by location, that reference Attachment 1, Table 1-4, -5 and -8, which lists the analytes, sampling methods, and the minimum and preferred MDL for samples collected from each location.

CH2M HILL Sampling In Support of the Project Proposal

CH2M HILL sampling programs are subcategorized as follows:

- Seep water and WRD groundwater monitoring
- Borrow source investigation
- Faro Pit Lake sampling
- Down Valley interim hydraulic upgrades
- Cross Valley Dam SIS
- Vangorda Creek Diversion
- Water treatment plant

The programs are described in the following sections.

Seep Water and Waste Rock Dumps Groundwater and Air Monitoring

CH2M HILL manages the seep water and WRD groundwater and air monitoring. ALS performs laboratory analyses under contract with CH2M HILL.

CH2M HILL samples 158 seeps three times per year (spring, summer, and fall). Attachment 2, Table 2-5 lists the sampling locations, matrixes, sampling frequencies, and required analyses for samples collected from each location. In addition, 24 seep locations that are only accessible by boat are sampled once each year, in the fall; Attachment 2, Table 2-6 lists the sampling locations, matrixes, sampling frequencies, and required analyses for samples collected from each location.

Attachment 2, Table 2-5 and Table 6 footnotes reference Attachment 2, Table 2-21, which lists the analytes, sampling methods, and reporting level requirements for samples collected from each location.

Five WRD groundwater (GW) locations are sampled three times per year (spring, fall, and winter). Attachment 2, Table 2-9 lists the sampling locations, matrixes, sampling frequencies, and required analyses for samples collected from each location.

Attachment 2, Table 2-9 footnotes reference Attachment 2, Table 2-21; which lists the analytes, sampling methods, and reporting level requirements for samples collected from each location.

Forty-two WRD air monitoring locations are planned for sampling three times per year (spring, fall, and winter). Attachment 2, Table 2-10 lists the sampling locations, matrixes, sampling frequencies, and field measurements required for each sampling location.

Borrow Source Investigation

CH2M HILL will manage the borrow source investigation sampling. Nine high-priority sites will be investigated to support various near-term objectives. The high-priority locations and material type(s) include the following:

- Faro Mine Area
  - Calc-silicate waste rock dumps (non-acid generating waste rock for rip-rap and gabions)
  - Rose Creek borrow (granular)
  - Rose Creek Haul Road (low permeability)
  - Haul Road borrow (granular)
- Grum/Vangorda Area
  - Grum Overburden Dump (low permeability)
  - Grum Overburden Dump foundation and north wall of Grum Pit (low permeability)

  - Grum Dump Rock Quarry (diorite bedrock for rip-rap)

- Haul Road Area
  - Faro Mine Access Road granitic outcrop (granite bedrock for rip-rap)
  - Ridge north of Grum Pit (granite bedrock for rip-rap, granular, and low permeability)

Faro Mine Area

Attachment 2, Table 2-11 lists the calc-silicate waste rock dump soil sampling locations, matrixes, sampling frequencies, and required analyses for samples collected from each location. Ten test pit locations will be sampled for geochemical, and geotechnical analyses. Attachment 2, Table 2-11 reference Attachment 2, Tables 2-20 and 2-22, which list the analytes, sampling methods, and reporting level requirements for each sampling location.

Attachment 2, Table 2-12 lists the Rose Creek borrow soil sampling locations, matrixes, sampling frequency, and required analyses for samples collected from each sampling location. Five surface soil and 10 test pit locations will be sampled. Samples will be collected for geochemical, geotechnical, and soil fertility analyses. Attachment 2, Table 2-12 footnotes direct the reader to reference Attachment 2, Tables 2-20, 2-22, and 2-24, which list the analytes, sampling methods, and reporting level requirements for each sampling location.

Attachment 2, Table 2-13 lists the Rose Creek Haul Road soil sampling locations, matrixes, sampling frequencies, and required analyses for samples collected from each sampling location. Four borehole, 5 surface soil, and 5 test pit locations will be sampled. Samples will be collected for geochemical, geotechnical, and soil fertility analyses. Attachment 2, Table 2-13 footnotes reference Attachment 2, Tables 2-20, 2-22, and 2-24, which list the analytes, sampling methods, and reporting level requirements for each sampling location.

Attachment 2, Table 2-14 lists the Haul Road Borrow soil sampling locations, matrixes, sampling frequencies, and required analyses for samples collected from each sampling location. Five test pit locations will be sampled and samples submitted for geochemical and geotechnical analyses. Footnotes in Attachment 2, Table 2-14 reference Attachment 2, Tables 2-20 and 2-22, which list the analytes, sampling method, and reporting level requirements for each sampling location.

Grum/Vangorda Area

Attachment 2, Table 2-15 lists the Grum Overburden Dump soil sampling locations, matrixes, sampling frequency, and required analyses for samples collected from each sampling location. Five boreholes and 10 test pit locations will be sampled. Samples will be collected for geochemical, geotechnical, and soil fertility analyses. Attachment 2, Table 2-15 footnotes reference Attachment 2, Tables 2-20, 2-22, and 2-24, which describe the analytes, sampling methods, and the reporting level requirements for each sampling location.

Attachment 2, Table 2-16 lists the Grum Overburden Dump foundation and the north wall of Grum Pit soil sampling locations, matrixes, sampling frequencies, and the required analyses for samples collected from each sampling location. Six boreholes, 15 surface soil, and 5 test pit locations will be sampled. Samples will be collected for geochemical, geotechnical, and soil fertility analyses. Footnotes in Attachment 2, Table 2-16 reference Attachment 2, Tables 2-20, 2-22 and 2-24; these tables list the analytes, sampling methods, and reporting level requirements for each sampling location.

Attachment 2, Table 2-17 lists the Grum Dump Rock Quarry soil sampling locations, matrixes, sampling frequencies, and the required analyses for samples collected from each sampling location. Six surface soil locations will be sampled and samples submitted for geochemical and geotechnical analyses. Attachment 2, Table 2-17 footnotes reference Attachment 2, Tables 2-20 and 2-22, which list the analytes, sampling methods, and reporting level requirements for each sampling location.

Haul Road Area

Attachment 2, Table 2-18 lists the Faro Mine Access Road granitic outcrop soil sampling locations, matrixes, sampling frequencies, and the required analyses for samples collected from each sampling location. Five surface soil and five test pit locations will be sampled and samples submitted for geochemical and geotechnical analyses.

Attachment 2, Table 2-18 footnotes reference Attachment 2, Tables 2-20 and 2-22, which list the analytes, sampling methods, and reporting level requirements for each sampling location.

Attachment 2, Table 2-19 lists the Ridge North of Grum Pit soil sampling locations, matrixes, sampling frequencies, and the required analyses for samples collected from each sampling location. Five borehole and five surface soil locations will be sampled. Samples will be collected for geochemical, geotechnical, and soil fertility analyses. Attachment 2, Table 2-19 footnotes reference Attachment 2, Tables 2-20, 2-22, and 2-24, which list the analytes, sampling methods, and reporting level requirements for each sampling location.

Faro Pit Lake Sampling

CH2M HILL manages Faro Pit Lake surface water sampling. ALS performs laboratory analyses under contract with CH2M HILL. One location will be sampled. Attachment 2, Table 2-8 lists the sampling location, matrix, sampling frequency, and the required analyses.

Attachment 2, Table 2-8 footnotes reference Attachment 2, Table 2-23, which lists the analytes, sampling method, and reporting level requirements.

Down Valley Interim Hydraulic Upgrades

CH2M HILL will manage soil sampling for the down valley interim hydraulic upgrades. Golder and Associates will perform the geotechnical analyses. Attachment 2, Table 2-3 lists the Intermediate Dam crest test pit sampling locations, Attachment 2, Table 2-4 lists the North Fork Rose Creek rock drain assessment sampling locations. Attachment 2, Tables 2-3 and 2-4 list the soil sampling locations, matrixes, sampling frequencies, and geotechnical analyses required for each sampling location.

Attachment 2, Table 2-3 and Attachment 2, Table 2-4 footnotes reference Attachment 2, Table 2-22, which lists the analytes, sampling methods, and reporting level requirements for each sampling location.

Cross Valley Dam Seepage Interception System

CH2M HILL will manage the Cross Valley Dam SIS soil and GW sampling. ALS will perform the geochemical laboratory analyses under contract with CH2M HILL. Golder and Associates will perform geotechnical analyses. CH2M HILL will collect soil samples from 17 locations for either geochemical or geotechnical analyses. Attachment 2, Table 2-1 lists the soil sampling locations, matrixes, sampling frequencies, and analyses required for each sampling location. In addition, 80 groundwater locations will be sampled; 5 locations will be sampled immediately after development, 9 locations will be sampled immediately after development and again in the summer, and the remaining locations will be sampled in the summer. Attachment 2, Table 2-2 lists the groundwater sampling locations, matrixes, sampling frequencies, and analyses required for each sampling location.

Attachment 2, Table 2-1 footnotes reference Attachment 2, Tables 2-20 and 2-22, which list the analytes, sampling methods, and reporting level requirements for each soil sampling location.

Attachment 2, Table 2-2 footnotes reference Attachment 2, Table 2-21, which lists the analytes, sampling methods, and reporting level requirements for each groundwater sampling location.

Vangorda Creek Diversion

CH2M HILL will manage soil sampling for the Vangorda Creek Diversion. Golder and Associates will perform geotechnical analyses on samples collected from three borings. Attachment 2, Table 2-7 lists the sampling locations, matrixes, sampling frequencies, and geotechnical analyses required by location.

Attachment 2, Table 2-7 footnotes reference Attachment 2, Table 2-22, which lists the analytes, sampling methods, and reporting level requirements for each sampling location.

References

CH2M HILL Canada Limited (CH2M HILL). 2013. *Field Sampling Plan for 2013 Seep Monitoring, Faro Mine Remediation Project*.

CH2M HILL Canada Limited (CH2M HILL). 2013. *Field Sampling Plan, Waste Rock Dump Monitoring, Faro Mine Remediation Project*.

CH2M HILL Canada Limited (CH2M HILL). 2013. *Field Sampling Plan, Develop and Decommission Faro-Grum-Vangorda Borrow Sources, Faro Mine Remediation Project*.

CH2M HILL Canada Limited (CH2M HILL). 2013. *Field Sampling Plan, Down Valley Interim Hydraulic Upgrades, Faro Mine Remediation Project*.

CH2M HILL Canada Limited (CH2M HILL). 2013. *Field Sampling Plan, Obtain Physical and Geochemical Dynamic Data of Faro Pit Lake, Faro Mine Remediation Project*.

CH2M HILL Canada Limited (CH2M HILL). 2013. *Field Sampling Plan, Construct New Vangorda Creek Diversion, Faro Mine Remediation Project*.

CH2M HILL Canada Limited (CH2M HILL). 2013. *Construct Cross Valley Dam Interception System – 2013 Field Sampling Plan, Faro Mine Remediation Project*.

Attachment 1

TABLE 1-1

Faro Mine Care and Maintenance Sampling: Locations, Frequency, and Methods

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Matrix	Northing	Easting	Sampling Frequency	APHA 4500H (pH)	Bioassay	JEM/SM4500N (Ammonia)	SM2130 (Turb)	SM2310 (Acidity)	SM2320B (Alk)	SM2340C (Hard)	SM2510 (Cond)	SM2540C (TDS)	SM2540D (TSS)	SM4110B (Anions)	SM4500P (Phosphorus)	SM5310 (DOC)	SM5310C (TOC)	SW6010B/6020A (Diss. Metals)	SW6010B/SW6020A (Tot. Metals)
A30	SE	6915450.00	584533.00	M	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
ETA Combined	SW	6913961.00	582742.00	M	SW_R[7]		SW_R[7]			SW_R[7]		SW_R[7]	SW_R[7]	SW_R[7]	SW_R[7]				SW_R[7]	SW_R[7]
FAROCR	SW	6914433.20	586417.50	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
FCO	SW	6916047.00	584893.00	3x	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
FCS-4	SW	6913819.93	582694.91	M	SW_R[7]		SW_R[7]			SW_R[7]		SW_R[7]	SW_R[7]	SW_R[7]	SW_R[7]				SW_R[7]	SW_R[7]
GDHSECK	SW	6914050.00	581672.00	3x	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
LCD	SW	6903157.70	593391.40	MO	SW_R[7]		SW_R[7]			SW_R[7]		SW_R[7]	SW_R[7]	SW_R[7]	SW_R[7]				SW_R[7]	SW_R[7]
MOOSE SEEP	SE	6903122.00	592859.00	2M/M	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
NF2	SW	6913016.30	584696.20	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
PW-10-06	G	6913950.00	584784.00	Q	G[1]				G[1]	G[1]		G[1]		G[1]	G[1]				G[1]	
R7	SW	6914293.00	586434.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R8	SW	6914402.00	586302.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R9	SW	6913652.00	585181.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R10	SW	6913485.00	585113.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
SP5-6	SE	6914231.58	585016.54	SF	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
SRK08-SPW1	G	6913112.98	584509.69	M	G[1]				G[1]	G[1]		G[1]		G[1]	G[1]				G[1]	
SRK08-SPW2	G	6913132.16	584467.46	M	G[1]				G[1]	G[1]		G[1]		G[1]	G[1]				G[1]	
SRK08-SPW3	G	6913123.91	584506.25	M	G[1]				G[1]	G[1]		G[1]		G[1]	G[1]				G[1]	
V1	SW	6903735.00	594453.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V2	SW	6903160.00	592774.00	2M/M	SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]		SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]		SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]	SW_B_LDL[6]
V2A	SW	6903267.51	593027.62	2M/M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V4	SW	6901844.00	591664.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V5	SW	6902122.00	586132.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V8	SW	6900598.00	584785.00	3x/M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[6]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V14	SE	6903236.66	592486.06	SF	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
V15	SE	6903391.00	592636.00	2M	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
V16	SE	6903377.48	592705.18	SF	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
V22	SW	6903505.09	593866.94	Q	SW_R[7]		SW_R[7]			SW_R[7]		SW_R[7]	SW_R[7]	SW_R[7]	SW_R[7]				SW_R[7]	SW_R[7]
V23	SW	6905067.56	592288.35	Q	SW_R_P_LDL[10]		SW_R_P_LDL[10]			SW_R_P_LDL[10]		SW_R_P_LDL[10]	SW_R_P_LDL[10]	SW_R_P_LDL[10]	SW_R_P_LDL[10]	SW_R_P_LDL[10]			SW_R_P_LDL[10]	SW_R_P_LDL[10]
V24	SW	6905197.00	593113.00	WD	SW_R[7]		SW_R[7]			SW_R[7]		SW_R[7]	SW_R[7]	SW_R[7]	SW_R[7]				SW_R[7]	SW_R[7]
V25	SW	6904995.00	593305.00	WD	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
V25 BSP	SW	6903655.00	593459.00	WD/M	SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]			SW_R_P_B_LDL[11]		SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]			SW_R_P_B_LDL[11]	SW_R_P_B_LDL[11]
V27	SW	6902098.00	591625.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V29	SE	6902507.00	593463.00	SF	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
V30	SE	6902579.00	593209.00	SF	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
V31	SE	6902983.00	593311.00	SF	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
V32	SE	6903041.00	593426.00	SF	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
V33	SE	6903087.00	593514.00	SF	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
WEIR3	SE	6914370.00	580016.00	WS	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
X2	SW	6912765.00	584061.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
X3	SW	6912513.00	583298.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
X3A	SW	6912537.41	583160.29	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
X4	SW	6914367.00	580740.00	M	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
X4_PondBarge	SW	6914367.00	580740.00	M	SW_R[7]		SW_R[7]			SW_R[7]		SW_R[7]	SW_R[7]	SW_R[7]	SW_R[7]				SW_R[7]	SW_R[7]
X5	SW	6914622.00	579992.80	WD	SW_R_B_LDL[9]	SW_R_B_LDL[9]	SW_R_B_LDL[9]			SW_R_B_LDL[9]		SW_R_B_LDL[9]	SW_R_B_LDL[9]	SW_R_B_LDL[9]	SW_R_B_LDL[9]				SW_R_B_LDL[9]	SW_R_B_LDL[9]

TABLE 1-1

Faro Mine Care and Maintenance Sampling: Locations, Frequency, and Methods

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Matrix	Northing	Easting	Sampling Frequency	APHA 4500H (pH)	Bioassay	JEM/SM4500N (Ammonia)	SM2130 (Turb)	SM2310 (Acidity)	SM2320B (Alk)	SM2340C (Hard)	SM2510 (Cond)	SM2540C (TDS)	SM2540D (TSS)	SM4110B (Anions)	SM4500P (Phosphorus)	SM5310 (DOC)	SM5310C (TOC)	SW6010B/6020A (Diss. Metals)	SW6010B/SW6020A (Tot. Metals)
X5P	SW	6914573.51	580190.32	M	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
X7	SW	6913979.00	582798.00	SF	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
X10	SW	6914863.00	579407.00	M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
X11	SE	6914452.00	579998.00	WS	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
X12	SE	6914283.00	579977.00	WS	SELDL[3]				SELDL[3]	SELDL[3]		SELDL[3]		SELDL[3]	SELDL[3]				SELDL[3]	
X13	SE	6914439.65	579961.20	M	SE_B_LDL[4]	SE_B_LDL[4]			SE_B_LDL[4]	SE_B_LDL[4]		SE_B_LDL[4]		SE_B_LDL[4]	SE_B_LDL[4]				SE_B_LDL[4]	
X14	SW	6915063.40	579348.80	WD/M	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
X22B	SW	6915000.91	584203.68	M	SW_R_LDL[8]		SW_R_LDL[8]			SW_R_LDL[8]		SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]	SW_R_LDL[8]				SW_R_LDL[8]	SW_R_LDL[8]
X23	SE	6914081.00	583227.00	M	SE[2]				SE[2]	SE[2]		SE[2]		SE[2]	SE[2]				SE[2]	
X26	G	6913916.17	584776.25	MD	G[1]				G[1]	G[1]		G[1]		G[1]	G[1]				G[1]	

Notes:

Matrix Definitions:

G=Groundwater

SE=Seep

SW = Surface Water

Frequency Definitions:

2M = Twice monthly

2M/M = Twice monthly May-Oct, other times once per month

3x = Three times/year including second half of March (low flow), second half of May (freshet), and October (mid-range flow)

3x/M = Monthly; but ensure that three times/year including second half of March (low flow), second half of May (freshet), and October (mid-range flow)

M = Monthly

MD = Monthly when discharging

MO=Monthly during open water (May to October)

Q = Quarterly

SF = Spring and fall

WD = Weekly when discharging

WD/M = Weekly when discharging; monthly otherwise

WS = Winter and summer

Analytical Suite Definitions:

[1] G = Groundwater. See Table 1-4 for detailed analyte list.

[2] SE = Seep. See Attachment 1, Table 1-6 for detailed analyte list.

[3] SELDL = Seep LDL. See Table 1-6 for detailed analyte list.

[4] SE_B_LDL = Seep/bioassay LDL. See Table 1-7 for detailed analyte list.

[5] SW_LDL = Surface water LDL. See Table 1-8 for detailed analyte list.

[6] SW_B_LDL = Surface water/bioassay LDL. See Table 1-9 for detailed analyte list.

[7] SW_R = Surface water reduced analyte list. See Table 1-11 for detailed analyte list.

[8] SW_R_LDL = Surface water reduced analyte list LDL. See Table 1-11 for detailed analyte list.

[9] SW_R_B_LDL = Surface water reduced analyte list/bioassay LDL. See Table 1-12 for detailed analyte list.

[10] SW_R_P_LDL = Surface water reduced analyte list/phosphorus LDL. See Table 1-13 for detailed analyte list.

[11] SW_R_P_B_LDL = Surface water reduced analyte list/phosphorus/bioassay LDL: See Table 1-14 for detailed analyte list.

TABLE 1-2

Faro Mine Confirmatory Monitoring Sampling: Locations, Frequency, and Methods

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Matrix	Northing	Easting	Sampling Frequency	APHA 4500H (pH)	JEM/SM4500N (Ammonia)	SM2130 (Turb)	SM2320B (Alk)	SM2340C (Hard)	SM2510 (Cond)	SM2540C (TDS)	SM2540D (TSS)	SM4110B (Anions)	SM4500P (Phosphorus)	SM5310 (DOC)	SM5310C (TOC)	SW6010B/6020A (Diss. Metals)	SW6010B/SW6020A (Tot. Metals)
V2	SW	6903160.00	592774.00	M	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]
V25 BSP	SW	6903655.00	593459.00	M	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]
X13	SW	6914439.65	579961.20	M	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]
X14	SW	6915063.40	579348.80	M	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]
X2	SW	6912765.00	584061.00	M	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]
X5	SW	6914622.00	579992.80	M	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]	SW_P_LDL[1]

Matrix Definition:

SW = Surface Water

Frequency Definitions:

M = Monthly May through September

Analytical Definitions:

[1] SW_P_LDL = Surface water + Phosphorus LDL.
See Table 1-10 for detailed analyte list

TABLE 1-3

Faro Mine Non-care and Maintenance Sampling: Locations, Frequency, and Methods

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Matrix	Northing	Easting	Sampling Frequency	APHA 4500H (pH)	JEM/SM4500N (Ammonia)	SM2130 (Turb)	SM2310 (Acidity)	SM2320B (Alk)	SM2340C (Hard)	SM2510 (Cond)	SM2540C (TDS)	SM2540D (TSS)	SM4110B (Anions)	SM5310 (DOC)	SM5310C (TOC)	SW6010B/6020A (Diss. Metals)	SW6010B/SW6020A (Tot. Metals)
BH5	G	6913551.47	585089.50	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
BH6	G	6913640.85	585093.77	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
BH8	G	6913776.92	585145.63	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
BH10A	G	6913707.67	585084.58	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
BH10B	G	6913707.62	585084.59	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
BH13B	G	6914494.49	585751.73	SF	G_R_LDL[3]				G_R_LDL[3]		G_R_LDL[3]			G_R_LDL[3]			G_R_LDL[3]	
BH14A	G	6914011.30	585584.61	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
BH14B	G	6914011.27	585584.83	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P01-01A	G	6914854.11	579700.88	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P01-01B	G	6914854.16	579700.86	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P01-03	G	6914252.95	580519.54	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P01-04A	G	6914074.40	580378.32	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P01-04B	G	6914074.42	580378.33	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P01-11	G	6914486.91	580096.33	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P03-01-02	G	6912754.85	583196.78	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-01-08	G	6912761.44	583184.15	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-03-02	G	6912879.89	582949.67	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-03-04	G	6912879.89	582949.67	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-03-09	G	6912879.89	582949.67	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-05-04	G	6913115.26	582487.57	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-06-01	G	6913490.35	582454.31	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-06-02	G	6913490.35	582454.31	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-06-06	G	6913490.35	582454.31	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-06-07	G	6913490.35	582454.31	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-09-06	G	6914409.95	579948.33	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P03-09-09	G	6914410.04	579948.25	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P05-01-03	G	6914509.51	580060.54	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P05-01-05	G	6914509.48	580060.57	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P05-04	G	6913649.42	585119.23	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-C2	G	6914402.13	580014.51	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-C3	G	6914317.58	579973.92	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-ETA1	G	6913809.42	582702.93	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-ETA2	G	6913807.37	582702.70	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-GS1A	G	6904832.37	592494.88	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-GS1B	G	6904833.13	592487.19	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-LCD1	G	6903312.73	593363.51	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-LCD4	G	6903271.40	593331.26	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-LCD6	G	6903247.87	593316.55	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-SIS1	G	6913128.35	584480.95	Q	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-SIS2	G	6913124.47	584489.22	Q	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-SIS3	G	6913118.57	584497.26	Q	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-SIS4	G	6913111.00	584512.00	Q	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-SIS5	G	6913109.29	584517.09	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
P09-VC1	G	6903419.16	593522.43	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P09-VC2	G	6903428.73	593531.51	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P2001-02A	G	6902864.35	593135.39	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P2001-02B	G	6902864.40	593135.46	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P2001-03	G	6902881.94	593099.22	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P96-6	G	6913312.68	584905.67	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P96-7	G	6913285.53	584127.69	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	

TABLE 1-3

Faro Mine Non-care and Maintenance Sampling: Locations, Frequency, and Methods

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Matrix	Northing	Easting	Sampling Frequency	APHA 4500H (pH)	JEM/SM4500N (Ammonia)	SM2130 (Turb)	SM2310 (Acidity)	SM2320B (Alk)	SM2340C (Hard)	SM2510 (Cond)	SM2540C (TDS)	SM2540D (TSS)	SM4110B (Anions)	SM5310 (DOC)	SM5310C (TOC)	SW6010B/6020A (Diss. Metals)	SW6010B/SW6020A (Tot. Metals)
P96-8A	G	6914073.83	583225.00	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P96-8B	G	6914073.81	583224.92	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P96-9A	G	6903346.80	592649.94	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
P96-9B(R)	G	6903346.86	592642.57	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
S1A	G	6913116.32	584434.30	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
S1B	G	6913116.43	584434.22	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
S2A	G	6913118.24	584471.53	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
S2B	G	6913118.53	584471.54	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK04-3A	G	6913999.03	582872.79	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-05C	G	6903383.13	592768.38	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK05-07	G	6903186.21	592372.72	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK05-08	G	6903237.80	592585.72	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK05-09	G	6903160.38	592953.98	2M	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK05-ETA-BR1	G	6914020.56	582867.51	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-ETA-BR2	G	6913999.56	582882.51	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-SP1A	G	6913075.57	584622.52	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-SP1B	G	6913075.57	584621.52	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-SP2	G	6913036.27	584684.95	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-SP3A	G	6913098.57	584546.52	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-SP3B	G	6913098.57	584547.52	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK05-SP4A	G	6913113.57	584507.52	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK05-SP4B	G	6913113.62	584506.52	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK05-SP5	G	6913130.57	584471.52	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK05-SP6	G	6913149.17	584387.13	F	G_R[2]				G_R[2]		G_R[2]			G_R[2]			G_R[2]	
SRK08-10A	G	6914052.99	582722.47	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-11A	G	6914570.82	582585.32	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-11B	G	6914571.01	582588.43	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-P09	G	6913614.00	583699.00	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-P12A	G	6913689.12	585228.91	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-P12B	G	6913690.53	585226.50	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-P14	G	6903698.82	591763.24	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-P15	G	6903533.55	591964.57	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-P16	G	6903146.58	592203.88	F	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
SRK08-SBR1	G	6913128.03	584477.82	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SBR2	G	6913126.30	584486.00	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SBR3	G	6913150.87	584397.32	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SBR4	G	6913138.84	584449.75	F	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SP7A	G	6913095.00	584429.00	Q	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SP7B	G	6913094.00	584432.50	Q	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SP8A	G	6912954.74	584297.23	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
SRK08-SP8B	G	6912947.82	584294.77	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
TH86-2	G	6912494.00	583536.00	F	G_R_LDL[3]				G_R_LDL[3]		G_R_LDL[3]			G_R_LDL[3]			G_R_LDL[3]	
TH86-5	G	6912571.00	583589.00	F	G_R_LDL[3]				G_R_LDL[3]		G_R_LDL[3]			G_R_LDL[3]			G_R_LDL[3]	
V34	G	6902484.87	593439.51	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
V35	G	6902554.81	593181.26	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
V36	G	6902916.60	593138.28	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
V37	G	6903080.27	593315.70	SF	GLDL[4]			GLDL[4]	GLDL[4]		GLDL[4]		GLDL[4]	GLDL[4]			GLDL[4]	
X24-96D	G	6914298.58	580549.93	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
X25-96A	G	6914120.59	580416.07	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	
X25-96B	G	6914120.50	580416.11	SF	G[1]			G[1]	G[1]		G[1]		G[1]	G[1]			G[1]	

TABLE 1-3

Faro Mine Non-care and Maintenance Sampling: Locations, Frequency, and Methods

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Matrix	Northing	Easting	Sampling Frequency	APHA 4500H (pH)	JEM/SM4500N (Ammonia)	SM2130 (Turb)	SM2310 (Acidity)	SM2320B (Alk)	SM2340C (Hard)	SM2510 (Cond)	SM2540C (TDS)	SM2540D (TSS)	SM4110B (Anions)	SM5310 (DOC)	SM5310C (TOC)	SW6010B/6020A (Diss. Metals)	SW6010B/SW6020A (Tot. Metals)
A1	SW	6924165.00	545788.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
FC	SW	6916777.00	585356.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
GCULV	SW	6907394.73	589825.18	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
K8	SW	6910755.70	586412.90	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
NWID	SW	6914540.00	582506.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
P1	SW	6899062.00	584964.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
P4	SW	6925855.00	543315.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R1	SW	6912408.00	584012.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R4	SW	6921037.00	567488.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R5	SW	6922700.00	566300.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
R6	SW	6921471.00	568453.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
USFR	SW	6906906.00	590678.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V17A	SW	6906059.00	591379.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V20A	SW	6902240.00	595137.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
V8	SW	6900598.00	584785.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
VGMAIN	SW	6901334.00	585790.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
VR	SW	6907372.00	590243.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
VW1	SW	6904730.00	586913.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
VW2	SW	6903730.00	587303.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
VW3	SW	6906702.00	590296.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
W10	SW	6915584.00	583282.00	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]
X14	SW	6915063.40	579348.80	3x	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]		SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]	SW_LDL[5]

Notes:

Matrix Definitions:

G=Groundwater

SE=Seep

SW = Surface Water

Frequency Definitions:

2M = Twice Monthly

3x = Three times per year (May, August, and October)

F = Fall

Q = Quarterly with low flow period

SF = Spring and Fall

Analytical Suite Definitions:

[1] G = Groundwater. See Table 1-4 for detailed analyte list.

[2] G_R = Groundwater reduced analyte list. See Table 1-5 for detailed analyte list.

[3] G_R_LDL = Groundwater reduced analyte listlow detection limit (LDL). See Table 1-5 for detailed analyte list.

[4] GLDL = Groundwater LDL. See Table 1-4 for detailed analyte list.

[5] SW_LDL = Surface water LDL. See Table 1-8 for detailed analyte list.

TABLE 1-4

Groundwater Analytical Suite: G and GLDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
SM2310	Acidity	mg/L		
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Sulphate	mg/L	1	0.2
SW6010B/6020A	Aluminum (dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be measured:

- pH
- Conductivity
- Temperature
- Purge volume
- Purge rate
- Purge time
- Sampling time

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-5

Groundwater Reduced Analytical Suite: G_R and G_R_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM4110B	Sulphate	mg/L	1	0.2
SW6010B/6020A	Calcium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Iron (dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Magnesium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Potassium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Sodium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Zinc (dissolved)	mg/L	0.005	0.0005

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature
- Purge volume
- Purge rate
- Purge time
- Sampling time

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-6

Seep Analyte Suite: SE and SELDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
SM2310	Acidity	mg/L		
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Sulphate	mg/L	1	0.2
SW6010B/6020A	Aluminum (dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature
- Oxidation reduction potential

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-7

Seep + Bioassay Analytical Suite: SE_B_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
Bioassay	Bioassay			
SM2310	Acidity	mg/L		
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	uS		
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Sulphate	mg/L	1	0.2
SW6010B/6020A	Aluminum (dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature
- Oxidation reduction potential

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-8

Surface Water Analytical Suite: SW_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
JEM/SM4500N	Ammonia-N	mg/L	0.05	0.02
SM2130	Turbidity	NTU		
SM2320B	Alkalinity	mg/L	1	1
SM2340C	Hardness	mg/L		
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SM5310	Dissolved organic Carbon	mg/L	1	0.1
SM5310C	Total organic Carbon	mg/L	1	0.1
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-9

Surface Water + Bioassay Analytical Suite: SW_B_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
Bioassay	Bioassay			
JEM/SM4500N	Ammonia-N	mg/L	0.05	0.02
SM2130	Turbidity	NTU		
SM2320B	Alkalinity	mg/L	1	1
SM2340C	Hardness	mg/L		
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SM5310	Dissolved organic Carbon	mg/L	1	0.1
SM5310C	Total organic Carbon	mg/L	1	0.1
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-10

Surface Water + Phosphorus Analytical Suite: SW_P_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
JEM/SM4500N	Ammonia-N	mg/L	0.05	0.02
SM2130	Turbidity	NTU		
SM2320B	Alkalinity	mg/L	1	1
SM2340C	Hardness	mg/L		
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SM4500P	Total Phosphorus	mg/L	0.005	0.002
SM5310	Dissolved organic Carbon	mg/L	1	0.1
SM5310C	Total organic Carbon	mg/L	1	0.1
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-11

Surface Water Reduced Analytical Suite: SW_R and SW_R_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
JEM/SM4500NH3	Ammonia-N	mg/L	0.05	0.02
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-12

Surface Water Reduced List + Bioassay Analytical Suite: SW_R_B_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
Bioassay	Bioassay			
JEM/SM4500NH3	Ammonia-N	mg/L	0.05	0.02
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-13

Surface Water Reduced List + Phosphorus Analytical Suite: SW_R_P_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
JEM/SM4500NH3	Ammonia-N	mg/L	0.05	0.02
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SM4500P	Total Phosphorus	mg/L	0.005	0.002
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

TABLE 1-14

Surface Water Reduced List + Phosphorus + Bioassay Analytical Suite: SW_R_P_B_LDL

Faro Mine Complex Site Wide Sampling Definition 2013–2014

			Minimum Detection Limits for LDL Designations	
Method	**Analyte**	**Units**	**Minimum MDL**	**Preferred MDL**
APHA 4500H	pH	pH units	0.01	0.01
Bioassay	Bioassay			
JEM/SM4500NH3	Ammonia-N	mg/L	0.05	0.02
SM2320B	Alkalinity	mg/L	1	1
SM2510	Conductivity	µS		
SM2540C	Total dissolved solids	mg/L	10	10
SM2540D	Total suspended solids	mg/L	2	1
SM4110B	Chloride	mg/L	1	0.05
SM4110B	Nitrate-N	mg/L	0.1	0.03
SM4110B	Sulphate	mg/L	1	0.2
SM4500P	Total Phosphorus	mg/L	0.005	0.002
SW6010B/6020A	Aluminum (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Antimony (total and dissolved)	mg/L	0.005	0.001
SW6010B/6020A	Arsenic (total and dissolved)	mg/L	0.001	0.0005
SW6010B/6020A	Barium (total and dissolved)	mg/L	0.01	0.001
SW6010B/6020A	Beryllium (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Bismuth (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Boron (total and dissolved)	mg/L	0.05	0.001
SW6010B/6020A	Cadmium (total and dissolved)	mg/L	0.00001	0.000005
SW6010B/6020A	Calcium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Chromium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Cobalt (total and dissolved)	mg/L	0.0009	0.00005
SW6010B/6020A	Copper (total and dissolved)	mg/L	0.001	0.0001
SW6010B/6020A	Iron (total and dissolved)	mg/L	0.05	0.005
SW6010B/6020A	Lead (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Magnesium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Manganese (total and dissolved)	mg/L	0.002	0.0005
SW6010B/6020A	Molybdenum (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Nickel (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Potassium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Selenium (total and dissolved)	mg/L	0.001	0.0002
SW6010B/6020A	Silver (total and dissolved)	mg/L	0.00005	0.00001
SW6010B/6020A	Sodium (total and dissolved)	mg/L	0.5	0.05
SW6010B/6020A	Strontium (total and dissolved)	mg/L	0.002	0.001
SW6010B/6020A	Thallium (total and dissolved)	mg/L	0.0003	0.00005
SW6010B/6020A	Tin (total and dissolved)	mg/L	0.001	0.001
SW6010B/6020A	Titanium (total and dissolved)	mg/L	0.005	0.005
SW6010B/6020A	Uranium (total and dissolved)	mg/L	0.005	0.0001
SW6010B/6020A	Vanadium (total and dissolved)	mg/L	0.006	0.001
SW6010B/6020A	Zinc (total and dissolved)	mg/L	0.005	0.0005
SW6010B/6020A	Zirconium (total and dissolved)	mg/L	0.004	0.001

Notes :

In addition to the analytical methods listed above the following field parameters will be collected:

- pH
- Conductivity
- Temperature

Low detection limits specified in table are only required for sites identified by LDL designation in the method columns.

Dissolved metals samples to be field filtered.

LDL = low detection limit

MDL = method detection limit

µS = microSiemens

mg/L = miligrams per litre

Attachment 2

TABLE 2-1

Cross Valley Dam Soil Sampling (Activity Code 204.2)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

				96-hour DI Water Leach								ABA						Geotechnical Tests				
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Approximate Depth (ft)[a]	Sample Frequency	TM, Paste pH, TIC	TOC	pH, ORP, Conductivity	Alkalinity, Acidity, Sulphate	DM	Total Sulphur	Acid-soluble Sulphate-S	Barium by Lithium Metaborate Fusion	Modified Neutralization Potential	SPLP Leach/DM	Modified Tessier Extractions/DM	Moisture Content	Gradation and Atterberg Limits	Consolidation	Shear Strength	In Situ Vane Shear Test
CH13-204-MW007	CH13-204-MW007_SOa	TAR15	SO	0	0	ID		X							X							
CH13-204-MW007	CH13-204-MW007_SOb	TAR15	SO	8	26	ID		X							X							
CH13-204-MW007	CH13-204-MW007_SOc	TAR15	SO	16	52	ID		X							X							
CH13-204-MW007	CH13-204-MW007_SOd	TAR15	SO	24	79	ID		X							X							
CH13-204-MW007	CH13-204-MW007_SOe	TAR15	SO	32	105	ID		X							X							
CH13-204-MW007	CH13-204-MW007_SOf	TAR15	SO	40	131	ID		X							X							
CH13-204-MW007	CH13-204-MW007_SOg	TAR15	SO	48	157	ID		X							X							
CH13-204-MW008B	CH13-204-MW008B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW008B	CH13-204-MW008B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW008B	CH13-204-MW008B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW008B	CH13-204-MW008B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW008B	CH13-204-MW008B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW008B	CH13-204-MW008B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW009B	CH13-204-MW009B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW009B	CH13-204-MW009B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW009B	CH13-204-MW009B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW009B	CH13-204-MW009B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW009B	CH13-204-MW009B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW009B	CH13-204-MW009B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW010B	CH13-204-MW010B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW010B	CH13-204-MW010B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW010B	CH13-204-MW010B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW010B	CH13-204-MW010B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW010B	CH13-204-MW010B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW010B	CH13-204-MW010B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW011B	CH13-204-MW011B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW012B	CH13-204-MW012B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW012B	CH13-204-MW012B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW012B	CH13-204-MW012B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW012B	CH13-204-MW012B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW012B	CH13-204-MW012B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW012B	CH13-204-MW012B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW014B	CH13-204-MW014B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW014B	CH13-204-MW014B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW014B	CH13-204-MW014B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW014B	CH13-204-MW014B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW014B	CH13-204-MW014B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW014B	CH13-204-MW014B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW015B	CH13-204-MW015B_SOa	TAR15	SO	0	0	ID													x[b]		x[b]	
CH13-204-MW015B	CH13-204-MW015B_SOb	TAR15	SO	3	10	ID													x[b]		x[b]	
CH13-204-MW015B	CH13-204-MW015B_SOc	TAR15	SO	6	20	ID													x[b]		x[b]	
CH13-204-MW015B	CH13-204-MW015B_SOd	TAR15	SO	9	30	ID													x[b]		x[b]	
CH13-204-MW015B	CH13-204-MW015B_SOe	TAR15	SO	12	39	ID													x[b]		x[b]	
CH13-204-MW015B	CH13-204-MW015B_SOf	TAR15	SO	15	49	ID													x[b]		x[b]	
CH13-204-MW016B	CH13-204-MW016B_SOa	TAR15	SO	0.5	1.6	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOb	TAR15	SO	1.5	5	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOc	TAR15	SO	3	10	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOd	TAR15	SO	4.5	15	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOe	TAR15	SO	6	20	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOf	TAR15	SO	7.5	25	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOg	TAR15	SO	9	30	ID												X	x[b]	TBD		
CH13-204-MW016B	CH13-204-MW016B_SOh	TAR15	SO	10.5	34	ID												X	x[b]	TBD		
CH13-204-MW016C	CH13-204-MW016C_SOa	TAR15	SO	0.5	1.6	ID																X

TABLE 2-1
Cross Valley Dam Soil Sampling (Activity Code 204.2)
Faro Mine Complex Site Wide Sampling Definition 2013–2014

				96-hour DI Water Leach								ABA						Geotechnical Tests				
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Approximate Depth (ft)[a]	Sample Frequency	TM, Paste pH, TIC	TOC	pH, ORP, Conductivity	Alkalinity, Acidity, Sulphate	DM	Total Sulphur	Acid-soluble Sulphate-S	Barium by Lithium Metaborate Fusion	Modified Neutralization Potential	SPLP Leach/DM	Modified Tessier Extractions/DM	Moisture Content	Gradation and Atterberg Limits	Consolidation	Shear Strength	In Situ Vane Shear Test
CH13-204-MW016C	CH13-204-MW016C_SOb	TAR15	SO	1.5	5	ID																X
CH13-204-MW016C	CH13-204-MW016C_SOc	TAR15	SO	3	10	ID																X
CH13-204-MW016C	CH13-204-MW016C_SOd	TAR15	SO	4.5	15	ID																X
CH13-204-MW016C	CH13-204-MW016C_SOe	TAR15	SO	6	20	ID																X
CH13-204-MW016C	CH13-204-MW016C_SOf	TAR15	SO	7.5	25	ID																X
CH13-204-MW016C	CH13-204-MW016C_SOg	TAR15	SO	9	30	ID																X
CH13-204-MW016C	CH13-204-MW016C_SOh	TAR15	SO	10	33	ID																X
CH13-204-MW016E	CH13-204-MW016E_SOa	TAR15	SO	0.5	1.6	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOb	TAR15	SO	3	10	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOc	TAR15	SO	6	20	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOd	TAR15	SO	9	30	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOe	TAR15	SO	12	39	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOf	TAR15	SO	15	49	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOg	TAR15	SO	19.5	64	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOh	TAR15	SO	24	79	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOi	TAR15	SO	29.5	97	ID	X		X	X	X	X	X	X	X	X	X					
CH13-204-MW016E	CH13-204-MW016E_SOj	TAR15	SO	34	112	ID	X		X	X	X	X	X	X	X	X	X					

For geochemical methods see Table 2-20. For geotechnical methods see Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations.
[b]Geotech samples will be collected at every sampling interval. Geotech lead will select 4-6 samples for laboratory analysis.

Notes:

ABA = acid-base accounting

DI = deionized
DM = dissolved metals
ft = feet
ID = Sample will be collected during Initial drilling/digging of borehole/test pit.
ORP = oxidation-reduction potential
m = metre(s)
SPLP = Synthetic Precipitation Leaching Procedure
SO = soil
TBD = to be determined
TM = total metals
TIC = total inorganic carbon
TOC = total organic carbon
X = Sample will be collect for designated analyte.

TABLE 2-2

Cross Valley Dam Groundwater Sampling (Activity Code 204.2)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Sample Identifier[a]	Associated TAR	Matrix	Sample Frequency	Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[d]	Dissolved Metals[e]	Free Cyanide[f]	DOC[e]	TDS	TSS	Field Parameters[g]
CH13-204-MW007	CH13-204-MW007_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW008A	CH13-204-MW008A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW009A	CH13-204-MW009A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW010A	CH13-204-MW010A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW011A	CH13-204-MW011A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW012A	CH13-204-MW012A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW013A	CH13-204-MW013A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW014A	CH13-204-MW014A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW015A	CH13-204-MW015A_GWMMYY	TAR15	GW	D	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW016A	CH13-204-MW016A_GWMMYY	TAR15	GW	D,S	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW016B	CH13-204-MW016B_GWMMYY	TAR15	GW	D,S	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW016C	CH13-204-MW016C_GWMMYY	TAR15	GW	D,S	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW016D	CH13-204-MW016D_GWMMYY	TAR15	GW	D,S	X	X	X	X	X	X	X	X	X	X	X
CH13-204-MW016E	CH13-204-MW016E_GWMMYY	TAR15	GW	D,S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW001A	CH12-204-MW001A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW001B	CH12-204-MW001B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW002A	CH12-204-MW002A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW002B	CH12-204-MW002B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW003A	CH12-204-MW003A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW003B	CH12-204-MW003B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW004A	CH12-204-MW004A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW004B	CH12-204-MW004B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW005A	CH12-204-MW005A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW005B	CH12-204-MW005B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW006A	CH12-204-MW006A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
CH12-204-MW006B	CH12-204-MW006B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P01-02A	P01-02A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P01-02B	P01-02B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P01-05B	P01-05B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-01-04	P03-01-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-01-06	P03-01-06_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-01-07	P03-01-07_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-01-09	P03-01-09_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-02-03	P03-02-03_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-02-04	P03-02-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-02-05	P03-02-05_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-02-07	P03-02-07_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-02-09	P03-02-09_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-03-01	P03-03-01_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-03-03	P03-03-03_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-03-06	P03-03-06_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-03-08	P03-03-08_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-04-02	P03-04-02_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-04-04	P03-04-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-04-06	P03-04-06_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-04-08	P03-04-08_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-05-02	P03-05-02_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-05-03	P03-05-03_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-05-05	P03-05-05_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-05-06	P03-05-06_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-05-07	P03-05-07_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-05-08	P03-05-08_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-06-03	P03-06-03_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-06-04	P03-06-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-06-05	P03-06-05_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-08-02	P03-08-02_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-08-03	P03-08-03_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X

TABLE 2-2
Cross Valley Dam Groundwater Sampling (Activity Code 204.2)
Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Sample Identifier[a]	Associated TAR	Matrix	Sample Frequency	Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[d]	Dissolved Metals[e]	Free Cyanide[f]	DOC[e]	TDS	TSS	Field Parameters[g]
P03-08-04	P03-08-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-08-05	P03-08-05_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-08-06	P03-08-06_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-08-07	P03-08-07_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-08-08	P03-08-08_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-09-02	P03-09-02_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-09-04	P03-09-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P03-09-08	P03-09-08_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P05-01-01	P05-01-01_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P05-01-02	P05-01-02_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P05-01-04	P05-01-04_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P05-01-06	P05-01-06_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P05-02	P05-02_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
P05-03	P05-03_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
TH86-17	TH86-17_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X16A	X16A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X16B	X16B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X17A	X17A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X17B	X17B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X18A	X18A_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X18B	X18B_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X21A-96	X21A-96_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X
X21B-96	X21B-96_GWMMYY	TAR15	GW	S	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-21.

[a]MMYY, where MM is the two digit month and YY is the year (13 for 2013), so sampling in June of 2013 would be 0613, and sampling in the October of 2013 would be 1013.

[b]Acidity on samples with >10 mg/L hydrolysable metals (i.e., aluminum, iron, manganese) but <15 mg/L iron and/or pH <7.5 but >5. Hot Peroxide Acidity on samples with >15 mg/L iron and/or pH <5.

[c]Alkalinity (including calculated carbonate and bicarbonate) on samples with pH >4.5.

[d]Ferrous iron in SW samples with pH <4.5 (field sample preparation will follow SOP INV008).

[e]Field filtered with 0.45-µm inline filter.

[f]Field filtered with 0.10-µm inline filter.

[g]Field parameters include: date and time, flow (if applicable), temperature, pH (temperature corrected), conductivity, DO, ORP , turbidity, and sulphide (field test kit) in samples with ORP < 0.

Notes:

D,S = Sample once immediately after development and once in summer.

DOC = dissolved organic carbon

GW = groundwater

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

S = Sample once in summer.

TDS = total dissolved solids

TSS = total suspended solids

X = Sample will be collect for designated analyte.

TABLE 2-3

DVIHU Intermediate Dam Crest Test Pits (Activity Codes 201.2 and 201.3)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Sample Identifier	Associated TAR	Matrix	Target Sample Material[a]	Sample Frequency	Atterberg Limits Tests	Gradation	Moisture Content
CH13-201-TP001	CH13-201-TP001_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP001	CH13-201-TP001_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP002	CH13-201-TP002_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP002	CH13-201-TP002_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP003	CH13-201-TP003_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP003	CH13-201-TP003_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP004	CH13-201-TP004_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP004	CH13-201-TP004_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP005	CH13-201-TP005_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP005	CH13-201-TP005_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP006	CH13-201-TP006_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP006	CH13-201-TP006_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP007	CH13-201-TP007_SOa	TAR16	SO	Embankment material	ID		X[b]	
CH13-201-TP007	CH13-201-TP007_SOb	TAR16	SO	Clay core	ID	X	X	X
CH13-201-TP008	CH13-201-TP008_SOa	TAR16	SO	Spillway material	ID	X	X	X
CH13-201-TP009	CH13-201-TP009_SOa	TAR16	SO	Spillway material	ID		X	
CH13-201-TP010	CH13-201-TP010_SOa	TAR16	SO	Spillway material	ID		X	

For geotechnical methods see Table 2-22.

[a]Sample depths will be directed by the Engineer in the field.

[b]Only five representative samples will be selected for laboratory analysis.

Notes:

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

X = Sample will be collect for designated analyte.

TABLE 2-4

DVIHU North Fork Rose Creek Rock Drain Assessment (Activity Code 203.3A)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Sample Identifier	Associated TAR	Matrix	Sampling Frequency	Approximate Depth (m)[a]	Approximate Depth (ft)[a]	Atterberg Limits Tests	Gradation	Moisture Content	Direct Shear Tests
CH13-203-BH001	CH13-203-BH001_SOa	TAR16	SO	ID	2	5	X	X	X	
CH13-203-BH001	CH13-203-BH001_SOb	TAR16	SO	ID	3	10	X	X	X	X
CH13-203-BH001	CH13-203-BH001_SOc	TAR16	SO	ID	5	15	X	X	X	
CH13-203-BH001	CH13-203-BH001_SOd	TAR16	SO	ID	6	20	X	X	X	X
CH13-203-BH002	CH13-203-BH002_SOa	TAR16	SO	ID	2	5	X	X	X	
CH13-203-BH002	CH13-203-BH002_SOb	TAR16	SO	ID	3	10	X	X	X	X
CH13-203-BH002	CH13-203-BH002_SOc	TAR16	SO	ID	5	15	X	X	X	
CH13-203-BH002	CH13-203-BH002_SOd	TAR16	SO	ID	6	20	X	X	X	X

For geotechnical methods see Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations. Final sample selection will be directed by the Engineer in the field.

Notes:

ft = feet

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

m = metres

SO = soil

X = Sample will be collect for designated analyte.

TABLE 2-5

Seeps Targeted for Spring and Fall 2013 Sampling (Activity Code SW-015)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Location Description	Sample Identifier	Associated TAR	Matrix	Sampling Frequency	Required Analyses											
						Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[d]	Dissolved Metals[f]	Free Cyanide	Ortho-Phosphate	DOC[f]	TDS	TSS	Field Parameters[e]
FCS-2	ETA	FCS-2_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
FCS-3	ETA	FCS-3_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
FCS-4	ETA	FCS-4_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
A30	Faro Pit North Wall	A30_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-FP-22	Faro Pit North Wall	CH-FP-22_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-FP-26	Faro Pit North Wall	CH-FP-26_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-FP-30	Faro Pit North Wall	CH-FP-30_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
FP05	Faro Pit Northwest Wall	FP05_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-FP-23	Faro Pit Southeast Wall	CH-FP-23_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
FP10	Faro Pit Southeast Wall	FP10_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD24	Faro Pit Southeast Wall	SRK-FD24_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD40	Faro Valley Dump	SRK-FD40_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-GD01	Grum Main Dump	SRK-GD01_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD11	Grum Main Dump	SRK-GD11_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD05	Grum Main Dump (Downgradient of Sulfide Cell)	SRK-GD05_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD21	Grum Main Dump (Downgradient of Sulfide Cell)	SRK-GD21_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD19	Grum Main Dump East	SRK-GD19_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD09	Grum Main Dump North	SRK-GD09_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD22	Grum Main Dump West	SRK-GD22_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD04	Grum Main WRD (Downgradient of Sulfide Cell)	SRK-GD04_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-GD07	Grum Main WRD North	SRK-GD07_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-GP-21	Grum Pit North Wall	CH-GP-21_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
GP09	Grum Pit Northwest Wall	GP09_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-GP-19	Grum Pit Slot	CH-GP-19_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
GP02	Grum Pit South Wall	GP02_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
GP12	Grum Pit South Wall	GP12_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-GD13	Grum Southwest Dump	SRK-GD13_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD13	Intermediate Dump North	SRK-FD13_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD38	Low Grade Stockpile C	SRK-FD38_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD30	Main Dump and Intermediate Dump	SRK-FD30_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD37	Medium Grade Stockpile	SRK-FD37_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-MILL-03	Mill Area	CH-MILL-03_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD01	Mill Area	SRK-FD01_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-MILL-01	Mill Area	CH-MILL-01_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD05	Northeast Dump	SRK-FD05_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD21	Northeast Dump	SRK-FD21_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD26	Northeast Dump and ZoneII Dump	SRK-FD26_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD23	Northeast Dump Upper	SRK-FD23_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD19	Northwest Dump Lower	SRK-FD19_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-FD18	Northwest Dump Upper	SRK-FD18_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-GD23	Ore Transfer Pad	SRK-GD23_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD14	Ramp Zone Dump	SRK-FD14_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-RCTA-01	Rose Creek Tailings Area	CH-RCTA-01_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-RCTA-02	Rose Creek Tailings Area	CH-RCTA-02_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-RCTA-03	Rose Creek Tailings Area	CH-RCTA-03_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-RCTA-04	Rose Creek Tailings Area	CH-RCTA-04_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-RCTA-05	Rose Creek Tailings Area	CH-RCTA-05_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD54	S-wells	SRK-FD54_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
VP09	Vangorda In-Pit Dump Hairpin	VP09_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-VD07	Vangorda Main Dump	SRK-VD07_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-VD09	Vangorda Main Dump	SRK-VD09_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
SRK-VD12	Vangorda Main Dump	SRK-VD12_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD02	Vangorda Main Dump Drain (V-29)	SRK-VD02_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD03	Vangorda Main Dump Drain (V-30)	SRK-VD03_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD10	Vangorda Main Dump Drain (V-31)	SRK-VD10_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD04	Vangorda Main Dump Drain (V-32)	SRK-VD04_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD05	Vangorda Main Dump Drain (V-33)	SRK-VD05_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD06	Vangorda Main WRD	SRK-VD06_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-VD01	Vangorda Main-Dump Southeast	SRK-VD01_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-VP-17	Vangorda Pit Southeast	CH-VP-17_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X
CH-VP-18	Vangorda Pit Southeast	CH-VP-18_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X		X	X	X	X	X

TABLE 2-5

Seeps Targeted for Spring and Fall 2013 Sampling (Activity Code SW-015)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Location Description	Sample Identifier	Associated TAR	Matrix	Sampling Frequency	Required Analyses											
						Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[d]	Dissolved Metals[f]	Free Cyanide	Ortho-Phosphate	DOC[f]	TDS	TSS	Field Parameters[e]
SRK-FD31	X23 Vicinity	SRK-FD31_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
SRK-FD09	X23 Vicinity	SRK-FD09_SEXXZZ	TAR06	SE	SF	X	X	X	X	X	X	X	X	X	X	X	X
X23		X23_SEXXZZ	TAR06	SW	SF	X	X	X	X	X	X	X	X	X	X	X	X
CH-ETA-01	ETA	CH-ETA-01_SEXXZZ	TAR06	SE	SF												X
CH-ETA-02	ETA	CH-ETA-02_SEXXZZ	TAR06	SE	SF												X
CH-ETA-03	ETA	CH-ETA-03_SEXXZZ	TAR06	SE	SF												X
CH-FD-64	ETA	CH-FD-64_SEXXZZ	TAR06	SE	SF												X
SRK-FD32	ETA	SRK-FD32_SEXXZZ	TAR06	SE	SF												X
SRK-FD46	ETA	SRK-FD46_SEXXZZ	TAR06	SE	SF												X
FP09	Faro Pit North Wall	FP09_SEXXZZ	TAR06	SE	SF												X
CH-FP-27	Faro Pit North Wall	CH-FP-27_SEXXZZ	TAR06	SE	SF												X
CH-FP-29	Faro Pit North Wall	CH-FP-29_SEXXZZ	TAR06	SE	SF												X
CH-FP-31	Faro Pit North Wall	CH-FP-31_SEXXZZ	TAR06	SE	SF												X
FP04	Faro Pit Northwest Wall	FP04_SEXXZZ	TAR06	SE	SF												X
FP07	Faro Pit Northwest Wall	FP07_SEXXZZ	TAR06	SE	SF												X
FP11	Faro Pit Northwest Wall	FP11_SEXXZZ	TAR06	SE	SF												X
FP18	Faro Pit Northwest Wall	FP18_SEXXZZ	TAR06	SE	SF												X
CH-FP-25	Faro Pit Southeast Pit Ramp	CH-FP-25_SEXXZZ	TAR06	SE	SF												X
CH-FP-28	Faro Pit Southeast Pit Ramp	CH-FP-28_SEXXZZ	TAR06	SE	SF												X
CH-FP-32	Faro Pit Southeast Pit Ramp	CH-FP-32_SEXXZZ	TAR06	SE	SF												X
CH-FD-59	Faro Pit Southeast Wall	CH-FD-59_SEXXZZ	TAR06	SE	SF												X
CH-FD-60	Faro Pit Southeast Wall	CH-FD-60_SEXXZZ	TAR06	SE	SF												X
CH-FD-61	Faro Pit Southeast Wall	CH-FD-61_SEXXZZ	TAR06	SE	SF												X
CH-FD-62	Faro Pit Southeast Wall	CH-FD-62_SEXXZZ	TAR06	SE	SF												X
CH-FD-63	Faro Pit Southeast Wall	CH-FD-63_SEXXZZ	TAR06	SE	SF												X
CH-FP-24	Faro Pit Southwest wall	CH-FP-24_SEXXZZ	TAR06	SE	SF												X
SRK-GD06	Grum Main Dump (Downgradient of Sulfide Cell)	SRK-GD06_SEXXZZ	TAR06	SE	SF												X
SRK-GD02	Grum Main WRD	SRK-GD02_SEXXZZ	TAR06	SE	SF												X
WTA02	Grum Main WRD (approximately 600–800m downgradient / south of toe)	WTA02_SEXXZZ	TAR06	SE	SF												X
SRK-GD20	Grum Main WRD East	SRK-GD20_SEXXZZ	TAR06	SE	SF												X
SRK-GD08	Grum Main WRD North	SRK-GD08_SEXXZZ	TAR06	SE	SF												X
SRK-GD10	Grum Main WRD Northwest	SRK-GD10_SEXXZZ	TAR06	SE	SF												X
SRK-GD12	Grum Main WRD Northwest	SRK-GD12_SEXXZZ	TAR06	SE	SF												X
SRK-GD24	Grum Main WRD South	SRK-GD24_SEXXZZ	TAR06	SE	SF												X
SRK-GD16	Grum Main WRD South	SRK-GD16_SEXXZZ	TAR06	SE	SF												X
SRK-GD17	Grum Main WRD West	SRK-GD17_SEXXZZ	TAR06	SE	SF												X
CH-GP-22	Grum Pit East Wall	CH-GP-22_SEXXZZ	TAR06	SE	SF												X
CH-GP-23	Grum Pit East Wall	CH-GP-23_SEXXZZ	TAR06	SE	SF												X
CH-GP-24	Grum Pit East Wall	CH-GP-24_SEXXZZ	TAR06	SE	SF												X
CH-GP-20	Grum Pit North Wall	CH-GP-20_SEXXZZ	TAR06	SE	SF												X
GP04	Grum Pit Northwest Wall	GP04_SEXXZZ	TAR06	SE	SF												X
GP05	Grum Pit Northwest Wall	GP05_SEXXZZ	TAR06	SE	SF												X
GP07	Grum Pit Northwest Wall	GP07_SEXXZZ	TAR06	SE	SF												X
GP06	Grum Pit Northwest Wall	GP06_SEXXZZ	TAR06	SE	SF												X
GP08	Grum Pit Northwest Wall	GP08_SEXXZZ	TAR06	SE	SF												X
GP10	Grum Pit Northwest Wall	GP10_SEXXZZ	TAR06	SE	SF												X
CH-GP-25	Grum Pit South Wall	CH-GP-25_SEXXZZ	TAR06	SE	SF												X
CH-GP-26	Grum Pit South Wall	CH-GP-26_SEXXZZ	TAR06	SE	SF												X
GP14	Grum Pit South Wall	GP14_SEXXZZ	TAR06	SE	SF												X
GP01	Grum Pit South Wall	GP01_SEXXZZ	TAR06	SE	SF												X
GP11	Grum Pit South Wall	GP11_SEXXZZ	TAR06	SE	SF												X
GP13	Grum Pit South Wall	GP13_SEXXZZ	TAR06	SE	SF												X
GP15	Grum Pit South Wall	GP15_SEXXZZ	TAR06	SE	SF												X
GP16	Grum Pit South Wall	GP16_SEXXZZ	TAR06	SE	SF												X
SRK-GD18	Grum Southwest WRD	SRK-GD18_SEXXZZ	TAR06	SE	SF												X
SRK-FD47	Intermediate WRD	SRK-FD47_SEXXZZ	TAR06	SE	SF												X
SRK-FD44	Intermediate WRD North	SRK-FD44_SEXXZZ	TAR06	SE	SF												X

TABLE 2-5

Seeps Targeted for Spring and Fall 2013 Sampling (Activity Code SW-015)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Location Description	Sample Identifier	Associated TAR	Matrix	Sampling Frequency	Required Analyses											
						Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[d]	Dissolved Metals[f]	Free Cyanide	Ortho-Phosphate	DOC[f]	TDS	TSS	Field Parameters[e]
SRK-FD48	Intermediate WRD North	SRK-FD48_SEXXZZ	TAR06	SE	SF												X
SRK-FD49	Intermediate WRD South	SRK-FD49_SEXXZZ	TAR06	SE	SF												X
SRK-FD53	Intermediate WRD South	SRK-FD53_SEXXZZ	TAR06	SE	SF												X
SRK-FD08	Intermediate WRD Southeast	SRK-FD08_SEXXZZ	TAR06	SE	SF												X
CH-FD-57	Main WRD	CH-FD-57_SEXXZZ	TAR06	SE	SF												X
SRK-FD36	Main WRD North	SRK-FD36_SEXXZZ	TAR06	SE	SF												X
CH-FD-65	Mill Area	CH-FD-65_SEXXZZ	TAR06	SE	SF												X
CH-MILL-02	Mill Area	CH-MILL-02_SEXXZZ	TAR06	SE	SF												X
SRK-FD33	Mill Area	SRK-FD33_SEXXZZ	TAR06	SE	SF												X
SRK-FD34	Mill Area	SRK-FD34_SEXXZZ	TAR06	SE	SF												X
SRK-FD35	Mill Area	SRK-FD35_SEXXZZ	TAR06	SE	SF												X
SRK-FD06	Northeast WRD	SRK-FD06_SEXXZZ	TAR06	SE	SF												X
FP08	Northeast WRD Upper	FP08_SEXXZZ	TAR06	SE	SF												X
SRK-FD22	Northeast WRD Upper	SRK-FD22_SEXXZZ	TAR06	SE	SF												X
SRK-FD51	Northeast WRD Upper	SRK-FD51_SEXXZZ	TAR06	SE	SF												X
NE1	NorthEastWRD	NE1_SEXXZZ	TAR06	SE	SF												X
SRK-FD16	Northwest WRD Upper	SRK-FD16_SEXXZZ	TAR06	SE	SF												X
SRK-FD17	Northwest WRD Upper	SRK-FD17_SEXXZZ	TAR06	SE	SF												X
FCS-5	Outlet of Faro Creek Diversion to Intermediate Impoundment	FCS-5_SEXXZZ	TAR06	SE	SF												X
CH-FD-58	Oxide Fines Stockpile	CH-FD-58_SEXXZZ	TAR06	SE	SF												X
SRK-FD04	Oxide Fines Stockpile	SRK-FD04_SEXXZZ	TAR06	SE	SF												X
CH-FD-56	S-Wells	CH-FD-56_SEXXZZ	TAR06	SE	SF												X
SRK-FD52	S-Wells	SRK-FD52_SEXXZZ	TAR06	SE	SF												X
SRK-FD55	S-wells West	SRK-FD55_SEXXZZ	TAR06	SE	SF												X
SRK-FD20	Upper Faro Creek	SRK-FD20_SEXXZZ	TAR06	SE	SF												X
SRK-FD02	Upper Parking Lot WRD	SRK-FD02_SEXXZZ	TAR06	SE	SF												X
CH-VP-20	Vangorda In-Pit WRD Hairpin	CH-VP-20_SEXXZZ	TAR06	SE	SF												X
VP10	Vangorda In-Pit WRD Hairpin	VP10_SEXXZZ	TAR06	SE	SF												X
VP11	Vangorda In-Pit WRD Hairpin	VP11_SEXXZZ	TAR06	SE	SF												X
SRK-VD08	Vangorda Main WRD	SRK-VD08_SEXXZZ	TAR06	SE	SF												X
CH-VP-19	Vangorda Pit North	CH-VP-19_SEXXZZ	TAR06	SE	SF												X
VP07	Vangorda Pit Ramp Landing East	VP07_SEXXZZ	TAR06	SE	SF												X
VP08	Vangorda Pit Ramp Landing East	VP08_SEXXZZ	TAR06	SE	SF												X
CH-VD-13	Vangorda WRD	CH-VD-13_SEXXZZ	TAR06	SE	SF												X
CH-VD-14	Vangorda WRD	CH-VD-14_SEXXZZ	TAR06	SE	SF												X
SRK-FD10	X23 Vicinity	SRK-FD10_SEXXZZ	TAR06	SE	SF												X
SRK-FD12	X23 Vicinity	SRK-FD12_SEXXZZ	TAR06	SE	SF												X
SRK-FD07	Zone II East Dump	SRK-FD07_SEXXZZ	TAR06	SE	SF												X
SRK-FD27	Zone II WRD	SRK-FD27_SEXXZZ	TAR06	SE	SF												X
SRK-FD50	Zone II WRD	SRK-FD50_SEXXZZ	TAR06	SE	SF												X

For geochemical methods see Table 2-21.

[a]XXZZ, where XX is the season (SP, SU, FA, or WI) and ZZ is the year (13 for 2013), so sampling in spring of 2013 would be SP13 and sampling in the fall of 2013 would be FA13

[b]Acidity on samples with >10 mg/L hydrolysable metals (i.e., aluminum, iron, manganese) and/or pH <7.5

[c]Alkalinity (including calculated carbonate and bicarbonate) on samples with pH >4.5

[d]Samples will be field filtered using 0.10-µm inline filter

eField parameters include: date and time, flow (if applicable), temperature, pH (temperature corrected), conductivity, DO, ORP , turbidity, and sulphide (field test kit) in samples with ORP < 0

[f]Samples will be field filtered using 0.45-µm inline filter

Notes:

DOC = dissolved organic carbon
ETA = Emergency Tailings Area
ID = identifier
µm = micrometer
SE= seep water
SF = spring and fall
TDS = total dissolved solids
TSS = total suspended solids
WRD = Waste Rock Dump
X = Sample will be collect for designated analyte.

TABLE 2-6

Boat-Accessible Seeps Targeted for Fall 2013 Sampling (Activity Code SW-015)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Location Description	Sample Identifier[a]	Associated TAR	Required Analyses												
				Matrix	Sampling Frequency	Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[d]	Dissolved Metals[e]	ortho-Phosphate	DOC[e]	TDS	TSS	Field Parameters[f]
FP01	Faro Pit southwest wall	FP01_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP02	Faro Pit northwest wall	FP02_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP06	Faro Pit east wall	FP06_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP12	Faro Pit northwest wall	FP12_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP13	Faro Pit northwest wall	FP13_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP14	Faro Pit northwest wall	FP14_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP15	Faro Pit north wall	FP15_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP16	Faro Pit north wall	FP16_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP17	Faro Pit south wall	FP17_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
FP19	Faro Pit south wall	FP19_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
GP03	Grum Pit northeast wall	GP03_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
GP17	Grum Pit northeast wall	GP17_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
GP18	Grum Pit northeast wall	GP18_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP01	Vangorda Pit West (Former Vangorda Creek alignment)	VP01_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP02	Vangorda Pit northwest	VP02_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP03	Vangorda Pit north	VP03_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP04	Vangorda Pit northeast	VP04_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP05	Vangorda Pit east	VP05_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP06	Vangorda Pit east	VP06_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP12	Vangorda Pit northwest	VP12_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP13	Vangorda Pit northeast	VP13_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP14	Vangorda Pit east	VP14_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP15	Vangorda Pit east	VP15_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X
VP16	Vangorda Pit east	VP16_SEXXZZ	TAR06	SE	F	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-21.

[a]XXZZ, where XX is the season (SP, SU, FA, or WI) and ZZ is the year (13 for 2013), so sampling in spring of 2013 would be SP13 and sampling in the fall of 2013 would be FA13

[b]Acidity on samples with >10 mg/L hydrolysable metals (i.e., aluminum, iron, manganese) and/or pH <7.5

[c]Alkalinity (including calculated carbonate and bicarbonate) on samples with pH >4.5

[d]Samples will be field filtered using 0.10-µm inline filter.

[e]Samples will be field filtered using 0.45-µm inline filter.

[f]Field parameters include date and time, flow (if applicable), temperature, pH (temperature corrected), conductivity, DO, ORP, turbidity, and sulphide (field test kit) in samples with ORP <0.

Notes:
DO = dissolved oxygen
DOC = dissolved organic carbon
F = Fall
µm = micrometres
ORP = oxidation reduction potential
SE = seep water
TDS = total dissolved solids
TSS = total suspended solids
X = Sample will be collect for designated analyte.

TABLE 2-7

Construct New Vangorda Creek Diversion (Activity Code 303.1/303.2)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Approximate Depth (ft)[a]	Sampling Frequency	Atterberg Limits Tests	Gradation	Moisture Content	Direct Shear Tests[b]	Unconfined Compressive Shear Strength Tests
CH13-303-BH001	CH13-303-BH001_SOa	TAR18	SO	2	5	ID	X	X	X		
CH13-303-BH001	CH13-303-BH001_SOb	TAR18	SO	3	10	ID	X	X	X	X[b]	
CH13-303-BH001	CH13-303-BH001_SOc	TAR18	SO	5	15	ID	X	X	X		
CH13-303-BH001	CH13-303-BH001_SOd	TAR18	SO	6	20	ID		X	X	X[b]	
CH13-303-BH001	CH13-303-BH001_SOe	TAR18	SO	8	25	ID	X	X	X		
CH13-303-BH001	CH13-303-BH001_SOf	TAR18	SO	9	30	ID		X	X	X[b]	
CH13-303-BH001	CH13-303-BH001_SOg	TAR18	Rock	11	35	ID					X
CH13-303-BH001	CH13-303-BH001_SOh	TAR18	Rock	12	40	ID					X
CH13-303-BH002	CH13-303-BH002_SOa	TAR18	SO	2	5	ID	X	X	X		
CH13-303-BH002	CH13-303-BH002_SOb	TAR18	SO	3	10	ID	X	X	X	X[b]	
CH13-303-BH002	CH13-303-BH002_SOc	TAR18	SO	5	15	ID	X	X	X		
CH13-303-BH002	CH13-303-BH002_SOd	TAR18	SO	6	20	ID		X	X	X[b]	
CH13-303-BH002	CH13-303-BH002_SOe	TAR18	SO	8	25	ID	X	X	X		
CH13-303-BH002	CH13-303-BH002_SOf	TAR18	SO	9	30	ID		X	X	X[b]	
CH13-303-BH002	CH13-303-BH002_SOg	TAR18	SO	11	35	ID			X		
CH13-303-BH002	CH13-303-BH002_SOh	TAR18	SO	12	40	ID	X	X	X		
CH13-303-BH002	CH13-303-BH002_SOi	TAR18	SO	14	45	ID			X		
CH13-303-BH002	CH13-303-BH002_SOj	TAR18	SO	15	50	ID		X	X		
CH13-303-BH002	CH13-303-BH002_SOk	TAR18	Rock	17	55	ID					X
CH13-303-BH002	CH13-303-BH002_SOl	TAR18	Rock	18	60	ID					X
CH13-303-BH003	CH13-303-BH003_SOa	TAR18	SO	2	5	ID	X	X	X		
CH13-303-BH003	CH13-303-BH003_SOb	TAR18	SO	3	10	ID	X	X	X	X[b]	
CH13-303-BH003	CH13-303-BH003_SOc	TAR18	SO	5	15	ID	X	X	X		
CH13-303-BH003	CH13-303-BH003_SOd	TAR18	SO	6	20	ID		X	X	X[b]	
CH13-303-BH003	CH13-303-BH003_SOe	TAR18	SO	8	25	ID	X	X	X		
CH13-303-BH003	CH13-303-BH003_SOf	TAR18	SO	9	30	ID		X	X	X[b]	
CH13-303-BH003	CH13-303-BH003_SOg	TAR18	SO	11	35	ID			X		
CH13-303-BH003	CH13-303-BH003_SOh	TAR18	SO	12	40	ID	X	X	X		
CH13-303-BH003	CH13-303-BH003_SOi	TAR18	SO	14	45	ID			X		
CH13-303-BH003	CH13-303-BH003_SOj	TAR18	SO	15	50	ID		X	X		
CH13-303-BH003	CH13-303-BH003_SOk	TAR18	SO	17	55	ID			X		
CH13-303-BH003	CH13-303-BH003_SOl	TAR18	SO	18	60	ID	X	X	X		
CH13-303-BH003	CH13-303-BH003_SOm	TAR18	SO	20	65	ID			X		
CH13-303-BH003	CH13-303-BH003_SOn	TAR18	SO	21	70	ID		X	X		
CH13-303-BH003	CH13-303-BH003_SOo	TAR18	SO	23	75	ID			X		
CH13-303-BH003	CH13-303-BH003_SOp	TAR18	SO	24	80	ID		X	X		
CH13-303-BH003	CH13-303-BH003_SOq	TAR18	SO	26	85	ID			X		
CH13-303-BH003	CH13-303-BH003_SOr	TAR18	SO	27	90	ID	X	X	X		
CH13-303-BH003	CH13-303-BH003_SOs	TAR18	Rock	32	105	ID					X
CH13-303-BH003	CH13-303-BH003_SOt	TAR18	Rock	34	110	ID					X

For geotechnical methods see Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations.

[b]Undisturbed sample to be collected with a piston sampler.

Notes:

f = feet

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

m = metres

SO = soil

X = Sample will be collect for designated analyte.

TABLE 2-8

Faro Pit Lake Sampling (Activity Code SW-016)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

					Required Analyses																
Location	**Sample Identifier[a]**	**Associated TAR**	**Matrix**	**Sampling Frequency**	**Acidity[b]**	**Alkalinity[c]**	**Ammonia**	**Anions**	**Ferrous Iron[d]**	**Chlorophyll-A**	**Free Cyanide**	**LD/SF**	**Total Metals**	**Dissolved Metals[e]**	**ortho-Phosphate**	**DOC[e]**	**Total P and Soluble Reactive P**	**TKN**	**TDS**	**TSS**	**Field Parameters[f]**
CH13-016-FAROPL	CH13-016-FAROPL_XX	TAR06	SW	F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-24.

[a]XX, where XX is the interval depth of sample

[b]Acidity on samples with >10 mg/L hydrolysable metals (i.e., aluminum, iron, manganese) and/or pH <7.5

[c]Alkalinity (including calculated carbonate and bicarbonate) on samples with pH >4.5

[d]Samples will be field filtered using 0.10-µm inline filter

[e]Samples will be field filtered using 0.45-µm inline filter

[f]Field parameters include date and time, flow (if applicable), temperature, pH (temperature corrected), conductivity, DO, ORP , turbidity, and sulphide (field test kit) in samples with ORP <0.

Notes:

DOC = dissolved organic carbon

F = fall

LD/SF = lime demand/solids formed

SW = seep water

TDS = total dissolved solids

TKN = total Kjeldahl nitrogen

TSS = total suspended solids

X = Sample will be collect for designated analyte.

TABLE 2-9

Waste Rock Dump Monitoring Wells Groundwater Sampling (Activity Code SW-014B)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	[a]Sample Identifier	Associated TAR	Matrix	Sampling Frequency	Acidity[b]	Alkalinity[c]	Ammonia	Anions	Ferrous Iron[f]	Dissolved Metals[e]	Free Cyanide	DOC[e]	TDS	TSS	Field Parameters[d]
CH12-014-MW003	CH12-014-MW003_GWMMYY	TAR06	GW	SFW	X	X	X	X	X	X	X	X	X	X	X
CH12-014-MW007	CH12-014-MW007_GWMMYY	TAR06	GW	SFW	X	X	X	X	X	X	X	X	X	X	X
CH12-014-MW011	CH12-014-MW011_GWMMYY	TAR06	GW	SFW	X	X	X	X	X	X	X	X	X	X	X
CH12-014-MW012	CH12-014-MW012_GWMMYY	TAR06	GW	SFW	X	X	X	X	X	X	X	X	X	X	X
CH12-014-MW013	CH12-014-MW013_GWMMYY	TAR06	GW	SFW	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-21.

Notes:

[a]MMYY, where MM is the two digit month and YY is the year (13 for 2013), so sampling in June of 2013 would be 0613 and sampling in the October of 2013 would be 1013.

[b]Acidity on samples with >10 mg/L hydrolysable metals (i.e., aluminum, iron, manganese) but <15 mg/L iron and/or pH < 7.5 but >5. Hot Peroxide Acidity on samples with >15 mg/L iron and/or pH <5.

[c]Alkalinity (including calculated carbonate and bicarbonate) on samples with pH > 4.5.

[d]Field parameters include: date and time, flow (if applicable), temperature, pH (temperature corrected), conductivity, DO, ORP , turbidity, and sulphide (field test kit) in samples with ORP < 0.

[e]Samples will be field filtered using 0.45-µm inline filter.

[f]Samples will be field filtered using 0.10-µm inline filter.

Notes:

DOC = dissolved organic carbon

GW= groundwater

SFW = spring, fall, and winter

TDS = total dissolved solids

TSS = total suspended solids

X = Sample will be collect for designated analyte.

TABLE 2-10

Waste Rock Dump Monitoring Wells Air Monitoring (Activity Code SW-014B)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Location	Sample Identifier[a]	Associated TAR	Matrix	Sampling Frequency	O_2	CO_2	Vacuum	Flow Rate	Temperature
CH12-014-MW003a	CH12-014-MW003a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW003b	CH12-014-MW003b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW003c	CH12-014-MW003c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW003d	CH12-014-MW003d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW003e	CH12-014-MW003e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW003f	CH12-014-MW003f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW007a	CH12-014-MW007a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW007b	CH12-014-MW007b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW007c	CH12-014-MW007c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW007d	CH12-014-MW007d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW007e	CH12-014-MW007e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW007f	CH12-014-MW007f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005a	CH12-014-MW005a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005b	CH12-014-MW005b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005c	CH12-014-MW005c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005d	CH12-014-MW005d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005e	CH12-014-MW005e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005f	CH12-014-MW005f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005a	CH12-014-MW005a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005b	CH12-014-MW005b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005c	CH12-014-MW005c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005d	CH12-014-MW005d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005e	CH12-014-MW005e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW005f	CH12-014-MW005f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW011a	CH12-014-MW011a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW011b	CH12-014-MW011b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW011c	CH12-014-MW011c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW011d	CH12-014-MW011d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW011e	CH12-014-MW011e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW011f	CH12-014-MW011f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW012a	CH12-014-MW012a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW012b	CH12-014-MW012b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW012c	CH12-014-MW012c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW012d	CH12-014-MW012d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW012e	CH12-014-MW012e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW012f	CH12-014-MW012f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW013a	CH12-014-MW013a_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW013b	CH12-014-MW013b_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW013c	CH12-014-MW013c_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW013d	CH12-014-MW013d_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW013e	CH12-014-MW013e_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X
CH12-014-MW013f	CH12-014-MW013f_GSMMYY	TAR06	WRD Gas	SFW	X	X	X	X	X

Field measurements only; no laboratory samples will be collected.

[a]MMYY, where MM is the two digit month and YY is the two digit year (13 for 2013). So sampling in June of 2013 would be 0613, and sampling in the October of 2013 would be 1013.

Notes:

O_2 = oxygen

CO_2 = carbon dioxide

SFW = spring, fall, and winter

Samples will be analyzed using field instruments (see SOP SMP012); no laboratory samples will be collected. Sample IDs are provided to facilitate entering soil-gas concentration information into the project database.

TABLE 2-11

Borrow Source Investigation: Calc Silicate Waste Rock (Activity Code 108.4.1)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses								Borrow Rock Geotechnical Analysis			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	Specific Gravity and Absorption	Unconfined Compressive Shear Strength	Petrographic Examination	Rock Durability Test (Freeze/ Thaw)	Rock Soundness (use Sodium Sulfate)	Rock Durability Test (Wetting/ Drying)
CH13-108-TP020	CH13-108-TP020_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP021	CH13-108-TP021_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP022	CH13-108-TP022_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP023	CH13-108-TP023_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP024	CH13-108-TP024_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP025	CH13-108-TP025_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP026	CH13-108-TP026_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP027	CH13-108-TP027_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP028	CH13-108-TP028_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP029	CH13-108-TP029_SOa	TAR16	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods see Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

SO = soil

TIC = total inorganic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-12

Borrow Source Investigation: Rose Creek Borrow (Activity Code 108.4A.3)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses								Borrow Granular Soils Geotechnical Analysis								Soil Fertility (TOC included in geochem section)					Soil Fertility EA			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth[a] (m)	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	TOC	Gradation by Sieve	Organic Impurities of Fines	Petrographic Examination	Relative Density and Absorption	Alkali-aggregate Reactivity of Coarse Particles (Mortar Bar)	Sulphate Soundness	Micro-Deval Abrasion	Particle Shape	pH (1:2)	SMP Buffer pH (for pH<6.0)	1 N, pH 7.0 NH_4OAc Extractable Ca, Mg, K, Na	Available P (Mehlich 3)	$Ca(H_2PO_4)_2.H_2O$ Extractable SO_4-S	Extractable Micronutrients (Zn, Fe, Cu, Mn) (Mehlich 3)	Soluble Salts (1:1 Paste as Initial Screening)	ECe (Saturation Paste)	Sodium Adsorption Ratio	$CaCO_3$ Equivalent	Total N	Total P	Cation Exchange Capacity	NH4-N (2N KCl Extraction)	NO3-N (2N KCl Extraction)	Gradation
CH13-108-SS001	CH13-108-SS001_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS002	CH13-108-SS002_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS003	CH13-108-SS003_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS004	CH13-108-SS004_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS005	CH13-108-SS005_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP001	CH13-108-TP001_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP002	CH13-108-TP002_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP003	CH13-108-TP003_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP004	CH13-108-TP004_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP005	CH13-108-TP005_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP006	CH13-108-TP006_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP007	CH13-108-TP007_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP008	CH13-108-TP008_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP009	CH13-108-TP009_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP010	CH13-108-TP010_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22. For soil fertility/EA methods see Table 2-24

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ALK = alkalinity

Ca = calcium

$CaCO_3$ = Calcium Carbonate

DI = deionized water

DM = dissolved metals

ECe = Electrical Conductivity

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

K = potassium

m = metres

Mg = magnesium

Na = sodium

NH_4OAc = Ammonium Acetate

ORP = oxidation reduction potential

P = phosphorus

SO = soil

TIC = total inorganic carbon

TOC = total organic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-13

Borrow Source Investigation: Rose Creek Haul Road (Activity Code 108.4B.5)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses										Borrow Low Permeability Soil Geotech Analysis	Borrow Low Permeability Soil Geotech Analysis			Soil Fertility (TOC included in Geochem Section)									Soil Fertility EA			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth[a] (m)	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	TOC	Gradation with Hydrometer	Atterberg Limits and Moisture Content	pH (1:2)	SMP Buffer pH (for pH<6.0)	1 N, pH 7.0 NH_4OAc Extractable Ca, Mg, K, Na	Available P (Mehlich 3)	Ca(H2PO4) 2.H2O Extractable SO_4, S	Extractable Micronutrients (Zn, Fe, Cu, Mn) (Mehlich 3)	Soluble Salts (1:1 Paste as Initial Screening)	ECe (Saturation Paste)	Sodium Adsorption Ratio	$CaCO_3$ Equivalent	Total N	Total P	Cation Exchange Capacity	NH4-N (2N KCl extraction)	NO3-N (2N KCl extraction)	Gradation
CH13-108-BH001	CH13-108-BH001_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-BH002	CH13-108-BH002_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-BH003	CH13-108-BH003_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-BH004	CH13-108-BH004_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS010	CH13-108-SS010_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS011	CH13-108-SS011_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS012	CH13-108-SS012_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS013	CH13-108-SS013_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-SS014	CH13-108-SS014_SOa	TAR13	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP014	CH13-108-TP014_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP015	CH13-108-TP015_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP016	CH13-108-TP016_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP017	CH13-108-TP017_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP018	CH13-108-TP018_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 20. For geotechnical methods Table 22. For soil fertility/EA methods see Table 2-24.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ALK = alkalinity

Ca = calcium

$CaCO_3$ = Calcium Carbonate

DI = deionized water

DM = dissolved metals

EA = environmental assessment

ECe = Electrical Conductivity

ID = Sample will be collected during initial drilling/digging of borehole/test pit

K = potassium

m = metres

Mg = magnesium

Na = sodium

NH_4OAc = Ammonium Acetate

ORP = oxidation reduction potential

P = phosphorus

SO = soil

TIC = total inorganic carbon

TOC = total organic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-14

Borrow Source Investigation: Haul Road (Activity Code 108.4B.8)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses								Borrow Granular Soils Geotechnical Analysis					
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth[a] (m)	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	Gradation by Sieve	Organic Impurities of Fines	Petrographic Examination	Relative Density and Absorption	Alkali-aggregate Reactivity of Coarse Particles (Mortar Bar)	Sulphate Soundness	Micro-Deval Abrasion	Particle Shape
CH13-108-TP040	CH13-108-TP040_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP041	CH13-108-TP041_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP042	CH13-108-TP042_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP043	CH13-108-TP043_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-108-TP044	CH13-108-TP044_SOa	TAR13	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

SO = soil

TIC = total inorganic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-15

Borrow Source Investigation: Grum Overburden Dump (Activity Code 311.5B.1)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses							Borrow Low Permeability Soil Geotech Analysis				Soil Fertility (TOC included in geochem section)										Soil Fertility EA			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth[a] (m)	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	TOC	Gradation with Hydrometer (ASTM D422-63 and ASTM D698)	Atterberg Limits (ASTM 4318) and Moisture Content	pH (1:2)	SMP Buffer pH (for pH<6.0)	1 N, pH 7.0 NH_4OAc Extractable Ca, Mg, K, Na	Available P (Mehlich 3)	Ca(H2PO4)2.H2O Extractable SO_4-S	Extractable Micronutrients (Zn, Fe, Cu, Mn) (Mehlich 3)	Soluble Salts (1:1 Paste as Initial Screening)	ECe (Saturation Paste)	Sodium Adsorption Ratio	CaCO3 Equivalent	Total N	Total P	Cation Exchange Capacity	NH4-N (2N KCl Extraction)	NO3-N (2N KCl Extraction)	Gradation
CH13-311-BH011	CH13-311-BH011_SOa	TAR06	SO	50	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH012	CH13-311-BH012_SOa	TAR06	SO	50	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH013	CH13-311-BH013_SOa	TAR06	SO	50	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH014	CH13-311-BH014_SOa	TAR06	SO	50	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH015	CH13-311-BH015_SOa	TAR06	SO	50	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP001	CH13-311-TP001_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP002	CH13-311-TP002_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP003	CH13-311-TP003_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP004	CH13-311-TP004_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP005	CH13-311-TP005_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP006	CH13-311-TP006_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP007	CH13-311-TP007_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP008	CH13-311-TP008_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP009	CH13-311-TP009_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP010	CH13-311-TP010_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22. For soil fertility/EA methods see Table 2-24.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ALK = alkalinity

Ca = calcium

$CaCO_3$ = Calcium Carbonate

DI = deionized water

DM = dissolved metals

ECe = Electrical Conductivity

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

K = potassium

m = metres

Mg = magnesium

Na = sodium

NH_4OAc = Ammonium Acetate

ORP = oxidation reduction potential

P = phosphorus

SO = soil

TIC = total inorganic carbon

TOC = total organic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-16

Borrow Source Investigation: Northeast Area of Grum Pit (incl. NE face) (Activity Code 311.5C)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses							Borrow Low Permeability Soil Geotech Analysis				Soil Fertility (TOC included in geochem section)									Soil Fertility EA			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	TOC	Gradation w/ hydrometer (ASTM D422-63 and ASTM D698)	Atterberg Limits (ASTM 4318) & Moisture Content	pH (1:2)	SMP Buffer pH (for pH<6.0)	1 N, pH 7.0 NH4OAc Extractable Ca, Mg, K, Na	Available P (Mehlich 3)	Ca(H2PO4)2 .H2O extractable SO4-S	Extractable Micronutrients (Zn, Fe, Cu, Mn) (Mehlich 3)	Soluble Salts (1:1 paste as initial screening)	ECe (Saturation Paste)	Sodium adsorption Ratio (SAR)	CaCO3 Equivalent	Total N	Total P	Cation Exchange Capacity	NH4-N (2N KCl extraction)	NO3-N (2N KCl extraction)	Gradation
CH13-311-BH001	CH13-311-BH001_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH002	CH13-311-BH002_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH003	CH13-311-BH003_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH004	CH13-311-BH004_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH005	CH13-311-BH005_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH010	CH13-311-BH010_SOa	TAR06	SO	40	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS001	CH13-311-SS001_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS002	CH13-311-SS002_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS003	CH13-311-SS003_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS004	CH13-311-SS004_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS005	CH13-311-SS005_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS006	CH13-311-SS006_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS007	CH13-311-SS007_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS008	CH13-311-SS008_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS009	CH13-311-SS009_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS010	CH13-311-SS010_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS011	CH13-311-SS011_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS012	CH13-311-SS012_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS013	CH13-311-SS013_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS014	CH13-311-SS014_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS015	CH13-311-SS015_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP020	CH13-311-TP020_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP021	CH13-311-TP021_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP022	CH13-311-TP022_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP023	CH13-311-TP023_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP024	CH13-311-TP024_SOa	TAR06	SO	5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22. For soil fertility/EA methods see Table 2-24.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ALK = alkalinity

Ca = calcium

$CaCO_3$ = calcium carbonate

DI = deionized water

DM = dissolved metals

ECe = Electrical Conductivity

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

K = potassium

m = metres

Mg = magnesium

Na = sodium

NH_4OAc = Ammonium Acetate

ORP = oxidation reduction potential

P = phosphorus

SO = soil

TIC = total inorganic carbon

TOC = total organic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-17

Borrow Source Investigation: Grum Dump Rock Quarry (Activity Code 311.5D.1)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses								Borrow Rock Geotechnical Analysis			
Location	Sample Identifier	Associated TAR	Matrix	[a]Approximate Depth (m)	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	Specific Gravity and Absorption	Unconfined Compressive Shear Strength	Petrographic Examination	Rock Durability Test (Freeze/ Thaw)	Rock Soundness (use Sodium Sulfate)	Rock Durability Test (Wetting/Dr ying)
CH13-311-GX001	CH13-311-GX001_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS020	CH13-311-SS020_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS021	CH13-311-SS021_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS022	CH13-311-SS022_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS023	CH13-311-SS023_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS024	CH13-311-SS024_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

SO = soil

TIC = total inorganic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-18

Borrow Source Investigation: Granite Outcrop Northwest of Ore Transfer Pad (vicinity of) (Activity Code 311.5D.2)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses								Borrow Rock Geotechnical Analysis			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	Specific Gravity and Absorption	Unconfined Compressive Shear Strength	Petrographic Examination	Rock Durability Test (Freeze/ Thaw)	Rock Soundness (use Sodium Sulfate)	Rock Durability Test (Wetting/Drying)
CH13-311-GX002	CH13-311-GX002_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS040	CH13-311-SS040_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS041	CH13-311-SS041_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS042	CH13-311-SS042_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS043	CH13-311-SS043_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS044	CH13-311-SS044_SOa	TAR18	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP030	CH13-311-TP030_SOa	TAR18	SO	2	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP031	CH13-311-TP031_SOa	TAR18	SO	2	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP032	CH13-311-TP032_SOa	TAR18	SO	2	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP033	CH13-311-TP033_SOa	TAR18	SO	2	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-TP034	CH13-311-TP034_SOa	TAR18	SO	2	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

SO = soil

TIC = total inorganic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-19

Borrow Source Investigation: Assess borrow area: Ridge North of Grum Pit (Activity Code NEW)

Faro Mine Complex Site Wide Sampling Definition 2013–2014

								Soil Geochemical Analyses							Borrow Low Permeability Soil Geotech Analysis	Borrow Low Permeability Soil Geotech Analysis	Borrow Granular Soils Geotechnical Analysis				Borrow Rock Geotechnical Analysis								Soil Fertility (TOC included in geochem section)							Soil Fertility EA			
Location	Sample Identifier	Associated TAR	Matrix	Approximate Depth (m)[a]	Sampling Frequency	Paste pH	Total Metals	TIC	Total Sulphur	Modified Neutralization Potential	Acid Soluble Sulphate	Barium by Lithium Metaborate Fusion	DI Leach (pH, ORP, Conductivity, DM, Alk, Acidity, Sulphate)	TOC	Gradation w/ hydrometer	Atterberg Limits & Moisture Content	Organic Impurities of fines	Petrographic Examination	Relative Density and Absorption	Particle Shape	Specific Gravity and Absorption	Unconfined Compressive Shear Strength	Petrographic Examination	Rock Durability Test (Freeze/ Thaw)	Rock Soundness (use Sodium Sulfate)	Rock Durability Test (Wetting/ Drying)	pH (1:2)	SMP Buffer pH (for pH<6.0)	1 N, pH 7.0 NH4OAc Extractable Ca, Mg, K, Na	Available P (Mehlich 3)	Ca(H2PO4) 2.H2O extractable SO4-S	Extractable Micronutrients (Zn, Fe, Cu, Mn) (Mehlich 3)	Soluble Salts (1:1 paste as initial screening)	ECe (Saturation Paste)	Sodium adsorption Ratio (SAR)	CaCO3 Equivalent	Total N	Total P	Cation Exchange Capacity	NH4-N (2N KCl extraction)	NO3-N (2N KCl extraction)	Gradation
CH13-311-BH020	CH13-311-BH020_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH021	CH13-311-BH021_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH022	CH13-311-BH022_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH023	CH13-311-BH023_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-BH024	CH13-311-BH024_SOa	TAR06	SO	4	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS030	CH13-311-SS030_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS031	CH13-311-SS031_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS032	CH13-311-SS032_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS033	CH13-311-SS033_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CH13-311-SS034	CH13-311-SS034_SOa	TAR06	SO	0.5	ID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

For geochemical methods see Table 2-20. For geotechnical methods Table 2-22. For soil fertility/EA methods see Table 2-24.

[a]Sample depths are approximate and may be modified based on field observations.

Notes:

ALK = alkalinity

Ca = calcium

$CaCO_3$ = Calcium Carbonate

DI = deionized water

DM = dissolved metals

ECe = Electrical Conductivity

ID = Sample will be collected during initial drilling/digging of borehole/test pit.

K = potassium

m = metres

Mg = magnesium

Na = sodium

NH_4OAc = Ammonium Acetate

ORP = oxidation reduction potential

P = phosphorus

SO = soil

TIC = total inorganic carbon

TOC = total organic carbon

X = The geochemist and geotechnical leads will select the locations and analyses, based upon the review of field observations of the soil.

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6010B/SW6020A	Aluminum	Soil	50	mg/kg
SW6010B/SW6020A	Antimony	Soil	0.1	mg/kg
SW6010B/SW6020A	Arsenic	Soil	0.05	mg/kg
SW6010B/SW6020A	Barium	Soil	0.5	mg/kg
SW6010B/SW6020A	Beryllium	Soil	0.2	mg/kg
SW6010B/SW6020A	Bismuth	Soil	0.2	mg/kg
SW6010B/SW6020A	Boron	Soil	10	mg/kg
SW6010B/SW6020A	Cadmium	Soil	0.05	mg/kg
SW6010B/SW6020A	Calcium	Soil	50	mg/kg
SW6010B/SW6020A	Chromium	Soil	0.5	mg.kg
SW6010B/SW6020A	Cobalt	Soil	0.1	mg/kg
SW6010B/SW6020A	Copper	Soil	0.5	mg/kg
SW6010B/SW6020A	Iron	Soil	50	mg/kg
SW6010B/SW6020A	Lead	Soil	0.5	mg/kg
SW6010B/SW6020A	Lithium	Soil	5	mg/kg
SW6010B/SW6020A	Magnesium	Soil	20	mg/kg
SW6010B/SW6020A	Manganese	Soil	1	mg/kg
SW6010B/SW6020A	Molybdenum	Soil	0.5	mg/kg
SW6010B/SW6020A	Nickel	Soil	0.5	mg/kg
SW6010B/SW6020A	Phosphorus	Soil	50	mg/kg
SW6010B/SW6020A	Potassium	Soil	100	mg/kg
SW6010B/SW6020A	Selenium	Soil	0.2	mg/kg
SW6010B/SW6020A	Silver	Soil	0.1	mg/kg
SW6010B/SW6020A	Sodium	Soil	100	mg/kg
SW6010B/SW6020A	Strontium	Soil	0.5	mg/kg
SW6010B/SW6020A	Thallium	Soil	0.05	mg/kg
SW6010B/SW6020A	Tin	Soil	2	mg/kg
SW6010B/SW6020A	Titanium	Soil	1	mg/kg
SW6010B/SW6020A	Uranium	Soil	0.05	mg/kg
SW6010B/SW6020A	Vanadium	Soil	0.2	mg/kg
SW6010B/SW6020A	Zinc	Soil	1	mg/kg
E245.7	Mercury	Soil	0.005	mg/kg
CSSS/APHA 4500H	Paste pH	Soil	0.1	pH units
SSSA P 455-456	Total inorganic carbon	Soil	0.1	Percent
Walkley-Black	Total organic carbon	Soil	0.4	Percent
CSSS/APHA 4500H_DI	pH, DI	Soil	0.1	pH units
ASTMD1498_DI	ORP leachable, DI	Soil	0	mV
CSSS/APHA 2510B_DI	Specific conductance, DI	Soil	2	umhos/cm
SM2320B_DI	Alkalinity, total, DI	Soil	1	mg/L
SM2310_DI	Acidity, DI	Soil	1	mg/L
SM4110B	Sulfate, DI	Soil	0.5	mg/L
SW6010B_DI/SW6020A_DI	Aluminum, DI	Soil	0.005	mg/L
SW6010B_DI/SW6020A_DI	Antimony, DI	Soil	0.0001	mg/L
SW6010B_DI/SW6020A_DI	Arsenic, DI	Soil	0.001	mg/L
SW6010B_DI/SW6020A_DI	Barium, DI	Soil	0.001	mg/L
SW6010B_DI/SW6020A_DI	Beryllium, DI	Soil	0.0005	mg/L
SW6010B_DI/SW6020A_DI	Boron, DI	Soil	0.01	mg/L
SW6010B_DI/SW6020A_DI	Cadmium, DI	Soil	0.00005	mg/L

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6010B_DI/SW6020A_DI	Calcium, DI	Soil	0.05	mg/L
SW6010B_DI/SW6020A_DI	Chromium, DI	Soil	0.0005	mg/L
SW6010B_DI/SW6020A_DI	Cobalt, DI	Soil	0.0001	mg/L
SW6010B_DI/SW6020A_DI	Copper, DI	Soil	0.001	mg/L
SW6010B_DI/SW6020A_DI	Iron, DI	Soil	0.03	mg/L
SW6010B_DI/SW6020A_DI	Lead, DI	Soil	0.0001	mg/L
SW6010B_DI/SW6020A_DI	Lithium, DI	Soil	0.005	mg/L
SW6010B_DI/SW6020A_DI	Magnesium, DI	Soil	0.1	mg/L
SW6010B_DI/SW6020A_DI	Manganese, DI	Soil	0.0005	mg/L
SW6010B_DI/SW6020A_DI	Molybdenum, DI	Soil	0.0001	mg/L
SW6010B_DI/SW6020A_DI	Nickel, DI	Soil	0.0005	mg/L
SW6010B_DI/SW6020A_DI	Phosphorus, DI	Soil	0.3	mg/L
SW6010B_DI/SW6020A_DI	Potassium, DI	Soil	2	mg/L
SW6010B_DI/SW6020A_DI	Selenium, DI	Soil	0.0005	mg/L
SW6010B_DI/SW6020A_DI	Silicon, DI	Soil	0.05	mg/L
SW6010B_DI/SW6020A_DI	Silver, DI	Soil	0.00005	mg/L
SW6010B_DI/SW6020A_DI	Sodium, DI	Soil	2	mg/L
SW6010B_DI/SW6020A_DI	Strontium, DI	Soil	0.0005	mg/L
SW6010B_DI/SW6020A_DI	Sulfur, DI	Soil	0.5	mg/L
SW6010B_DI/SW6020A_DI	Thallium, DI	Soil	0.0001	mg/L
SW6010B_DI/SW6020A_DI	Titanium, DI	Soil	0.01	mg/L
SW6010B_DI/SW6020A_DI	Uranium, DI	Soil	0.00001	mg/L
SW6010B_DI/SW6020A_DI	Vanadium, DI	Soil	0.001	mg/L
SW6010B_DI/SW6020A_DI	Zinc, DI	Soil	0.01	mg/L
ISO 15178:2000	Sulfur	Soil	500	mg/kg
EPA600/2-78-054	Sulfate, Acid Soluble	Soil	0.01	percent
SW6020A	Barium by Lithium Metaborate Fusion	Soil	0.5	ppm
AOAC 955.01	Modified Neutralization Potential (as CaCO3 Eq.)	Soil	10	percent
SW6010B_SPLP3	Aluminum, SPLP3	Soil	0.02	mg/L
SW6010B_SPLP4	Aluminum, SPLP4	Soil	0.02	mg/L
SW6010B_SPLP5	Aluminum, SPLP5	Soil	0.02	mg/L
SW6010B_SPLP3	Antimony, SPLP3	Soil	0.00005	mg/L
SW6010B_SPLP4	Antimony, SPLP4	Soil	0.00005	mg/L
SW6010B_SPLP5	Antimony, SPLP5	Soil	0.00005	mg/L
SW6010B_SPLP3	Arsenic, SPLP3	Soil	0.0001	mg/L
SW6010B_SPLP4	Arsenic, SPLP4	Soil	0.0001	mg/L
SW6010B_SPLP5	Arsenic, SPLP5	Soil	0.0001	mg/L
SW6010B_SPLP3	Barium, SPLP3	Soil	0.1	mg/L
SW6010B_SPLP4	Barium, SPLP4	Soil	0.1	mg/L
SW6010B_SPLP5	Barium, SPLP5	Soil	0.1	mg/L
SW6010B_SPLP3	Beryllium, SPLP3	Soil	0.0005	mg/L
SW6010B_SPLP4	Beryllium, SPLP4	Soil	0.0005	mg/L
SW6010B_SPLP5	Beryllium, SPLP5	Soil	0.0005	mg/L
SW6010B_SPLP3	Bismuth, SPLP3	Soil	0.001	mg/L
SW6010B_SPLP4	Bismuth, SPLP4	Soil	0.001	mg/L
SW6010B_SPLP5	Bismuth, SPLP5	Soil	0.001	mg/L
SW6010B_SPLP3	Boron, SPLP3	Soil	0.1	mg/L
SW6010B_SPLP4	Boron, SPLP4	Soil	0.1	mg/L

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6010B_SPLP5	Boron, SPLP5	Soil	0.1	mg/L
SW6010B_SPLP3	Cadmium, SPLP3	Soil	0.00002	mg/L
SW6010B_SPLP4	Cadmium, SPLP4	Soil	0.00002	mg/L
SW6010B_SPLP5	Cadmium, SPLP5	Soil	0.00002	mg/L
SW6010B_SPLP3	Calcium, SPLP3	Soil	0.1	mg/L
SW6010B_SPLP4	Calcium, SPLP4	Soil	0.1	mg/L
SW6010B_SPLP5	Calcium, SPLP5	Soil	0.1	mg/L
SW6010B_SPLP3	Chromium, SPLP3	Soil	0.0005	mg/L
SW6010B_SPLP4	Chromium, SPLP4	Soil	0.0005	mg/L
SW6010B_SPLP5	Chromium, SPLP5	Soil	0.0005	mg/L
SW6010B_SPLP3	Cobalt, SPLP3	Soil	0.0001	mg/L
SW6010B_SPLP4	Cobalt, SPLP4	Soil	0.0001	mg/L
SW6010B_SPLP5	Cobalt, SPLP5	Soil	0.0001	mg/L
SW6010B_SPLP3	Copper, SPLP3	Soil	0.0005	mg/L
SW6010B_SPLP4	Copper, SPLP4	Soil	0.0005	mg/L
SW6010B_SPLP5	Copper, SPLP5	Soil	0.0005	mg/L
SW6010B_SPLP3	Iron, SPLP3	Soil	0.03	mg/L
SW6010B_SPLP4	Iron, SPLP4	Soil	0.03	mg/L
SW6010B_SPLP5	Iron, SPLP5	Soil	0.03	mg/L
SW6010B_SPLP3	Lead, SPLP3	Soil	0.0001	mg/L
SW6010B_SPLP4	Lead, SPLP4	Soil	0.0001	mg/L
SW6010B_SPLP5	Lead, SPLP5	Soil	0.0001	mg/L
SW6010B_SPLP3	Lithium, SPLP3	Soil	0.001	mg/L
SW6010B_SPLP4	Lithium, SPLP4	Soil	0.001	mg/L
SW6010B_SPLP5	Lithium, SPLP5	Soil	0.001	mg/L
SW6010B_SPLP3	Magnesium, SPLP3	Soil	0.05	mg/L
SW6010B_SPLP4	Magnesium, SPLP4	Soil	0.05	mg/L
SW6010B_SPLP5	Magnesium, SPLP5	Soil	0.05	mg/L
SW6010B_SPLP3	Manganese, SPLP3	Soil	0.0001	mg/L
SW6010B_SPLP4	Manganese, SPLP4	Soil	0.0001	mg/L
SW6010B_SPLP5	Manganese, SPLP5	Soil	0.0001	mg/L
SW6010B_SPLP3	Molybdenum, SPLP3	Soil	0.0001	mg/L
SW6010B_SPLP4	Molybdenum, SPLP4	Soil	0.0001	mg/L
SW6010B_SPLP5	Molybdenum, SPLP5	Soil	0.0001	mg/L
SW6010B_SPLP3	Nickel, SPLP3	Soil	0.0005	mg/L
SW6010B_SPLP4	Nickel, SPLP4	Soil	0.0005	mg/L
SW6010B_SPLP5	Nickel, SPLP5	Soil	0.0005	mg/L
SW6010B_SPLP3	Phosphorus, SPLP3	Soil	0.3	mg/L
SW6010B_SPLP4	Phosphorus, SPLP4	Soil	0.3	mg/L
SW6010B_SPLP5	Phosphorus, SPLP5	Soil	0.3	mg/L
SW6010B_SPLP3	Potassium, SPLP3	Soil	0.05	mg/L
SW6010B_SPLP4	Potassium, SPLP4	Soil	0.05	mg/L
SW6010B_SPLP5	Potassium, SPLP5	Soil	0.05	mg/L
SW6010B_SPLP3	Selenium, SPLP3	Soil	0.0005	mg/L
SW6010B_SPLP4	Selenium, SPLP4	Soil	0.0005	mg/L
SW6010B_SPLP5	Selenium, SPLP5	Soil	0.0005	mg/L
SW6010B_SPLP3	Silicon, SPLP3	Soil	0.05	mg/L
SW6010B_SPLP4	Silicon, SPLP4	Soil	0.05	mg/L

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6010B_SPLP5	Silicon, SPLP5	Soil	0.05	mg/L
SW6010B_SPLP3	Silver, SPLP3	Soil	0.00005	mg/L
SW6010B_SPLP4	Silver, SPLP4	Soil	0.00005	mg/L
SW6010B_SPLP5	Silver, SPLP5	Soil	0.00005	mg/L
SW6010B_SPLP3	Sodium, SPLP3	Soil	1	mg/L
SW6010B_SPLP4	Sodium, SPLP4	Soil	1	mg/L
SW6010B_SPLP5	Sodium, SPLP5	Soil	1	mg/L
SW6010B_SPLP3	Strontium, SPLP3	Soil	0.001	mg/L
SW6010B_SPLP4	Strontium, SPLP4	Soil	0.001	mg/L
SW6010B_SPLP5	Strontium, SPLP5	Soil	0.001	mg/L
SW6010B_SPLP3	Thallium, SPLP3	Soil	0.0001	mg/L
SW6010B_SPLP4	Thallium, SPLP4	Soil	0.0001	mg/L
SW6010B_SPLP5	Thallium, SPLP5	Soil	0.0001	mg/L
SW6010B_SPLP3	Tin, SPLP3	Soil	0.001	mg/L
SW6010B_SPLP4	Tin, SPLP4	Soil	0.001	mg/L
SW6010B_SPLP5	Tin, SPLP5	Soil	0.001	mg/L
SW6010B_SPLP3	Titanium, SPLP3	Soil	0.01	mg/L
SW6010B_SPLP4	Titanium, SPLP4	Soil	0.01	mg/L
SW6010B_SPLP5	Titanium, SPLP5	Soil	0.01	mg/L
SW6010B_SPLP3	Vanadium, SPLP3	Soil	0.001	mg/L
SW6010B_SPLP4	Vanadium, SPLP4	Soil	0.001	mg/L
SW6010B_SPLP5	Vanadium, SPLP5	Soil	0.001	mg/L
SW6010B_SPLP3	Zinc, SPLP3	Soil	0.05	mg/L
SW6010B_SPLP4	Zinc, SPLP4	Soil	0.05	mg/L
SW6010B_SPLP5	Zinc, SPLP5	Soil	0.05	mg/L
SW6020A	Aluminum, TES1	Soil	50	mg/kg
SW6020A	Aluminum, TES2	Soil	50	mg/kg
SW6020A	Aluminum, TES3	Soil	50	mg/kg
SW6020A	Aluminum, TES4	Soil	50	mg/kg
SW6020A	Aluminum, TES5	Soil	50	mg/kg
SW6020A	Aluminum, TES6	Soil	50	mg/kg
SW6020A	Antimony, TES1	Soil	0.1	mg/kg
SW6020A	Antimony, TES2	Soil	0.1	mg/kg
SW6020A	Antimony, TES3	Soil	0.1	mg/kg
SW6020A	Antimony, TES4	Soil	0.1	mg/kg
SW6020A	Antimony, TES5	Soil	0.1	mg/kg
SW6020A	Antimony, TES6	Soil	0.1	mg/kg
SW6020A	Arsenic, TES1	Soil	0.05	mg/kg
SW6020A	Arsenic, TES2	Soil	0.05	mg/kg
SW6020A	Arsenic, TES3	Soil	0.05	mg/kg
SW6020A	Arsenic, TES4	Soil	0.05	mg/kg
SW6020A	Arsenic, TES5	Soil	0.5	mg/kg
SW6020A	Arsenic, TES6	Soil	0.5	mg/kg
SW6020A	Barium, TES1	Soil	2	mg/kg
SW6020A	Barium, TES2	Soil	2	mg/kg
SW6020A	Barium, TES3	Soil	2	mg/kg
SW6020A	Barium, TES4	Soil	2	mg/kg
SW6020A	Barium, TES5	Soil	2	mg/kg

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6020A	Barium, TES6	Soil	2	mg/kg
SW6020A	Beryllium, TES1	Soil	0.2	mg/kg
SW6020A	Beryllium, TES2	Soil	0.2	mg/kg
SW6020A	Beryllium, TES3	Soil	0.2	mg/kg
SW6020A	Beryllium, TES4	Soil	0.2	mg/kg
SW6020A	Beryllium, TES5	Soil	0.2	mg/kg
SW6020A	Beryllium, TES6	Soil	0.2	mg/kg
SW6020A	Bismuth, TES1	Soil	0.2	mg/kg
SW6020A	Bismuth, TES2	Soil	0.2	mg/kg
SW6020A	Bismuth, TES3	Soil	0.2	mg/kg
SW6020A	Bismuth, TES4	Soil	0.2	mg/kg
SW6020A	Bismuth, TES5	Soil	0.2	mg/kg
SW6020A	Bismuth, TES6	Soil	0.2	mg/kg
SW6020A	Cadmium, TES1	Soil	0.05	mg/kg
SW6020A	Cadmium, TES2	Soil	0.05	mg/kg
SW6020A	Cadmium, TES3	Soil	0.05	mg/kg
SW6020A	Cadmium, TES4	Soil	0.05	mg/kg
SW6020A	Cadmium, TES5	Soil	0.05	mg/kg
SW6020A	Cadmium, TES6	Soil	0.05	mg/kg
SW6020A	Calcium, TES1	Soil	50	mg/kg
SW6020A	Calcium, TES2	Soil	50	mg/kg
SW6020A	Calcium, TES3	Soil	50	mg/kg
SW6020A	Calcium, TES4	Soil	50	mg/kg
SW6020A	Calcium, TES5	Soil	50	mg/kg
SW6020A	Calcium, TES6	Soil	50	mg/kg
SW6020A	Chromium, TES1	Soil	5	mg/kg
SW6020A	Chromium, TES2	Soil	5	mg/kg
SW6020A	Chromium, TES3	Soil	5	mg/kg
SW6020A	Chromium, TES4	Soil	5	mg/kg
SW6020A	Chromium, TES5	Soil	5	mg/kg
SW6020A	Chromium, TES6	Soil	5	mg/kg
SW6020A	Cobalt, TES1	Soil	0.1	mg/kg
SW6020A	Cobalt, TES2	Soil	0.1	mg/kg
SW6020A	Cobalt, TES3	Soil	0.1	mg/kg
SW6020A	Cobalt, TES4	Soil	0.1	mg/kg
SW6020A	Cobalt, TES5	Soil	0.1	mg/kg
SW6020A	Cobalt, TES6	Soil	0.1	mg/kg
SW6020A	Copper, TES1	Soil	0.5	mg/kg
SW6020A	Copper, TES2	Soil	0.5	mg/kg
SW6020A	Copper, TES3	Soil	0.5	mg/kg
SW6020A	Copper, TES4	Soil	0.5	mg/kg
SW6020A	Copper, TES5	Soil	0.5	mg/kg
SW6020A	Copper, TES6	Soil	0.5	mg/kg
SW6020A	Iron, TES1	Soil	50	mg/kg
SW6020A	Iron, TES2	Soil	50	mg/kg
SW6020A	Iron, TES3	Soil	50	mg/kg
SW6020A	Iron, TES4	Soil	50	mg/kg
SW6020A	Iron, TES5	Soil	50	mg/kg

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6020A	Iron, TES6	Soil	50	mg/kg
SW6020A	Lead, TES1	Soil	0.5	mg/kg
SW6020A	Lead, TES2	Soil	0.5	mg/kg
SW6020A	Lead, TES3	Soil	0.5	mg/kg
SW6020A	Lead, TES4	Soil	0.5	mg/kg
SW6020A	Lead, TES5	Soil	0.5	mg/kg
SW6020A	Lead, TES6	Soil	0.5	mg/kg
SW6020A	Lithium, TES1	Soil	5	mg/kg
SW6020A	Lithium, TES2	Soil	5	mg/kg
SW6020A	Lithium, TES3	Soil	5	mg/kg
SW6020A	Lithium, TES4	Soil	5	mg/kg
SW6020A	Lithium, TES5	Soil	5	mg/kg
SW6020A	Lithium, TES6	Soil	5	mg/kg
SW6020A	Magnesium, TES1	Soil	20	mg/kg
SW6020A	Magnesium, TES2	Soil	20	mg/kg
SW6020A	Magnesium, TES3	Soil	20	mg/kg
SW6020A	Magnesium, TES4	Soil	20	mg/kg
SW6020A	Magnesium, TES5	Soil	20	mg/kg
SW6020A	Magnesium, TES6	Soil	20	mg/kg
SW6020A	Manganese, TES1	Soil	5	mg/kg
SW6020A	Manganese, TES2	Soil	5	mg/kg
SW6020A	Manganese, TES3	Soil	5	mg/kg
SW6020A	Manganese, TES4	Soil	5	mg/kg
SW6020A	Manganese, TES5	Soil	5	mg/kg
SW6020A	Manganese, TES6	Soil	5	mg/kg
SW6020A	Molybdenum, TES1	Soil	0.5	mg/kg
SW6020A	Molybdenum, TES2	Soil	0.5	mg/kg
SW6020A	Molybdenum, TES3	Soil	0.5	mg/kg
SW6020A	Molybdenum, TES4	Soil	0.5	mg/kg
SW6020A	Molybdenum, TES5	Soil	0.5	mg/kg
SW6020A	Molybdenum, TES6	Soil	0.5	mg/kg
SW6020A	Nickel, TES1	Soil	2	mg/kg
SW6020A	Nickel, TES2	Soil	2	mg/kg
SW6020A	Nickel, TES3	Soil	2	mg/kg
SW6020A	Nickel, TES4	Soil	2	mg/kg
SW6020A	Nickel, TES5	Soil	2	mg/kg
SW6020A	Nickel, TES6	Soil	2	mg/kg
SW6020A	Phosphorus, TES1	Soil	50	mg/kg
SW6020A	Phosphorus, TES2	Soil	50	mg/kg
SW6020A	Phosphorus, TES3	Soil	50	mg/kg
SW6020A	Phosphorus, TES4	Soil	50	mg/kg
SW6020A	Phosphorus, TES5	Soil	50	mg/kg
SW6020A	Phosphorus, TES6	Soil	50	mg/kg
SW6020A	Potassium, TES1	Soil	100	mg/kg
SW6020A	Potassium, TES2	Soil	100	mg/kg
SW6020A	Potassium, TES3	Soil	100	mg/kg
SW6020A	Potassium, TES4	Soil	100	mg/kg
SW6020A	Potassium, TES5	Soil	100	mg/kg

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6020A	Potassium, TES6	Soil	100	mg/kg
SW6020A	Selenium, TES1	Soil	0.2	mg/kg
SW6020A	Selenium, TES2	Soil	0.2	mg/kg
SW6020A	Selenium, TES3	Soil	0.2	mg/kg
SW6020A	Selenium, TES4	Soil	0.2	mg/kg
SW6020A	Selenium, TES5	Soil	0.5	mg/kg
SW6020A	Selenium, TES6	Soil	0.2	mg/kg
SW6020A	Silver, TES1	Soil	0.1	mg/kg
SW6020A	Silver, TES2	Soil	0.1	mg/kg
SW6020A	Silver, TES3	Soil	0.1	mg/kg
SW6020A	Silver, TES4	Soil	0.1	mg/kg
SW6020A	Silver, TES5	Soil	0.1	mg/kg
SW6020A	Silver, TES6	Soil	0.1	mg/kg
SW6020A	Sodium, TES1	Soil	100	mg/kg
SW6020A	Sodium, TES2	Soil	100	mg/kg
SW6020A	Sodium, TES3	Soil	100	mg/kg
SW6020A	Sodium, TES4	Soil	100	mg/kg
SW6020A	Sodium, TES5	Soil	100	mg/kg
SW6020A	Sodium, TES6	Soil	100	mg/kg
SW6020A	Strontium, TES1	Soil	5	mg/kg
SW6020A	Strontium, TES2	Soil	5	mg/kg
SW6020A	Strontium, TES3	Soil	5	mg/kg
SW6020A	Strontium, TES4	Soil	5	mg/kg
SW6020A	Strontium, TES5	Soil	5	mg/kg
SW6020A	Strontium, TES6	Soil	5	mg/kg
SW6020A	Thallium, TES1	Soil	0.05	mg/kg
SW6020A	Thallium, TES2	Soil	0.05	mg/kg
SW6020A	Thallium, TES3	Soil	0.05	mg/kg
SW6020A	Thallium, TES4	Soil	0.05	mg/kg
SW6020A	Thallium, TES5	Soil	2	mg/kg
SW6020A	Thallium, TES6	Soil	0.05	mg/kg
SW6020A	Tin, TES1	Soil	2	mg/kg
SW6020A	Tin, TES2	Soil	2	mg/kg
SW6020A	Tin, TES3	Soil	2	mg/kg
SW6020A	Tin, TES4	Soil	2	mg/kg
SW6020A	Tin, TES5	Soil	2	mg/kg
SW6020A	Tin, TES6	Soil	2	mg/kg
SW6020A	Titanium, TES1	Soil	5	mg/kg
SW6020A	Titanium, TES2	Soil	5	mg/kg
SW6020A	Titanium, TES3	Soil	5	mg/kg
SW6020A	Titanium, TES4	Soil	5	mg/kg
SW6020A	Titanium, TES5	Soil	5	mg/kg
SW6020A	Titanium, TES6	Soil	5	mg/kg
SW6020A	Uranium, TES1	Soil	0.05	mg/kg
SW6020A	Uranium, TES2	Soil	0.05	mg/kg
SW6020A	Uranium, TES3	Soil	0.05	mg/kg
SW6020A	Uranium, TES4	Soil	0.05	mg/kg
SW6020A	Uranium, TES5	Soil	0.05	mg/kg

TABLE 2-20

Geochemical Soil Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6020A	Uranium, TES6	Soil	0.05	mg/kg
SW6020A	Vanadium, TES1	Soil	0.2	mg/kg
SW6020A	Vanadium, TES2	Soil	0.2	mg/kg
SW6020A	Vanadium, TES3	Soil	0.2	mg/kg
SW6020A	Vanadium, TES4	Soil	0.2	mg/kg
SW6020A	Vanadium, TES5	Soil	0.2	mg/kg
SW6020A	Vanadium, TES6	Soil	0.2	mg/kg
SW6020A	Zinc, TES1	Soil	1	mg/kg
SW6020A	Zinc, TES2	Soil	1	mg/kg
SW6020A	Zinc, TES3	Soil	1	mg/kg
SW6020A	Zinc, TES4	Soil	1	mg/kg
SW6020A	Zinc, TES5	Soil	50	mg/kg
SW6020A	Zinc, TES6	Soil	1	mg/kg

TABLE 2-21

Geochemical Methods and Groundwater Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SM2310	Acidity	Water	1	mg/L
SM2320B	Alkalinity, bicarbonate	Water	1	mg/L
SM2320B	Alkalinity, carbonate	Water	1	mg/L
SM2320B	Alkalinity, hydroxide	Water	1	mg/L
SM2320B	Alkalinity, total	Water	1.00	mg/L
JEM/SM4500N	Ammonia-N	Water	0.005	mg/L
SM4110B	Chloride	Water	0.5	mg/L
SM4110B	Fluoride	Water	0.02	mg/L
SM4110B	Nitrite-N	Water	0.001	mg/L
SM4110B	Nitrate-N	Water	0.005	mg/L
SM4110B	Sulfate	Water	0.5	mg/L
SM4500P	ortho-Phosphate	Water	0.001	mg/L
Ferrozine	Ferrous iron	Water	0.02	mg/L
SW6010B/SW6020A	Aluminum, dissolved	Water	0.0005	mg/L
SW6010B/SW6020A	Antimony, dissolved	Water	0.00002	mg/L
SW6010B/SW6020A	Arsenic, dissolved	Water	0.00002	mg/L
SW6010B/SW6020A	Barium, dissolved	Water	0.00002	mg/L
SW6010B/SW6020A	Beryllium, dissolved	Water	0.00001	mg/L
SW6010B/SW6020A	Boron, dissolved	Water	0.005	mg/L
SW6010B/SW6020A	Cadmium, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Calcium, dissolved	Water	0.02	mg/L
SW6010B/SW6020A	Chromium, dissolved	Water	0.0001	mg/L
SW6010B/SW6020A	Cobalt, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Copper, dissolved	Water	0.0001	mg/L
SW6010B/SW6020A	Iron, dissolved	Water	0.001	mg/L
SW6010B/SW6020A	Lead, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Lithium, dissolved	Water	0.0005	mg/L
SW6010B/SW6020A	Magnesium, dissolved	Water	0.005	mg/L
SW6010B/SW6020A	Manganese, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Molybdenum, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Nickel, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Potassium, dissolved	Water	0.05	mg/L
SW6010B/SW6020A	Selenium, dissolved	Water	0.00004	mg/L
SW6010B/SW6020A	Silica, dissolved	Water	0.2	mg/L
SW6010B/SW6020A	Silicon, dissolved	Water	0.05	mg/L
SW6010B/SW6020A	Silver, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Sodium, dissolved	Water	0.01	mg/L
SW6010B/SW6020A	Strontium, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Sulfur, dissolved	Water	0.5	mg/L
SW6010B/SW6020A	Thallium, dissolved	Water	0.000002	mg/L
SW6010B/SW6020A	Titanium, dissolved	Water	0.0005	mg/L
SW6010B/SW6020A	Uranium, dissolved	Water	0.000002	mg/L
SW6010B/SW6020A	Vanadium, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Zinc, dissolved	Water	0.0005	mg/L
E245.7	Mercury, dissolved	Water	0.00001	mg/L
ASTM D7237	Free cyanide	Water	0.005	mg/L
SM5310	Dissolved organic carbon	Water	0.5	mg/L
SM2540C	Total dissolved solids	Water	10	mg/L
SM2540D	Total suspended solids	Water	1	mg/L

TABLE 2-22

Geotechnical Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
ASTM C131	LA abrasion	Rock	None	Percent
ASTM C295	Petrographic examination	Rock	None	NA
ASTM C535	LA abrasion	Rock	None	Percent
ASTM D1429	Specific gravity	Soil	10	NA
ASTM D2435	Consolidation	Soil	None	in^2/min
ASTM D2435	Permeability	Soil	None	ft/sec
ASTM D422 (Sieve/Hydrometer)	Gradation	Soil	None	Percent
ASTM D4318 (Atterberg Limits)	Moisture at liquid limit	Soil	1	Percent
ASTM D4318 (Atterberg Limits)	Plasticity index	Soil	1	Percent
ASTM D4644	Slake durability	Rock	None	Percent
ASTM D4767	Shear strength	Soil	None	NA
ASTM D5240	Rock soundness tests	Rock	None	Percent
ASTM D5312	Rock durability tests – freeze/thaw	Rock	None	Percent loss
ASTM D5313	Rock durability tests – wet/dry	Rock	None	Percent loss
ASTM D5731	Point load index	Rock	None	psi
ASTM D5873	Rock total hardness	Rock	None	NA
ASTM D6473	Specific rravity and absorption	Rock	None	NA
ASTM 6913	Sieve	Soil	None	mm
ASTM D7012	Unconfined compressive shear strength tests	Soil	None	MA
ASTM D71012-07 Method C	Compressive strength	Rock	None	psi
ASTM D7263	Porosity	Soil	None	Percent
ASTM D7263	Density	Rock	None	mg/m^3
ASTM D7263	Dry bulk density	Soil	None	mg/m^3
ASTM D7263	Moisture content	Soil	None	Percent
CSSS (1978) 3.321/COMM SOIL SCI17(7)	Cation exchange capacity	Soil	None	centi-mol per kg
ASTM D3080/D3080M	Direct shear test	Soil	None	psi
CSA A23.2-2A	Gradation by sieve	Aggregate	None	NA
CSA A23.2-7A	Organic impurities of fines	Aggregate	None	NA
CSA A23.2-15A	Petrographic examination	Aggregate	None	NA
CSA A23.2-6A/12A	Relative density and absorption	Aggregate	None	NA
CSA A23.2-25A	Alkali-aggregate reactivity	Aggregate	None	NA
CSA A23.2-9A	Sulfate soundness	Aggregate	None	NA
CSA A23.2-23A/29A	Micro-deval abrasion	Aggregate	None	NA
CSA A23.2-13A	Particle shape	Aggregate	None	NA

Notes:

There are no geotechnical reporting limits other than where listed.

NA = not applicable

TABLE 2-23

Faro Pit Methods and Water Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SM2310	Acidity	Water	1	mg/L
SM2320B	Alkalinity, bicarbonate	Water	1	mg/L
SM2320B	Alkalinity, carbonate	Water	1	mg/L
SM2320B	Alkalinity, hydroxide	Water	1	mg/L
SM2320B	Alkalinity, total	Water	1.00	mg/L
JEM/SM4500N	Ammonia-N	Water	0.005	mg/L
SM4110B	Chloride	Water	0.5	mg/L
SM4110B	Fluoride	Water	0.02	mg/L
SM4110B	Nitrite-N	Water	0.001	mg/L
SM4110B	Nitrate-N	Water	0.005	mg/L
SM4110B	Sulfate	Water	0.5	mg/L
SM4500P	ortho-Phosphate	Water	0.001	mg/L
Ferrozine	Ferrous iron	Water	0.02	mg/L
SM10200H	Chlorophyll-a	Water	0.05	µg/L
ASTM D7237	Free cyanide	Water	0.005	mg/L
CH1987LIME	Lime demand/solids formed	Water	0.05	lb/1000USG
SW6010B/SW6020A	Aluminum	Water	0.003	mg/L
SW6010B/SW6020A	Antimony	Water	0.0001	mg/L
SW6010B/SW6020A	Arsenic	Water	0.0001	mg/L
SW6010B/SW6020A	Barium	Water	0.00002	mg/L
SW6010B/SW6020A	Beryllium	Water	0.00001	mg/L
SW6010B/SW6020A	Boron	Water	0.005	mg/L
SW6010B/SW6020A	Cadmium	Water	0.000005	mg/L
SW6010B/SW6020A	Calcium	Water	0.02	mg/L
SW6010B/SW6020A	Chromium	Water	0.0001	mg/L
SW6010B/SW6020A	Cobalt	Water	0.000005	mg/L
SW6010B/SW6020A	Copper	Water	0.0001	mg/L
SW6010B/SW6020A	Iron	Water	0.001	mg/L
SW6010B/SW6020A	Lead	Water	0.00005	mg/L
SW6010B/SW6020A	Lithium	Water	0.0005	mg/L
SW6010B/SW6020A	Magnesium	Water	0.00005	mg/L
SW6010B/SW6020A	Manganese	Water	0.00005	mg/L
SW6010B/SW6020A	Molybdenum	Water	0.00005	mg/L
SW6010B/SW6020A	Nickel	Water	0.00005	mg/L
SW6010B/SW6020A	Phosphorus	Water	0.05	mg/L
SW6010B/SW6020A	Potassium	Water	0.05	mg/L
SW6010B/SW6020A	Selenium	Water	0.00004	mg/L
SW6010B/SW6020A	Silica	Water	0.2	mg/L
SW6010B/SW6020A	Silver	Water	0.000005	mg/L
SW6010B/SW6020A	Sodium	Water	0.01	mg/L
SW6010B/SW6020A	Strontium	Water	0.00005	mg/L
SW6010B/SW6020A	Sulfur	Water	0.5	mg/L

TABLE 2-23

Faro Pit Methods and Water Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Method	Analyte	Matrix	RL	Units
SW6010B/SW6020A	Thallium	Water	0.000002	mg/L
SW6010B/SW6020A	Titanium	Water	0.0005	mg/L
SW6010B/SW6020A	Uranium	Water	0.000002	mg/L
SW6010B/SW6020A	Vanadium	Water	0.00005	mg/L
SW6010B/SW6020A	Zinc	Water	0.0005	mg/L
E245.7	Mercury	Water	0.00001	mg/L
SW6010B/SW6020A	Aluminum, dissolved	Water	0.0005	mg/L
SW6010B/SW6020A	Antimony, dissolved	Water	0.00002	mg/L
SW6010B/SW6020A	Arsenic, dissolved	Water	0.00002	mg/L
SW6010B/SW6020A	Barium, dissolved	Water	0.00002	mg/L
SW6010B/SW6020A	Beryllium, dissolved	Water	0.00001	mg/L
SW6010B/SW6020A	Boron, dissolved	Water	0.005	mg/L
SW6010B/SW6020A	Cadmium, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Calcium, dissolved	Water	0.02	mg/L
SW6010B/SW6020A	Chromium, dissolved	Water	0.0001	mg/L
SW6010B/SW6020A	Cobalt, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Copper, dissolved	Water	0.0001	mg/L
SW6010B/SW6020A	Iron, dissolved	Water	0.001	mg/L
SW6010B/SW6020A	Lead, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Lithium, dissolved	Water	0.0005	mg/L
SW6010B/SW6020A	Magnesium, dissolved	Water	0.005	mg/L
SW6010B/SW6020A	Manganese, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Molybdenum, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Nickel, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Potassium, dissolved	Water	0.05	mg/L
SW6010B/SW6020A	Selenium, dissolved	Water	0.00004	mg/L
SW6010B/SW6020A	Silica, dissolved	Water	0.2	mg/L
SW6010B/SW6020A	Silicon, dissolved	Water	0.05	mg/L
SW6010B/SW6020A	Silver, dissolved	Water	0.000005	mg/L
SW6010B/SW6020A	Sodium, dissolved	Water	0.01	mg/L
SW6010B/SW6020A	Strontium, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Sulfur, dissolved	Water	0.5	mg/L
SW6010B/SW6020A	Thallium, dissolved	Water	0.000002	mg/L
SW6010B/SW6020A	Titanium, dissolved	Water	0.0005	mg/L
SW6010B/SW6020A	Uranium, dissolved	Water	0.000002	mg/L
SW6010B/SW6020A	Vanadium, dissolved	Water	0.00005	mg/L
SW6010B/SW6020A	Zinc, dissolved	Water	0.0005	mg/L
E245.7	Mercury, dissolved	Water	0.00001	mg/L
SM5310	Dissolved organic carbon	Water	0.5	mg/L
SM4500Norg	Total Kjeldahl nitrogen	Water	0.05	mg/L
SM2540C	Total dissolved solids	Water	10	mg/L
SM2540D	Total suspended solids	Water	1	mg/L

TABLE 2-24

Soil Fertility and Soil Fertility EA Methods and Reporting Limits

Faro Mine Complex Site Wide Sampling Definition 2013–2014

Soil Fertility

Method	Analyte	Matrix	RL	Units
CSSS 16.3 (2008)	1:2 $CaCl_2$ pH	Soil	0.1	pH units
CSSS (2008) 12.2	SMP buffer pH	Soil	0.1	pH units
CSSS (2008) 18.4	1N, pH 7.0 NH4OAc extractable Ca	Soil	0.5	meq/100g
CSSS (2008) 18.4	1N, pH 7.0 NH4OAc extractable Mg	Soil	0.5	meq/100g
CSSS (2008) 18.4	1N, pH 7.0 NH4OAc extractable K	Soil	0.5	meq/100g
CSSS (2008) 18.4	1N, pH 7.0 NH4OAc extractable Na	Soil	0.5	meq/100g
SSSA (1996) P 894-895	Available phosphorous (for pH<7.2)	Soil	2	mg/kg
SSSA (1996) P 894-895	Available phosphorous (for pH>7.2)	Soil	2	mg/kg
S-11.10 in Gavlak et al. (2005)	Ca(H2PO4)2.H2O extractable SO4-S	Soil	3	mg/kg
CSSS (2008) 11.3 and 11.4	DTPA extractable micronutrients Cu	Soil	0.02	mg/kg
CSSS (2008) 11.3 and 11.4	DTPA extractable micronutrients Fe	Soil	2	mg/kg
CSSS (2008) 11.3 and 11.4	DTPA extractable micronutrients Mn	Soil	0.04	mg/kg
CSSS (2008) 11.3 and 11.4	DTPA extractable micronutrients Zn	Soil	0.2	mg/kg
CSSS (2008) 15.3	Soluble salts	Soil	0.1	dS/m
CSSS (2008) 15.2.1	Electrical conductivity of saturation paste	Soil	0.1	dS/m
CSSS (2008) 15.3.2, 14.4.4	Sodium absorption ratio	Soil	1	Std units
CSSS (2008) 20.3	Calcium carbonate equivalent	Soil	0.8	Percent

Soil Fertility EA

Method	Analyte	Matrix	RL	Units
SSSA (1996) P 973-974	Total nitrogen	Soil	0.05	Percent
EPA 200.2/SW6020A	Total phosphorous	Soil	0.01	percent
CSSS (2008) 18.4	Cation Exchange Capacity	Soil	2	meq/100g
CSSS (2008) 6.2	2N KCl extraction ammonium	Soil	1	mg/kg
CSSS (2008) 6.2	2N KCl extraction nitrate	Soil	2	mg/kg

Note:

Gavlak, R., Horneck, D., Miller, R. O., Kotuby-Amacher, J. 2003. *Soil, Plant and Water Reference Methods for the Western Region, 2nd Edition* . Method S-11.10.