

**Table A-4: Surface Water Quality Parameters and Detection Limits
 (From Table 4 of Appendix B of Care and Maintenance Contract)**



Measurements	Units	Method Detection Limits	
		Minimum Method Detection Limit	Preferred Method Detection Limit
Field Parameters			
pH			
Conductivity	uS/cm		
Temperature	°C		
Micellaneous Parameters			
alkalinity	mg/L	1	1
ammonia - N	"	0.05	0.02
chloride	"	1	0.05
conductivity	uS/cm		
dissolved solids, total (TDS)	"	10	10
organic carbon, dissolved (DOC) ¹	"	1	0.1
organic carbon, total (TOC) ¹	"	1	0.1
pH	pH units	0.01	0.01
sulphate	mg/L	1	0.2
suspended solids, total (TSS)	"	2	1
ICP - Metals Scan (Total and Dissolved)			
aluminum	mg/L	0.005	0.001
antimony	"	0.005	0.001
arsenic	"	0.001	0.0005
barium	"	0.01	0.001
beryllium	"	0.001	0.001
bismuth	"	0.002	0.001
boron	"	0.05	0.001
cadmium	"	0.00001	0.000005
calcium	"	0.5	0.05
chromium	"	0.001	0.0002
cobalt	"	0.0009	0.00005
copper	"	0.001	0.0001
iron	"	0.05	0.005
lead	"	0.001	0.0002
magnesium	"	0.5	0.05
manganese	"	0.002	0.0005
molybdenum	"	0.001	0.001
nickel	"	0.002	0.001
potassium	"	0.5	0.05
selenium	"	0.001	0.0002
silver	"	0.00005	0.00001
sodium	"	0.5	0.05
strontium	"	0.002	0.001
thallium	"	0.0003	0.00005
tin	"	0.001	0.001
titanium	"	0.005	0.005
uranium	"	0.005	0.0001
vanadium	"	0.006	0.001
zinc	"	0.005	0.0005
zirconium	"	0.004	0.001

¹ Not required for S2 and S2 LDL Designations in Parameter Suite Column

Lab Parameters

Low detection limits specified in Table are only required for sites identified by S LDL designation in the Parameter Suite

Note 1: column.

Note 2: Total Metals **and** Dissolved Metals are part of surface water monitoring requirements.

Note 3: All sampling and analysis to be conducted in accordance with the current edition of "Standard Methods for the Examination of Water and Waste Water" including field filtering of samples for dissolved metals.

Note 4: Hardness not required, but Ca and Mg must be part of ICP results.



Table A-5: Seepage Water Quality Parameters and Detection Limits
(From Table 5 of Appendix B of Care and Maintenance Contract)



Measurements	Units	Method Detection Limits	
		Minimum Method Detection Limit	Preferred Method Detection Limit
Field Parameters			
pH			
Conductivity	uS/cm		
Temperature	°C		
ORP	mV		
Micellaneous Parameters			
acidity (to pH 8.3)	mg/L		
alkalinity	mg/L	1	1
chloride	"	1	0.05
conductivity	uS/cm		
pH	pH units	0.01	0.01
sulphate	mg/L	1	0.2
suspended solids, total (TSS)	"	2	1
ICP - Metals Scan (Dissolved)			
aluminum	mg/L	0.005	0.001
antimony	"	0.005	0.001
arsenic	"	0.001	0.0005
barium	"	0.01	0.001
beryllium	"	0.001	0.001
bismuth	"	0.002	0.001
boron	"	0.05	0.001
cadmium	"	0.00001	0.000005
calcium	"	0.5	0.05
chromium	"	0.001	0.0002
cobalt	"	0.0009	0.00005
copper	"	0.001	0.0001
iron	"	0.05	0.005
lead	"	0.001	0.0002
magnesium	"	0.5	0.05
manganese	"	0.002	0.0005
molybdenum	"	0.001	0.001
nickel	"	0.002	0.001
potassium	"	0.5	0.05
selenium	"	0.001	0.0002
silver	"	0.00005	0.00001
sodium	"	0.5	0.05
strontium	"	0.002	0.001
thallium	"	0.0003	0.00005
tin	"	0.001	0.001
titanium	"	0.005	0.005
uranium	"	0.005	0.0001
vanadium	"	0.006	0.001
zinc	"	0.005	0.0005
zirconium	"	0.004	0.001

Lab Parameters

Note 1: Low detection limits specified in Table are only required for sites identified by SE LDL designation in the parameter Suite column.

Note 2: All sampling and analysis to be conducted in accordance with the current edition of "Standard Methods for the Examination of Water and Waste Water" including field filtering of samples for

Note 3: Hardness not required, but Ca and Mg must be part of ICP results.

Table A-6 (a and b): Groundwater Quality Parameters and Detection Limits
 (From Table 6 of Appendix B of Care and Maintenance Contract)



Table A-6 (a)		Method Detection Limits	
Full Suite Measurements	Units	Minimum Method Detection Limit	Preferred Method Detection Limit
Field Parameters			
pH			
Conductivity	uS/cm		
Temperature	°C		
Purge Volume	L		
Purge Rate			
Purge Time			
Sampling Time			
Micellaneous Parameters			
acidity (to pH 8.3)	mg/L		
alkalinity	mg/L	1	1
chloride	"	1	0.05
conductivity	uS/cm		
pH	pH units	0.01	0.01
sulphate	mg/L	1	0.2
suspended solids, total (TSS)	"	2	1
ICP - Metals Scan (Dissolved)			
aluminum	mg/L	0.005	0.001
antimony	"	0.005	0.001
arsenic	"	0.001	0.0005
barium	"	0.01	0.001
beryllium	"	0.001	0.001
bismuth	"	0.002	0.001
boron	"	0.05	0.001
cadmium	"	0.00001	0.000005
calcium	"	0.5	0.05
chromium	"	0.001	0.0002
cobalt	"	0.0009	0.00005
copper	"	0.001	0.0001
iron	"	0.05	0.005
lead	"	0.001	0.0002
magnesium	"	0.5	0.05
manganese	"	0.002	0.0005
molybdenum	"	0.001	0.001
nickel	"	0.002	0.001
potassium	"	0.5	0.05
selenium	"	0.001	0.0002
silver	"	0.00005	0.00001
sodium	"	0.5	0.05
strontium	"	0.002	0.001
thallium	"	0.0003	0.00005
tin	"	0.001	0.001
titanium	"	0.005	0.005
uranium	"	0.005	0.0001
vanadium	"	0.006	0.001
zinc	"	0.005	0.0005
zirconium	"	0.004	0.001

Lab Parameters

Note 1: Low detection limits specified in Table are only required for sites identified by G LDL designation in the Parameter Suite column.

Note 2: All sampling and analysis to be conducted in accordance with the current edition of "Standard Methods for the Examination of Water and Waste Water" including field filtering of samples for dissolved metals.

Note 3: Hardness not required, but Ca and Mg must be part of ICP results.

Table A-6 (b)		Method Detection Limits for	
Reduced Suite Measurements ¹	Units	Minimum Method Detection Limit	Preferred Method Detection Limit
Micellaneous Parameters			
alkalinity	mg/L	1	1
conductivity	uS		
pH	pH units	0.01	0.01
sulphate	"	1	0.2
ICP - Metals Scan (Dissolved)			
calcium	"	0.5	0.05
iron	"	0.05	0.005
magnesium	"	0.5	0.05
manganese	"	0.002	0.0005
potassium	"	0.5	0.05
sodium	"	0.5	0.05
zinc	"	0.005	0.0005

Note 1: Reduced suite can include collection and analysis of dissolved metal samples with reporting of only listed parameters.

**Table A-7: Water Quality Parameters
and Effluent Standards**

for Sites X5, X13, V2 and V25BSP

(From Table 1 of Appendix B of Care and Maintenance Contract)

Measurements	Effluent Quality Standard
Total Suspended Solids	≤ 15 mg/L
pH	≥ 6.5 pH Units
Colour	≤ 20 Colour Units
Turbidity**	≤ 15 mg/L
Ammonia (as N)	≤ 1.30 mg/L
Antimony	≤ 0.10 mg/L
Arsenic	≤ 0.05 mg/L
Barium	≤ 1.00 mg/L
Cadmium	≤ 0.02 mg/L
Copper	≤ 0.20 mg/L
Cyanide	≤ 0.05 mg/L
Lead	≤ 0.20 mg/L
Mercury	≤ 0.005 mg/L
Molybdenum	≤ 0.50 mg/L
Nickel	≤ 0.50 mg/L
Selenium	≤ 0.05 mg/L
Silver	≤ 0.10 mg/L
Zinc	≤ 0.50 mg/L
Oil or Grease	Any visible or floating
Bioassay	Pass 100% 96-hour LC ₅₀ (%v/v)

