



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-038
Client Sample ID: T2/EA-10 (0-2)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.5	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	0.99	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.71	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdh
Saturation	58.2	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	0.9	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	8.4	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	6.09	meq/l		0.05		SW6010B	06/01/04 01:12 / rp
Magnesium, Saturated Paste	3.46	meq/l		0.08		SW6010B	06/01/04 01:12 / rp
Sodium, Saturated Paste	1.87	meq/l		0.04		SW6010B	06/01/04 01:12 / rp
PHYSICAL CHARACTERISTICS							
Sand	21	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	50	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	29	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	CL	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	26.4	meq/100g		0.09		SW6010B	06/15/04 02:36 / rp
Exchangeable Sodium Percentage	1.5	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	5.8	wt%		0.1		USDA23c	06/24/04 14:41 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.51	meq/100g		0.04		SW6010B	06/04/04 05:02 / rp

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
 Project: Tongue River Monitoring Tier 2
 Lab ID: H04050009-039
 Client Sample ID: T2/EA-10 (0-6)

Report Date: 07/04/04
 Collection Date: 04/14/04 10:00
 Date Received: 05/03/04
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.6	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	0.94	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.71	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdH
Saturation	56.3	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	1.1	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	10	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdH
Nitrate as N, Saturated Paste	ND	mg/L		0.6		ASA10-3	06/15/04 11:02 / cwh
Sulfate, Saturated Paste	3.19	meq/L		0.002		ASA10-3	06/20/04 13:00 / rp
SATURATED PASTE							
Calcium, Saturated Paste	5.42	meq/l		0.05		SW6010B	06/01/04 01:14 / rp
Magnesium, Saturated Paste	3.09	meq/l		0.08		SW6010B	06/01/04 01:14 / rp
Sodium, Saturated Paste	2.33	meq/l		0.04		SW6010B	06/01/04 01:14 / rp
PHYSICAL CHARACTERISTICS							
Sand	17	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	53	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	30	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	SiCL	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Fluoride	ND	mg/kg		1.0		A4500-F C	06/17/04 13:00 / ddb
Organic Matter	3.30	wt%		0.02		ASA29-3	06/24/04 14:41 / rp
Cation Exchange Capacity	28.6	meq/100g		0.09		SW6010B	06/15/04 02:39 / rp
Exchangeable Sodium Percentage	2.0	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	5.9	wt%		0.1		USDA23c	06/24/04 14:41 / rp
Phosphorus	9.2	mg/kg		0.1		ASA24-5	06/24/04 04:51 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Potassium	248	mg/kg		1		SW6010B	06/04/04 05:05 / rp
Sodium, Extractable	0.70	meq/100g		0.04		SW6010B	06/04/04 05:05 / rp
METALS, WATER EXTRACTABLE							
Selenium	0.051	mg/kg		0.010		SW6020	06/24/04 22:43 / car
METALS, DTPA EXTRACTABLE							
Zinc	0.52	mg/kg		0.02		SW6010B	06/16/04 01:46 / rp

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-039
Client Sample ID: T2/EA-10 (0-6)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, CACL2 EXTRACTABLE							
Barium	7.7	mg/L		0.001		SW6010B	06/16/04 11:46 / rp
Boron	1.1	mg/L		0.04		SW6010B	06/16/04 11:46 / rp

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-040
Client Sample ID: T2/EA-10 (6-12)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.6	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	2.66	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.42	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdh
Saturation	55.6	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	2.1	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	4.6	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdh
Nitrate as N, Saturated Paste	2.2	mg/L		0.1		ASA10-3	06/15/04 12:13 / cwh
Sulfate, Saturated Paste	26.2	meq/L		0.002		ASA10-3	06/20/04 13:00 / rp
SATURATED PASTE							
Calcium, Saturated Paste	13.5	meq/l		0.05		SW6010B	06/01/04 01:17 / rp
Magnesium, Saturated Paste	10.0	meq/l		0.08		SW6010B	06/01/04 01:17 / rp
Sodium, Saturated Paste	7.16	meq/l		0.04		SW6010B	06/01/04 01:17 / rp
PHYSICAL CHARACTERISTICS							
Sand	12	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	54	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	34	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	SiCL	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	26.6	meq/100g		0.09		SW6010B	06/15/04 02:42 / rp
Exchangeable Sodium Percentage	3.5	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	6.1	wt%		0.1		USDA23c	06/24/04 14:41 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.33	meq/100g		0.04		SW6010B	06/04/04 05:08 / rp

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 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-041
Client Sample ID: T2/EA-10 (12-24)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.6	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	4.60	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.56	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdH
Saturation	51.8	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	2.7	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	4.0	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdH
Nitrate as N, Saturated Paste	ND	mg/L		0.1		ASA10-3	06/15/04 12:15 / cwH
Sulfate, Saturated Paste	57.6	meq/L		0.002		ASA10-3	06/20/04 13:00 / rp
SATURATED PASTE							
Calcium, Saturated Paste	24.6	meq/l		0.05		SW6010B	06/01/04 01:23 / rp
Magnesium, Saturated Paste	21.2	meq/l		0.08		SW6010B	06/01/04 01:23 / rp
Sodium, Saturated Paste	13.1	meq/l		0.04		SW6010B	06/01/04 01:23 / rp
PHYSICAL CHARACTERISTICS							
Sand	13	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	51	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	36	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	SiCL	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	26.3	meq/100g		0.09		SW6010B	06/15/04 02:48 / rp
Exchangeable Sodium Percentage	4.4	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	7.2	wt%		0.1		USDA23c	06/24/04 14:41 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.83	meq/100g		0.04		SW6010B	06/04/04 05:14 / rp

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 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-042
Client Sample ID: T2/EA-10 (24-36)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.8	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	5.52	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.28	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdh
Saturation	48.5	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	4.4	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	3.6	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	20.0	meq/l		0.05		SW6010B	06/01/04 01:26 / rp
Magnesium, Saturated Paste	24.9	meq/l		0.08		SW6010B	06/01/04 01:26 / rp
Sodium, Saturated Paste	20.7	meq/l		0.04		SW6010B	06/01/04 01:26 / rp
PHYSICAL CHARACTERISTICS							
Sand	23	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	49	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	28	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	CL	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	20.5	meq/100g		0.09		SW6010B	06/15/04 02:51 / rp
Exchangeable Sodium Percentage	6.4	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	8.8	wt%		0.1		USDA23c	06/24/04 14:41 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.31	meq/100g		0.04		SW6010B	06/04/04 05:17 / rp

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-043
Client Sample ID: T2/EA-10 (36-60)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	8.0	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	4.17	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.56	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdh
Saturation	42.8	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	5.6	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	3.0	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	8.41	meq/l		0.05		SW6010B	06/01/04 01:29 / rp
Magnesium, Saturated Paste	16.1	meq/l		0.08		SW6010B	06/01/04 01:29 / rp
Sodium, Saturated Paste	19.6	meq/l		0.04		SW6010B	06/01/04 01:29 / rp
PHYSICAL CHARACTERISTICS							
Sand	36	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	42	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	22	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	L	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Fluoride	1.3	mg/kg		1.0		A4500-F C	06/17/04 13:00 / ddb
Cation Exchange Capacity	19.6	meq/100g		0.09		SW6010B	06/15/04 02:54 / rp
Exchangeable Sodium Percentage	6.8	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	8.1	wt%		0.1		USDA23c	06/24/04 14:41 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.17	meq/100g		0.04		SW6010B	06/04/04 05:20 / rp
METALS, WATER EXTRACTABLE							
Selenium	0.041	mg/kg		0.010		SW6020	06/28/04 10:32 / car
METALS, CaCl2 EXTRACTABLE							
Barium	1.2	mg/L		0.001		SW6010B	06/16/04 11:49 / rp
Boron	1.5	mg/L		0.04		SW6010B	06/16/04 11:49 / rp

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04050009-044
Client Sample ID: T2/EA-10 (60-96)

Report Date: 07/04/04
Collection Date: 04/14/04 10:00
Date Received: 05/03/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.8	s.u.		0.1		ASAM10-3.2	06/24/04 14:41 / rp
Conductivity, Paste Extract	3.16	mmhos/cm		0.01		ASAM10-3	06/24/04 14:41 / rp
Chloride, Saturated Paste	0.42	meq/L		0.01		ASA10-3	06/21/04 13:00 / jdh
Saturation	40.7	wt%		0.1		USDA27a	06/24/04 14:41 / rp
Sodium Adsorption Ratio (SAR)	3.1	unitless		0.1		Calculation	06/24/04 14:41 / rp
Alkalinity, Saturated Paste	2.6	meq/L		1.0		ASA10-3	06/24/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	11.6	meq/l		0.05		SW6010B	06/01/04 01:32 / rp
Magnesium, Saturated Paste	16.3	meq/l		0.08		SW6010B	06/01/04 01:32 / rp
Sodium, Saturated Paste	11.7	meq/l		0.04		SW6010B	06/01/04 01:32 / rp
PHYSICAL CHARACTERISTICS							
Sand	39	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Silt	37	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Clay	24	wt%		1.0		ASA15-5	06/24/04 14:41 / rp
Texture	L	unitless				ASA15-5	06/24/04 14:41 / rp
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	16.9	meq/100g		0.09		SW6010B	06/15/04 03:03 / rp
Exchangeable Sodium Percentage	4.3	%		0.1		USDA20b	06/24/04 14:41 / rp
Lime as CaCO3	8.0	wt%		0.1		USDA23c	06/24/04 14:41 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.20	meq/100g		0.04		SW6010B	06/04/04 05:29 / rp

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.