



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100167-009
Client Sample ID: T2/GA-10-(0-6")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.4	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	0.92	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	45.7	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	1.4	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	7.7	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
Nitrate as N, Saturated Paste	ND	mg/L		0.1		ASA10-3	11/10/04 12:23 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	4.64	meq/l		0.05		SW6010B	11/04/04 11:10 / rp
Magnesium, Saturated Paste	2.58	meq/l		0.08		SW6010B	11/04/04 11:10 / rp
Sodium, Saturated Paste	2.74	meq/l		0.04		SW6010B	11/04/04 11:10 / rp
Sulfate, Saturated Paste	2.34	meq/l		0.002		SW6010B	11/04/04 11:10 / rp
PHYSICAL CHARACTERISTICS							
Sand	34	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	43	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	23	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	L	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	1.0	mg/kg		1.0		A4500-F C	11/22/04 13:00 / jdh
Potassium, NH4OAc Extractable	237	mg/kg		1		ASA13-3	11/22/04 13:00 / jdh
Organic Matter	2.80	%		0.02		ASA29-3	11/22/04 07:49 / jdh
Cation Exchange Capacity	26.8	meq/100g		0.09		SW6010B	11/05/04 10:22 / rp
Lime as CaCO3	5.8	%		0.1		USDA23c	11/09/04 00:00 / jdh
Phosphorus	8.3	mg/kg		0.1		ASA24-5	11/12/04 07:15 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.74	meq/100g		0.04		SW6010B	11/08/04 11:06 / rp
EXCHANGEABLES							
Exchangeable Sodium	0.6	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	2.3	%		0.1		USDA20a	11/22/04 07:49 / jdh
METALS, DTPA EXTRACTABLE							
Zinc	0.67	mg/kg		0.02		SW6010B	11/09/04 10:51 / rp
METALS, CACL2 EXTRACTABLE							
Barium	8.6	mg/L		0.04		SW6010B	11/09/04 09:00 / rp

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

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



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Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, CACL2 EXTRACTABLE							
Boron	2.0	mg/L		0.04		SW6010B	11/09/04 09:00 / rp
Selenium	ND	mg/L		0.10		SW6010B	11/09/04 09:00 / rp

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100167-010
Client Sample ID: T2/GA-10-(6-12")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.6	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	0.78	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	42.8	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	1.5	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	5.2	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
Nitrate as N, Saturated Paste	2.5	mg/L		0.1		ASA10-3	11/10/04 12:27 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	3.87	meq/l		0.05		SW6010B	11/04/04 11:13 / rp
Magnesium, Saturated Paste	2.34	meq/l		0.08		SW6010B	11/04/04 11:13 / rp
Sodium, Saturated Paste	2.66	meq/l		0.04		SW6010B	11/04/04 11:13 / rp
Sulfate, Saturated Paste	3.63	meq/l		0.002		SW6010B	11/04/04 11:13 / rp
PHYSICAL CHARACTERISTICS							
Sand	26	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	48	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	26	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	L	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	23.4	meq/100g		0.09		SW6010B	11/05/04 10:31 / rp
Lime as CaCO3	6.7	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.74	meq/100g		0.04		SW6010B	11/08/04 11:14 / rp
EXCHANGEABLES							
Exchangeable Sodium	0.6	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	2.7	%		0.1		USDA20a	11/22/04 07:49 / jdh

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100167-011
Client Sample ID: T2/GA-10-(12-24")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.7	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	2.24	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	41.4	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	2.9	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	4.5	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
Nitrate as N, Saturated Paste	2.4	mg/L		0.1		ASA10-3	11/10/04 12:31 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	8.16	meq/l		0.05		SW6010B	11/04/04 11:24 / rp
Magnesium, Saturated Paste	6.88	meq/l		0.08		SW6010B	11/04/04 11:24 / rp
Sodium, Saturated Paste	7.84	meq/l		0.04		SW6010B	11/04/04 11:24 / rp
Sulfate, Saturated Paste	19.0	meq/l		0.002		SW6010B	11/04/04 11:24 / rp
PHYSICAL CHARACTERISTICS							
Sand	34	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	44	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	22	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	L	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	21.2	meq/100g		0.09		SW6010B	11/05/04 10:37 / rp
Lime as CaCO3	7.2	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.34	meq/100g		0.04		SW6010B	11/08/04 11:20 / rp
EXCHANGEABLES							
Exchangeable Sodium	1.0	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	4.8	%		0.1		USDA20a	11/22/04 07:49 / jdh

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100167-012
Client Sample ID: T2/GA-10-(24-36")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.8	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	4.71	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	40.4	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	5.0	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	3.5	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	12.9	meq/l		0.05		SW6010B	11/04/04 11:27 / rp
Magnesium, Saturated Paste	21.6	meq/l		0.08		SW6010B	11/04/04 11:27 / rp
Sodium, Saturated Paste	20.8	meq/l		0.04		SW6010B	11/04/04 11:27 / rp
PHYSICAL CHARACTERISTICS							
Sand	43	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	39	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	18	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	L	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	17.7	meq/100g		0.09		SW6010B	11/05/04 10:40 / rp
Lime as CaCO3	6.7	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.89	meq/100g		0.04		SW6010B	11/08/04 11:23 / rp
EXCHANGEABLES							
Exchangeable Sodium	1.0	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	5.9	%		0.1		USDA20a	11/22/04 07:49 / jdh

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100167-013
Client Sample ID: T2/GA-10-(36-60")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.9	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	5.23	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	33.0	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	6.9	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	2.9	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	12.0	meq/l		0.05		SW6010B	11/04/04 11:30 / rp
Magnesium, Saturated Paste	21.5	meq/l		0.08		SW6010B	11/04/04 11:30 / rp
Sodium, Saturated Paste	28.3	meq/l		0.04		SW6010B	11/04/04 11:30 / rp
PHYSICAL CHARACTERISTICS							
Sand	56	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	30	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	14	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	SL	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	1.4	mg/kg		1.0		A4500-F C	11/22/04 13:00 / jdh
Cation Exchange Capacity	13.8	meq/100g		0.09		SW6010B	11/05/04 10:42 / rp
Lime as CaCO3	6.2	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.32	meq/100g		0.04		SW6010B	11/08/04 11:26 / rp
EXCHANGEABLES							
Exchangeable Sodium	1.4	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	10	%		0.1		USDA20a	11/22/04 07:49 / jdh
METALS, CACL2 EXTRACTABLE							
Barium	1.1	mg/L		0.04		SW6010B	11/09/04 09:03 / rp
Boron	2.0	mg/L		0.04		SW6010B	11/09/04 09:03 / rp
Selenium	ND	mg/L		0.10		SW6010B	11/09/04 09:03 / 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: H04100167-014
Client Sample ID: T2/GA-10-(60-90")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	8.0	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	3.06	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	30.4	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	7.4	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	3.2	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	4.48	meq/l		0.05		SW6010B	11/04/04 11:33 / rp
Magnesium, Saturated Paste	7.58	meq/l		0.08		SW6010B	11/04/04 11:33 / rp
Sodium, Saturated Paste	18.1	meq/l		0.04		SW6010B	11/04/04 11:33 / rp
PHYSICAL CHARACTERISTICS							
Sand	66	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	22	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	12	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	SL	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	11.3	meq/100g		0.09		SW6010B	11/05/04 10:45 / rp
Lime as CaCO3	6.1	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.83	meq/100g		0.04		SW6010B	11/08/04 11:29 / rp
EXCHANGEABLES							
Exchangeable Sodium	1.3	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	11	%		0.1		USDA20a	11/22/04 07:49 / jdh

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: H04100167-015
Client Sample ID: T2/GA-10-(0-2")

Report Date: 11/22/04
Collection Date: 10/13/04 17:00
Date Received: 10/20/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.4	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	1.05	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	44.8	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	0.77	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	9.3	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	5.29	meq/l		0.05		SW6010B	11/04/04 11:36 / rp
Magnesium, Saturated Paste	3.46	meq/l		0.08		SW6010B	11/04/04 11:36 / rp
Sodium, Saturated Paste	1.61	meq/l		0.04		SW6010B	11/04/04 11:36 / rp
PHYSICAL CHARACTERISTICS							
Sand	36	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	40	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	24	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	L	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	26.3	meq/100g		0.09		SW6010B	11/05/04 10:48 / rp
Lime as CaCO3	5.7	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.49	meq/100g		0.04		SW6010B	11/08/04 11:32 / rp
EXCHANGEABLES							
Exchangeable Sodium	0.4	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	1.6	%		0.1		USDA20a	11/22/04 07:49 / jdh

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

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