



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100167-062
Client Sample ID: T2/YAA-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	7.5	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	1.35	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	53.8	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	2.0	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	6.9	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
Nitrate as N, Saturated Paste	0.4	mg/L		0.1		ASA10-3	11/10/04 13:23 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	5.93	meq/l		0.05		SW6010B	11/04/04 02:42 / rp
Magnesium, Saturated Paste	4.11	meq/l		0.08		SW6010B	11/04/04 02:42 / rp
Sodium, Saturated Paste	4.36	meq/l		0.04		SW6010B	11/04/04 02:42 / rp
Sulfate, Saturated Paste	5.80	meq/l		0.002		SW6010B	11/04/04 02:42 / rp
PHYSICAL CHARACTERISTICS							
Sand	23	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	46	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	31	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	CL	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
Potassium, NH4OAc Extractable	199	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	29.4	meq/100g		0.09		SW6010B	11/09/04 05:22 / rp
Lime as CaCO3	4.1	%		0.1		USDA23c	11/09/04 00:00 / jdh
Phosphorus	6.7	mg/kg		0.1		ASA24-5	11/12/04 07:42 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.00	meq/100g		0.04		SW6010B	11/08/04 02:50 / rp
EXCHANGEABLES							
Exchangeable Sodium	0.8	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	2.6	%		0.1		USDA20a	11/22/04 07:49 / jdh
METALS, DTPA EXTRACTABLE							
Zinc	0.28	mg/kg		0.02		SW6010B	11/09/04 11:27 / rp
METALS, CACL2 EXTRACTABLE							
Barium	8.0	mg/L		0.04		SW6010B	11/09/04 10:03 / 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: H04100167-062
Client Sample ID: T2/YAA-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		
METALS, CACL2 EXTRACTABLE							
Boron	1.8	mg/L		0.04		SW6010B	11/09/04 10:03 / rp
Selenium	ND	mg/L		0.10		SW6010B	11/09/04 10:03 / 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: H04100167-063
Client Sample ID: T2/YAA-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	1.41	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	51.6	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	5.3	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
Nitrate as N, Saturated Paste	0.7	mg/L		0.1		ASA10-3	11/10/04 13:26 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	5.38	meq/l		0.05		SW6010B	11/04/04 02:45 / rp
Magnesium, Saturated Paste	4.12	meq/l		0.08		SW6010B	11/04/04 02:45 / rp
Sodium, Saturated Paste	5.03	meq/l		0.04		SW6010B	11/04/04 02:45 / rp
Sulfate, Saturated Paste	8.27	meq/l		0.002		SW6010B	11/04/04 02:45 / rp
PHYSICAL CHARACTERISTICS							
Sand	21	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	48	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	31	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	CL	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	30.9	meq/100g		0.09		SW6010B	11/09/04 05:31 / rp
Lime as CaCO3	4.5	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.20	meq/100g		0.04		SW6010B	11/08/04 02:53 / rp
EXCHANGEABLES							
Exchangeable Sodium	0.9	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	3.1	%		0.1		USDA20a	11/22/04 07:49 / jdh

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: H04100167-064
Client Sample ID: T2/YAA-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	2.45	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	51.2	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	4.1	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	4.9	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
Nitrate as N, Saturated Paste	1.6	mg/L		0.1		ASA10-3	11/10/04 13:28 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	7.82	meq/l		0.05		SW6010B	11/04/04 02:54 / rp
Magnesium, Saturated Paste	7.09	meq/l		0.08		SW6010B	11/04/04 02:54 / rp
Sodium, Saturated Paste	11.3	meq/l		0.04		SW6010B	11/04/04 02:54 / rp
Sulfate, Saturated Paste	19.6	meq/l		0.002		SW6010B	11/04/04 02:54 / rp
PHYSICAL CHARACTERISTICS							
Sand	26	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	46	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	28	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	CL	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	27.2	meq/100g		0.09		SW6010B	11/09/04 05:34 / rp
Lime as CaCO3	4.7	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.69	meq/100g		0.04		SW6010B	11/08/04 02:56 / rp
EXCHANGEABLES							
Exchangeable Sodium	1.1	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	4.1	%		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: H04100167-065
Client Sample ID: T2/YAA-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	7.9	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	2.92	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	52.1	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	8.7	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	4.6	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	5.17	meq/l		0.05		SW6010B	11/04/04 02:57 / rp
Magnesium, Saturated Paste	4.54	meq/l		0.08		SW6010B	11/04/04 02:57 / rp
Sodium, Saturated Paste	19.1	meq/l		0.04		SW6010B	11/04/04 02:57 / rp
PHYSICAL CHARACTERISTICS							
Sand	26	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	45	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	29	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	CL	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	27.0	meq/100g		0.09		SW6010B	11/09/04 05:37 / rp
Lime as CaCO3	4.9	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	3.14	meq/100g		0.04		SW6010B	11/08/04 02:59 / rp
EXCHANGEABLES							
Exchangeable Sodium	2.1	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	8.0	%		0.1		USDA20a	11/22/04 07:49 / jdh

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: H04100167-066
Client Sample ID: T2/YAA-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	4.41	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	51.9	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	11	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	8.11	meq/l		0.05		SW6010B	11/04/04 03:06 / rp
Magnesium, Saturated Paste	6.53	meq/l		0.08		SW6010B	11/04/04 03:06 / rp
Sodium, Saturated Paste	30.9	meq/l		0.04		SW6010B	11/04/04 03:06 / rp
PHYSICAL CHARACTERISTICS							
Sand	28	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	46	%		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							
Fluoride	1.7	mg/kg		1.0		A4500-F C	11/22/04 13:00 / jdh
Cation Exchange Capacity	25.0	meq/100g		0.09		SW6010B	11/09/04 05:45 / rp
Lime as CaCO3	4.5	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	4.35	meq/100g		0.04		SW6010B	11/08/04 03:02 / rp
EXCHANGEABLES							
Exchangeable Sodium	2.8	meq/100g		0.1		Calculation	11/22/04 07:49 / jdh
Exchangeable Sodium Percentage	11	%		0.1		USDA20a	11/22/04 07:49 / jdh
METALS, CACL2 EXTRACTABLE							
Barium	1.2	mg/L		0.04		SW6010B	11/09/04 10:06 / rp
Boron	2.1	mg/L		0.04		SW6010B	11/09/04 10:06 / rp
Selenium	ND	mg/L		0.10		SW6010B	11/09/04 10:06 / 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: H04100167-067
Client Sample ID: T2/YAA-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	7.9	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	4.83	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	48.6	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	11	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	9.64	meq/l		0.05		SW6010B	11/04/04 03:09 / rp
Magnesium, Saturated Paste	7.58	meq/l		0.08		SW6010B	11/04/04 03:09 / rp
Sodium, Saturated Paste	32.8	meq/l		0.04		SW6010B	11/04/04 03:09 / rp
PHYSICAL CHARACTERISTICS							
Sand	32	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	45	%		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							
Cation Exchange Capacity	21.3	meq/100g		0.09		SW6010B	11/09/04 05:48 / rp
Lime as CaCO3	5.1	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	3.98	meq/100g		0.04		SW6010B	11/08/04 03:05 / rp
EXCHANGEABLES							
Exchangeable Sodium	2.4	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 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: H04100167-068
Client Sample ID: T2/YAA-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	7.5	s.u.		0.1		ASAM10-3.2	11/22/04 07:49 / jdh
Conductivity, Paste Extract	1.08	mmhos/cm		0.01		ASAM10-3	11/22/04 07:49 / jdh
Saturation	57.3	%		0.1		USDA27a	11/22/04 07:49 / jdh
Sodium Adsorption Ratio (SAR)	1.8	unitless		0.01		Calculation	11/22/04 07:49 / jdh
Alkalinity, Saturated Paste	8.2	meq/L		1.0		ASA10-3	11/22/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	5.45	meq/l		0.05		SW6010B	11/04/04 03:12 / rp
Magnesium, Saturated Paste	4.04	meq/l		0.08		SW6010B	11/04/04 03:12 / rp
Sodium, Saturated Paste	3.88	meq/l		0.04		SW6010B	11/04/04 03:12 / rp
PHYSICAL CHARACTERISTICS							
Sand	22	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Silt	48	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Clay	30	%		1.0		ASA15-5	11/22/04 07:49 / jdh
Texture	CL	unitless				ASA15-5	11/22/04 07:49 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	28.5	meq/100g		0.09		SW6010B	11/09/04 05:51 / rp
Lime as CaCO3	4.0	%		0.1		USDA23c	11/09/04 00:00 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.87	meq/100g		0.04		SW6010B	11/08/04 03:07 / 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

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

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