



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04090044-001
Client Sample ID: T2/BHAA-10-0-2

Report Date: 09/15/04
Collection Date: 09/07/04 17:00
Date Received: 09/08/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.7	s.u.		0.1		ASAM10-3.2	09/14/04 16:43 / jdh
Conductivity, Paste Extract	1.04	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	55.9	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	3.0	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	4	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	3.93	meq/l		0.05		SW6010B	09/10/04 03:11 / rp
Magnesium, Saturated Paste	1.86	meq/l		0.08		SW6010B	09/10/04 03:11 / rp
Sodium, Saturated Paste	5.18	meq/l		0.04		SW6010B	09/10/04 03:11 / rp
Chloride, Saturated Paste	2.44	meq/l		0.02		SW6010B	09/10/04 03:11 / rp
PHYSICAL CHARACTERISTICS							
Sand	14	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	41	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	45	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	SiC	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	36.3	meq/100g		0.09		SW6010B	09/14/04 08:51 / rp
Exchangeable Sodium Percentage	2.1	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	2.7	%		0.1		USDA23c	09/14/04 16:43 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.06	meq/100g		0.04		SW6010B	09/13/04 02:13 / 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: H04090044-002
 Client Sample ID: T2/BHAA-10-0-6

Report Date: 09/15/04
 Collection Date: 09/07/04 17:00
 Date Received: 09/08/04
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.7	s.u.		0.1		ASAM10-3.2	09/14/04 16:43 / jdh
Conductivity, Paste Extract	0.89	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	58.9	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	3.5	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	4	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
Nitrate as N, Saturated Paste	2.8	mg/L		0.1		ASA10-3	09/14/04 09:42 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	3.01	meq/l		0.05		SW6010B	09/10/04 03:20 / rp
Magnesium, Saturated Paste	1.33	meq/l		0.08		SW6010B	09/10/04 03:20 / rp
Sodium, Saturated Paste	5.15	meq/l		0.04		SW6010B	09/10/04 03:20 / rp
Sulfate, Saturated Paste	3.52	meq/l		0.002		SW6010B	09/10/04 03:20 / rp
Chloride, Saturated Paste	1.72	meq/l		0.02		SW6010B	09/10/04 03:20 / rp
PHYSICAL CHARACTERISTICS							
Sand	15	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	40	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	45	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	C	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	1.4	mg/kg		1.0		A4500-F C	09/14/04 00:00 / jdh
Potassium, NH4OAc Extractable	355	mg/kg		1		ASA13-3	09/14/04 00:00 / jdh
Organic Matter	1.60	%		0.02		ASA29-3	09/14/04 16:43 / jdh
Cation Exchange Capacity	43.4	meq/100g		0.09		SW6010B	09/14/04 09:00 / rp
Exchangeable Sodium Percentage	2.0	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	2.6	%		0.1		USDA23c	09/14/04 16:43 / jdh
Phosphorus	15	mg/kg	D	0.4		ASA24-5	09/14/04 12:09 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.18	meq/100g		0.04		SW6010B	09/13/04 02:21 / rp
METALS, DTPA EXTRACTABLE							
Zinc	1.30	mg/kg		0.02		SW6010B	09/14/04 00:00 / jdh
METALS, CACL2 EXTRACTABLE							
Barium	11.3	mg/L		0.04		SW6010B	09/14/04 00:00 / jdh
Boron	1.88	mg/L		0.04		SW6010B	09/14/04 00:00 / jdh
Selenium	ND	mg/L		0.04		SW6010B	09/14/04 00:00 / jdh

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04090044-003
Client Sample ID: T2/BHAA-10-6-12

Report Date: 09/15/04
Collection Date: 09/07/04 17:00
Date Received: 09/08/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.7	s.u.		0.1		ASAM10-3.2	09/14/04 16:43 / jdh
Conductivity, Paste Extract	0.80	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	65.5	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	2.8	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	4	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
Nitrate as N, Saturated Paste	1.4	mg/L		0.1		ASA10-3	09/14/04 09:44 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	3.31	meq/l		0.05		SW6010B	09/10/04 03:23 / rp
Magnesium, Saturated Paste	1.51	meq/l		0.08		SW6010B	09/10/04 03:23 / rp
Sodium, Saturated Paste	4.38	meq/l		0.04		SW6010B	09/10/04 03:23 / rp
Sulfate, Saturated Paste	4.80	meq/l		0.002		SW6010B	09/10/04 03:23 / rp
Chloride, Saturated Paste	0.77	meq/l		0.02		SW6010B	09/10/04 03:23 / rp
PHYSICAL CHARACTERISTICS							
Sand	13	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	42	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	45	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	SiC	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	38.8	meq/100g		0.09		SW6010B	09/14/04 09:03 / rp
Exchangeable Sodium Percentage	2.2	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	3.0	%		0.1		USDA23c	09/14/04 16:43 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.16	meq/100g		0.04		SW6010B	09/13/04 02:24 / 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: H04090044-004
Client Sample ID: T2/BHAA-10-12-24

Report Date: 09/15/04
Collection Date: 09/07/04 17:00
Date Received: 09/08/04
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	09/14/04 16:43 / jdh
Conductivity, Paste Extract	1.11	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	64.4	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	2.6	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	2	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
Nitrate as N, Saturated Paste	3.4	mg/L		0.1		ASA10-3	09/14/04 09:46 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	4.44	meq/l		0.05		SW6010B	09/10/04 03:26 / rp
Magnesium, Saturated Paste	2.42	meq/l		0.08		SW6010B	09/10/04 03:26 / rp
Sodium, Saturated Paste	4.90	meq/l		0.04		SW6010B	09/10/04 03:26 / rp
Sulfate, Saturated Paste	8.08	meq/l		0.002		SW6010B	09/10/04 03:26 / rp
Chloride, Saturated Paste	1.33	meq/l		0.02		SW6010B	09/10/04 03:26 / rp
PHYSICAL CHARACTERISTICS							
Sand	9.0	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	40	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	51	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	C	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	36.1	meq/100g		0.09		SW6010B	09/14/04 09:06 / rp
Exchangeable Sodium Percentage	2.4	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	4.9	%		0.1		USDA23c	09/14/04 16:43 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.19	meq/100g		0.04		SW6010B	09/13/04 02:27 / 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: H04090044-005
Client Sample ID: T2/BHAA-10-24-36

Report Date: 09/15/04
Collection Date: 09/07/04 17:00
Date Received: 09/08/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.7	s.u.		0.1		ASAM10-3.2	09/14/04 16:43 / jdh
Conductivity, Paste Extract	3.14	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	58.0	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	1.9	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	1	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	22.6	meq/l		0.05		SW6010B	09/10/04 03:29 / rp
Magnesium, Saturated Paste	10.6	meq/l		0.08		SW6010B	09/10/04 03:29 / rp
Sodium, Saturated Paste	7.65	meq/l		0.04		SW6010B	09/10/04 03:29 / rp
Chloride, Saturated Paste	0.93	meq/l		0.02		SW6010B	09/10/04 03:29 / rp
PHYSICAL CHARACTERISTICS							
Sand	12	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	43	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	45	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	SiC	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	31.6	meq/100g		0.09		SW6010B	09/14/04 09:09 / rp
Exchangeable Sodium Percentage	2.6	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	4.5	%		0.1		USDA23c	09/14/04 16:43 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.27	meq/100g		0.04		SW6010B	09/13/04 02:30 / 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: H04090044-006
Client Sample ID: T2/BHAA-10-36-60

Report Date: 09/15/04
Collection Date: 09/07/04 17:00
Date Received: 09/08/04
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	09/14/04 16:43 / jdh
Conductivity, Paste Extract	3.34	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	55.1	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	1.9	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	1	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	26.3	meq/l		0.05		SW6010B	09/10/04 03:32 / rp
Magnesium, Saturated Paste	11.5	meq/l		0.08		SW6010B	09/10/04 03:32 / rp
Sodium, Saturated Paste	8.33	meq/l		0.04		SW6010B	09/10/04 03:32 / rp
Chloride, Saturated Paste	0.51	meq/l		0.02		SW6010B	09/10/04 03:32 / rp
PHYSICAL CHARACTERISTICS							
Sand	15	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	46	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	39	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	SiCL	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	2.3	mg/kg		1.0		A4500-F C	09/14/04 00:00 / jdh
Cation Exchange Capacity	28.3	meq/100g		0.09		SW6010B	09/14/04 09:12 / rp
Exchangeable Sodium Percentage	2.4	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	3.3	%		0.1		USDA23c	09/14/04 16:43 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.15	meq/100g		0.04		SW6010B	09/13/04 02:33 / rp
METALS, CaCL2 EXTRACTABLE							
Barium	7.26	mg/L		0.04		SW6010B	09/14/04 00:00 / jdh
Boron	1.97	mg/L		0.04		SW6010B	09/14/04 00:00 / jdh
Selenium	ND	mg/L		0.04		SW6010B	09/14/04 00:00 / 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: H04090044-007
Client Sample ID: T2/BHAA-10-60-96

Report Date: 09/15/04
Collection Date: 09/07/04 17:00
Date Received: 09/08/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.7	s.u.		0.1		ASAM10-3.2	09/14/04 16:43 / jdh
Conductivity, Paste Extract	3.44	mmhos/cm		0.01		ASAM10-3	09/14/04 16:43 / jdh
Saturation	52.6	%		0.1		USDA27a	09/14/04 16:43 / jdh
Sodium Adsorption Ratio (SAR)	1.8	unitless		0.1		Calculation	09/14/04 16:43 / jdh
Alkalinity, Saturated Paste	2	meq/L		1		ASA10-3	09/14/04 00:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	26.3	meq/l		0.05		SW6010B	09/10/04 03:35 / rp
Magnesium, Saturated Paste	13.3	meq/l		0.08		SW6010B	09/10/04 03:35 / rp
Sodium, Saturated Paste	7.81	meq/l		0.04		SW6010B	09/10/04 03:35 / rp
Chloride, Saturated Paste	0.47	meq/l		0.02		SW6010B	09/10/04 03:35 / rp
PHYSICAL CHARACTERISTICS							
Sand	23	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Silt	37	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Clay	40	%		1.0		ASA15-5	09/14/04 16:43 / jdh
Texture	C	unitless				ASA15-5	09/14/04 16:43 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	33.4	meq/100g		0.09		SW6010B	09/14/04 09:14 / rp
Exchangeable Sodium Percentage	2.5	%		0.1		USDA20b	09/14/04 16:43 / jdh
Lime as CaCO3	5.8	%		0.1		USDA23c	09/14/04 16:43 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.23	meq/100g		0.04		SW6010B	09/13/04 02:36 / rp

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

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