



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring
Lab ID: H03100082-001
Client Sample ID: T2/EA-10-(0-6")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	1.88	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	60.1	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	9.3	meq/l		0.1		SW6010B	10/30/03 01:00 / rp
Magnesium, Saturated Paste	5.7	meq/l		0.1		SW6010B	10/30/03 01:00 / rp
Sodium, Saturated Paste	5.4	meq/l		0.1		SW6010B	10/30/03 01:00 / rp
Sodium Adsorption Ratio (SAR)	2.0	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	6.4	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
Nitrate as N, Saturated Paste	0.5	mg/L		0.1		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	13.8	meq/L		0.1		ASA10-3	10/31/03 07:09 / rp
PHYSICAL CHARACTERISTICS							
Sand	17	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	54	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	29	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiCL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	ND	mg/kg		1.0		A4500-F C	11/19/03 14:45 / ddb
Potassium, NH4OAc Extractable	274	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
Organic Matter	3.30	wt%		0.02		ASA29-3	12/01/03 11:37 / jdh
Cation Exchange Capacity	32.5	meq/100g		0.1		SW6010B	11/11/03 05:19 / jdh
Exchangeable Sodium Percentage	2.8	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	6.3	wt%		0.1		USDA23c	10/31/03 00:00 / jms
Phosphorus	12	mg/kg		0.1		ASA24-5	11/18/03 08:18 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.2	meq/100g		0.1		SW6010B	11/17/03 01:34 / jdh
METALS, HOT WATER EXTRACTABLE							
Barium	ND	mg/kg		5		SW6010B	11/24/03 16:43 / rih
Boron	ND	mg/kg		1		SW6010B	11/24/03 16:43 / rih
Selenium	ND	mg/kg		0.05		SW6020	11/20/03 11:37 / car
METALS, DTPA EXTRACTABLE							
Zinc	0.60	mg/kg		0.02		SW6010B	11/14/03 05:42 / 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
Lab ID: H03100082-002
Client Sample ID: T2/EA-10-(6-12")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.9	s.u.		0.1		ASAM10-3.2	12/01/03 11:37 / jdh
Conductivity, Paste Extract	1.55	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	47.6	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	5.7	meq/l		0.1		SW6010B	10/30/03 01:03 / rp
Magnesium, Saturated Paste	4.0	meq/l		0.1		SW6010B	10/30/03 01:03 / rp
Sodium, Saturated Paste	6.6	meq/l		0.1		SW6010B	10/30/03 01:03 / rp
Sodium Adsorption Ratio (SAR)	3.0	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	4.0	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
Nitrate as N, Saturated Paste	0.9	mg/L		0.1		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	12.3	meq/L		0.1		ASA10-3	10/31/03 07:12 / rp
PHYSICAL CHARACTERISTICS							
Sand	21	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	52	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	27	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	CL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Potassium, NH4OAc Extractable	186	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
Organic Matter	2.10	wt%		0.02		ASA29-3	12/01/03 11:37 / jdh
Cation Exchange Capacity	31.1	meq/100g		0.1		SW6010B	11/11/03 05:22 / jdh
Exchangeable Sodium Percentage	4.0	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	6.5	wt%		0.1		USDA23c	10/31/03 00:00 / jms
Phosphorus	5.0	mg/kg		0.1		ASA24-5	11/18/03 08:21 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.5	meq/100g		0.1		SW6010B	11/17/03 01:36 / jdh
METALS, DTPA EXTRACTABLE							
Zinc	0.42	mg/kg		0.02		SW6010B	11/14/03 05:45 / 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
Lab ID: H03100082-003
Client Sample ID: T2/EA-10-(12-24")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	4.00	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	53.7	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	17.6	meq/l		0.1		SW6010B	10/30/03 01:05 / rp
Magnesium, Saturated Paste	14.9	meq/l		0.1		SW6010B	10/30/03 01:05 / rp
Sodium, Saturated Paste	18.5	meq/l		0.1		SW6010B	10/30/03 01:05 / rp
Sodium Adsorption Ratio (SAR)	4.6	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	3.2	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
Nitrate as N, Saturated Paste	0.6	mg/L		0.1		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	50.7	meq/L		0.1		ASA10-3	10/31/03 07:14 / rp
PHYSICAL CHARACTERISTICS							
Sand	20	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	45	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	35	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiCL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Potassium, NH4OAc Extractable	206	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
Organic Matter	1.70	wt%		0.02		ASA29-3	12/01/03 11:37 / jdh
Cation Exchange Capacity	30.2	meq/100g		0.1		SW6010B	11/11/03 05:24 / jdh
Exchangeable Sodium Percentage	4.3	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	7.3	wt%		0.1		USDA23c	10/31/03 00:00 / jms
Phosphorus	3.0	mg/kg		0.1		ASA24-5	11/18/03 08:24 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.3	meq/100g		0.1		SW6010B	11/17/03 01:39 / jdh
METALS, DTPA EXTRACTABLE							
Zinc	0.43	mg/kg		0.02		SW6010B	11/14/03 05:48 / jdh

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

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 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring
Lab ID: H03100082-004
Client Sample ID: T2/EA-10-(24-36")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	4.77	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	52.3	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	16.1	meq/l		0.1		SW6010B	10/30/03 01:08 / rp
Magnesium, Saturated Paste	21.1	meq/l		0.1		SW6010B	10/30/03 01:08 / rp
Sodium, Saturated Paste	24.2	meq/l		0.1		SW6010B	10/30/03 01:08 / rp
Sodium Adsorption Ratio (SAR)	5.6	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	2.8	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
PHYSICAL CHARACTERISTICS							
Sand	29	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	41	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	30	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	CL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	25.1	meq/100g		0.1		SW6010B	11/11/03 05:27 / jdh
Exchangeable Sodium Percentage	4.1	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	8.5	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.3	meq/100g		0.1		SW6010B	11/17/03 01:42 / 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
Lab ID: H03100082-005
Client Sample ID: T2/EA-10-(36-60")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	7.9	s.u.		0.1		ASAM10-3.2	12/01/03 11:37 / jdh
Conductivity, Paste Extract	5.58	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	50.1	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	17.4	meq/l		0.1		SW6010B	10/30/03 01:10 / rp
Magnesium, Saturated Paste	28.1	meq/l		0.1		SW6010B	10/30/03 01:10 / rp
Sodium, Saturated Paste	26.7	meq/l		0.1		SW6010B	10/30/03 01:10 / rp
Sodium Adsorption Ratio (SAR)	5.6	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	2.4	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
PHYSICAL CHARACTERISTICS							
Sand	30	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	42	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	28	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	CL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	ND	mg/kg		1.0		A4500-F C	11/19/03 14:45 / ddb
Cation Exchange Capacity	24.2	meq/100g		0.1		SW6010B	11/11/03 05:30 / jdh
Exchangeable Sodium Percentage	4.0	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	8.1	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.3	meq/100g		0.1		SW6010B	11/17/03 01:44 / jdh
METALS, HOT WATER EXTRACTABLE							
Barium	ND	mg/kg		5		SW6010B	11/24/03 16:48 / rih
Boron	ND	mg/kg		1		SW6010B	11/24/03 16:48 / rih
Selenium	ND	mg/kg		0.05		SW6020	11/20/03 11:42 / car

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
Lab ID: H03100082-006
Client Sample ID: T2/EA-10-(60-96")

Report Date: 02/03/04
Collection Date: 10/10/03 09:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	2.19	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	45.6	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	5.0	meq/l		0.1		SW6010B	10/30/03 01:13 / rp
Magnesium, Saturated Paste	9.3	meq/l		0.1		SW6010B	10/30/03 01:13 / rp
Sodium, Saturated Paste	11.0	meq/l		0.1		SW6010B	10/30/03 01:13 / rp
Sodium Adsorption Ratio (SAR)	4.1	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	2.8	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
PHYSICAL CHARACTERISTICS							
Sand	19	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	56	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	25	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	20.8	meq/100g		0.1		SW6010B	11/11/03 05:32 / jdh
Exchangeable Sodium Percentage	5.3	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	7.6	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.6	meq/100g		0.1		SW6010B	11/17/03 01:47 / 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
Lab ID: H03100082-007
Client Sample ID: T2/EA-10-(0-2")

Report Date: 02/03/04
Collection Date: 10/10/03 09:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	1.40	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	57.8	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	7.1	meq/l		0.1		SW6010B	10/30/03 01:16 / rp
Magnesium, Saturated Paste	4.4	meq/l		0.1		SW6010B	10/30/03 01:16 / rp
Sodium, Saturated Paste	2.9	meq/l		0.1		SW6010B	10/30/03 01:16 / rp
Sodium Adsorption Ratio (SAR)	1.2	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	7.6	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
PHYSICAL CHARACTERISTICS							
Sand	31	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	42	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	27	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	CL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	32.5	meq/100g		0.1		SW6010B	11/11/03 05:35 / jdh
Exchangeable Sodium Percentage	2.4	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	6.0	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.0	meq/100g		0.1		SW6010B	11/17/03 01:50 / 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
Lab ID: H03100082-009
Client Sample ID: T2/EA-1-(0-4")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	1.40	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	70.0	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	7.0	meq/l		0.1		SW6010B	10/30/03 01:21 / rp
Magnesium, Saturated Paste	4.0	meq/l		0.1		SW6010B	10/30/03 01:21 / rp
Sodium, Saturated Paste	3.5	meq/l		0.1		SW6010B	10/30/03 01:21 / rp
Sodium Adsorption Ratio (SAR)	1.5	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	8.4	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
Nitrate as N, Saturated Paste	0.5	mg/L		0.1		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	6.0	meq/L		0.1		ASA10-3	10/31/03 07:31 / rp
PHYSICAL CHARACTERISTICS							
Sand	1.0	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	66	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	33	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiCL	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Potassium, NH4OAc Extractable	522	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
Organic Matter	4.50	wt%		0.02		ASA29-3	12/01/03 11:37 / jdh
Cation Exchange Capacity	45.6	meq/100g		0.1		SW6010B	11/11/03 05:40 / jdh
Exchangeable Sodium Percentage	1.8	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	6.9	wt%		0.1		USDA23c	10/31/03 00:00 / jms
Phosphorus	22	mg/kg		0.1		ASA24-5	11/18/03 08:27 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.1	meq/100g		0.1		SW6010B	11/17/03 02:00 / jdh
METALS, DTPA EXTRACTABLE							
Zinc	0.64	mg/kg		0.02		SW6010B	11/14/03 05:51 / jdh
CLAY MINEROLOGY							
Smectite	14	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Illite	40	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Kaolinite	38	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Chlorite	8	%		1		XrayDiffraction	11/07/03 00:00 / wjj

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
Lab ID: H03100082-010
Client Sample ID: T2/EA-1-(4-18")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
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	12/01/03 11:37 / jdh
Conductivity, Paste Extract	3.25	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	69.3	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	11.3	meq/l		0.1		SW6010B	10/30/03 01:23 / rp
Magnesium, Saturated Paste	11.7	meq/l		0.1		SW6010B	10/30/03 01:23 / rp
Sodium, Saturated Paste	16.1	meq/l		0.1		SW6010B	10/30/03 01:23 / rp
Sodium Adsorption Ratio (SAR)	4.8	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	3.6	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
Nitrate as N, Saturated Paste	0.5	mg/L		0.1		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	38.0	meq/L		0.1		ASA10-3	10/31/03 07:34 / rp
PHYSICAL CHARACTERISTICS							
Sand	1.0	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	55	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	44	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiC	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	50.2	meq/100g		0.1		SW6010B	11/11/03 05:43 / jdh
Exchangeable Sodium Percentage	2.8	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	6.3	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	2.5	meq/100g		0.1		SW6010B	11/17/03 02:03 / 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
Lab ID: H03100082-011
Client Sample ID: T2/EA-1-(18-33")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	8.1	s.u.		0.1		ASAM10-3.2	12/01/03 11:37 / jdh
Conductivity, Paste Extract	10.0	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	78.5	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	18.1	meq/l		0.1		SW6010B	10/30/03 01:29 / rp
Magnesium, Saturated Paste	46.3	meq/l		0.1		SW6010B	10/30/03 01:29 / rp
Sodium, Saturated Paste	56.4	meq/l		0.1		SW6010B	10/30/03 01:29 / rp
Sodium Adsorption Ratio (SAR)	9.9	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	2.4	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
Nitrate as N, Saturated Paste	1.8	mg/L		0.2		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	47.1	meq/L		0.1		ASA10-3	10/31/03 07:40 / rp
PHYSICAL CHARACTERISTICS							
Sand	2.0	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	48	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	50	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiC	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	50.6	meq/100g		0.1		SW6010B	11/11/03 05:53 / jdh
Exchangeable Sodium Percentage	4.1	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	9.6	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	6.5	meq/100g		0.1		SW6010B	11/17/03 02:08 / jdh
CLAY MINEROLOGY							
Smectite	13	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Illite	36	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Kaolinite	39	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Chlorite	11	%		1		XrayDiffraction	11/07/03 00:00 / wjj

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
Lab ID: H03100082-012
Client Sample ID: T2/EA-1-(33-50")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	8.5	s.u.		0.1		ASAM10-3.2	12/01/03 11:37 / jdh
Conductivity, Paste Extract	7.37	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	72.2	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	3.8	meq/l		0.1		SW6010B	10/30/03 01:31 / rp
Magnesium, Saturated Paste	28.1	meq/l		0.1		SW6010B	10/30/03 01:31 / rp
Sodium, Saturated Paste	61.2	meq/l		0.1		SW6010B	10/30/03 01:31 / rp
Sodium Adsorption Ratio (SAR)	15	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	2.8	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
PHYSICAL CHARACTERISTICS							
Sand	1.0	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	58	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	41	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	SiC	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	42.8	meq/100g		0.1		SW6010B	11/11/03 05:56 / jdh
Exchangeable Sodium Percentage	6.1	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	9.0	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	7.0	meq/100g		0.1		SW6010B	11/17/03 02:11 / 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
Lab ID: H03100082-013
Client Sample ID: T2/EA-1-(50-60")

Report Date: 02/03/04
Collection Date: 10/10/03 17:00
Date Received: 10/14/03
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, Saturated Paste	8.6	s.u.		0.1		ASAM10-3.2	12/01/03 11:37 / jdh
Conductivity, Paste Extract	8.00	mmhos/cm		0.01		ASAM10-3	12/01/03 11:37 / jdh
Saturation	40.0	wt%		0.1		USDA27a	12/01/03 11:37 / jdh
Calcium, Saturated Paste	3.2	meq/l		0.1		SW6010B	10/30/03 01:34 / rp
Magnesium, Saturated Paste	28.9	meq/l		0.1		SW6010B	10/30/03 01:34 / rp
Sodium, Saturated Paste	70.0	meq/l		0.1		SW6010B	10/30/03 01:34 / rp
Sodium Adsorption Ratio (SAR)	17	unitless		0.1		Calculation	12/01/03 11:37 / jdh
Alkalinity, Saturated Paste	3.0	meq/L		1.0		ASA10-3	11/25/03 00:00 / jdh
PHYSICAL CHARACTERISTICS							
Sand	42	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Silt	45	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Clay	13	wt%		1.0		ASA15-5	12/01/03 11:37 / jdh
Texture	L	unitless				ASA15-5	12/01/03 11:37 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	12.7	meq/100g		0.1		SW6010B	11/11/03 05:59 / jdh
Exchangeable Sodium Percentage	8.4	%		0.1		USDA20b	12/01/03 11:37 / jdh
Lime as CaCO3	8.5	wt%		0.1		USDA23c	10/31/03 00:00 / jms
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	3.9	meq/100g		0.1		SW6010B	11/17/03 02:14 / jdh

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

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