



LABORATORY ANALYTICAL REPORT

Client: AMPP
 Project: Tongue River Monitoring
 Lab ID: H03100061-001
 Client Sample ID: T2/GC-10-(0-6")

Report Date: 01/20/04
 Collection Date: 10/09/03 17:00
 Date Received: 10/10/03
 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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.67	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	57.9	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	3.6	meq/l		0.1		SW6010B	10/27/03 11:05 / rp
Magnesium, Saturated Paste	2.1	meq/l		0.1		SW6010B	10/27/03 11:05 / rp
Sodium, Saturated Paste	1.7	meq/l		0.1		SW6010B	10/27/03 11:05 / rp
Sodium Adsorption Ratio (SAR)	1.0	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	5.0	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	10.2	mg/L		0.6		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	1.7	meq/L		0.1		ASA10-3	10/27/03 02:49 / rp
PHYSICAL CHARACTERISTICS							
Sand	12	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	53	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	35	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiCL	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Fluoride	1.3	mg/kg		1.0		A4500-F C	10/31/03 11:30 / ddb
Potassium, NH4OAc Extractable	224	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
Organic Matter	3.60	wt%		0.02		ASA29-3	11/07/03 06:36 / jdh
Cation Exchange Capacity	42.2	meq/100g		0.1		SW6010B	10/31/03 09:59 / rp
Exchangeable Sodium Percentage	1.3	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	9.7	wt%		0.1		USDA23c	10/27/03 00:00 / nh
Phosphorus	19	mg/kg		0.1		ASA24-5	11/04/03 02:58 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.6	meq/100g		0.1		SW6010B	10/24/03 09:55 / rp
METALS, HOT WATER EXTRACTABLE							
Barium	ND	mg/kg		5		SW6020	10/31/03 15:45 / jjw
Boron	0.3	mg/kg		0.1		SW6020	10/31/03 15:45 / jjw
Selenium	ND	mg/kg		0.01		SW6020	10/31/03 15:45 / jjw
METALS, DTPA EXTRACTABLE							
Zinc	0.55	mg/kg		0.02		SW6010B	10/31/03 02:14 / 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
Lab ID: H03100061-002
Client Sample ID: T2/GC-10-(6-12")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.61	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	54.1	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	2.7	meq/l		0.1		SW6010B	10/27/03 11:07 / rp
Magnesium, Saturated Paste	1.6	meq/l		0.1		SW6010B	10/27/03 11:07 / rp
Sodium, Saturated Paste	2.3	meq/l		0.1		SW6010B	10/27/03 11:07 / rp
Sodium Adsorption Ratio (SAR)	1.5	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	3.5	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	13.8	mg/L		0.6		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	2.1	meq/L		0.1		ASA10-3	10/27/03 02:52 / rp
PHYSICAL CHARACTERISTICS							
Sand	8.0	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	57	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	35	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiCL	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	39.1	meq/100g		0.1		SW6010B	10/31/03 10:02 / rp
Exchangeable Sodium Percentage	1.8	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	8.8	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.8	meq/100g		0.1		SW6010B	10/24/03 09:57 / rp

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring
Lab ID: H03100061-003
Client Sample ID: T2/GC-10-(12-24")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.83	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	50.6	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	3.7	meq/l		0.1		SW6010B	10/27/03 11:10 / rp
Magnesium, Saturated Paste	2.4	meq/l		0.1		SW6010B	10/27/03 11:10 / rp
Sodium, Saturated Paste	2.6	meq/l		0.1		SW6010B	10/27/03 11:10 / rp
Sodium Adsorption Ratio (SAR)	1.5	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	2.2	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	31.0	mg/L		0.6		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	5.4	meq/L		0.1		ASA10-3	10/27/03 02:55 / rp
PHYSICAL CHARACTERISTICS							
Sand	10	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	59	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	31	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiCL	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	33.3	meq/100g		0.1		SW6010B	10/31/03 10:04 / rp
Exchangeable Sodium Percentage	2.2	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	9.2	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.9	meq/100g		0.1		SW6010B	10/24/03 10:00 / rp

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LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring
Lab ID: H03100061-004
Client Sample ID: T2/GC-10-(24-36")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.86	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	43.4	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	4.0	meq/l		0.1		SW6010B	10/27/03 11:12 / rp
Magnesium, Saturated Paste	2.6	meq/l		0.1		SW6010B	10/27/03 11:12 / rp
Sodium, Saturated Paste	2.5	meq/l		0.1		SW6010B	10/27/03 11:12 / rp
Sodium Adsorption Ratio (SAR)	1.4	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	2.7	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
PHYSICAL CHARACTERISTICS							
Sand	24	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	52	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	24	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiL	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	28.7	meq/100g		0.1		SW6010B	10/31/03 10:07 / rp
Exchangeable Sodium Percentage	2.2	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	9.5	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.7	meq/100g		0.1		SW6010B	10/24/03 10:02 / 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
Lab ID: H03100061-005
Client Sample ID: T2/GC-10-(36-60")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.77	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	38.9	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	3.3	meq/l		0.1		SW6010B	10/27/03 11:15 / rp
Magnesium, Saturated Paste	2.4	meq/l		0.1		SW6010B	10/27/03 11:15 / rp
Sodium, Saturated Paste	2.3	meq/l		0.1		SW6010B	10/27/03 11:15 / rp
Sodium Adsorption Ratio (SAR)	1.3	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	2.7	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
PHYSICAL CHARACTERISTICS							
Sand	31	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	47	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	22	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	L	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Fluoride	1.3	mg/kg		1.0		A4500-F C	10/31/03 11:30 / ddb
Cation Exchange Capacity	24.2	meq/100g		0.1		SW6010B	10/31/03 10:09 / rp
Exchangeable Sodium Percentage	2.4	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	8.7	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.7	meq/100g		0.1		SW6010B	10/24/03 10:05 / rp
METALS, HOT WATER EXTRACTABLE							
Barium	ND	mg/kg		5		SW6020	10/31/03 15:49 / jjw
Boron	0.3	mg/kg		0.1		SW6020	10/31/03 15:49 / jjw
Selenium	ND	mg/kg		0.01		SW6020	10/31/03 15:49 / jjw

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: H03100061-006
Client Sample ID: T2/GC-10-(60-96")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.64	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	27.4	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	2.7	meq/l		0.1		SW6010B	10/27/03 11:23 / rp
Magnesium, Saturated Paste	2.0	meq/l		0.1		SW6010B	10/27/03 11:23 / rp
Sodium, Saturated Paste	1.9	meq/l		0.1		SW6010B	10/27/03 11:23 / rp
Sodium Adsorption Ratio (SAR)	1.2	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	2.9	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
PHYSICAL CHARACTERISTICS							
Sand	52	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	32	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	16	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	L	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	17.6	meq/100g		0.1		SW6010B	10/31/03 10:12 / rp
Exchangeable Sodium Percentage	3.4	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	8.1	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.6	meq/100g		0.1		SW6010B	10/24/03 10:08 / 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
Lab ID: H03100061-007
Client Sample ID: T2/GC-10-(0-2")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.78	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	64.1	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	4.6	meq/l		0.1		SW6010B	10/27/03 11:26 / rp
Magnesium, Saturated Paste	2.8	meq/l		0.1		SW6010B	10/27/03 11:26 / rp
Sodium, Saturated Paste	1.5	meq/l		0.1		SW6010B	10/27/03 11:26 / rp
Sodium Adsorption Ratio (SAR)	0.8	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	6.6	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
PHYSICAL CHARACTERISTICS							
Sand	15	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	52	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	33	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiCL	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	37.5	meq/100g		0.1		SW6010B	10/31/03 10:15 / rp
Exchangeable Sodium Percentage	1.7	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	10.5	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.7	meq/100g		0.1		SW6010B	10/24/03 10:10 / 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
 Lab ID: H03100061-009
 Client Sample ID: T2/GC-1-(0-5)

Report Date: 01/20/04
 Collection Date: 10/09/03 17:00
 Date Received: 10/10/03
 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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.71	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	63.9	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	4.2	meq/l		0.1		SW6010B	10/27/03 11:31 / rp
Magnesium, Saturated Paste	2.4	meq/l		0.1		SW6010B	10/27/03 11:31 / rp
Sodium, Saturated Paste	1.8	meq/l		0.1		SW6010B	10/27/03 11:31 / rp
Sodium Adsorption Ratio (SAR)	1.0	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	5.6	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	4.8	mg/L		0.1		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	1.8	meq/L		0.1		ASA10-3	10/27/03 02:58 / rp
PHYSICAL CHARACTERISTICS							
Sand	6.0	wt%		1.0		ASA15-5	10/30/03 00:00 / jdh
Silt	64	wt%		1.0		ASA15-5	10/30/03 00:00 / jdh
Clay	30	wt%		1.0		ASA15-5	10/30/03 00:00 / jdh
Texture	SiCL	unitless				ASA15-5	10/30/03 00:00 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Potassium, NH4OAc Extractable	219	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
Organic Matter	4.20	wt%		0.02		ASA29-3	11/07/03 06:36 / jdh
Cation Exchange Capacity	45.3	meq/100g		0.1		SW6010B	10/31/03 10:20 / rp
Exchangeable Sodium Percentage	1.7	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	8.1	wt%		0.1		USDA23c	10/27/03 00:00 / nh
Phosphorus	24	mg/kg		0.1		ASA24-5	11/04/03 03:01 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.9	meq/100g		0.1		SW6010B	10/24/03 10:15 / rp
METALS, DTPA EXTRACTABLE							
Zinc	0.61	mg/kg		0.02		SW6010B	11/05/03 12:49 / jdh
CLAY MINEROLOGY							
Smectite	16	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Illite	35	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Kaolinite	38	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Chlorite	11	%		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: H03100061-010
Client Sample ID: T2/GC-1-(5-18)

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.72	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	59.4	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	3.9	meq/l		0.1		SW6010B	10/27/03 11:33 / rp
Magnesium, Saturated Paste	2.1	meq/l		0.1		SW6010B	10/27/03 11:33 / rp
Sodium, Saturated Paste	2.2	meq/l		0.1		SW6010B	10/27/03 11:33 / rp
Sodium Adsorption Ratio (SAR)	1.3	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	3.8	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	26.5	mg/L		0.6		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	3.5	meq/L		0.1		ASA10-3	10/27/03 03:01 / rp
PHYSICAL CHARACTERISTICS							
Sand	ND	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	59	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	41	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiC	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	38.9	meq/100g		0.1		SW6010B	10/31/03 10:22 / rp
Exchangeable Sodium Percentage	2.0	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	8.6	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.9	meq/100g		0.1		SW6010B	10/24/03 10:18 / 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
 Lab ID: H03100061-011
 Client Sample ID: T2/GC-1-(18-30)

Report Date: 01/20/04
 Collection Date: 10/09/03 17:00
 Date Received: 10/10/03
 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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	1.08	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	63.5	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	5.5	meq/l		0.1		SW6010B	10/27/03 11:39 / rp
Magnesium, Saturated Paste	3.8	meq/l		0.1		SW6010B	10/27/03 11:39 / rp
Sodium, Saturated Paste	2.4	meq/l		0.1		SW6010B	10/27/03 11:39 / rp
Sodium Adsorption Ratio (SAR)	1.1	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	4.8	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	6.4	mg/L		0.2		ASA10-3	10/30/03 08:00 / cwh
Sulfate, Saturated Paste	8.1	meq/L		0.1		ASA10-3	10/27/03 03:06 / rp
PHYSICAL CHARACTERISTICS							
Sand	ND	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	53	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	47	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiC	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	41.5	meq/100g		0.1		SW6010B	10/31/03 10:28 / rp
Exchangeable Sodium Percentage	1.4	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	9.5	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.7	meq/100g		0.1		SW6010B	10/24/03 10:23 / rp
CLAY MINEROLOGY							
Smectite	21	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Illite	31	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Kaolinite	38	%		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: H03100061-012
Client Sample ID: T2/GC-1-(30-60")

Report Date: 01/20/04
Collection Date: 10/09/03 17:00
Date Received: 10/10/03
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	11/07/03 06:36 / jdh
Conductivity, Paste Extract	0.72	mmhos/cm		0.01		ASAM10-3	11/07/03 06:36 / jdh
Saturation	55.8	wt%		0.1		USDA27a	11/07/03 06:36 / jdh
Calcium, Saturated Paste	2.8	meq/l		0.1		SW6010B	10/27/03 11:41 / rp
Magnesium, Saturated Paste	2.4	meq/l		0.1		SW6010B	10/27/03 11:41 / rp
Sodium, Saturated Paste	1.8	meq/l		0.1		SW6010B	10/27/03 11:41 / rp
Sodium Adsorption Ratio (SAR)	1.1	unitless		0.1		Calculation	11/07/03 06:36 / jdh
Alkalinity, Saturated Paste	2.4	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
PHYSICAL CHARACTERISTICS							
Sand	19	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Silt	43	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Clay	38	wt%		1.0		ASA15-5	11/07/03 06:36 / jdh
Texture	SiCL	unitless				ASA15-5	11/07/03 06:36 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	40.8	meq/100g		0.1		SW6010B	10/31/03 10:30 / rp
Exchangeable Sodium Percentage	1.6	%		0.1		USDA20b	11/07/03 06:36 / jdh
Lime as CaCO3	8.8	wt%		0.1		USDA23c	10/27/03 00:00 / nh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.8	meq/100g		0.1		SW6010B	10/24/03 10:26 / rp

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

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