



LABORATORY ANALYTICAL REPORT

Client: AMPP  
 Project: Tongue River Monitoring, Set 3  
 Lab ID: H03100052-013  
 Client Sample ID: T2/MB-10-(0-6")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.5	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.81	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	40.8	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	3.7	meq/l		0.1		SW6010B	10/23/03 08:30 / rp
Mg-SatPst	3.0	meq/l		0.1		SW6010B	10/23/03 08:30 / rp
Na-SatPst	1.5	meq/l		0.1		SW6010B	10/23/03 08:30 / rp
SAR	0.8	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	5.5	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	7.9	mg/L		0.6		ASA10-3	10/23/03 12:00 / cwh
SO4-SatPst	1.6	meq/L		0.1		ASA10-3	10/24/03 02:03 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	26	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	45	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	29	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
F	< 1.0	mg/kg		1.0		A4500-F C	10/31/03 11:30 / ddb
K-EXT	483	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
OM-WB	2.00	wt%		0.02		ASA29-3	11/06/03 20:50 / jdh
CEC	35.5	meq/100g		0.1		SW6010B	10/24/03 12:07 / rp
ESP	1.5	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	1.2	wt%		0.1		USDA23c	10/27/03 00:00 / nh
P-Olsen	14	mg/kg		0.1		ASA24-5	11/04/03 02:44 / rp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.6	meq/100g		0.1		SW6010B	10/24/03 09:10 / rp
<b>METALS, HOT WATER EXTRACTABLE</b>							
Ba-H2O	< 5	mg/kg		5		SW6020	10/31/03 15:19 / jjw
B-H2O	0.5	mg/kg		0.1		SW6020	10/31/03 15:19 / jjw
Se-H2O	< 0.01	mg/kg		0.01		SW6020	10/31/03 15:19 / jjw
<b>METALS, DTPA EXTRACTABLE</b>							
Zn-DTPA	0.22	mg/kg		0.02		SW6010B	10/31/03 01:58 / 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, Set 3  
 Lab ID: H03100052-014  
 Client Sample ID: T2/MB-10-(6-12")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.7	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.60	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	43.3	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	2.5	meq/l		0.1		SW6010B	10/23/03 08:33 / rp
Mg-SatPst	2.3	meq/l		0.1		SW6010B	10/23/03 08:33 / rp
Na-SatPst	1.3	meq/l		0.1		SW6010B	10/23/03 08:33 / rp
SAR	0.8	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	4.3	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	5.2	mg/L		0.6		ASA10-3	10/27/03 08:00 / cwh
SO4-SatPst	1.4	meq/L		0.1		ASA10-3	10/24/03 02:06 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	25	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	42	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	33	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	34.6	meq/100g		0.1		SW6010B	10/24/03 12:09 / rp
ESP	1.6	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	2.9	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.6	meq/100g		0.1		SW6010B	10/24/03 09:13 / 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, Set 3  
 Lab ID: H03100052-015  
 Client Sample ID: T2/MB-10-(12-24")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	8.0	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.63	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	53.5	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	2.3	meq/l		0.1		SW6010B	10/23/03 08:35 / rp
Mg-SatPst	2.4	meq/l		0.1		SW6010B	10/23/03 08:35 / rp
Na-SatPst	2.0	meq/l		0.1		SW6010B	10/23/03 08:35 / rp
SAR	1.3	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	3.2	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	3.3	mg/L		0.1		ASA10-3	10/27/03 08:00 / cwh
SO4-SatPst	3.2	meq/L		0.1		ASA10-3	10/24/03 02:09 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	23	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	41	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	36	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	33.9	meq/100g		0.1		SW6010B	10/24/03 12:12 / rp
ESP	1.9	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	9.3	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.8	meq/100g		0.1		SW6010B	10/24/03 09:15 / rp

Report Definitions: RL - Analyte reporting limit.  
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 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP  
 Project: Tongue River Monitoring, Set 3  
 Lab ID: H03100052-016  
 Client Sample ID: T2/MB-10-(24-36")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	8.0	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.89	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	52.4	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	2.5	meq/l		0.1		SW6010B	10/23/03 08:38 / rp
Mg-SatPst	3.0	meq/l		0.1		SW6010B	10/23/03 08:38 / rp
Na-SatPst	3.8	meq/l		0.1		SW6010B	10/23/03 08:38 / rp
SAR	2.3	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	3.1	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	24	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	43	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	33	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	29.4	meq/100g		0.1		SW6010B	10/24/03 12:15 / rp
ESP	3.1	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	10.8	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	1.1	meq/100g		0.1		SW6010B	10/24/03 09:18 / 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, Set 3  
 Lab ID: H03100052-017  
 Client Sample ID: T2/MB-10-(36-60")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.8	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	3.89	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	44.0	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	22.3	meq/l		0.1		SW6010B	10/23/03 08:41 / rp
Mg-SatPst	24.9	meq/l		0.1		SW6010B	10/23/03 08:41 / rp
Na-SatPst	9.1	meq/l		0.1		SW6010B	10/23/03 08:41 / rp
SAR	1.9	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	1.4	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	30	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	42	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	28	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
F	1.5	mg/kg		1.0		A4500-F C	10/31/03 11:30 / ddb
CEC	26.7	meq/100g		0.1		SW6010B	10/24/03 12:17 / rp
ESP	3.3	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	7.8	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	1.3	meq/100g		0.1		SW6010B	10/24/03 09:20 / rp
<b>METALS, HOT WATER EXTRACTABLE</b>							
Ba-H2O	< 5	mg/kg		5		SW6020	10/31/03 15:23 / jjw
B-H2O	0.5	mg/kg		0.1		SW6020	10/31/03 15:23 / jjw
Se-H2O	0.02	mg/kg		0.01		SW6020	10/31/03 15:23 / jjw

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, Set 3  
 Lab ID: H03100052-018  
 Client Sample ID: T2/MB-10-(60-96")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.8	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	3.23	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	43.5	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	20.7	meq/l		0.1		SW6010B	10/23/03 08:43 / rp
Mg-SatPst	20.4	meq/l		0.1		SW6010B	10/23/03 08:43 / rp
Na-SatPst	8.1	meq/l		0.1		SW6010B	10/23/03 08:43 / rp
SAR	1.8	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	1.2	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	31	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	41	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	28	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	28.2	meq/100g		0.1		SW6010B	10/24/03 12:20 / rp
ESP	3.3	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	5.9	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	1.3	meq/100g		0.1		SW6010B	10/24/03 09:23 / 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, Set 3  
 Lab ID: H03100052-019  
 Client Sample ID: T2/MB-10-(0-2")

Report Date: 01/20/04  
 Collection Date: 10/01/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.5	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.82	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	40.5	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	3.7	meq/l		0.1		SW6010B	10/23/03 08:46 / rp
Mg-SatPst	3.0	meq/l		0.1		SW6010B	10/23/03 08:46 / rp
Na-SatPst	1.6	meq/l		0.1		SW6010B	10/23/03 08:46 / rp
SAR	0.9	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	4.0	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	23	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	46	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	31	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	27.4	meq/100g		0.1		SW6010B	10/31/03 09:36 / rp
ESP	2.0	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	1.2	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.6	meq/100g		0.1		SW6010B	10/24/03 09:26 / 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, Set 3  
 Lab ID: H03100052-020  
 Client Sample ID: T2/MB-1-(0-3")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.6	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.69	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	42.5	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	3.6	meq/l		0.1		SW6010B	10/23/03 08:48 / rp
Mg-SatPst	2.4	meq/l		0.1		SW6010B	10/23/03 08:48 / rp
Na-SatPst	0.9	meq/l		0.1		SW6010B	10/23/03 08:48 / rp
SAR	0.5	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	4.5	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	34.9	mg/L		1.1		ASA10-3	10/27/03 08:00 / cwh
SO4-SatPst	1.3	meq/L		0.1		ASA10-3	10/24/03 02:12 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	25	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	42	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	33	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
K-EXT	533	mg/kg		1		AAA13-3	01/15/04 00:00 / jdh
OM-WB	2.10	wt%		0.02		ASA29-3	11/06/03 20:50 / jdh
CEC	29.2	meq/100g		0.1		SW6010B	10/31/03 09:38 / rp
ESP	1.6	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	1.3	wt%		0.1		USDA23c	10/27/03 00:00 / nh
P-Olsen	16	mg/kg		0.1		ASA24-5	11/04/03 02:47 / rp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.5	meq/100g		0.1		SW6010B	10/24/03 09:28 / rp
<b>METALS, DTPA EXTRACTABLE</b>							
Zn-DTPA	0.24	mg/kg		0.02		SW6010B	10/31/03 02:04 / rp
<b>CLAY MINEROLOGY</b>							
Smectite	5	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Illite	54	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Kaolinite	33	%		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, Set 3  
 Lab ID: H03100052-021  
 Client Sample ID: T2/MB-1-(3-7")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.8	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.43	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	49.8	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	2.1	meq/l		0.1		SW6010B	10/23/03 08:54 / rp
Mg-SatPst	1.6	meq/l		0.1		SW6010B	10/23/03 08:54 / rp
Na-SatPst	1.1	meq/l		0.1		SW6010B	10/23/03 08:54 / rp
SAR	0.8	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	3.2	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	12.6	mg/L		0.6		ASA10-3	10/27/03 08:00 / cwh
SO4-SatPst	0.6	meq/L		0.1		ASA10-3	10/24/03 02:17 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	15	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	44	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	41	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	SiC	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	36.6	meq/100g		0.1		SW6010B	10/31/03 09:43 / rp
ESP	1.4	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	4.8	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.6	meq/100g		0.1		SW6010B	10/24/03 09:33 / 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, Set 3  
 Lab ID: H03100052-022  
 Client Sample ID: T2/MB-1-(7-17")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	8.0	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.43	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	47.6	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	2.3	meq/l		0.1		SW6010B	10/23/03 08:56 / rp
Mg-SatPst	1.8	meq/l		0.1		SW6010B	10/23/03 08:56 / rp
Na-SatPst	1.1	meq/l		0.1		SW6010B	10/23/03 08:56 / rp
SAR	0.8	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	3.7	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
Nitrate as N, Saturated Paste	5.6	mg/L		0.6		ASA10-3	10/27/03 08:00 / cwh
SO4-SatPst	1.0	meq/L		0.1		ASA10-3	10/24/03 02:20 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	16	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	44	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	40	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	SiC	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	32.3	meq/100g		0.1		SW6010B	10/31/03 09:46 / rp
ESP	1.4	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	12.4	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.5	meq/100g		0.1		SW6010B	10/24/03 09:36 / rp
<b>CLAY MINEROLOGY</b>							
Smectite	23	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Illite	29	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Kaolinite	39	%		1		XrayDiffraction	11/07/03 00:00 / wjj
Chlorite	9	%		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, Set 3  
 Lab ID: H03100052-023  
 Client Sample ID: T2/MB-1-(17-31")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	8.0	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	0.54	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	39.0	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	1.9	meq/l		0.1		SW6010B	10/23/03 08:59 / rp
Mg-SatPst	1.6	meq/l		0.1		SW6010B	10/23/03 08:59 / rp
Na-SatPst	2.4	meq/l		0.1		SW6010B	10/23/03 08:59 / rp
SAR	1.8	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	3.8	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	39	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	33	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	28	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	CL	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	26.0	meq/100g		0.1		SW6010B	10/31/03 09:49 / rp
ESP	2.7	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	11.2	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	0.8	meq/100g		0.1		SW6010B	10/24/03 09:39 / 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, Set 3  
 Lab ID: H03100052-024  
 Client Sample ID: T2/MB-1-(31-66")

Report Date: 01/20/04  
 Collection Date: 09/30/03 17:00  
 Date Received: 10/07/03  
 Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>SATURATED PASTE</b>							
pH-SatPst	7.9	s.u.		0.1		ASAM10-3.2	11/06/03 20:50 / jdh
COND	2.99	mmhos/cm		0.01		ASAM10-3	11/06/03 20:50 / jdh
Percent Sat	41.6	wt%		0.1		USDA27a	11/06/03 20:50 / jdh
Ca-SatPst	12.6	meq/l		0.1		SW6010B	10/23/03 09:01 / rp
Mg-SatPst	18.8	meq/l		0.1		SW6010B	10/23/03 09:01 / rp
Na-SatPst	9.1	meq/l		0.1		SW6010B	10/23/03 09:01 / rp
SAR	2.3	unitless		0.1		Calculation	11/06/03 20:50 / jdh
Alk-SatPst	1.6	meq/L		1.0		ASA10-3	10/22/03 00:00 / rp
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	39	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Silt	39	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Clay	22	wt%		1.0		ASA15-5	11/06/03 20:50 / jdh
Texture	L	unitless				ASA15-5	11/06/03 20:50 / jdh
C=Clay, S=Sand(y), Si=Silt(y), L=Loam(y)							
<b>CHEMICAL CHARACTERISTICS</b>							
CEC	24.7	meq/100g		0.1		SW6010B	10/31/03 09:51 / rp
ESP	3.8	%		0.1		USDA20b	11/06/03 20:50 / jdh
Lime as CaCO3	7.4	wt%		0.1		USDA23c	10/27/03 00:00 / nh
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Na-Av	1.3	meq/100g		0.1		SW6010B	10/24/03 09:41 / rp

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

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