



LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-008  
**Client Sample ID:** T2/MB-10 (0-6") [0-6]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.8	s.u.		0.1		ASAM10-3.2	11/11/09 07:46 / rrr
Conductivity, sat. paste	0.44	mmhos/cm		0.01		ASA10-3	11/12/09 15:28 / sah
Saturation	44.0	%		0.1		USDA27a	11/11/09 07:50 / wj
Calcium, sat. paste	2.14	meq/l		0.05		SW6010B	12/01/09 12:54 / sld
Magnesium, sat. paste	1.50	meq/l		0.08		SW6010B	12/01/09 12:54 / sld
Sodium, sat. paste	1.11	meq/l		0.04		SW6010B	12/01/09 12:54 / sld
Sodium Adsorption Ratio (SAR)	0.82	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	2.29	meq/L		0.02		ASA10-3	11/13/09 21:45 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	28	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	42	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	30	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	CL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Potassium, NH4OAc Extractable	389	mg/kg		1		ASA13-3	11/14/09 18:05 / sld
Cation Exchange Capacity	24.7	meq/100g		0.09		SW6010B	11/15/09 20:00 / sld
Organic Matter	1.54	%		0.02		ASA29-3	11/16/09 08:06 / rrr
Lime as CaCO3	1.6	%		0.1		USDA23c	11/16/09 00:00 / sah
Phosphorus	12	mg/kg		0.1		ASA24-5	11/24/09 15:58 / stp
Nitrate as N, KCL Extract	11	mg/kg		1.0		ASA38-3	11/17/09 15:57 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.35	meq/100g		0.0044		SW6010B	11/14/09 12:58 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.3	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	1.2	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Fluoride	0.35	mg/kg		0.10		E300.0	11/21/09 00:14 / hm
Sulfate, sat. paste	2.1	meq/L		0.021		E300.0	11/21/09 00:14 / hm
Chloride, sat. paste	0.30	meq/L		0.028		E300.0	11/21/09 00:14 / hm
<b>METALS, DTPA EXTRACTABLE</b>							
Zinc	0.42	mg/kg		0.02		SW6010B	12/17/09 16:41 / sld
<b>METALS, WATER SOLUBLE</b>							
Selenium	ND	mg/kg		0.04		E270.3	11/24/09 10:00 / eau

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

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



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**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-008  
**Client Sample ID:** T2/MB-10 (0-6") [0-6]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

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Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS, CACL2 EXTRACTABLE</b>							
Barium	0.69	mg/kg		0.20		SW6010B	12/04/09 11:32 / sld
Boron	0.22	mg/kg		0.20		SW6010B	12/04/09 11:32 / sld

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-009  
**Client Sample ID:** T2/MB-10 (6-12") [6-12]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	8.0	s.u.		0.1		ASAM10-3.2	11/11/09 07:47 / rrr
Conductivity, sat. paste	0.41	mmhos/cm		0.01		ASA10-3	11/12/09 15:28 / sah
Saturation	52.1	%		0.1		USDA27a	11/11/09 07:50 / wj
Calcium, sat. paste	3.28	meq/l		0.05		SW6010B	12/01/09 13:02 / sld
Magnesium, sat. paste	1.81	meq/l		0.08		SW6010B	12/01/09 13:02 / sld
Sodium, sat. paste	1.21	meq/l		0.04		SW6010B	12/01/09 13:02 / sld
Sodium Adsorption Ratio (SAR)	0.76	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	2.26	meq/L		0.02		ASA10-3	11/13/09 21:51 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	20	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	44	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	36	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	SiCL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	30.2	meq/100g		0.09		SW6010B	11/15/09 20:08 / sld
Lime as CaCO3	5.2	%		0.1		USDA23c	11/16/09 00:00 / sah
Nitrate as N, KCL Extract	4.9	mg/kg		1.0		ASA38-3	11/17/09 16:03 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.53	meq/100g		0.0044		SW6010B	11/14/09 13:00 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.5	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	1.6	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Sulfate, sat. paste	2.4	meq/L		0.021		E300.0	11/21/09 00:30 / hm
Chloride, sat. paste	0.19	meq/L		0.028		E300.0	11/21/09 00:30 / hm

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-010  
**Client Sample ID:** T2/MB-10 (12-24") [12-24]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	8.1	s.u.		0.1		ASAM10-3.2	11/11/09 07:48 / rrr
Conductivity, sat. paste	0.53	mmhos/cm		0.01		ASA10-3	11/12/09 15:29 / sah
Saturation	51.0	%		0.1		USDA27a	11/11/09 07:50 / wj
Calcium, sat. paste	3.24	meq/l		0.05		SW6010B	12/01/09 13:05 / sld
Magnesium, sat. paste	2.31	meq/l		0.08		SW6010B	12/01/09 13:05 / sld
Sodium, sat. paste	1.30	meq/l		0.04		SW6010B	12/01/09 13:05 / sld
Sodium Adsorption Ratio (SAR)	0.78	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	2.02	meq/L		0.02		ASA10-3	11/13/09 21:56 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	22	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	42	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	36	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	CL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	23.9	meq/100g		0.09		SW6010B	11/15/09 20:11 / sld
Lime as CaCO3	10.2	%		0.1		USDA23c	11/16/09 00:00 / sah
Nitrate as N, KCL Extract	3.4	mg/kg		1.0		ASA38-3	11/17/09 16:51 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.50	meq/100g		0.0044		SW6010B	11/14/09 13:03 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.4	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	1.8	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Sulfate, sat. paste	3.3	meq/L		0.021		E300.0	11/21/09 00:46 / hm
Chloride, sat. paste	0.16	meq/L		0.028		E300.0	11/21/09 00:46 / hm

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-011  
**Client Sample ID:** T2/MB-10 (24-36") [24-36]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	8.0	s.u.		0.1		ASAM10-3.2	11/11/09 07:50 / rrr
Conductivity, sat. paste	0.53	mmhos/cm		0.01		ASA10-3	11/12/09 15:30 / sah
Saturation	44.1	%		0.1		USDA27a	11/11/09 07:50 / wj
Calcium, sat. paste	2.61	meq/l		0.05		SW6010B	12/01/09 13:12 / sld
Magnesium, sat. paste	2.75	meq/l		0.08		SW6010B	12/01/09 13:12 / sld
Sodium, sat. paste	1.53	meq/l		0.04		SW6010B	12/01/09 13:12 / sld
Sodium Adsorption Ratio (SAR)	0.93	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	2.32	meq/L		0.02		ASA10-3	11/13/09 22:07 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	30	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	40	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	30	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	CL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	20.8	meq/100g		0.09		SW6010B	11/15/09 20:16 / sld
Lime as CaCO3	10.2	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.44	meq/100g		0.0044		SW6010B	11/14/09 13:08 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.4	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	1.8	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.16	meq/L		0.028		E300.0	11/21/09 01:19 / hm

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 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-012  
**Client Sample ID:** T2/MB-10 (36-60") [36-60]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.9	s.u.		0.1		ASAM10-3.2	11/11/09 07:51 / rrr
Conductivity, sat. paste	1.43	mmhos/cm		0.01		ASA10-3	11/12/09 15:30 / sah
Saturation	43.4	%		0.1		USDA27a	11/11/09 07:50 / wj
Calcium, sat. paste	7.53	meq/l		0.05		SW6010B	12/01/09 13:15 / sld
Magnesium, sat. paste	8.31	meq/l		0.08		SW6010B	12/01/09 13:15 / sld
Sodium, sat. paste	2.76	meq/l		0.04		SW6010B	12/01/09 13:15 / sld
Sodium Adsorption Ratio (SAR)	0.98	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	1.42	meq/L		0.02		ASA10-3	11/13/09 22:13 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	38	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	36	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	26	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	L	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	19.1	meq/100g		0.09		SW6010B	11/15/09 20:19 / sld
Lime as CaCO3	7.3	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.50	meq/100g		0.0044		SW6010B	11/14/09 13:11 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.4	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	2.0	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Fluoride	0.70	mg/kg		0.10		E300.0	11/21/09 01:36 / hm
Chloride, sat. paste	0.16	meq/L		0.028		E300.0	11/21/09 01:36 / hm
<b>METALS, WATER SOLUBLE</b>							
Selenium	ND	mg/kg		0.04		E270.3	11/24/09 10:02 / eau
<b>METALS, CaCl2 EXTRACTABLE</b>							
Barium	0.22	mg/kg		0.20		SW6010B	12/04/09 11:35 / sld
Boron	0.22	mg/kg		0.20		SW6010B	12/04/09 11:35 / sld

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-013  
**Client Sample ID:** T2/MB-10 (60-96") [60-96]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.9	s.u.		0.1		ASAM10-3.2	11/11/09 07:51 / rrr
Conductivity, sat. paste	2.55	mmhos/cm		0.01		ASA10-3	11/12/09 15:31 / sah
Saturation	45.7	%		0.1		USDA27a	11/11/09 07:51 / wj
Calcium, sat. paste	19.4	meq/l		0.05		SW6010B	12/01/09 13:18 / sld
Magnesium, sat. paste	16.6	meq/l		0.08		SW6010B	12/01/09 13:18 / sld
Sodium, sat. paste	5.32	meq/l		0.04		SW6010B	12/01/09 13:18 / sld
Sodium Adsorption Ratio (SAR)	1.2	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	0.93	meq/L		0.02		ASA10-3	11/13/09 22:34 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	34	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	40	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	26	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	L	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	20.8	meq/100g		0.09		SW6010B	11/15/09 20:26 / sld
Lime as CaCO3	5.9	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.76	meq/100g		0.0044		SW6010B	11/14/09 13:13 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.5	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	2.5	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.19	meq/L		0.028		E300.0	11/21/09 02:09 / hm

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-014  
**Client Sample ID:** T2/MB-10 (0-2") [0-2]

**Report Date:** 12/18/09  
**Collection Date:** 10/27/09 17:00  
**Date Received:** 10/30/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.8	s.u.		0.1		ASAM10-3.2	11/11/09 07:53 / rrr
Conductivity, sat. paste	0.49	mmhos/cm		0.01		ASA10-3	11/12/09 15:31 / sah
Saturation	43.8	%		0.1		USDA27a	11/11/09 07:51 / wj
Calcium, sat. paste	1.99	meq/l		0.05		SW6010B	12/01/09 13:20 / sld
Magnesium, sat. paste	1.72	meq/l		0.08		SW6010B	12/01/09 13:20 / sld
Sodium, sat. paste	1.14	meq/l		0.04		SW6010B	12/01/09 13:20 / sld
Sodium Adsorption Ratio (SAR)	0.84	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	3.21	meq/L		0.02		ASA10-3	11/13/09 22:40 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	26	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	46	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	28	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	CL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	27.3	meq/100g		0.09		SW6010B	11/15/09 20:29 / sld
Lime as CaCO3	1.4	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.34	meq/100g		0.0044		SW6010B	11/14/09 13:16 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.3	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	1.1	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.24	meq/L		0.028		E300.0	11/21/09 02:25 / hm

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