



LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-001  
**Client Sample ID:** T2/MA-10 (0-6") [0-6]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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	7.6	s.u.		0.1		ASAM10-3.2	11/11/09 07:37 / rrr
Conductivity, sat. paste	0.65	mmhos/cm		0.01		ASA10-3	11/12/09 15:24 / sah
Saturation	46.8	%		0.1		USDA27a	11/11/09 07:49 / wj
Calcium, sat. paste	2.85	meq/l		0.05		SW6010B	12/01/09 12:36 / sld
Magnesium, sat. paste	1.46	meq/l		0.08		SW6010B	12/01/09 12:36 / sld
Sodium, sat. paste	2.23	meq/l		0.04		SW6010B	12/01/09 12:36 / sld
Sodium Adsorption Ratio (SAR)	1.5	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	4.23	meq/L		0.02		ASA10-3	11/13/09 20:48 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	24	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	52	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	24	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	SiL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Potassium, NH4OAc Extractable	360	mg/kg		1		ASA13-3	11/14/09 18:02 / sld
Cation Exchange Capacity	26.0	meq/100g		0.09		SW6010B	11/15/09 19:42 / sld
Organic Matter	2.55	%		0.02		ASA29-3	11/16/09 08:06 / rrr
Lime as CaCO3	8.4	%		0.1		USDA23c	11/16/09 00:00 / sah
Phosphorus	6.3	mg/kg		0.1		ASA24-5	11/24/09 15:54 / stp
Nitrate as N, KCL Extract	20	mg/kg		1.0		ASA38-3	11/17/09 16:49 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.19	meq/100g		0.0044		SW6010B	11/14/09 12:33 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.09	meq/100g		0.05		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	0.3	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Fluoride	0.37	mg/kg		0.10		E300.0	11/20/09 21:46 / hm
Sulfate, sat. paste	1.7	meq/L		0.021		E300.0	11/20/09 21:46 / hm
Chloride, sat. paste	0.98	meq/L		0.028		E300.0	11/20/09 21:46 / hm
<b>METALS, DTPA EXTRACTABLE</b>							
Zinc	3.14	mg/kg		0.02		SW6010B	12/17/09 16:38 / sld
<b>METALS, WATER SOLUBLE</b>							
Selenium	ND	mg/kg		0.04		E270.3	11/24/09 09:57 / 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:** H09110004-001  
**Client Sample ID:** T2/MA-10 (0-6") [0-6]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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	1.4	mg/kg		0.20		SW6010B	12/04/09 10:43 / sld
Boron	0.23	mg/kg		0.20		SW6010B	12/04/09 10:43 / sld

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-002  
**Client Sample ID:** T2/MA-10 (6-12") [6-12]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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 07:37 / rrr
Conductivity, sat. paste	0.43	mmhos/cm		0.01		ASA10-3	11/12/09 15:25 / sah
Saturation	42.5	%		0.1		USDA27a	11/11/09 07:49 / wj
Calcium, sat. paste	2.37	meq/l		0.05		SW6010B	12/01/09 12:39 / sld
Magnesium, sat. paste	1.28	meq/l		0.08		SW6010B	12/01/09 12:39 / sld
Sodium, sat. paste	0.91	meq/l		0.04		SW6010B	12/01/09 12:39 / sld
Sodium Adsorption Ratio (SAR)	0.67	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	3.19	meq/L		0.02		ASA10-3	11/13/09 20:54 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	26	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	52	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	22	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	SiL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	23.1	meq/100g		0.09		SW6010B	11/15/09 19:45 / sld
Lime as CaCO3	9.0	%		0.1		USDA23c	11/16/09 00:00 / sah
Nitrate as N, KCL Extract	9.7	mg/kg		1.0		ASA38-3	11/17/09 15:53 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.26	meq/100g		0.0044		SW6010B	11/14/09 12:36 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.2	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	1.0	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Sulfate, sat. paste	0.83	meq/L		0.021		E300.0	11/20/09 22:02 / hm
Chloride, sat. paste	0.32	meq/L		0.028		E300.0	11/20/09 22:02 / hm

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-003  
**Client Sample ID:** T2/MA-10 (12-24") [12-24]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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 07:38 / rrr
Conductivity, sat. paste	0.55	mmhos/cm		0.01		ASA10-3	11/12/09 15:25 / sah
Saturation	43.0	%		0.1		USDA27a	11/11/09 07:49 / wj
Calcium, sat. paste	2.32	meq/l		0.05		SW6010B	12/01/09 12:41 / sld
Magnesium, sat. paste	2.20	meq/l		0.08		SW6010B	12/01/09 12:41 / sld
Sodium, sat. paste	2.10	meq/l		0.04		SW6010B	12/01/09 12:41 / sld
Sodium Adsorption Ratio (SAR)	1.4	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	3.22	meq/L		0.02		ASA10-3	11/13/09 21:15 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	28	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	50	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	22	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	SiL	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 19:47 / sld
Lime as CaCO3	10.6	%		0.1		USDA23c	11/16/09 00:00 / sah
Nitrate as N, KCL Extract	4.4	mg/kg		1.0		ASA38-3	11/17/09 15:55 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.50	meq/100g		0.0044		SW6010B	11/14/09 12:38 / 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>							
Sulfate, sat. paste	2.6	meq/L		0.021		E300.0	11/20/09 22:19 / hm
Chloride, sat. paste	0.27	meq/L		0.028		E300.0	11/20/09 22:19 / hm

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-004  
**Client Sample ID:** T2/MA-10 (24-36") [24-36]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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 07:39 / rrr
Conductivity, sat. paste	2.58	mmhos/cm		0.01		ASA10-3	11/12/09 15:26 / sah
Saturation	43.3	%		0.1		USDA27a	11/11/09 07:49 / wj
Calcium, sat. paste	8.65	meq/l		0.05		SW6010B	12/01/09 12:44 / sld
Magnesium, sat. paste	18.2	meq/l		0.08		SW6010B	12/01/09 12:44 / sld
Sodium, sat. paste	8.47	meq/l		0.04		SW6010B	12/01/09 12:44 / sld
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	2.30	meq/L		0.02		ASA10-3	11/13/09 21:21 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	26	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	52	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	22	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	SiL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	21.9	meq/100g		0.09		SW6010B	11/15/09 19:50 / sld
Lime as CaCO3	9.6	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	1.0	meq/100g		0.0044		SW6010B	11/14/09 12:41 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.6	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	2.9	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.57	meq/L		0.028		E300.0	11/20/09 22:35 / hm

**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:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-005  
**Client Sample ID:** T2/MA-10 (36-60") [36-60]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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 07:40 / rrr
Conductivity, sat. paste	3.54	mmhos/cm		0.01		ASA10-3	11/12/09 15:26 / sah
Saturation	43.9	%		0.1		USDA27a	11/11/09 07:49 / wj
Calcium, sat. paste	9.00	meq/l		0.05		SW6010B	12/01/09 12:47 / sld
Magnesium, sat. paste	28.4	meq/l		0.08		SW6010B	12/01/09 12:47 / sld
Sodium, sat. paste	13.7	meq/l		0.04		SW6010B	12/01/09 12:47 / sld
Sodium Adsorption Ratio (SAR)	3.2	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	2.05	meq/L		0.02		ASA10-3	11/13/09 21:27 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	36	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	46	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	18	%		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	17.4	meq/100g		0.09		SW6010B	11/15/09 19:52 / sld
Lime as CaCO3	10.1	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	1.3	meq/100g		0.0044		SW6010B	11/14/09 12:44 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.7	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	4.2	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Fluoride	ND	mg/kg		0.10		E300.0	11/20/09 23:24 / hm
Chloride, sat. paste	0.66	meq/L		0.028		E300.0	11/20/09 23:24 / hm
<b>METALS, WATER SOLUBLE</b>							
Selenium	ND	mg/kg		0.04		E270.3	11/24/09 09:59 / eau
<b>METALS, CaCl2 EXTRACTABLE</b>							
Barium	ND	mg/kg		0.20		SW6010B	12/04/09 10:46 / sld
Boron	ND	mg/kg		0.20		SW6010B	12/04/09 10:46 / sld

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LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-006  
**Client Sample ID:** T2/MA-10 (60-96") [60-96]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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 07:40 / rrr
Conductivity, sat. paste	2.12	mmhos/cm		0.01		ASA10-3	11/12/09 15:27 / sah
Saturation	35.1	%		0.1		USDA27a	11/11/09 07:49 / wj
Calcium, sat. paste	7.85	meq/l		0.05		SW6010B	12/01/09 12:49 / sld
Magnesium, sat. paste	13.6	meq/l		0.08		SW6010B	12/01/09 12:49 / sld
Sodium, sat. paste	7.33	meq/l		0.04		SW6010B	12/01/09 12:49 / sld
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	1.74	meq/L		0.02		ASA10-3	11/13/09 21:33 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	50	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	34	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	16	%		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	15.1	meq/100g		0.09		SW6010B	11/15/09 19:55 / sld
Lime as CaCO3	9.9	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.79	meq/100g		0.0044		SW6010B	11/14/09 12:46 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.5	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	3.5	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.40	meq/L		0.028		E300.0	11/20/09 23:41 / hm

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## LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (formerly referred to as AMPP)  
**Lab ID:** H09110004-007  
**Client Sample ID:** T2/MA-10 (0-2") [0-2]

**Report Date:** 12/18/09  
**Collection Date:** 10/26/09 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 07:41 / rrr
Conductivity, sat. paste	0.50	mmhos/cm		0.01		ASA10-3	11/12/09 15:28 / sah
Saturation	47.6	%		0.1		USDA27a	11/11/09 07:50 / wj
Calcium, sat. paste	2.93	meq/l		0.05		SW6010B	12/01/09 12:52 / sld
Magnesium, sat. paste	1.66	meq/l		0.08		SW6010B	12/01/09 12:52 / sld
Sodium, sat. paste	0.26	meq/l		0.04		SW6010B	12/01/09 12:52 / sld
Sodium Adsorption Ratio (SAR)	0.17	unitless		0.01		Calculation	11/16/09 07:56 / wj
Bicarbonate, sat. paste	4.60	meq/L		0.02		ASA10-3	11/13/09 21:39 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	28	%		1		ASA15-5	11/11/09 15:29 / wj
Silt	50	%		1		ASA15-5	11/11/09 15:29 / wj
Clay	22	%		1		ASA15-5	11/11/09 15:29 / wj
Texture	SiL	unitless				ASA15-5	11/11/09 15:29 / wj
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	25.7	meq/100g		0.09		SW6010B	11/15/09 19:58 / sld
Lime as CaCO3	8.4	%		0.1		USDA23c	11/16/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.16	meq/100g		0.0044		SW6010B	11/14/09 12:49 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.2	meq/100g		0.1		Calculation	11/16/09 07:56 / wj
Exchangeable Sodium Percentage	0.6	%		0.1		USDA20a	11/16/09 07:56 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.20	meq/L		0.028		E300.0	11/20/09 23:57 / hm

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