



LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (Formerly Referred To As AMPP)  
**Lab ID:** H09110013-029  
**Client Sample ID:** T2/BC-10 (0-6") [0-6]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.7	s.u.		0.1		ASAM10-3.2	11/17/09 09:02 / rrr
Conductivity, sat. paste	0.83	mmhos/cm		0.01		ASA10-3	11/18/09 08:40 / rrr
Saturation	52.9	%		0.1		USDA27a	11/17/09 08:10 / wj
Calcium, sat. paste	3.70	meq/l		0.05		SW6010B	11/19/09 12:11 / sld
Magnesium, sat. paste	2.65	meq/l		0.08		SW6010B	11/19/09 12:11 / sld
Sodium, sat. paste	2.44	meq/l		0.04		SW6010B	11/19/09 12:11 / sld
Sodium Adsorption Ratio (SAR)	1.4	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	4.85	meq/L		0.02		ASA10-3	12/08/09 19:10 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	14	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	52	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	34	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	SiCL	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Potassium, NH4OAc Extractable	169	mg/kg		1		ASA13-3	12/21/09 11:30 / sld
Cation Exchange Capacity	31.8	meq/100g		0.09		SW6010B	11/20/09 00:11 / sld
Organic Matter	2.62	%		0.02		ASA29-3	11/17/09 11:33 / sah
Lime as CaCO3	6.8	%		0.1		USDA23c	11/17/09 00:00 / sah
Phosphorus	8.0	mg/kg		0.1		ASA24-5	11/24/09 16:16 / stp
Nitrate as N, KCL Extract	19	mg/kg		1.0		ASA38-3	12/04/09 13:52 / stp
Nitrate as N, KCL Extract	29	mg/kg	D	2.5		ASA38-3	12/04/09 14:36 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.50	meq/100g		0.0044		SW6010B	12/03/09 14:41 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.4	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	1.2	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Fluoride	0.94	mg/kg		0.10		E300.0	11/22/09 01:08 / hm
Sulfate, sat. paste	3.1	meq/L		0.021		E300.0	11/22/09 01:08 / hm
Chloride, sat. paste	0.97	meq/L		0.028		E300.0	11/22/09 01:08 / hm
<b>METALS, DTPA EXTRACTABLE</b>							
Zinc	0.78	mg/kg		0.02		SW6010B	12/17/09 18:49 / sld
<b>METALS, WATER SOLUBLE</b>							
Selenium	ND	mg/kg		0.04		E270.3	12/16/09 11:54 / eau

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



### LABORATORY ANALYTICAL REPORT

**Client:** HydroSolutions Inc  
**Project:** TRIP Tier II (Formerly Referred To As AMPP)  
**Lab ID:** H09110013-029  
**Client Sample ID:** T2/BC-10 (0-6") [0-6]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS, CACL2 EXTRACTABLE</b>							
Barium	0.71	mg/kg		0.20		SW6010B	12/04/09 13:30 / sld
Boron	ND	mg/kg		0.20		SW6010B	12/04/09 13:30 / sld

**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:** H09110013-030  
**Client Sample ID:** T2/BC-10 (6-12") [6-12]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.7	s.u.		0.1		ASAM10-3.2	11/17/09 09:03 / rrr
Conductivity, sat. paste	0.75	mmhos/cm		0.01		ASA10-3	11/18/09 08:42 / rrr
Saturation	53.6	%		0.1		USDA27a	11/17/09 08:11 / wj
Calcium, sat. paste	3.32	meq/l		0.05		SW6010B	11/19/09 12:19 / sld
Magnesium, sat. paste	2.47	meq/l		0.08		SW6010B	11/19/09 12:19 / sld
Sodium, sat. paste	3.06	meq/l		0.04		SW6010B	11/19/09 12:19 / sld
Sodium Adsorption Ratio (SAR)	1.8	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	5.25	meq/L		0.02		ASA10-3	12/08/09 19:31 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	12	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	54	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	34	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	SiCL	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	31.9	meq/100g		0.09		SW6010B	11/20/09 00:13 / sld
Lime as CaCO3	6.9	%		0.1		USDA23c	11/17/09 00:00 / sah
Nitrate as N, KCL Extract	11	mg/kg		1.0		ASA38-3	12/04/09 14:38 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.66	meq/100g		0.0044		SW6010B	12/03/09 14:49 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.5	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	1.6	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Sulfate, sat. paste	3.2	meq/L		0.021		E300.0	11/22/09 01:24 / hm
Chloride, sat. paste	0.25	meq/L		0.028		E300.0	11/22/09 01:24 / 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:** H09110013-031  
**Client Sample ID:** T2/BC-10 (12-24") [12-24]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**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	11/17/09 09:04 / rrr
Conductivity, sat. paste	0.86	mmhos/cm		0.01		ASA10-3	11/18/09 08:43 / rrr
Saturation	51.2	%		0.1		USDA27a	11/17/09 08:11 / wj
Calcium, sat. paste	2.43	meq/l		0.05		SW6010B	11/19/09 12:24 / sld
Magnesium, sat. paste	2.07	meq/l		0.08		SW6010B	11/19/09 12:24 / sld
Sodium, sat. paste	5.24	meq/l		0.04		SW6010B	11/19/09 12:24 / sld
Sodium Adsorption Ratio (SAR)	3.5	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	3.17	meq/L		0.02		ASA10-3	12/08/09 19:43 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	10	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	50	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	40	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	SiC	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	27.8	meq/100g		0.09		SW6010B	11/20/09 00:18 / sld
Lime as CaCO3	6.8	%		0.1		USDA23c	11/17/09 00:00 / sah
Nitrate as N, KCL Extract	6.6	mg/kg		1.0		ASA38-3	12/04/09 14:02 / stp
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	1.5	meq/100g		0.0044		SW6010B	12/03/09 14:54 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	1.2	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	4.4	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Sulfate, sat. paste	7.3	meq/L		0.021		E300.0	11/22/09 02:30 / hm
Chloride, sat. paste	0.23	meq/L		0.028		E300.0	11/22/09 02:30 / hm

**Report Definitions:** RL - Analyte reporting limit.  
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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:** H09110013-032  
**Client Sample ID:** T2/BC-10 (24-36") [24-36]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**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	11/17/09 09:05 / rrr
Conductivity, sat. paste	2.99	mmhos/cm		0.01		ASA10-3	11/18/09 08:44 / rrr
Saturation	59.6	%		0.1		USDA27a	11/17/09 08:11 / wj
Calcium, sat. paste	12.6	meq/l		0.05		SW6010B	11/19/09 12:27 / sld
Magnesium, sat. paste	9.86	meq/l		0.08		SW6010B	11/19/09 12:27 / sld
Sodium, sat. paste	17.1	meq/l		0.04		SW6010B	11/19/09 12:27 / sld
Sodium Adsorption Ratio (SAR)	5.1	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	2.22	meq/L		0.02		ASA10-3	12/08/09 19:48 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	4	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	50	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	46	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	SiC	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	27.9	meq/100g		0.09		SW6010B	11/20/09 00:21 / sld
Lime as CaCO3	6.0	%		0.1		USDA23c	11/17/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	2.8	meq/100g		0.0044		SW6010B	12/03/09 14:57 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	1.8	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	6.5	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.40	meq/L		0.028		E300.0	11/22/09 02:47 / 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:** H09110013-033  
**Client Sample ID:** T2/BC-10 (36-60") [36-60]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**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	11/17/09 09:06 / rrr
Conductivity, sat. paste	4.38	mmhos/cm		0.01		ASA10-3	11/18/09 08:45 / rrr
Saturation	57.0	%		0.1		USDA27a	11/17/09 08:11 / wj
Calcium, sat. paste	17.7	meq/l		0.05		SW6010B	11/19/09 12:29 / sld
Magnesium, sat. paste	12.8	meq/l		0.08		SW6010B	11/19/09 12:29 / sld
Sodium, sat. paste	26.7	meq/l		0.04		SW6010B	11/19/09 12:29 / sld
Sodium Adsorption Ratio (SAR)	6.8	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	1.91	meq/L		0.02		ASA10-3	12/08/09 19:54 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	10	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	52	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	38	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	SiCL	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	25.0	meq/100g		0.09		SW6010B	11/20/09 00:29 / sld
Lime as CaCO3	7.1	%		0.1		USDA23c	11/17/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	3.6	meq/100g		0.0044		SW6010B	12/03/09 14:59 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	2.1	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	8.3	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Fluoride	0.94	mg/kg		0.10		E300.0	11/22/09 03:03 / hm
Chloride, sat. paste	0.49	meq/L		0.028		E300.0	11/22/09 03:03 / hm
<b>METALS, WATER SOLUBLE</b>							
Selenium	ND	mg/kg		0.04		E270.3	12/16/09 11:56 / eau
<b>METALS, CaCL2 EXTRACTABLE</b>							
Barium	ND	mg/kg		0.20		SW6010B	12/04/09 13:33 / sld
Boron	0.39	mg/kg		0.20		SW6010B	12/04/09 13:33 / sld

**Report Definitions:** RL - Analyte reporting limit.  
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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:** H09110013-034  
**Client Sample ID:** T2/BC-10 (60-96") [60-96]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**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	11/17/09 09:06 / rrr
Conductivity, sat. paste	5.10	mmhos/cm		0.01		ASA10-3	11/18/09 08:45 / rrr
Saturation	52.2	%		0.1		USDA27a	11/17/09 08:11 / wj
Calcium, sat. paste	16.3	meq/l		0.05		SW6010B	11/19/09 12:32 / sld
Magnesium, sat. paste	11.8	meq/l		0.08		SW6010B	11/19/09 12:32 / sld
Sodium, sat. paste	34.2	meq/l	D	0.09		SW6010B	11/19/09 12:32 / sld
Sodium Adsorption Ratio (SAR)	9.1	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	1.74	meq/L		0.02		ASA10-3	12/08/09 20:00 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	22	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	46	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	32	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	CL	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	27.5	meq/100g		0.09		SW6010B	11/20/09 00:32 / sld
Lime as CaCO3	7.7	%		0.1		USDA23c	11/17/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	4.1	meq/100g		0.0044		SW6010B	12/03/09 15:02 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	2.3	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	8.3	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.47	meq/L		0.028		E300.0	11/22/09 03:19 / hm

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

D - RL increased due to sample matrix interference.

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:** H09110013-035  
**Client Sample ID:** T2/BC-10 (0-2") [0-2]

**Report Date:** 12/22/09  
**Collection Date:** 10/29/09 17:00  
**Date Received:** 11/02/09  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>SATURATED PASTE</b>							
pH, sat. paste	7.7	s.u.		0.1		ASAM10-3.2	11/17/09 09:07 / rrr
Conductivity, sat. paste	0.87	mmhos/cm		0.01		ASA10-3	11/18/09 08:46 / rrr
Saturation	49.4	%		0.1		USDA27a	11/17/09 08:11 / wj
Calcium, sat. paste	4.07	meq/l		0.05		SW6010B	11/19/09 12:34 / sld
Magnesium, sat. paste	2.85	meq/l		0.08		SW6010B	11/19/09 12:34 / sld
Sodium, sat. paste	2.30	meq/l		0.04		SW6010B	11/19/09 12:34 / sld
Sodium Adsorption Ratio (SAR)	1.2	unitless		0.01		Calculation	11/19/09 15:16 / wj
Bicarbonate, sat. paste	5.19	meq/L		0.02		ASA10-3	12/08/09 20:06 / wj
<b>PHYSICAL CHARACTERISTICS</b>							
Sand	14	%		1		ASA15-5	11/18/09 15:11 / sah
Silt	52	%		1		ASA15-5	11/18/09 15:11 / sah
Clay	34	%		1		ASA15-5	11/18/09 15:11 / sah
Texture	SiCL	unitless				ASA15-5	11/18/09 15:11 / sah
<b>CHEMICAL CHARACTERISTICS</b>							
Cation Exchange Capacity	32.0	meq/100g		0.09		SW6010B	11/20/09 00:34 / sld
Lime as CaCO3	6.7	%		0.1		USDA23c	11/17/09 00:00 / sah
<b>METALS, AMMONIUM ACETATE EXTRACTABLE</b>							
Sodium, Extractable	0.46	meq/100g		0.0044		SW6010B	12/03/09 15:05 / sld
<b>EXCHANGEABLES</b>							
Exchangeable Sodium	0.4	meq/100g		0.1		Calculation	11/19/09 15:16 / wj
Exchangeable Sodium Percentage	1.1	%		0.1		USDA20a	11/19/09 15:16 / wj
<b>INORGANICS</b>							
Chloride, sat. paste	0.33	meq/L		0.028		E300.0	11/22/09 03:36 / hm

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

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