

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: July 30, 2007
JOB NUMBER: 07-911-1
PAGE: 1 of 40
INVOICE NO.: 7060179

REPORT OF: Soil Analysis – South Heart Soil Survey – Project No. 506021-134

CASE NARRATIVE:

On May 21, 2007, these soil samples (laboratory numbers 2007060179-1 through -38) were received in our laboratory for analysis. Samples were selected for analysis based upon the client's instructions. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, *"Diagnosis and Improvement of Saline and Alkali Soils"*; American Society of Agronomy, *"Methods of Soil Analysis"* 1965, 1982, 1986; and Western States Laboratory Proficiency Testing Program, *"Soil & Plant Analytical Methods"*.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

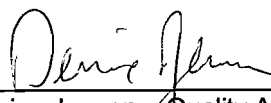
Footnotes used in this report are as follows:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

INSF – An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Reviewed by


Denise Jensen – Quality Assurance Coordinator

Attachments: Chain of Custody (5)
Sample Receipt Checklist

nct

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-5 **Description:** 070513-SO1-0006 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 05/13/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.80	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	5.43	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.92	meq/l	3-5.4	07/16/2007
Sodium saturated paste	0.70	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.34	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-6	Description: 070513-SO1-0619	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	1.78	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.08	meq/l	3-5.4	07/16/2007
Sodium saturated paste	3.26	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	2.35	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-7	Description: 070513-SO1-1936	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	1.37	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.77	meq/l	3-5.4	07/16/2007
Sodium saturated paste	24.1	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	16.8	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-8	Description: 070513-SO1-3659	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.23	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	2.22	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.58	meq/l	3-5.4	07/16/2007
Sodium saturated paste	20.2	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	13.1	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-9	Description: 070501-TO3-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.0	%	29-3.5.2	07/12/2007
Very Fine Sand	3.4J	%	43-5.3	07/09/2007
Sand	51.3	%	15-5 mod	07/06/2007
Silt	32.4	%	15-5 mod	07/06/2007
Clay	16.3	%	15-5 mod	07/06/2007
Texture	Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	1.56	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	5.6	S.U.	21a	07/06/2007
Calcium saturated paste	9.78	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	4.22	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.26	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.10	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-10	Description: 070501-TO3-0716	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.7	%	29-3.5.2	07/12/2007
Very Fine Sand	1.1	%	43-5.3	07/09/2007
Sand	51.3	%	15-5 mod	07/06/2007
Silt	33.7	%	15-5 mod	07/06/2007
Clay	15.0	%	15-5 mod	07/06/2007
Texture	Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.90	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	6.1	S.U.	21a	07/06/2007
Calcium saturated paste	5.58	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	2.43	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.21	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.10	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-11	Description: 070501-TO3-1625	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.0	%	29-3.5.2	07/12/2007
Very Fine Sand	7.1	%	43-5.3	07/09/2007
Sand	53.8	%	15-5 mod	07/06/2007
Silt	31.2	%	15-5 mod	07/06/2007
Clay	15.0	%	15-5 mod	07/06/2007
Texture	Sandy Loam	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.48	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.2	S.U.	21a	07/06/2007
Calcium saturated paste	3.38	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.49	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.24	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.15	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-12	Description: 070501-TO3-2534	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.0	%	29-3.5.2	07/12/2007
Very Fine Sand	13.4	%	43-5.3	07/09/2007
Sand	56.3	%	15-5 mod	07/06/2007
Silt	24.9	%	15-5 mod	07/06/2007
Clay	18.8	%	15-5 mod	07/06/2007
Texture	Sandy Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.42	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.6	S.U.	21a	07/06/2007
Calcium saturated paste	2.62	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.11	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.33	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.24	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-13	Description: 070501-TO3-3460	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.1	%	29-3.5.2	07/12/2007
Very Fine Sand	10.7	%	43-5.3	07/09/2007
Sand	78.8	%	15-5 mod	07/06/2007
Silt	12.4	%	15-5 mod	07/06/2007
Clay	8.8	%	15-5 mod	07/06/2007
Texture	Loamy Sand	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.29	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.9	S.U.	21a	07/06/2007
Calcium saturated paste	1.58	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.17	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.30	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.25	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-14 Description: 070501-TO4-0006

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.5	%	29-3.5.2	07/12/2007
Very Fine Sand	6.7	%	43-5.3	07/09/2007
Sand	31.3	%	15-5 mod	07/06/2007
Silt	49.9	%	15-5 mod	07/06/2007
Clay	18.8	%	15-5 mod	07/06/2007
Texture	Loam	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	1.04	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.4	S.U.	21a	07/06/2007
Calcium saturated paste	7.46	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.69	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.16	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.08	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-15	Description: 070501-TO4-0612	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.9	%	29-3.5.2	07/12/2007
Very Fine Sand	7.7	%	43-5.3	07/09/2007
Sand	31.3	%	15-5 mod	07/06/2007
Silt	49.9	%	15-5 mod	07/06/2007
Clay	18.8	%	15-5 mod	07/06/2007
Texture	Loam	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.54	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.6	S.U.	21a	07/06/2007
Calcium saturated paste	4.08	meq/l	3-5.4	07/09/2007
Magnesium saturated paste	1.23	meq/l	3-5.4	07/09/2007
Sodium saturated paste	0.19	meq/l	3-5.4	07/09/2007
Sodium Adsorption Ratio	0.12	-----	20b	07/09/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-16	Description: 070504-TO1-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/04/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.6	%	29-3.5.2	07/12/2007
Very Fine Sand	6.8	%	43-5.3	07/09/2007
Sand	63.8	%	15-5 mod	07/06/2007
Silt	24.9	%	15-5 mod	07/06/2007
Clay	11.3	%	15-5 mod	07/06/2007
Texture	Sandy Loam	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	1.66	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.4	S.U.	21a	07/06/2007
Calcium saturated paste	12.6	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	2.19	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.20	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.07	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-17	Description: 070504-TO1-0714	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/04/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.9	%	29-3.5.2	07/12/2007
Very Fine Sand	11.8	%	43-5.3	07/09/2007
Sand	67.5	%	15-5 mod	07/06/2007
Silt	21.2	%	15-5 mod	07/06/2007
Clay	11.3	%	15-5 mod	07/06/2007
Texture	Sandy Loam	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.45	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.7	S.U.	21a	07/06/2007
Calcium saturated paste	3.26	meq/l	3-5.4	07/09/2007
Magnesium saturated paste	0.87	meq/l	3-5.4	07/09/2007
Sodium saturated paste	0.17	meq/l	3-5.4	07/09/2007
Sodium Adsorption Ratio	0.12	-----	20b	07/09/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-18	Description: 070511-S28-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.95	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	6.58	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	3.49	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.16	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.51	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-19	Description: 070511-S28-0614	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.84	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	13.0	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	9.38	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.40	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.42	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-20	Description: 070511-S28-1424	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.87	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	27.8	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	19.8	meq/l	3-5.4	07/16/2007
Sodium saturated paste	11.3	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	2.31	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-26	Description: 070511-S30-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	5.7	%	29-3.5.2	07/12/2007
Very Fine Sand	18.8	%	43-5.3	07/09/2007
Sand	23.8	%	15-5 mod	07/06/2007
Silt	47.4	%	15-5 mod	07/06/2007
Clay	28.8	%	15-5 mod	07/06/2007
Texture	Clay Loam	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.3	S.U.	21a	07/06/2007
Calcium saturated paste	5.25	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	4.35	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.83	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.38	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-27 **Description:** 070511-S30-0615 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 05/11/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.3	%	29-3.5.2	07/12/2007
Very Fine Sand	17.9	%	43-5.3	07/09/2007
Sand	20.0	%	15-5 mod	07/06/2007
Silt	46.2	%	15-5 mod	07/06/2007
Clay	33.8	%	15-5 mod	07/06/2007
Texture	Si Cl Lo	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.80	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	8.2	S.U.	21a	07/06/2007
Calcium saturated paste	1.11	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.21	meq/l	3-5.4	07/10/2007
Sodium saturated paste	6.02	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	5.59	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-28	Description: 070511-S30-1523	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.3	%	29-3.5.2	07/12/2007
Very Fine Sand	13.8	%	43-5.3	07/09/2007
Sand	15.0	%	15-5 mod	07/06/2007
Silt	51.2	%	15-5 mod	07/06/2007
Clay	33.8	%	15-5 mod	07/06/2007
Texture	Si Cl Lo	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	2.86	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	8.6	S.U.	21a	07/06/2007
Calcium saturated paste	1.58	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	3.18	meq/l	3-5.4	07/10/2007
Sodium saturated paste	30.1	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	19.5	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-29 **Description:** 070511-S30-2337 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 05/11/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.8	%	29-3.5.2	07/12/2007
Very Fine Sand	10.8	%	43-5.3	07/09/2007
Sand	11.3	%	15-5 mod	07/06/2007
Silt	53.7	%	15-5 mod	07/06/2007
Clay	35.0	%	15-5 mod	07/06/2007
Texture	Si Cl Lo	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	15.1	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	8.4	S.U.	21a	07/06/2007
Calcium saturated paste	21.6	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	83.4	meq/l	3-5.4	07/10/2007
Sodium saturated paste	143	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	19.8	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-30	Description: 070511-S30-3747	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.6	%	29-3.5.2	07/12/2007
Very Fine Sand	11.1	%	43-5.3	07/09/2007
Sand	11.3	%	15-5 mod	07/06/2007
Silt	58.7	%	15-5 mod	07/06/2007
Clay	30.0	%	15-5 mod	07/06/2007
Texture	Si Cl Lo	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	18.2	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	8.3	S.U.	21a	07/06/2007
Calcium saturated paste	22.4	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	107	meq/l	3-5.4	07/10/2007
Sodium saturated paste	179	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	22.2	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-31	Description: 070511-S31-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.87	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	5.28	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	3.80	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.14	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.53	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-32	Description: 070511-S31-0614	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.94	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	4.27	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.71	meq/l	3-5.4	07/16/2007
Sodium saturated paste	4.16	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	2.23	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-33	Description: 070511-S31-1423	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	1.20	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.14	meq/l	3-5.4	07/16/2007
Sodium saturated paste	17.3	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	16.0	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-34	Description: 070511-S31-2335	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	0.54	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.44	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.90	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	2.72	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-36	Description: 070511-S32-0009	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	5.3	%	29-3.5.2	07/12/2007
Very Fine Sand	15.5	%	43-5.3	07/09/2007
Sand	21.3	%	15-5 mod	07/06/2007
Silt	59.9	%	15-5 mod	07/06/2007
Clay	18.8	%	15-5 mod	07/06/2007
Texture	Silt Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	0.71	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.6	S.U.	21a	07/06/2007
Calcium saturated paste	4.67	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.41J	meq/l	3-5.4	07/10/2007
Sodium saturated paste	2.67J	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	1.53J	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-37	Description: 070511-S32-0923	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	5.4	%	29-3.5.2	07/12/2007
Very Fine Sand	13.0	%	43-5.3	07/09/2007
Sand	13.8	%	15-5 mod	07/06/2007
Silt	46.2	%	15-5 mod	07/06/2007
Clay	40.0	%	15-5 mod	07/06/2007
Texture	Si Cl Lo	-----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	1.89	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	8.1	S.U.	21a	07/06/2007
Calcium saturated paste	1.58	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.52	meq/l	3-5.4	07/10/2007
Sodium saturated paste	20.3	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	19.8	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-38 Description: 070511-S32-2347

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/11/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.3	%	29-3.5.2	07/12/2007
Very Fine Sand	16.8	%	43-5.3	07/09/2007
Sand	21.3	%	15-5 mod	07/06/2007
Silt	54.9	%	15-5 mod	07/06/2007
Clay	23.8	%	15-5 mod	07/06/2007
Texture	Silt Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	5.00	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	8.2	S.U.	21a	07/06/2007
Calcium saturated paste	4.47	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.85	meq/l	3-5.4	07/10/2007
Sodium saturated paste	56.9	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	34.9	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-39 Description: DUPLICATE OF 2007060179-36 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	-----	-----	-----
Very Fine Sand	NA	-----	-----	-----
Sand	NA	-----	-----	-----
Silt	NA	-----	-----	-----
Clay	NA	-----	-----	-----
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	0.67	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.6	S.U.	21a	07/06/2007
Calcium saturated paste	4.61	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.69 (6)	meq/l	3-5.4	07/10/2007
Sodium saturated paste	1.74 (6)	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	1.07 (6)	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-40	Description: DUPLICATE OF 2007060179-11	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	----	----	----
Very Fine Sand	NA	----	----	----
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	0.48	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	7.0	S.U.	21a	07/06/2007
Calcium saturated paste	3.48	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.55	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.25	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.16	----	20b	07/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-41 Description: METHOD BLANK FOR COMPLETE Matrix: SOIL/WATER
 Date Received: ----- LIST SAMPLES
 Date Collected: ----- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	<0.10	%	29-3.5.2	07/12/2007
Very Fine Sand	NA	-----	-----	-----
Sand	NA	-----	-----	-----
Silt	NA	-----	-----	-----
Clay	NA	-----	-----	-----
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/09/2007
pH Saturated Paste	NA	-----	-----	-----
Calcium saturated paste	<0.05	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/10/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-42	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: -----	FOR COMPLETE LIST SAMPLES	
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	142	% [42-158]	29-3.5.2	07/12/2007
Very Fine Sand	NA	-----	-----	-----
Sand	19	% [0-200]	15-5 mod	07/06/2007
Silt	128	% [55-145]	15-5 mod	07/06/2007
Clay	94	% [74-126]	15-5 mod	07/06/2007
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	110	% [56-144]	10-3.3	07/09/2007
pH Saturated Paste	98	% [94-106]	21a	07/06/2007
Calcium saturated paste	106	% [76-124]	3-5.4	07/10/2007
Magnesium saturated paste	109	% [79-121]	3-5.4	07/10/2007
Sodium saturated paste	107	% [61-139]	3-5.4	07/10/2007
Sodium Adsorption Ratio	104	% [79-121]	20b	07/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-43	Description: DUPLICATE OF 2007060179-9	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.3	%	29-3.5.2	07/12/2007
Very Fine Sand	2.7(6)	%	43-5.3	07/09/2007
Sand	51.3	%	15-5 mod	07/06/2007
Silt	32.4	%	15-5 mod	07/06/2007
Clay	16.3	%	15-5 mod	07/06/2007
Texture	Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	NA	----	----	----
pH Saturated Paste	NA	----	----	----
Calcium saturated paste	NA	----	----	----
Magnesium saturated paste	NA	----	----	----
Sodium saturated paste	NA	----	----	----
Sodium Adsorption Ratio	NA	----	----	----
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-45 **Description:** METHOD BLANK FOR PARTIAL LIST **Matrix:** SOIL/WATER
Date Received: -----
Date Collected: ----- **Collected by:** PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/16/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-46	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: ----	FOR PARTIAL LIST SAMPLES	
Date Collected: ----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	117	%[56-144]	10-3.3	07/13/2007
Calcium saturated paste	114	% [76-124]	3-5.4	07/16/2007
Magnesium saturated paste	115	% [79-121]	3-5.4	07/16/2007
Sodium saturated paste	119	% [61-139]	3-5.4	07/16/2007
Sodium Adsorption Ratio	111	% [79-121]	20b	07/16/2007
Sample Preparation	----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-47 Description: DUPLICATE OF 2007060179-17 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 05/04/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.0	%	29-3.5.2	07/12/2007
Very Fine Sand	12.3	%	43-5.3	07/12/2007
Sand	67.5	%	15-5 mod	07/06/2007
Silt	21.2	%	15-5 mod	07/06/2007
Clay	11.3	%	15-5 mod	07/06/2007
Texture	Sandy Loam	----	USDA	07/06/2007
Electrical Conductivity Saturated Paste	NA	----	----	
pH Saturated Paste	NA	----	----	
Calcium saturated paste	NA	----	----	
Magnesium saturated paste	NA	----	----	
Sodium saturated paste	NA	----	----	
Sodium Adsorption Ratio	NA	----	----	
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-48 Description: DUPLICATE OF 2007060179-19 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 05/11/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.88	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	14.3	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	10.0	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.49	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.43	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060179-49 Description: DUPLICATE OF 2007060179-32 Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/11/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.89	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	3.81	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.45	meq/l	3-5.4	07/16/2007
Sodium saturated paste	3.62	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	2.05	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

[illegible]

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAP	Pb	Cd	Cu	Fe	Mn	Ni	Se	Ag	As		
5/1/07	11:00	070501-TC3-0007	G	Soil	1	X											9
		0716				X											10 2
		16.25				X											11 3
		2534				X											12
		3460				X											13
5/1/07	1:00	070501-TC4-0006				X											14
		0612				X											15
																	16
Relinquished by: Matt Usareillo			Date: 5/21/07	Time: 1315	Received by: M. Walter												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

South Heart
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

**602 South 25th Street
Billings, Montana 59101**

Ph: 406-254-7226 • Fax: 406-254-1389

nlab@wtp.net

Catena Consulting
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59101
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR	AII										
5/4/07	8:00	070504-T01-0007	G	SOIL	1		X									1617	
↓	↓	0714	↓	↓	↓		X									1718	
5/11/07	1:45	070511-S28-0006	↓	↓	↓	X										1819	
↓	↓	0614	↓	↓	↓	X										1920	
↓	↓	1424	↓	↓	↓	X										2021	
↓	↓	2435	↓	↓	↓											2122	
5/11/07	2:20	070511-S29-0006	↓	↓	↓											2223	
↓	↓	0614	↓	↓	↓											2324	
↓	↓	1426	↓	↓	↓											2425	
↓	↓	2642	↓	↓	↓											2526	
↓	↓		↓	↓	↓											2641	
Relinquished by: <u>Matt Usuriello</u>			Date	Time	Received by: <u>M. Walter</u>												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

506021-134
Project Number

 Sampler Name (Printed)

Judd Stark
Project Manager, Report to

NORTHERN

**602 South 25th Street
Billings, Montana 59101**

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Catena Consulting
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105

Phone _____ Fax _____

[illegible]

506 021-134
Project Number

CHAIN OF CUSTODY RECORD

NORTHERN

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Ph: 406-254-7226 • Fax: 406-254-1389
nlabs@wtp.net**

Catena Consulting, LLC
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR	ALL										
			G	Soil													
5/11/07	3:30	070511-531-0006			1	X											
		0614				X											
		1423				X											
		2335				X											
		3551				X											
5/11/07	4:00	070511-532-0009				X											
		0923				X											
		2347				X											
Relinquished by: Matt Usarevella			Date	Time	Received by: M. Walter												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name <u>Caterina</u>	Date/Time Received <u>5/21/07</u> <u>1315</u> Date / Time
Project <u>SH Soil</u>	Received by <u>MW</u>
Laboratory Number(s) <u>060147, 165, 179, 219</u>	Carrier Name <u>HAND</u>
Checklist Completed by <u>MW</u> <u>6/18/07</u> Initials / Date	Sample Type <u>Soil</u>

	YES	NO		YES	NO
1. Shipping container in good condition?	<u>NA</u>	<u> </u>	14. pH check performed by: _____		
2. Custody seals present on shipping container? Condition: Intact _____ Broken _____	<u> </u>	<u> </u>	15. Metals bottle(s) pH <2?	<u>NA</u>	<u> </u>
3. Chain of custody present?	<u> </u>	<u> </u>	16. Nutrient bottle(s) pH <2?	<u> </u>	<u> </u>
4. Chain of custody signed when relinquished and received?	<u> </u>	<u> </u>	17. Cyanide bottle(s) pH >12?	<u> </u>	<u> </u>
5. Chain of custody agrees with sample labels?	<u> </u>	<u> </u>	18. Sulfide bottle(s) pH >9?	<u> </u>	<u> </u>
6. Custody seals on sample bottles? Condition: Intact _____ Broken _____	<u> </u>	<u> </u>	19. TOC bottle(s) pH <2?	<u> </u>	<u> </u>
7. Samples in proper container/bottle?*	<u> </u>	<u> </u>	20. Phenolics bottle(s) pH <2?	<u> </u>	<u> </u>
8. Sample containers intact?*	<u> </u>	<u> </u>	21. Oil & grease bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
9. Sufficient sample volume for indicated test?*	<u> </u>	<u> </u>	22. EPH/DRO bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
10. Ice/Frozen Blue Ice present in shipping container? (circle one) container temperature 1. _____ 2. _____ 3. _____ * (if <0 or >10)	<u> </u>	<u> </u>	23. Volatiles (VOA) pH <2? (checked by analyst)	<u> </u>	<u> </u>
11. All samples rec'd within holding time?*	<u> </u>	<u> </u>	24. Semivolatiles (525) pH <2? (checked by analyst)	<u> </u>	<u> </u>
12. VOA vials have zero headspace? * (if contains >5mm headspace)	<u>NA</u>	<u> </u>	25. Other test types	<u> </u>	<u> </u>
13. Trip Blank received?	<u> </u>	<u> </u>	26. Client contacted?	<u> </u>	<u> </u>
			27. Person contacted	<u> </u>	<u> </u>
			28. Date contacted	<u> </u>	<u> </u>

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: _____

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: February 22, 2007
JOB NUMBER: 07-911
PAGE: 1 of 68
INVOICE NO.: 6110127

REPORT OF: Soil Analysis – South Heart Power Project

CASE NARRATIVE:

On October 26, 2006, these soil samples (laboratory numbers 2006110127-1 through -54) were received in our laboratory for analysis. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "Diagnosis and Improvement of Saline and Alkali Soils"; American Society of Agronomy, "Methods of Soil Analysis" 1965, 1982, 1986; Western States Laboratory Proficiency Testing Program, "Soil & Plant Analytical Methods"; and American Society for Testing Materials, "Annual Book of ASTM Standards". The samples were air dried and processed to remove and measure the coarse fragment content.

For the batch 2006110127-1 through -20, two replicate pairs were prepared to evaluate the precision of the extraction and analysis process for cations. One of the two replicate pairs did not meet the quality control limits for precision for sodium. The measurements made for the laboratory control sample, method blank, matrix spikes and one replicate pair met the quality control limits. Based on the results of the quality control tests, the sodium concentration for "060823-T02-0916" is reported with the "J" qualifier, indicating it is an estimated concentration.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Notations used in this report include the following:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

Reviewed by



Kathleen A. Smit – Laboratory Manager

Cc: Attn: Stephanie Ross
Golder Associates, Inc.
44 Union Blvd.; Suite 300
Lakewood, CO 80228

Attachments: Chain of Custody (5)
Sample Receipt Checklist

nct

REPORT TO: ATTN: STEPHANIE ROSS
GOLDER ASSOCIATES, INC.
44 UNION BLVD.; SUITE 300
LAKEWOOD, CO 80228

DATE: February 6, 2007
JOB NUMBER: 06-933-5
PAGE: 1 of 68
INVOICE NO.: 6110127

REPORT OF: Soil Analysis – South Heart Power Project

CASE NARRATIVE:

On October 26, 2006, these soil samples (laboratory numbers 2006110127-1 through -54) were received in our laboratory for analysis. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "Diagnosis and Improvement of Saline and Alkali Soils"; American Society of Agronomy, "Methods of Soil Analysis" 1965, 1982, 1986; Western States Laboratory Proficiency Testing Program, "Soil & Plant Analytical Methods"; and American Society for Testing Materials, "Annual Book of ASTM Standards". The samples were air dried and processed to remove and measure the coarse fragment content.

For the batch 2006110127-1 through -20, two replicate pairs were prepared to evaluate the precision of the extraction and analysis process for cations. One of the two replicate pairs did not meet the quality control limits for precision for sodium. The measurements made for the laboratory control sample, method blank, matrix spikes and one replicate pair met the quality control limits. Based on the results of the quality control tests, the sodium concentration for "060823-T02-0916" is reported with the "J" qualifier, indicating it is an estimated concentration.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Notations used in this report include the following:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

Reviewed by



Kathleen A. Smit – Laboratory Manager

Cc: Judd Stark
Catena Consulting, LLC
P.O. Box 50538
716 Aronson Ave.
Billings, MT 59105

Attachments: Chain of Custody (5)
Sample Receipt Checklist

not

Northern Analytical Laboratories, Inc.

Page 2

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-1	Description: 060822-T06-0006	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.61	mmhos/cm	10.3.3	01/23/2007
Saturation	56.8	%	27b	01/05/2007
Sand	7.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	4.6	%	43-5.3	01/08/2007
Silt	52.5	%	15-5 Mod.	01/05/2007
Clay	40.0	%	15-5 Mod.	01/05/2007
Texture	Si Cl Lo	—	USDA	01/05/2007
Calcium Saturated Paste	3.65	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.57	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.49	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.28	—	20b	01/12/2007
Coarse Fragment Content	1.3	%	D422	01/25/2007
Organic Matter Dry Basis	3.91	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-2	Description: 060822-T06-0613	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10.3.3	01/23/2007
Saturation	49.6	%	27b	01/05/2007
Sand	5.0	%	15-5 Mod.	01/05/2007
Very Fine Sand	4.4	%	43-5.3.	01/08/2007
Silt	52.5	%	15-5 Mod.	01/05/2007
Clay	42.5	%	15-5 Mod.	01/05/2007
Texture	Silty Clay	—	USDA	01/05/2007
Calcium Saturated Paste	2.74	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.32	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	1.81	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.14	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.42	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-3	Description: 060822-T06-1323	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	3.93	mmhos/cm	10.3.3	01/23/2007
Saturation	54.1	%	27b	01/05/2007
Sand	7.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	7.0	%	43-5.3	01/08/2007
Silt	47.5	%	15-5 Mod.	01/05/2007
Clay	45.0	%	15-5 Mod.	01/05/2007
Texture	Silty Clay	---	USDA	01/05/2007
Calcium Saturated Paste	23.1	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	18.0	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	15.3	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	3.37	---	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.74	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-4	Description: 060822-T06-2337	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	6.92	mmhos/cm	10.3.3	01/23/2007
Saturation	56.8	%	27b	01/05/2007
Sand	6.3	%	15-5 Mod.	01/05/2007
Very Fine Sand	5.2	%	43-5.3	01/08/2007
Silt	46.2	%	15-5 Mod.	01/05/2007
Clay	47.5	%	15-5 Mod.	01/05/2007
Texture	Silty Clay	—	USDA	01/05/2007
Calcium Saturated Paste	21.9	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	25.5	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	48.1	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	9.88	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.56	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-5	Description: 060822-T06-3745	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.8	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	16.7	mmhos/cm	10.3.3	01/23/2007
Saturation	67.4	%	27b	01/05/2007
Sand	12.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	4.1	%	43-5.3	01/08/2007
Silt	45.0	%	15-5 Mod.	01/05/2007
Clay	42.5	%	15-5 Mod.	01/05/2007
Texture	Silty Clay	—	USDA	01/05/2007
Calcium Saturated Paste	21.3	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	107	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	156	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	19.5	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.19	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-6	Description: 060822-T08-0006	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	1.06	mmhos/cm	10.3.3	01/23/2007
Saturation	42.1	%	27b	01/05/2007
Sand	17.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	9.2	%	43-5.3	01/08/2007
Silt	60.0	%	15-5 Mod.	01/05/2007
Clay	22.5	%	15-5 Mod.	01/05/2007
Texture	Silt Loam	—	USDA	01/05/2007
Calcium Saturated Paste	7.06	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	3.22	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.54	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.24	—	20b	01/12/2007
Coarse Fragment Content	1.5	%	D422	01/25/2007
Organic Matter Dry Basis	2.11	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-7	Description: 060822-T08-0612	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	1.04	mmhos/cm	10.3.3	01/23/2007
Saturation	41.5	%	27b	01/05/2007
Sand	12.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	11.4	%	43-5.3	01/08/2007
Silt	70.0	%	15-5 Mod.	01/05/2007
Clay	17.5	%	15-5 Mod.	01/05/2007
Texture	Silt Loam	—	USDA	01/05/2007
Calcium Saturated Paste	0.74	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	3.05	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	6.23	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	4.52	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.84	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-8	Description: 060822-T08-1233	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10.3.3	01/23/2007
Saturation	41.8	%	27b	01/05/2007
Sand	13.8	%	15-5 Mod.	01/05/2007
Very Fine Sand	10.9	%	43-5.3	01/08/2007
Silt	63.7	%	15-5 Mod.	01/05/2007
Clay	22.5	%	15-5 Mod.	01/05/2007
Texture	Silt Loam	—	USDA	01/05/2007
Calcium Saturated Paste	1.82	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	3.36	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	4.10	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	2.55	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.08	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 10

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-9	Description: 060822-T08-3360	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/22/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	6.54	mmhos/cm	10.3.3	01/23/2007
Saturation	50.6	%	27b	01/05/2007
Sand	10.0	%	15-5 Mod.	01/05/2007
Very Fine Sand	9.4	%	43-5.3	01/08/2007
Silt	60.0	%	15-5 Mod.	01/05/2007
Clay	30.0	%	15-5 Mod.	01/05/2007
Texture	Si Cl Lo	---	USDA	01/05/2007
Calcium Saturated Paste	13.6	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	28.1	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	48.2	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	10.5	---	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.88	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-10 Description: 060823-T02-0009 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 08/23/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.7	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.32	mmhos/cm	10.3.3	01/23/2007
Saturation	43.1	%	27b	01/05/2007
Sand	45.0	%	15-5 Mod.	01/05/2007
Very Fine Sand	9.5	%	43-5.3	01/08/2007
Silt	32.5	%	15-5 Mod.	01/05/2007
Clay	22.5	%	15-5 Mod.	01/05/2007
Texture	Loam	—	USDA	01/05/2007
Calcium Saturated Paste	1.34	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.32	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.57	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.50	—	20b	01/12/2007
Coarse Fragment Content	0.2	%	D422	01/25/2007
Organic Matter Dry Basis	2.71	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-11 Description: 060823-T02-0916

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 08/23/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.37	mmhos/cm	10.3.3	01/23/2007
Saturation	37.2	%	27b	01/05/2007
Sand	42.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	4.4	%	43-5.3	01/08/2007
Silt	27.5	%	15-5 Mod.	01/05/2007
Clay	30.0	%	15-5 Mod.	01/05/2007
Texture	Clay Loam	—	USDA	01/05/2007
Calcium Saturated Paste	0.70	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	0.91	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	1.53J	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.70	—	20b	01/12/2007
Coarse Fragment Content	0.4	%	D422	01/25/2007
Organic Matter Dry Basis	2.67	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-12	Description: 060823-T02-1628	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	1.58	mmhos/cm	10.3.3	01/23/2007
Saturation	43.7	%	27b	01/05/2007
Sand	47.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	7.2	%	43-5.3	01/08/2007
Silt	20.0	%	15-5 Mod.	01/05/2007
Clay	32.5	%	15-5 Mod.	01/05/2007
Texture	Sa Cl Lo	---	USDA	01/05/2007
Calcium Saturated Paste	5.40	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	7.64	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	5.30	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	2.08	---	20b	01/12/2007
Coarse Fragment Content	0.4	%	D422	01/25/2007
Organic Matter Dry Basis	2.19	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-13	Description: 060823-T02-2837	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	3.89	mmhos/cm	10.3.3	01/23/2007
Saturation	44.7	%	27b	01/05/2007
Sand	27.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	9.3	%	43-5.3	01/08/2007
Silt	40.0	%	15-5 Mod.	01/05/2007
Clay	32.5	%	15-5 Mod.	01/05/2007
Texture	Clay Loam	—	USDA	01/05/2007
Calcium Saturated Paste	24.8	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	25.5	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	9.42	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.88	—	20b	01/12/2007
Coarse Fragment Content	0.5	%	D422	01/25/2007
Organic Matter Dry Basis	0.79	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-14	Description: 060823-T02-3760	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	3.76	mmhos/cm	10.3.3	01/23/2007
Saturation	48.5	%	27b	01/05/2007
Sand	32.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	13.2	%	43-5.3	01/08/2007
Silt	42.5	%	15-5 Mod.	01/05/2007
Clay	25.0	%	15-5 Mod.	01/05/2007
Texture	Loam	---	USDA	01/05/2007
Calcium Saturated Paste	23.4	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	24.1	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	9.49	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.95	---	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.85	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-15	Description: 060823-T03-0004	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10.3.3	01/23/2007
Saturation	64.1	%	27b	01/05/2007
Sand	13.8	%	15-5 Mod.	01/05/2007
Very Fine Sand	9.8	%	43-5.3	01/08/2007
Silt	28.7	%	15-5 Mod.	01/05/2007
Clay	57.5	%	15-5 Mod.	01/05/2007
Texture	Clay	—	USDA	01/05/2007
Calcium Saturated Paste	4.48	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.53	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.59	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.34	—	20b	01/12/2007
Coarse Fragment Content	0.2	%	D422	01/25/2007
Organic Matter Dry Basis	4.88	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-16 Description: 060823-T03-0410 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 08/23/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	2.31	mmhos/cm	10.3.3	01/23/2007
Saturation	94.5	%	27b	01/05/2007
Sand	17.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	14.6	%	43-5.3	01/08/2007
Silt	25.0	%	15-5 Mod.	01/05/2007
Clay	57.5	%	15-5 Mod.	01/05/2007
Texture	Clay	---	USDA	01/05/2007
Calcium Saturated Paste	25.5	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	6.44	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	1.28	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.32	---	20b	01/12/2007
Coarse Fragment Content	0.2	%	D422	01/25/2007
Organic Matter Dry Basis	4.40	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-17	Description: 060823-T03-1020	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	2.59	mmhos/cm	10.3.3	01/23/2007
Saturation	92.0	%	27b	01/05/2007
Sand	33.8	%	15-5 Mod.	01/05/2007
Very Fine Sand	20.6	%	43-5.3	01/08/2007
Silt	23.7	%	15-5 Mod.	01/05/2007
Clay	42.5	%	15-5 Mod.	01/05/2007
Texture	Clay	—	USDA	01/05/2007
Calcium Saturated Paste	26.7	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	8.31	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	2.12	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.51	—	20b	01/12/2007
Coarse Fragment Content	5.3	%	D422	01/25/2007
Organic Matter Dry Basis	3.98	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-18	Description: 060823-T03-2036	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	5.29	mmhos/cm	10.3.3	01/23/2007
Saturation	50.7	%	27b	01/05/2007
Sand	32.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	14.5	%	43-5.3	01/08/2007
Silt	35.0	%	15-5 Mod.	01/05/2007
Clay	32.5	%	15-5 Mod.	01/05/2007
Texture	Clay Loam	—	USDA	01/05/2007
Calcium Saturated Paste	24.7	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	35.9	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	20.8	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	3.79	—	20b	01/12/2007
Coarse Fragment Content	0.7	%	D422	01/25/2007
Organic Matter Dry Basis	3.14	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-19 Description: 060823-T03-3660

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 08/23/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	8.90	mmhos/cm	10.3.3	01/23/2007
Saturation	55.9	%	27b	01/05/2007
Sand	22.5	%	15-5 Mod.	01/05/2007
Very Fine Sand	16.8	%	43-5.3	01/08/2007
Silt	48.7	%	15-5 Mod.	01/05/2007
Clay	28.8	%	15-5 Mod.	01/05/2007
Texture	Clay Loam	—	USDA	01/05/2007
Calcium Saturated Paste	21.0	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	80.6	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	42.1	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	5.90	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.22	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-20	Description: 060823-T04-0006	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.69	mmhos/cm	10.3.3	01/23/2007
Saturation	49.8	%	27b	01/05/2007
Sand	10.0	%	15-5 Mod.	01/05/2007
Very Fine Sand	5.7	%	43-5.3	01/08/2007
Silt	60.0	%	15-5 Mod.	01/05/2007
Clay	30.0	%	15-5 Mod.	01/05/2007
Texture	Si Cl Lo	—	USDA	01/05/2007
Calcium Saturated Paste	3.63	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.63	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.53	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.30	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	4.84	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-21 Description: 060823-T04-0617

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 08/23/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.54	mmhos/cm	10.3.3	01/19/2007
Saturation	45.8	%	27b	01/09/2007
Sand	11.3	%	15-5 Mod.	01/08/2007
Very Fine Sand	8.6	%	43-5.3	01/09/2007
Silt	52.4	%	15-5 Mod.	01/08/2007
Clay	36.3	%	15-5 Mod.	01/08/2007
Texture	Si Cl Lo	—	USDA	01/08/2007
Calcium Saturated Paste	2.51	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.71	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	1.43	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.98	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.86	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-22	Description: 060823-T04-1726	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.77	mmhos/cm	10.3.3	01/19/2007
Saturation	46.5	%	27b	01/09/2007
Sand	15.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	13.1	%	43-5.3	01/09/2007
Silt	40.0	%	15-5 Mod.	01/08/2007
Clay	45.0	%	15-5 Mod.	01/08/2007
Texture	Silty Clay	—	USDA	01/08/2007
Calcium Saturated Paste	1.23	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.04	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	5.25	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	4.93	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.98	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-23	Description: 060823-T04-2640	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	5.14	mmhos/cm	10.3.3	01/19/2007
Saturation	58.9	%	27b	01/09/2007
Sand	5.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	3.4	%	43-5.3	01/09/2007
Silt	48.7	%	15-5 Mod.	01/08/2007
Clay	46.3	%	15-5 Mod.	01/08/2007
Texture	Silty Clay	—	USDA	01/08/2007
Calcium Saturated Paste	8.45	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	16.4	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	38.8	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	11.0	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.51	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-24	Description: 060823-T04-4060	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 08/23/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.6	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	11.5	mmhos/cm	10.3.3	01/19/2007
Saturation	56.8	%	27b	01/09/2007
Sand	5.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	2.3	%	43-5.3	01/09/2007
Silt	50.0	%	15-5 Mod.	01/08/2007
Clay	45.0	%	15-5 Mod.	01/08/2007
Texture	Silty Clay	---	USDA	01/08/2007
Calcium Saturated Paste	22.3	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	64.1	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	85.6	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	13.0	---	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.27	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-25	Description: 060920-T01-0009	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.7	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.49	mmhos/cm	10.3.3	01/19/2007
Saturation	56.1	%	27b	01/09/2007
Sand	20.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	9.3	%	43-5.3	01/09/2007
Silt	56.2	%	15-5 Mod.	01/08/2007
Clay	23.8	%	15-5 Mod.	01/08/2007
Texture	Silt Loam	—	USDA	01/08/2007
Calcium Saturated Paste	2.82	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.78	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.24	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	<0.10	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-26	Description: 060920-T01-0921	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.50	mmhos/cm	10.3.3	01/19/2007
Saturation	46.4	%	27b	01/09/2007
Sand	15.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	8.0	%	43-5.3	01/09/2007
Silt	53.7	%	15-5 Mod.	01/08/2007
Clay	31.3	%	15-5 Mod.	01/08/2007
Texture	Si Cl Lo	---	USDA	01/08/2007
Calcium Saturated Paste	2.72	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.97	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.85	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.56	---	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.10	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-27	Description: 060920-T01-2136	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.72	mmhos/cm	10.3.3	01/19/2007
Saturation	47.0	%	27b	01/09/2007
Sand	15.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	6.1	%	43-5.3	01/09/2007
Silt	51.2	%	15-5 Mod.	01/08/2007
Clay	33.8	%	15-5 Mod.	01/08/2007
Texture	Si Cl Lo	----	USDA	01/08/2007
Calcium Saturated Paste	2.82	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.45	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	2.30	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.42	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.19	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-28 Description: 060920-T01-3647

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/20/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.97	mmhos/cm	10.3.3	01/19/2007
Saturation	47.1	%	27b	01/09/2007
Sand	22.5	%	15-5 Mod.	01/08/2007
Very Fine Sand	10.8	%	43-5.3	01/09/2007
Silt	42.5	%	15-5 Mod.	01/08/2007
Clay	35.0	%	15-5 Mod.	01/08/2007
Texture	Clay Loam	—	USDA	01/08/2007
Calcium Saturated Paste	3.36	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	3.07	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	3.87	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	2.16	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.22	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-29	Description: 060920-T01-4760	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	2.66	mmhos/cm	10.3.3	01/19/2007
Saturation	46.9	%	27b	01/09/2007
Sand	18.8	%	15-5 Mod.	01/08/2007
Very Fine Sand	8.8	%	43-5.3	01/09/2007
Silt	43.7	%	15-5 Mod.	01/08/2007
Clay	37.5	%	15-5 Mod.	01/08/2007
Texture	Si Cl Lo	---	USDA	01/08/2007
Calcium Saturated Paste	11.6	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	11.3	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	10.6	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	3.12	---	20b	01/12/2007
Coarse Fragment Content	0.4	%	D422	01/25/2007
Organic Matter Dry Basis	0.23	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-30 Description: 060921-T01-0006 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/21/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.82	mmhos/cm	10.3.3	01/19/2007
Saturation	48.7	%	27b	01/09/2007
Sand	20.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	14.1	%	43-5.3	01/09/2007
Silt	47.5	%	15-5 Mod.	01/08/2007
Clay	32.5	%	15-5 Mod.	01/08/2007
Texture	Si Cl Lo	—	USDA	01/08/2007
Calcium Saturated Paste	4.70	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.77	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.41	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.21	—	20b	01/12/2007
Coarse Fragment Content	1.9	%	D422	01/25/2007
Organic Matter Dry Basis	0.27	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-31 Description: 060921-T01-0614

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/21/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.34	mmhos/cm	10.3.3	01/19/2007
Saturation	50.0	%	27b	01/09/2007
Sand	23.8	%	15-5 Mod.	01/08/2007
Very Fine Sand	21.0	%	43-5.3	01/09/2007
Silt	41.2	%	15-5 Mod.	01/08/2007
Clay	35.0	%	15-5 Mod.	01/08/2007
Texture	Clay Loam	—	USDA	01/08/2007
Calcium Saturated Paste	1.66	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.35	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.49	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.40	—	20b	01/12/2007
Coarse Fragment Content	0.2	%	D422	01/25/2007
Organic Matter Dry Basis	0.50	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-32	Description: 060921-T01-1427	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/21/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.38	mmhos/cm	10.3.3	01/19/2007
Saturation	44.5	%	27b	01/09/2007
Sand	32.5	%	15-5 Mod.	01/08/2007
Very Fine Sand	22.4	%	43-5.3	01/09/2007
Silt	41.2	%	15-5 Mod.	01/08/2007
Clay	26.3	%	15-5 Mod.	01/08/2007
Texture	Loam	—	USDA	01/08/2007
Calcium Saturated Paste	0.64	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	0.79	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	2.33	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	2.76	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.36	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-33 Description: 060921-T01-2736 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/21/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	1.27	mmhos/cm	10.3.3	01/19/2007
Saturation	52.1	%	27b	01/09/2007
Sand	37.5	%	15-5 Mod.	01/08/2007
Very Fine Sand	14.8	%	43-5.3	01/09/2007
Silt	37.5	%	15-5 Mod.	01/08/2007
Clay	25.0	%	15-5 Mod.	01/08/2007
Texture	Loam	—	USDA	01/08/2007
Calcium Saturated Paste	0.67	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.32	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	10.0	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	10.0	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.22	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-34	Description: 060921-T01-3660	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/21/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.7	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	7.63	mmhos/cm	10.3.3	01/19/2007
Saturation	46.2	%	27b	01/09/2007
Sand	40.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	26.2	%	43-5.3	01/09/2007
Silt	40.0	%	15-5 Mod.	01/08/2007
Clay	20.0	%	15-5 Mod.	01/08/2007
Texture	Loam	—	USDA	01/08/2007
Calcium Saturated Paste	15.6	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	36.1	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	53.4	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	10.5	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.23	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-35 Description: 060926-T01-0006 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	1.06	mmhos/cm	10.3.3	01/19/2007
Saturation	49.6	%	27b	01/09/2007
Sand	27.5	%	15-5 Mod.	01/08/2007
Very Fine Sand	12.4	%	43-5.3	01/09/2007
Silt	38.7	%	15-5 Mod.	01/08/2007
Clay	33.8	%	15-5 Mod.	01/08/2007
Texture	Clay Loam	—	USDA	01/08/2007
Calcium Saturated Paste	5.94	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	5.46	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.47	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.20	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.28	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-36 Description: 060926-T01-0613

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.47	mmhos/cm	10.3.3	01/19/2007
Saturation	45.3	%	27b	01/09/2007
Sand	25.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	16.2	%	43-5.3	01/09/2007
Silt	28.7	%	15-5 Mod.	01/08/2007
Clay	46.3	%	15-5 Mod.	01/08/2007
Texture	Clay	—	USDA	01/08/2007
Calcium Saturated Paste	2.27	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.28	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.37	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.24	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.38	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-37 Description: 060926-T01-1328

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.50	mmhos/cm	10.3.3	01/19/2007
Saturation	51.2	%	27b	01/09/2007
Sand	18.8	%	15-5 Mod.	01/08/2007
Very Fine Sand	12.2	%	43-5.3	01/09/2007
Silt	31.2	%	15-5 Mod.	01/08/2007
Clay	50.0	%	15-5 Mod.	01/08/2007
Texture	Clay	----	USDA	01/08/2007
Calcium Saturated Paste	1.85	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.27	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	1.26	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.88	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.33	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-38 Description: 060926-T01-2841 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	1.53	mmhos/cm	10.3.3	01/19/2007
Saturation	55.6	%	27b	01/09/2007
Sand	15.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	9.8	%	43-5.3	01/09/2007
Silt	35.0	%	15-5 Mod.	01/08/2007
Clay	50.0	%	15-5 Mod.	01/08/2007
Texture	Clay	---	USDA	01/08/2007
Calcium Saturated Paste	2.70	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	4.06	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	8.76	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	4.77	---	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.36	%	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-39 Description: 060926-T01-4160 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	7.27	mmhos/cm	10.3.3	01/19/2007
Saturation	59.3	%	27b	01/09/2007
Sand	11.3	%	15-5 Mod.	01/08/2007
Very Fine Sand	6.3	%	43-5.3	01/09/2007
Silt	38.7	%	15-5 Mod.	01/08/2007
Clay	50.0	%	15-5 Mod.	01/08/2007
Texture	Clay	—	USDA	01/08/2007
Calcium Saturated Paste	23.5	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	45.4	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	39.1	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	6.67	—	20b	01/12/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	0.42	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-40 Description: 060926-T02-0006

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.5	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	1.12	mmhos/cm	10.3.3	01/19/2007
Saturation	45.6	%	27b	01/09/2007
Sand	25.0	%	15-5 Mod.	01/08/2007
Very Fine Sand	17.0	%	43-5.3	01/09/2007
Silt	48.7	%	15-5 Mod.	01/08/2007
Clay	26.3	%	15-5 Mod.	01/08/2007
Texture	Loam	—	USDA	01/08/2007
Calcium Saturated Paste	5.22	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	3.47	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.77	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.37	—	20b	01/12/2007
Coarse Fragment Content	0.6	%	D422	01/25/2007
Organic Matter Dry Basis	0.16	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-41	Description: 060926-T02-0613	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/26/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	01/22/2007
Saturation	44.9	%	27b	01/10/2007
Sand	23.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	13.4	%	43-5.3	01/11/2007
Silt	48.7	%	15-5 Mod.	01/09/2007
Clay	27.5	%	15-5 Mod.	01/09/2007
Texture	Clay Loam	---	USDA	01/09/2007
Calcium Saturated Paste	2.94	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.86	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.39	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.25	---	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.63	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-42 Description: 060926-T02-1324

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.33	mmhos/cm	10.3.3	01/22/2007
Saturation	43.5	%	27b	01/10/2007
Sand	18.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	14.7	%	43-5.3	01/11/2007
Silt	54.9	%	15-5 Mod.	01/09/2007
Clay	26.3	%	15-5 Mod.	01/09/2007
Texture	Silt Loam	---	USDA	01/09/2007
Calcium Saturated Paste	1.50	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.46	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.45	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.37	---	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.69	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-43	Description: 060926-T02-2460	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/26/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.66	mmhos/cm	10.3.3	01/22/2007
Saturation	43.4	%	27b	01/10/2007
Sand	22.5	%	15-5 Mod.	01/09/2007
Very Fine Sand	19.4	%	43-5.3	01/11/2007
Silt	60.0	%	15-5 Mod.	01/09/2007
Clay	17.5	%	15-5 Mod.	01/09/2007
Texture	Silt Loam	—	USDA	01/09/2007
Calcium Saturated Paste	1.18	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	3.20	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	2.13	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	1.44	—	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.10	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-44 Description: 060926-T04-0007

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.4	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.90	mmhos/cm	10.3.3	01/22/2007
Saturation	42.9	%	27b	01/10/2007
Sand	28.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	7.2	%	43-5.3	01/11/2007
Silt	47.4	%	15-5 Mod.	01/09/2007
Clay	23.8	%	15-5 Mod.	01/09/2007
Texture	Loam	---	USDA	01/09/2007
Calcium Saturated Paste	4.04	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.99	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.13	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/13/2007
Coarse Fragment Content	3.0	%	D422	01/25/2007
Organic Matter Dry Basis	3.04	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-45 Description: 060926-T04-0712 Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.80	mmhos/cm	10.3.3	01/22/2007
Saturation	45.1	%	27b	01/10/2007
Sand	28.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	6.2	%	43-5.3	01/11/2007
Silt	49.9	%	15-5 Mod.	01/09/2007
Clay	21.3	%	15-5 Mod.	01/09/2007
Texture	Loam	—	USDA	01/09/2007
Calcium Saturated Paste	3.50	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.76	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.08	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/13/2007
Coarse Fragment Content	3.6	%	D422	01/25/2007
Organic Matter Dry Basis	2.90	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-46 Description: 060926-T04-1220 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.8	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.51	mmhos/cm	10.3.3	01/22/2007
Saturation	43.9	%	27b	01/10/2007
Sand	23.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	6.0	%	43-5.3	01/11/2007
Silt	49.9	%	15-5 Mod.	01/09/2007
Clay	26.3	%	15-5 Mod.	01/09/2007
Texture	Loam	---	USDA	01/09/2007
Calcium Saturated Paste	2.57	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.25	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.12	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/13/2007
Coarse Fragment Content	3.3	%	D422	01/25/2007
Organic Matter Dry Basis	2.60	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-47 Description: 060926-T04-2060

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/26/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.57	mmhos/cm	10.3.3	01/22/2007
Saturation	40.5	%	27b	01/10/2007
Sand	51.3	%	15-5 Mod.	01/09/2007
Very Fine Sand	6.2	%	43-5.3	01/11/2007
Silt	24.9	%	15-5 Mod.	01/09/2007
Clay	23.8	%	15-5 Mod.	01/09/2007
Texture	Sa Cl Lo	—	USDA	01/09/2007
Calcium Saturated Paste	3.81	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.52	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.30	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/13/2007
Coarse Fragment Content	34.7	%	D422.	01/25/2007
Organic Matter Dry Basis	3.18	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-48 Description: 060927-T01-0007 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/27/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.4	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.65	mmhos/cm	10.3.3	01/22/2007
Saturation	43.1	%	27b	01/10/2007
Sand	46.3	%	15-5 Mod.	01/09/2007
Very Fine Sand	9.6	%	43-5.3	01/11/2007
Silt	36.2	%	15-5 Mod.	01/09/2007
Clay	17.5	%	15-5 Mod.	01/09/2007
Texture	Loam	—	USDA	01/09/2007
Calcium Saturated Paste	3.07	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.60	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.15	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	3.24	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-49	Description: 060927-T01-0711	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: THOMPSON	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.5	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.29	mmhos/cm	10.3.3	01/22/2007
Saturation	37.3	%	27b	01/10/2007
Sand	48.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	11.6	%	43-5.3	01/11/2007
Silt	31.2	%	15-5 Mod.	01/09/2007
Clay	20.0	%	15-5 Mod.	01/09/2007
Texture	Loam	---	USDA	01/09/2007
Calcium Saturated Paste	1.26	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	0.72	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.19	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.05	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-50 Description: 060927-T01-1124

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/27/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.5	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.26	mmhos/cm	10.3.3	01/22/2007
Saturation	39.3	%	27b	01/10/2007
Sand	31.3	%	15-5 Mod.	01/09/2007
Very Fine Sand	1.0	%	43-5.3	01/11/2007
Silt	43.7	%	15-5 Mod.	01/09/2007
Clay	25.0	%	15-5 Mod.	01/09/2007
Texture	Loam	---	USDA	01/09/2007
Calcium Saturated Paste	1.33	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	0.93	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.27	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.25	---	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	1.90	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-51 Description: 060927-T01-2436 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/27/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.47	mmhos/cm	10.3.3	01/22/2007
Saturation	52.4	%	27b	01/10/2007
Sand	23.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	3.6	%	43-5.3	01/11/2007
Silt	43.7	%	15-5 Mod.	01/09/2007
Clay	32.5	%	15-5 Mod.	01/09/2007
Texture	Clay Loam	---	USDA	01/09/2007
Calcium Saturated Paste	2.47	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.71	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.91	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.63	---	20b	01/13/2007
Coarse Fragment Content	2.5	%	D422	01/25/2007
Organic Matter Dry Basis	1.88	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-52 Description: 060927-T02-0005 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/27/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.73	mmhos/cm	10.3.3	01/22/2007
Saturation	61.1	%	27b	01/10/2007
Sand	8.8	%	15-5 Mod.	01/09/2007
Very Fine Sand	6.4	%	43-5.3	01/11/2007
Silt	49.9	%	15-5 Mod.	01/09/2007
Clay	41.3	%	15-5 Mod.	01/09/2007
Texture	Silty Clay	—	USDA	01/09/2007
Calcium Saturated Paste	4.83	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	2.29	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.79	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.42	—	20b	01/13/2007
Coarse Fragment Content	1.0	%	D422	01/25/2007
Organic Matter Dry Basis	2.30	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-53 Description: 060927-T02-0514

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/27/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	3.11	mmhos/cm	10.3.3	01/22/2007
Saturation	60.6	%	27b	01/10/2007
Sand	12.5	%	15-5 Mod.	01/09/2007
Very Fine Sand	8.3	%	43-5.3	01/11/2007
Silt	31.2	%	15-5 Mod.	01/09/2007
Clay	56.3	%	15-5 Mod.	01/09/2007
Texture	Clay	—	USDA	01/09/2007
Calcium Saturated Paste	30.7	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	12.3	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	2.63	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.57	—	20b	01/13/2007
Coarse Fragment Content	<0.1	%	D422	01/25/2007
Organic Matter Dry Basis	2.61	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-54 Description: 060927-T02-1460

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/27/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	15.1	mmhos/cm	10.3.3	01/22/2007
Saturation	83.4	%	27b	01/10/2007
Sand	5.0	%	15-5 Mod.	01/09/2007
Very Fine Sand	2.0	%	43-5.3	01/11/2007
Silt	50.0	%	15-5 Mod.	01/09/2007
Clay	45.0	%	15-5 Mod.	01/09/2007
Texture	Silty Clay	---	USDA	01/09/2007
Calcium Saturated Paste	23.0	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	103	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	124	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	15.6	---	20b	01/17/2007
Coarse Fragment Content	0.3	%	D422	01/25/2007
Organic Matter Dry Basis	1.14	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-55 Description: DUPLICATE OF 2006110127-1 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 08/22/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.63	mmhos/cm	10.3.3	01/23/2007
Saturation	55.6	%	27b	01/05/2007
Sand	8.8	%	15-5 Mod.	01/05/2007
Very Fine Sand	5.2	%	43-5.3	01/08/2007
Silt	51.2	%	15-5 Mod.	01/05/2007
Clay	40.0	%	15-5 Mod.	01/05/2007
Texture	Si Cl Lo	—	USDA	01/05/2007
Calcium Saturated Paste	3.53	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.41	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.46	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.27	—	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	NA	—	—	—
Sample Preparation	—	—	3-5.1	—

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-56 Description: DUPLICATE OF 2006110127-11 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 08/23/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	0.45	mmhos/cm	10.3.3	01/23/2007
Saturation	37.2	%	27b	01/05/2007
Sand	45.0	%	15-5 Mod.	01/05/2007
Very Fine Sand	5.2	%	43-5.3	01/08/2007
Silt	25.0	%	15-5 Mod.	01/05/2007
Clay	30.0	%	15-5 Mod.	01/05/2007
Texture	Clay Loam	—	USDA	01/05/2007
Calcium Saturated Paste	0.95	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.26	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	2.08 (6)	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.98	—	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.54	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-57	Description: METHOD BLANK FOR 2006110127-1	Matrix: WATER
Date Received: —	TO 20	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/23/2007
Saturation	NA	—	—	—
Sand	NA	—	—	—
Very Fine Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	<0.10	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	—

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-58 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ---- FOR 2006110127-1 TO 20
 Date Collected: ---- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	102	% [97-103]	10.3.2	01/06/2007
Electrical Conductivity Saturated Paste	133	% [65-135]	10.3.3	01/23/2007
Saturation	98	% [89-111]	27b	01/05/2007
Sand	105	% [76-124]	15-5 Mod.	01/05/2007
Very Fine Sand	17.0	%	43-5.3	01/08/2007
Silt	83	% [69-130]	15-5 Mod.	01/05/2007
Clay	108	% [73-126]	15-5 Mod.	01/05/2007
Texture	Clay Loam	---	USDR	01/05/2007
Calcium Saturated Paste	95	% [62-138]	3-5.4	01/17/2007
Magnesium Saturated Paste	94	% [56-144]	3-5.4	01/17/2007
Sodium Saturated Paste	87	% [80-120]	3-5.4	01/17/2007
Sodium Adsorption Ratio	88	% [85-115]	20b	01/17/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	105	% [64-136]	S-9.20	01/17/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-59 Description: DUPLICATE OF 2006110127-21 Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 08/23/2006

Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10.3.3	01/19/2007
Saturation	46.7	%	27b	01/09/2007
Sand	12.5	%	15-5 Mod.	01/08/2007
Very Fine Sand	9.8	%	43-5.3	01/09/2007
Silt	51.2	%	15-5 Mod.	01/08/2007
Clay	36.3	%	15-5 Mod.	01/08/2007
Texture	Si Cl Lo	—	USDA	01/08/2007
Calcium Saturated Paste	2.92	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	2.00	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	1.59	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	1.01	—	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.88	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-60 Description: DUPLICATE OF 2006110127-31 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/21/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.37	mmhos/cm	10.3.3	01/19/2007
Saturation	51.2	%	27b	01/09/2007
Sand	23.8	%	15-5 Mod.	01/08/2007
Very Fine Sand	22.6	%	43-5.3	01/09/2007
Silt	43.7	%	15-5 Mod.	01/08/2007
Clay	32.5	%	15-5 Mod.	01/08/2007
Texture	Clay Loam	—	USDA	01/08/2007
Calcium Saturated Paste	1.85	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	1.53	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	0.56	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	0.43	—	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	0.51	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-61	Description: METHOD BLANK FOR 2006110127-21 TO 40	Matrix: WATER
Date Received: —		
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/19/2007
Saturation	NA	—	—	—
Sand	NA	—	—	—
Very Fine Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/12/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/12/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/12/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	<0.10	%	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-62	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: —	FOR 2006110127-21 TO 40	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	100	% [97-103]	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	118	% [56-144]	10.3.3	01/19/2007
Saturation	98	% [70-130]	27b	01/09/2007
Sand	77	% [76-124]	15-5 Mod.	01/08/2007
Very Fine Sand	NA	—	—	—
Silt	108	% [69-130]	15-5 Mod.	01/08/2007
Clay	108	% [73-126]	15-5 Mod.	01/08/2007
Texture	Clay Loam	—	USDA	01/08/2007
Calcium Saturated Paste	103	% [76-124]	3-5.4	01/12/2007
Magnesium Saturated Paste	105	% [79-121]	3-5.4	01/12/2007
Sodium Saturated Paste	95	% [61-139]	3-5.4	01/12/2007
Sodium Adsorption Ratio	94	% [79-121]	20b	01/12/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	112	% [64-136]	S-9.20	01/17/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-63 Description: DUPLICATE OF 2006110127-41 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/26/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	01/22/2007
Saturation	45.0	%	27b	01/10/2007
Sand	25.0	%	15-5 Mod.	01/09/2007
Very Fine Sand	15.6	%	43-5.3	01/11/2007
Silt	47.5	%	15-5 Mod.	01/09/2007
Clay	27.5	%	15-5 Mod.	01/09/2007
Texture	Clay Loam	—	USDA	01/09/2007
Calcium Saturated Paste	2.78	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.79	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.37	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.24	—	20b	01/13/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.61	%	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-64 Description: DUPLICATE OF 2006110127-51 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/27/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	0.46	mmhos/cm	10.3.3	01/22/2007
Saturation	51.0	%	27b	01/10/2007
Sand	26.3	%	15-5 Mod.	01/09/2007
Very Fine Sand	6.0	%	43-5.3	01/11/2007
Silt	43.7	%	15-5 Mod.	01/09/2007
Clay	30.0	%	15-5 Mod.	01/09/2007
Texture	Clay Loam	----	USDA	01/09/2007
Calcium Saturated Paste	2.45	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	1.74	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	0.91	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	0.63	---	20b	01/13/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	1.83	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-65	Description: METHOD BLANK FOR	Matrix: WATER
Date Received: —	2006110127-41 TO 54	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	---	---	---
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/22/2007
Saturation	NA	---	---	---
Sand	NA	---	---	---
Very Fine Sand	NA	---	---	---
Silt	NA	---	---	---
Clay	NA	---	---	---
Texture	NA	---	---	---
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/13/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/13/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/13/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/13/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	<0.10	%	S-9.20	01/22/2007
Sample Preparation	---	---	3-5.1	---

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-66 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ——— FOR 2006110127-41 TO 54
 Date Collected: ——— Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	100	% [97-103]	10.3.2	01/13/2007
Electrical Conductivity Saturated Paste	122	% [56-144]	10.3.3	01/22/2007
Saturation	99	% [70-130]	27b	01/10/2007
Sand	85	% [76-124]	15-5 Mod.	01/09/2007
Very Fine Sand	NA	—	—	—
Silt	105	% [69-130]	15-5 Mod.	01/09/2007
Clay	101	% [73-126]	15-5 Mod.	01/09/2007
Texture	Clay Loam	—	USDA	01/09/2007
Calcium Saturated Paste	106	% [76-124]	3-5.4	01/13/2007
Magnesium Saturated Paste	111	% [79-121]	3-5.4	01/13/2007
Sodium Saturated Paste	119	% [61-139]	3-5.4	01/13/2007
Sodium Adsorption Ratio	114	% [79-121]	20b	01/13/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	129	% [64-136]	S-9.20	01/22/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110127-67 Description: DUPLICATE OF 2006110127-3 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 08/22/2006 Collected by: THOMPSON

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	NA	—	—	—
Saturation	NA	—	—	—
Sand	NA	—	—	—
Very Fine Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Calcium Saturated Paste	NA	—	—	—
Magnesium Saturated Paste	NA	—	—	—
Sodium Saturated Paste	NA	—	—	—
Sodium Adsorption Ratio	NA	—	—	—
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	1.70	%	2-9.20	01/17/2007
Sample Preparation	NA	—	—	—

South Heart
Project or Site Name

Project Number

Thompson
Sampler Name (Printed)

Judith Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
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nlabs@wtp.net

Catena
Report to (Firm or Agency)

716 Aronson
Address

Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER
8/22/06	1300	060822-T06-0006	G	Soil	1												1
↓	↓	-0613	↓	↓	↓												2
		-1323														3	
		-2337														4	
		-3745														5	
	1530	060822-T08-0006															6
↓	↓	-0612	↓	↓	↓												7
		-1233															8 ✓
		-3360															9 ✓
8/23/06	1400	060823-T02-0009															10 ✓
↓	↓	-0916	↓	↓	↓												11 ✓
		-1628															
Relinquished by: <u>Cook L. Murch</u>			Date: <u>8/22/06</u>	Time: <u>1800</u>	Received by: <u>[Signature]</u>										0006 may be labeled OK att 11/15 White bags 10/11		
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

South Heart
Project or Site Name

Project Number

Thompson
Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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Report to (Firm or Agency)

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Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER
8/23/06	1400	060823-T02-2837	G	Soil	1											\$ 060823-T02-3760-14 ✓	13 ✓
	1500	060823-T03-0004															15 ✓
		-0410															16 ✓
		-1020															17 ✓
		-2036															18 ✓
		-3660															19 ✓
	1600	060823-T04-0006															20 ✓
		-0617															21 ✓
		-1726															22 ✓
		-2640															23 ✓
		-4060															24 ✓
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

2 of 11

Project or Site Name
 Project Number
 Sampler Name (Printed)
 Project Manager, Report to

CHAIN OF CUSTODY RECORD



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 nlabs@wtp.net

Report to (Firm or Agency)
 Address
 City State Zip
 Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	LAB NUMBER
9/20/06	1330	060920-T01-0009	G	Soil	1													2006 110127	
		0921																25 ✓	
		2136																26 ✓	
		3647																27 ✓	
		4760																28 ✓	
9/21/06	1000	060921-T01-0006																29 ✓	
		-0614																30 ✓	
		-1427																31 ✓	
		-2736																32 ✓	
		-3660																33 ✓	
9/26/06	1300	060926-T01-0006															No Sample	34 ✓	
		0618															No Sample		
Relinquished by: Bob Z. March			Date	Time	Received by: [Signature]														
Relinquished by:			Date	Time	Received by:														
Relinquished by:			Date	Time	Received by:														

3 of 11

South Heart
Project or Site Name

Project Number

Thompson
Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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Analytical Laboratories, Inc.

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Report to (Firm or Agency)

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Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER
9/26/00	1300	060926-T01-1830	G	Soil	1											No Sample	3
		3042														No Sample	
		-4260														No Sample	
	0900	060926-T01-0006															35 ✓
		-0613															36 ✓
		-1328															37 ✓
		-2841															38 ✓
		-4160															39 ✓
	1400	060926-T02-0006															40 ✓
		-0613															41 ✓
		-1324															42 ✓
		-2466															43 ✓
Relinquished by: Cook L. Murch			Date: 10/26/00	Time: 1800	Received by: [Signature]												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

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South Heart
Project or Site Name

Project Number

Thompson
Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

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nlabs@wtp.net

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Report to (Firm or Agency)
716 Aranson Av.
Address
Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER
9/26/06	1600	060926-T04-0007	G	Soil	1											Dup 1 155	44 ✓
	↓	-0712														Dup 11 156	45 ✓
	↓	-1220														MB 57	46 ✓
	↓	-2060														HCS 58	47 ✓
9/27/06	1000	060927-T01-0007														Dup 21 59	48 ✓
	↓	-0711														Dup 31 60	49 ✓
	↓	-1124														MB 61	50 ✓
	↓	-2436														HCS 62	51 ✓
	1600	060927-T02-0005														Dup 41 63	52 ✓
	↓	-0514														Dup 51 64	53 ✓
	↓	1400														MB 65	54 ✓
	↓	-4400														HCS 66	
Relinquished by: Cook Z. Murch 10			Date: 26/06	Time: 1800	Received by: [Signature]												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

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SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name Holdre Date/Time Received 10/26/06 1800
Project S. Heart Soil Received by KS
Laboratory Number(s) 110127-130 Carrier Name HAND
Checklist Completed by 10/27/06 MLU Sample Type Soils
Initials / Date

	YES	NO		YES	NO
1. Shipping container in good condition?	☒	☐	14. pH check performed by: _____		
2. Custody seals present on shipping container? _____ Condition: Intact _____ Broken _____	☐	☒	15. Metals bottle(s) pH <2? <u>NA</u>		
3. Chain of custody present?	☒	☐	16. Nutrient bottle(s) pH <2?		
4. Chain of custody signed when relinquished and received?	☒	☐	17. Cyanide bottle(s) pH >12?		
5. Chain of custody agrees with sample labels?	☒	☒	18. Sulfide bottle(s) pH >9?		
6. Custody seals on sample bottles? _____ Condition: Intact _____ Broken _____	☐	☒	19. TOC bottle(s) pH <2?		
7. Samples in proper container/bottle?*	☒	☐	20. Phenolics bottle(s) pH <2?		
8. Sample containers intact?*	☒	☐	21. Oil & grease bottle(s) pH <2? (checked by analyst)		
9. Sufficient sample volume for indicated test?*	☒	☐	22. EPH/DRO bottle(s) pH <2? (checked by analyst)		
10. Ice/Frozen Blue Ice present in shipping container? (circle one) <u>>10°C</u> container temperature 1. _____ 2. <u>18°C</u> 3. <u>2/5/07</u> * (if <0 or >10)		☒	23. Volatiles (VOA) pH <2? (checked by analyst)		
11. All samples rec'd within holding time?*	☒	☐	24. Semivolatiles (525) pH <2? (checked by analyst)		
12. VOA vials have zero headspace? * (if contains >5mm headspace)	<u>NA</u>		25. Other test types		
13. Trip Blank received?	<u>X</u>		26. Client contacted?		
			27. Person contacted		
			28. Date contacted		

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: #5 see notes on Co/C's

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: February 22, 2007
JOB NUMBER: 07-911
PAGE: 1 of 57
INVOICE NO.: 6110129

REPORT OF: Soil Analysis – South Heart Power Project

CASE NARRATIVE:

On October 26, 2006, these soil samples (laboratory numbers 2006110129-1 through -44) were received in our laboratory for analysis. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "Diagnosis and Improvement of Saline and Alkali Soils"; American Society of Agronomy, "Methods of Soil Analysis" 1965, 1982, 1986; Western States Laboratory Proficiency Testing Program, "Soil & Plant Analytical Methods"; and American Society for Testing Materials, "Annual Book of ASTM Standards". The samples were air dried and processed to remove and measure the coarse fragment content.

For the batch 2006110129-1 through -20, the recovery of magnesium from the laboratory control sample exceeded the quality control limit published by the manufacturer of the reference material. The recovery of magnesium was 124% of the true value while the published control limits are 79% to 121%. The measurements made for the water laboratory control sample, method blank, matrix spikes and both replicate pairs met the quality control limits. Based on the results of the quality control tests, the magnesium concentrations for samples 2006110129-1 through -20 are reported with the "J" qualifier, indicating they are estimated concentrations which may be biased high.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test. RPD is the abbreviation for relative percent difference.

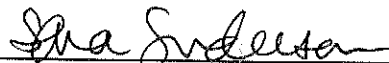
The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Notations used in this report include the following:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

Reviewed by


Sara Sanderson – Project Manager

Cc: Attn: Stephanie Ross
Golder Associates, Inc.
44 Union Blvd.; Suite 300
Lakewood, CO 80228

Attachments: Chain of Custody (4)
Sample Receipt Checklist

nct

As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of our clients and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. Test results apply specifically to the samples tested only. The entire report shall not be reproduced, except in full, without the written approval of the laboratory. Samples will be disposed of after testing is completed unless other arrangements are agreed to in writing.

REPORT TO: ATTN: STEPHANIE ROSS
 GOLDER ASSOCIATES, INC.
 44 UNION BLVD.; SUITE 300
 LAKEWOOD, CO 80228

DATE: February 9, 2007
JOB NUMBER: 06-933-5
PAGE: 1 of 57
INVOICE NO.: 6110129

REPORT OF: Soil Analysis – South Heart Power Project

CASE NARRATIVE:

On October 26, 2006, these soil samples (laboratory numbers 2006110129-1 through -44) were received in our laboratory for analysis. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "Diagnosis and Improvement of Saline and Alkali Soils"; American Society of Agronomy, "Methods of Soil Analysis" 1965, 1982, 1986; Western States Laboratory Proficiency Testing Program, "Soil & Plant Analytical Methods"; and American Society for Testing Materials, "Annual Book of ASTM Standards". The samples were air dried and processed to remove and measure the coarse fragment content.

For the batch 2006110129-1 through -20, the recovery of magnesium from the laboratory control sample exceeded the quality control limit published by the manufacturer of the reference material. The recovery of magnesium was 124% of the true value while the published control limits are 79% to 121%. The measurements made for the water laboratory control sample, method blank, matrix spikes and both replicate pairs met the quality control limits. Based on the results of the quality control tests, the magnesium concentrations for samples 2006110129-1 through -20 are reported with the "J" qualifier, indicating they are estimated concentrations which may be biased high.

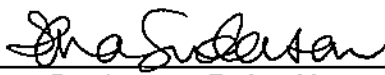
The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test. RPD is the abbreviation for relative percent difference.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Notations used in this report include the following:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

Reviewed by 
Sara Sanderson – Project Manager

Cc: Judd Stark
 Catena Consulting, LLC
 P.O. Box 50538
 716 Aronson Ave.
 Billings, MT 59105

Attachments: Chain of Custody (4)
 Sample Receipt Checklist

nct

Northern Analytical Laboratories, Inc.

Page 2

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-1	Description: 060919-S16-0007	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10.3.3	01/23/2007
Saturation	85.7	%	27b	01/16/2007
Sand	2.5	%	15-5 Mod.	01/18/2007
Very Fine Sand	3.6	%	43-5.3	01/19/2007
Silt	37.5	%	15-5 Mod.	01/18/2007
Clay	60.0	%	15-5 Mod.	01/18/2007
Texture	Clay	---	USDA	01/18/2007
Calcium Saturated Paste	6.61	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	3.00 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.49	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.22	---	20b	01/17/2007
Coarse Fragment Content	0.8	%	D422	01/29/2007
Organic Matter Dry Basis	3.66	%	S-9.20	01/24/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

Page 3

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-2 Description: 060919-S16-0714 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 09/19/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.46	mmhos/cm	10.3.3	01/23/2007
Saturation	90.7	%	27b	01/16/2007
Sand	17.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	15.8	%	43-5.3	01/16/2007
Silt	30.0	%	15-5 Mod.	01/15/2007
Clay	52.5	%	15-5 Mod.	01/15/2007
Texture	Clay	---	USDA	01/15/2007
Calcium Saturated Paste	3.33	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.53 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.60	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.39	---	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.93	%	S-9.20	01/24/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

Page 4

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-3	Description: 060919-S16-1424	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	3.15	mmhos/cm	10.3.3	01/23/2007
Saturation	101	%	27b	01/16/2007
Sand	32.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	29.2	%	43-5.3	01/16/2007
Silt	11.2	%	15-5 Mod.	01/15/2007
Clay	56.3	%	15-5 Mod.	01/15/2007
Texture	Clay	—	USDA	01/15/2007
Calcium Saturated Paste	30.4	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	15.9 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	2.06	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.43	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.48	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-4	Description: 060919-S16-2450	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	4.68	mmhos/cm	10.3.3	01/23/2007
Saturation	105	%	27b	01/16/2007
Sand	8.8	%	15-5 Mod.	01/15/2007
Very Fine Sand	6.6	%	43-5.3	01/16/2007
Silt	42.4	%	15-5 Mod.	01/15/2007
Clay	48.8	%	15-5 Mod.	01/15/2007
Texture	Silty Clay	----	USDA	01/15/2007
Calcium Saturated Paste	26.0	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	34.2 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	11.6	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	2.11	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.94	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-5	Description: 060919-S32-0013	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.2	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	01/23/2007
Saturation	44.7	%	27b	01/16/2007
Sand	41.3	%	15-5 Mod.	01/15/2007
Very Fine Sand	14.0	%	43-5.3	01/16/2007
Silt	37.4	%	15-5 Mod.	01/15/2007
Clay	21.3	%	15-5 Mod.	01/15/2007
Texture	Loam	—	USDA	01/15/2007
Calcium Saturated Paste	2.77	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.32 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.34	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.24	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.37	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 7

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-6	Description: 060919-S32-1322	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.4	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.32	mmhos/cm	10.3.3	01/23/2007
Saturation	37.0	%	27b	01/16/2007
Sand	55.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	14.1	%	43-5.3	01/16/2007
Silt	30.0	%	15-5 Mod.	01/15/2007
Clay	15.0	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	1.86	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.97 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.25	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.21	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.59	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-7	Description: 060919-S32-2229	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.5	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.29	mmhos/cm	10.3.3	01/23/2007
Saturation	36.3	%	27b	01/16/2007
Sand	57.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	18.4	%	43-5.3	01/16/2007
Silt	25.0	%	15-5 Mod.	01/15/2007
Clay	17.5	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	1.68	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.88 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.34	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.30	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.34	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-8	Description: 060919-S32-2941	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	01/23/2007
Saturation	41.0	%	27b	01/16/2007
Sand	40.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	13.6	%	43-5.3	01/16/2007
Silt	37.5	%	15-5 Mod.	01/15/2007
Clay	22.5	%	15-5 Mod.	01/15/2007
Texture	Loam	—	USDA	01/15/2007
Calcium Saturated Paste	3.56	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.53 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.30	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.19	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.35	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-9	Description: 060919-S32-4163	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.58	mmhos/cm	10.3.3	01/23/2007
Saturation	39.2	%	27b	01/16/2007
Sand	42.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	13.8	%	43-5.3	01/16/2007
Silt	35.0	%	15-5 Mod.	01/15/2007
Clay	22.5	%	15-5 Mod.	01/15/2007
Texture	Loam	---	USDA	01/15/2007
Calcium Saturated Paste	4.00	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.58 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.46	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.28	---	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.04	%	S-9.20	01/24/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-10	Description: 060920-S11-0007	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	1.21	mmhos/cm	10.3.3	01/23/2007
Saturation	50.7	%	27b	01/16/2007
Sand	7.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	3.0	%	43-5.3	01/16/2007
Silt	56.2	%	15-5 Mod.	01/15/2007
Clay	36.3	%	15-5 Mod.	01/15/2007
Texture	Si Cl Lo	—	USDA	01/15/2007
Calcium Saturated Paste	4.19	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	3.67 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	4.93	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	2.49	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.25	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-11	Description: 060920-S11-0719	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.8	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	1.08	mmhos/cm	10.3.3	01/23/2007
Saturation	126	%	27b	01/16/2007
Sand	40.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	37.9	%	43-5.3	01/16/2007
Silt	28.7	%	15-5 Mod.	01/15/2007
Clay	31.3	%	15-5 Mod.	01/15/2007
Texture	Clay Loam	—	USDA	01/15/2007
Calcium Saturated Paste	1.67	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.62 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	9.22	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	7.19	—	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.30	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-12 Description: 060920-S11-1931 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 09/20/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	10.8	mmhos/cm	10.3.3	01/23/2007
Saturation	96.8	%	27b	01/16/2007
Sand	35.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	28.9	%	43-5.3	01/16/2007
Silt	30.0	%	15-5 Mod.	01/15/2007
Clay	35.0	%	15-5 Mod.	01/15/2007
Texture	Clay Loam	---	USDA	01/15/2007
Calcium Saturated Paste	24.1	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	63.0 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	78.1	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	11.8	----	20b	01/17/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.71	%	S-9.20	01/24/2007
Sample Preparation	---	----	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-13	Description: 060920-S19-0007	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.7	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.19	mmhos/cm	10.3.3	01/23/2007
Saturation	48.1	%	27b	01/16/2007
Sand	65.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	5.3	%	43-5.3	01/16/2007
Silt	21.2	%	15-5 Mod.	01/15/2007
Clay	13.8	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	----	USDA	01/15/2007
Calcium Saturated Paste	1.17	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.87 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.59	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.58	—	20b	01/17/2007
Coarse Fragment Content	0.9	%	D422	01/29/2007
Organic Matter Dry Basis	3.22	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-14	Description: 060920-S19-0716	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.3	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.17	mmhos/cm	10.3.3	01/23/2007
Saturation	41.2	%	27b	01/16/2007
Sand	67.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	5.2	%	43-5.3	01/16/2007
Silt	17.5	%	15-5 Mod.	01/15/2007
Clay	15.0	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	1.32	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.53 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.25	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.26	—	20b	01/17/2007
Coarse Fragment Content	1.4	%	D422	01/29/2007
Organic Matter Dry Basis	2.20	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-15	Description: 060920-S19-1625	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.31	mmhos/cm	10.3.3	01/23/2007
Saturation	39.4	%	27b	01/16/2007
Sand	67.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	2.2	%	43-5.3	01/16/2007
Silt	17.5	%	15-5 Mod.	01/15/2007
Clay	15.0	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	2.59	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.80 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.39	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.30	—	20b	01/17/2007
Coarse Fragment Content	2.3	%	D422	01/29/2007
Organic Matter Dry Basis	1.78	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-16	Description: 060920-S19-2533	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.37	mmhos/cm	10.3.3	01/23/2007
Saturation	41.8	%	27b	01/16/2007
Sand	70.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	2.8	%	43-5.3	01/16/2007
Silt	15.0	%	15-5 Mod.	01/15/2007
Clay	15.0	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	3.43	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.78 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.32	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.22	—	20b	01/17/2007
Coarse Fragment Content	1.5	%	D422	01/29/2007
Organic Matter Dry Basis	1.56	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-17	Description: 060920-S19-3341	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.36	mmhos/cm	10.3.3	01/23/2007
Saturation	39.1	%	27b	01/16/2007
Sand	65.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	2.2	%	43-5.3	01/16/2007
Silt	16.2	%	15-5 Mod.	01/15/2007
Clay	18.8	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	3.34	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	0.89 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.38	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.26	—	20b	01/17/2007
Coarse Fragment Content	2.3	%	D422	01/29/2007
Organic Matter Dry Basis	1.47	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-18 Description: 060920-S19-4153 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 09/20/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.38	mmhos/cm	10.3.3	01/23/2007
Saturation	37.0	%	27b	01/16/2007
Sand	65.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	2.4	%	43-5.3	01/16/2007
Silt	16.2	%	15-5 Mod.	01/15/2007
Clay	18.8	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	2.87	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.22 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.53	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.37	—	20b	01/17/2007
Coarse Fragment Content	1.3	%	D422	01/29/2007
Organic Matter Dry Basis	1.40	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-19	Description: 060920-S19-5360	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.43	mmhos/cm	10.3.3	01/23/2007
Saturation	42.7	%	27b	01/16/2007
Sand	55.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	5.2	%	43-5.3	01/16/2007
Silt	25.0	%	15-5 Mod.	01/15/2007
Clay	20.0	%	15-5 Mod.	01/15/2007
Texture	Sandy Loam	—	USDA	01/15/2007
Calcium Saturated Paste	2.04	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.79 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	1.05	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.76	—	20b	01/17/2007
Coarse Fragment Content	0.8	%	D422	01/29/2007
Organic Matter Dry Basis	1.23	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-20	Description: 060927-S01-0004	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.7	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	1.05	mmhos/cm	10.3.3	01/23/2007
Saturation	64.3	%	27b	01/16/2007
Sand	10.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	6.2	%	43-5.3	01/16/2007
Silt	50.0	%	15-5 Mod.	01/15/2007
Clay	40.0	%	15-5 Mod.	01/15/2007
Texture	Si Cl Lo	—	USDA	01/15/2007
Calcium Saturated Paste	1.57	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.16 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	9.87	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	8.44	—	20b	01/17/2007
Coarse Fragment Content	0.2	%	D422	01/29/2007
Organic Matter Dry Basis	4.21	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-21	Description: 060927-S01-0410	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	7.54	mmhos/cm	10.3.3	01/23/2007
Saturation	87.1	%	27b	01/17/2007
Sand	5.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	3.3	%	43-5.3	01/19/2007
Silt	46.2	%	15-5 Mod.	01/17/2007
Clay	48.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	21.2	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	26.6	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	53.2	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	10.9	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.40	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-22 Description: 060927-S01-1016

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/27/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.6	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	11.0	mmhos/cm	10.3.3	01/23/2007
Saturation	126	%	27b	01/17/2007
Sand	5.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	0.6	%	43-5.3	01/19/2007
Silt	28.7	%	15-5 Mod.	01/17/2007
Clay	66.3	%	15-5 Mod.	01/17/2007
Texture	Clay	—	USDA	01/17/2007
Calcium Saturated Paste	27.7	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	41.7	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	89.5	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	15.2	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.10	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-23	Description: 060927-S01-1624	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.6	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	8.80	mmhos/cm	10.3.3	01/23/2007
Saturation	169	%	27b	01/17/2007
Sand	12.5	%	15-5 Mod.	01/17/2007
Very Fine Sand	11.7	%	43-5.3	01/19/2007
Silt	36.2	%	15-5 Mod.	01/17/2007
Clay	51.3	%	15-5 Mod.	01/17/2007
Texture	Clay	—	USDA	01/17/2007
Calcium Saturated Paste	19.8	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	28.9	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	73.4	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	14.9	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.58	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-24	Description: 060927-S03-0007	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.6	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	1.10	mmhos/cm	10.3.3	01/23/2007
Saturation	74.5	%	27b	01/17/2007
Sand	3.8	%	15-5 Mod.	01/17/2007
Very Fine Sand	1.6	%	43-5.3	01/19/2007
Silt	49.9	%	15-5 Mod.	01/17/2007
Clay	46.3	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	2.29	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	1.81	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	7.36	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	5.14	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.07	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-25	Description: 060927-S03-0713	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	4.96	mmhos/cm	10.3.3	01/23/2007
Saturation	93.8	%	27b	01/17/2007
Sand	3.8	%	15-5 Mod.	01/17/2007
Very Fine Sand	3.0	%	43-5.3	01/19/2007
Silt	54.9	%	15-5 Mod.	01/17/2007
Clay	41.3	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	20.7	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	19.2	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	25.1	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	5.61	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.00	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-26	Description: 060927-S03-1317	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.8	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	7.79	mmhos/cm	10.3.3	01/23/2007
Saturation	64.9	%	27b	01/17/2007
Sand	7.5	%	15-5 Mod.	01/17/2007
Very Fine Sand	6.8	%	43-5.3	01/19/2007
Silt	47.5	%	15-5 Mod.	01/17/2007
Clay	45.0	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	24.0	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	32.7	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	52.0	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	9.78	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.57	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-27		Description: 060927-S03-1728		Matrix: SOIL	
Date Received: 10/26/2006					
Date Collected: 09/27/2006		Collected by: JUDD STARK			
Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis	
pH on Saturation Extract	7.8	S.U.	10.3.2	01/17/2006	
Electrical Conductivity Saturated Paste	9.41	mmhos/cm	10.3.3	01/23/2007	
Saturation	80.5	%	27b	01/17/2007	
Sand	5.0	%	15-5 Mod.	01/17/2007	
Very Fine Sand	4.4	%	43-5.3	01/19/2007	
Silt	48.7	%	15-5 Mod.	01/17/2007	
Clay	46.3	%	15-5 Mod.	01/17/2007	
Texture	Silty Clay	---	USDA	01/17/2007	
Calcium Saturated Paste	22.5	meq/l	3-5.4	02/03/2007	
Magnesium Saturated Paste	50.2	meq/l	3-5.4	02/03/2007	
Sodium Saturated Paste	67.5	meq/l	3-5.4	02/03/2007	
Sodium Adsorption Ratio	11.2	---	20b	02/03/2007	
Coarse Fragment Content	<0.1	%	D422	01/29/2007	
Organic Matter Dry Basis	0.98	%	S-9.20	01/25/2007	
Sample Preparation	---	---	3-5.1		

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-28 Description: 060927-S03-2839 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/27/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.7	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	9.19	mmhos/cm	10.3.3	01/23/2007
Saturation	83.4	%	27b	01/17/2007
Sand	5.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	4.5	%	43-5.3	01/19/2007
Silt	56.2	%	15-5 Mod.	01/17/2007
Clay	38.8	%	15-5 Mod.	01/17/2007
Texture	Si Cl Lo	---	USDA	01/17/2007
Calcium Saturated Paste	21.2	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	45.3	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	67.5	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	11.7	---	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	0.76	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-29	Description: 060927-S03-3953	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.6	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	8.30	mmhos/cm	10.3.3	01/23/2007
Saturation	69.3	%	27b	01/17/2007
Sand	10.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	8.7	%	43-5.3	01/19/2007
Silt	61.2	%	15-5 Mod.	01/17/2007
Clay	28.8	%	15-5 Mod.	01/17/2007
Texture	Si Cl Lo	—	USDA	01/17/2007
Calcium Saturated Paste	23.6	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	36.8	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	56.3	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	10.2	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	0.75	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-30	Description: 060927-S04-0009	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.6	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.79	mmhos/cm	10.3.3	01/23/2007
Saturation	78.5	%	27b	01/17/2007
Sand	5.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	3.3	%	43-5.3	01/19/2007
Silt	46.2	%	15-5 Mod.	01/17/2007
Clay	48.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	2.54	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	3.06	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	2.84	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	1.69	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.83	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-31 Description: 060927-S04-0919 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/27/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.68	mmhos/cm	10.3.3	01/23/2007
Saturation	70.1	%	27b	01/17/2007
Sand	2.5	%	15-5 Mod.	01/17/2007
Very Fine Sand	1.6	%	43-5.3	01/19/2007
Silt	48.7	%	15-5 Mod.	01/17/2007
Clay	48.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	1.10	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	1.07	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	4.28	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	4.11	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.00	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-32 Description: 060927-S04-1925 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 09/27/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	9.0	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.53	mmhos/cm	10.3.3	01/23/2007
Saturation	77.0	%	27b	01/17/2007
Sand	5.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	4.4	%	43-5.3	01/19/2007
Silt	51.2	%	15-5 Mod.	01/17/2007
Clay	43.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	0.78	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	0.55	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	3.69	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	4.52	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.98	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-33	Description: 060927-S04-2536	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	4.25	mmhos/cm	10.3.3	01/23/2007
Saturation	70.7	%	27b	01/17/2007
Sand	8.8	%	15-5 Mod.	01/17/2007
Very Fine Sand	6.2	%	43-5.3	01/19/2007
Silt	46.2	%	15-5 Mod.	01/17/2007
Clay	45.0	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	7.96	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	12.0	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	30.4	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	9.61	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.99	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-34	Description: 060927-S04-3658	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.8	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	6.37	mmhos/cm	10.3.3	01/23/2007
Saturation	72.2	%	27b	01/17/2007
Sand	7.5	%	15-5 Mod.	01/17/2007
Very Fine Sand	4.8	%	43-5.3	01/19/2007
Silt	46.2	%	15-5 Mod.	01/17/2007
Clay	46.3	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	16.8	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	27.5	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	39.6	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	8.41	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.84	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-35	Description: 060928-S01-0009	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/28/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.65	mmhos/cm	10.3.3	01/23/2007
Saturation	83.5	%	27b	01/17/2007
Sand	6.3	%	15-5 Mod.	01/17/2007
Very Fine Sand	5.2	%	43-5.3	01/19/2007
Silt	41.2	%	15-5 Mod.	01/17/2007
Clay	52.5	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	---	USDA	01/17/2007
Calcium Saturated Paste	3.12	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	2.45	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	0.99	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	0.59	---	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.92	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-36	Description: 060928-S01-0926	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/28/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	01/23/2007
Saturation	78.4	%	27b	01/17/2007
Sand	0.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	<0.1	%	43-5.3	01/19/2007
Silt	43.8	%	15-5 Mod.	01/17/2007
Clay	56.3	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	---	USDA	01/17/2007
Calcium Saturated Paste	1.70	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	1.32	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	2.41	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	1.96	----	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.15	%	S-9.20	01/25/2007
Sample Preparation	---	----	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-37 Description: 060928-S01-2645 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/28/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	4.17	mmhos/cm	10.3.3	01/23/2007
Saturation	67.3	%	27b	01/17/2007
Sand	0.0	%	15-5 Mod.	01/17/2007
Very Fine Sand	<0.1	%	43-5.3	01/19/2007
Silt	51.2	%	15-5 Mod.	01/17/2007
Clay	48.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	22.5	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	16.2	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	16.6	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	3.78	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.77	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-38	Description: 060928-S01-4557	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/28/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	6.22	mmhos/cm	10.3.3	01/23/2007
Saturation	75.1	%	27b	01/17/2007
Sand	3.8	%	15-5 Mod.	01/17/2007
Very Fine Sand	3.5	%	43-5.3	01/19/2007
Silt	56.2	%	15-5 Mod.	01/17/2007
Clay	40.0	%	15-5 Mod.	01/17/2007
Texture	Si Cl Lo	—	USDA	01/17/2007
Calcium Saturated Paste	12.0	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	19.2	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	49.0	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	12.4	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.43	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-39	Description: 060928-S30-0006	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/28/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	1.14	mmhos/cm	10.3.3	01/23/2007
Saturation	54.4	%	27b	01/17/2007
Sand	20.0	%	15-5 Mqd.	01/17/2007
Very Fine Sand	7.2	%	43-5.3	01/19/2007
Silt	55.0	%	15-5 Mod.	01/17/2007
Clay	25.0	%	15-5 Mod.	01/17/2007
Texture	Silt Loam	---	USDA	01/17/2007
Calcium Saturated Paste	7.06	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	2.51	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	1.84	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	0.84	---	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.50	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-40	Description: 060928-S30-0630	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/28/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	01/23/2007
Saturation	43.3	%	27b	01/17/2007
Sand	42.5	%	15-5 Mod.	01/17/2007
Very Fine Sand	18.9	%	43-5.3	01/19/2007
Silt	43.7	%	15-5 Mod.	01/17/2007
Clay	13.8	%	15-5 Mod.	01/17/2007
Texture	Loam	—	USDA	01/17/2007
Calcium Saturated Paste	2.83	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	1.03	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	1.78	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	1.28	—	20b	02/03/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.19	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-41	Description: 060929-S25-0008	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.61	mmhos/cm	10.3.3	01/26/2007
Saturation	41.5	%	27b	01/25/2007
Sand	38.8	%	15-5 Mod.	01/23/2007
Very Fine Sand	9.3	%	43-5.3	01/25/2007
Silt	33.7	%	15-5 Mod.	01/23/2007
Clay	27.5	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	3.84	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.83	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.61	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.31	—	20b	01/25/2007
Coarse Fragment Content	5.2	%	D422	01/29/2007
Organic Matter Dry Basis	2.83	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-42	Description: 060929-S25-0816	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.51	mmhos/cm	10.3.3	01/26/2007
Saturation	49.1	%	27b	01/25/2007
Sand	37.5	%	15-5 Mod.	01/23/2007
Very Fine Sand	6.4	%	43-5.3	01/25/2007
Silt	28.7	%	15-5 Mod.	01/23/2007
Clay	33.8	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	2.66	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.17	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.83	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.49	—	20b	01/25/2007
Coarse Fragment Content	5.0	%	D422	01/29/2007
Organic Matter Dry Basis	2.63	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-43	Description: 060929-S25-1636	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.7	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	1.04	mmhos/cm	10.3.3	01/26/2007
Saturation	46.2	%	27b	01/25/2007
Sand	35.0	%	15-5 Mod.	01/23/2007
Very Fine Sand	1.4	%	43-5.3	01/25/2007
Silt	32.5	%	15-5 Mod.	01/23/2007
Clay	32.5	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	2.51	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	5.06	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	5.32	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	2.74	—	20b	01/25/2007
Coarse Fragment Content	13.9	%	D422	01/29/2007
Organic Matter Dry Basis	2.26	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-44	Description: 060929-S25-3656	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	6.00	mmhos/cm	10.3.3	01/26/2007
Saturation	37.4	%	27b	01/25/2007
Sand	33.8	%	15-5 Mgd.	01/23/2007
Very Fine Sand	16.6	%	43-5.3	01/25/2007
Silt	47.4	%	15-5 Mod.	01/23/2007
Clay	18.8	%	15-5 Mod.	01/23/2007
Texture	Loam	—	USDA	01/23/2007
Calcium Saturated Paste	24.6	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	48.6	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	24.0	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	3.96	—	20b	01/25/2007
Coarse Fragment Content	8.8	%	D422	01/29/2007
Organic Matter Dry Basis	1.10	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-45	Description: DUPLICATE OF 2006110129-1	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/19/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	0.48	mmhos/cm	10.3.3	01/23/2007
Saturation	92.9	%	27b	01/16/2007
Sand	10.0	%	15-5 Mod.	01/15/2007
Very Fine Sand	3*	RPD[0-20]	43-5.3	01/19/2007
Silt	33.7	%	15-5 Mod.	01/15/2007
Clay	56.3	%	15-5 Mod.	01/15/2007
Texture	Clay	—	USDA	01/15/2007
Calcium Saturated Paste	3.27	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.52 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	0.61	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	0.40	—	20b	01/17/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	3.53	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-46	Description: DUPLICATE OF 2006110129-11	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/20/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.8	S.U.	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	1.05	mmhos/cm	10.3.3	01/23/2007
Saturation	122	%	27b	01/16/2007
Sand	37.5	%	15-5 Mod.	01/15/2007
Very Fine Sand	35.6	%	43-5.3	01/16/2007
Silt	31.2	%	15-5 Mod.	01/15/2007
Clay	31.3	%	15-5 Mod.	01/15/2007
Texture	Clay Loam	—	USDA	01/15/2007
Calcium Saturated Paste	1.66	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	1.60 J	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	9.21	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	7.23	—	20b	01/17/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.84	%	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-47 Description: METHOD BLANK FOR 2006110129 Matrix: SOIL/WATER
Date Received: ---- 1-20
Date Collected: ---- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	---	---	---
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/23/2007
Saturation	NA	----	---	----
Sand	NA	---	----	---
Very Fine Sand	NA	---	---	---
Silt	NA	----	---	----
Clay	NA	---	----	---
Texture	NA	---	---	---
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/17/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/17/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/17/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/17/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	<0.10	%	S-9.20	01/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-48 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ———— FOR 2006110129 1-20
 Date Collected: ———— Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	100	% [97-103]	10.3.2	01/16/2007
Electrical Conductivity Saturated Paste	118	% [56-144]	10.3.3	01/23/2007
Saturation	98	% [70-130]	27b	01/16/2007
Sand	0	% [0-200]	15-5 Mod.	01/15/2007
Very Fine Sand	NA	—	—	—
Silt	125	% [55-145]	15-5 Mod.	01/15/2007
Clay	99	% [74-126]	15-5 Mod.	01/15/2007
Texture	Silty Clay	—	USDA	01/15/2007
Calcium Saturated Paste	119	% [76-124]	3-5.4	01/17/2007
Magnesium Saturated Paste	124 (6)	% [79-121]	3-5.4	01/17/2007
Sodium Saturated Paste	118	% [61-139]	3-5.4	01/17/2007
Sodium Adsorption Ratio	108	% [79-121]	20b	01/17/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	98	% [64-136]	S-9.20	01/24/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-49	Description: DUPLICATE OF 2006110129-21	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.9	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	7.67	mmhos/cm	10.3.3	01/23/2007
Saturation	85.8	%	27b	01/17/2007
Sand	3.8	%	15-5 Mod.	01/17/2007
Very Fine Sand	2.2	%	43-5.3	01/19/2007
Silt	47.4	%	15-5 Mod.	01/17/2007
Clay	48.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	---	USDA	01/17/2007
Calcium Saturated Paste	21.7	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	26.8	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	53.9	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	10.9	---	20b	02/03/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	2.29	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-50	Description: DUPLICATE OF 2006110129-31	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/27/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	0.67	mmhos/cm	10.3.3	01/23/2007
Saturation	68.1	%	27b	01/17/2007
Sand	2.5	%	15-5 Mod.	01/17/2007
Very Fine Sand	1.7	%	43-5.3	01/19/2007
Silt	48.7	%	15-5 Mod.	01/17/2007
Clay	48.8	%	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	1.13	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	1.08	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	4.18	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	3.98	—	20b	02/03/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.15	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-51 Description: METHOD BLANK FOR 2006110129 Matrix: SOIL/WATER
 Date Received: — 21-40
 Date Collected: — Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/23/2007
Saturation	NA	—	—	—
Sand	NA	—	—	—
Very Fine Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Calcium Saturated Paste	<0.05	meq/l	3-5.4	02/03/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	02/03/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	02/03/2007
Sodium Adsorption Ratio	<0.2	—	20b	02/03/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	<0.10	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	—

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-52	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: —	FOR 2006110129 21-40	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	99	% [97-103]	10.3.2	01/17/2006
Electrical Conductivity Saturated Paste	118	% [56-144]	10.3.3	01/23/2007
Saturation	100	% [70-130]	27b	01/17/2007
Sand	37	% [0-200]	15-5 Mod.	01/17/2007
Very Fine Sand	NA	—	—	—
Silt	122	% [55-145]	15-5 Mod.	01/17/2007
Clay	97	% [74-126]	15-5 Mod.	01/17/2007
Texture	Silty Clay	—	USDA	01/17/2007
Calcium Saturated Paste	113	% [76-124]	3-5.4	02/03/2007
Magnesium Saturated Paste	121	% [79-121]	3-5.4	02/03/2007
Sodium Saturated Paste	108	% [61-139]	3-5.4	02/03/2007
Sodium Adsorption Ratio	100	% [79-121]	20b	02/03/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	87	% [64-136]	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-53	Description: DUPLICATE OF 2006110129-42	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	NA	—	—	—
Saturation	NA	—	—	—
Sand	40.0	%	15-5 Mod.	01/23/2007
Very Fine Sand	7.4	%	43-5.3	01/25/2007
Silt	25.0	%	15-5 Mod.	01/23/2007
Clay	35.0	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	NA	—	—	—
Magnesium Saturated Paste	NA	—	—	—
Sodium Saturated Paste	NA	—	—	—
Sodium Adsorption Ratio	NA	—	—	—
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.64	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-54	Description: METHOD BLANK FOR 2006110129	Matrix: SOIL/WATER
Date Received: —	41-44	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/26/2007
Saturation	NA	—	—	—
Sand	NA	—	—	—
Very Fine Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/25/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	<0.1	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	—

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-55 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ——— FOR 2006110129 41-44
 Date Collected: ——— Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	101	% [97-103]	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	114	% [56-144]	10.3.3	01/26/2007
Saturation	98	% [70-130]	27b	01/25/2007
Sand	57	% [0-200]	15-5 Mod.	01/23/2007
Very Fine Sand	NA	—	—	—
Silt	115	% [55-145]	15-5 Mod.	01/23/2007
Clay	99	% [74-126]	15-5 Mod.	01/23/2007
Texture	Silty Clay	—	USDA	01/23/2007
Calcium Saturated Paste	107	% [76-124]	3-5.4	01/25/2007
Magnesium Saturated Paste	111	% [79-121]	3-5.4	01/25/2007
Sodium Saturated Paste	104	% [61-139]	3-5.4	01/25/2007
Sodium Adsorption Ratio	100	% [79-121]	20b	01/25/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	89	% [64-136]	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110129-56	Description: BATCH DUPLICATE FOR 2006110129-41 TO 44	Matrix: SOIL
Date Received: ----		
Date Collected: ----	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	----	----	----
Electrical Conductivity Saturated Paste	NA	-----	----	----
Saturation	NA	----	----	----
Sand	NA	-----	----	----
Very Fine Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	-----	----	----
Texture	NA	----	----	----
Calcium Saturated Paste	2	RPD [0-25]	3-5.4	01/25/2007
Magnesium Saturated Paste	1	RPD [0-25]	3-5.4	01/25/2007
Sodium Saturated Paste	0	RPD [0-25]	3-5.4	01/25/2007
Sodium Adsorption Ratio	0	RPD [0-25]	20b	01/25/2007
Coarse Fragment Content	NA	----	----	----
Organic Matter Dry Basis	NA	-----	----	----
Sample Preparation	----	----	3-5.1	

South Heart
Project or Site Name

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

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nlabs@wtp.net

Catena

Report to (Firm or Agency)

716 Aronson Av.

Address

Billings MT

City

State

Zip

Phone

Fax

Project Number

Judd Stark

Sampler Name (Printed)

Judd Stark

Project Manager, Report to

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED								NOTES	LAB NUMBER
9/19/06	1220	060919-316-0007	G	S	1									2006	
		" - " - 0714												110129	
		" - " - 1424													
		" - " - 2450													
		060919-332-0013													
	1530	" - " - 1322													
		- 2229													
		- 2941													
		- 4163													
9/19/06	1150	060920-311-0007													
		- 0719													
		- 1931													
Relinquished by: Cook E. Murch			Date	Time	Received by:										
Relinquished by:			Date	Time	Received by:										
Relinquished by:			Date	Time	Received by:										

South Heart
Project or Site Name

Project Number

Judd Stark
Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN
Analytical Laboratories, Inc.

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City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER	
9/20/06	1700	060920-S19-0007	G	Soil	1												13	
↓	↓	-0716	↓	↓	↓												14	
		-1625														15		
		-2533														16		
		-3341														17		
		-4153														18		
↓	↓	-5360	↓	↓	↓											19		
		9/27/06				1440	060927-S01-0004											20
		-0410															21	
		-1016															22	
↓	↓	-1624	↓	↓	↓												23	
Relinquished by: <u>Cook 2. Murok</u>			Date: <u>10/26/06</u>	Time: <u>1800</u>	Received by: <u>[Signature]</u>													
Relinquished by:			Date:	Time:	Received by:													
Relinquished by:			Date:	Time:	Received by:													

South Heart
Project or Site Name

Project Number

Jueld Stark
Sampler Name (Printed)

Jueld Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101

Ph: 406-254-7226 • Fax: 406-254-1389

nlabs@wtp.net

Caterer
Report to (Firm or Agency)

716 Aronson AU.
Address

Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	2006 LAB NUMBER
9/27/06	1700	060927-503-0007	G	soil	1												24		
		-0713															25		
		-1317															26		
		-1728															27		
		-2839															28		
		-3953															29		
	1730	060927-504-0009															30		
		-0919															31		
		-1925															32		
		-2534															33		
		-3658															34		
Relinquished by: <u>Cook 2-Minh</u>			Date: <u>10/26/06</u>	Time: <u>1800</u>	Received by: <u>[Signature]</u>														
Relinquished by:			Date:	Time:	Received by:														
Relinquished by:			Date:	Time:	Received by:														

South Heart
Project or Site Name

Project Number

Judd Stark
Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN
Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
Ph: 406-254-7226 • Fax: 406-254-1389
nlabs@wtp.net

Caterer
Report to (Firm or Agency)

File Aronson Av.
Address

Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER	
9/28/06	0800	060928-301-0009	G	soi	1											Dup1	45	35
		-0926														Dup11	46	36
		-2645														MB	47	37
		-4557														HCS	48	38
	1630	060928-330-0006														Dup21	49	39
		-0630														Dup31	50	40
9/29/06	1750	060929-325-0008														MB	51	41
		-0816														HCS	52	42
		-1636														Dup42	53	43
		-3656														MB	54	44
																HCS	55	—
																		—
Relinquished by: Cook & Murch			Date	Time	Received by: [Signature]													
Relinquished by:			Date	Time	Received by:													
Relinquished by:			Date	Time	Received by:													

SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name <u>Maldene</u>	Date/Time Received <u>10/26/06</u> <u>1800</u> Date / Time
Project <u>S. Heart Soil</u>	Received by <u>KS</u>
Laboratory Number(s) <u>110127-130</u>	Carrier Name <u>HAND</u>
Checklist Completed by <u>10/27/06</u> <u>me</u> Initials / Date	Sample Type <u>Soils</u>

	YES	NO		YES	NO
1. Shipping container in good condition?	☒	☐	14. pH check performed by: _____		
2. Custody seals present on shipping container? Condition: Intact _____ Broken _____	☐	☒	15. Metals bottle(s) pH <2?	☒	☐
3. Chain of custody present?	☒	☐	16. Nutrient bottle(s) pH <2?	☐	☐
4. Chain of custody signed when relinquished and received?	☒	☐	17. Cyanide bottle(s) pH >12?	☐	☐
5. Chain of custody agrees with sample labels?	☒	☒	18. Sulfide bottle(s) pH >9?	☐	☐
6. Custody seals on sample bottles? Condition: Intact _____ Broken _____	☐	☒	19. TOC bottle(s) pH <2?	☐	☐
7. Samples in proper container/bottle?*	☒	☐	20. Phenolics bottle(s) pH <2?	☐	☐
8. Sample containers intact?*	☒	☐	21. Oil & grease bottle(s) pH <2? (checked by analyst)	☐	☐
9. Sufficient sample volume for indicated test?*	☒	☐	22. EPH/DRO bottle(s) pH <2? (checked by analyst)	☐	☐
10. Ice/Frozen Blue Ice present in shipping container? (circle one) container temperature 1. _____ 2. _____ 3. _____ * (if <0 or >10)	☐	☒	23. Volatiles (VOA) pH <2? (checked by analyst)	☐	☐
11. All samples rec'd within holding time?*	☒	☐	24. Semivolatiles (525) pH <2? (checked by analyst)	☐	☐
12. VOA vials have zero headspace? * (if contains >5mm headspace)	☐	☒	25. Other test types	☐	☐
13. Trip Blank received?	☐	☒	26. Client contacted?	☐	☐
			27. Person contacted	☐	☐
			28. Date contacted	☐	☐

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: #5 see notes on Col'd

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: February 22, 2007
JOB NUMBER: 07-911
PAGE: 1 of 68
INVOICE NO.: 6110130

REPORT OF: Soil Analysis – South Heart Power Project

CASE NARRATIVE:

On October 26, 2006, these soil samples (laboratory numbers 2006110130-1 through -54) were received in our laboratory for analysis. The samples identified as "061005-S18-2550" and "061016-S28-4657" were not received at our laboratory. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "Diagnosis and Improvement of Saline and Alkali Soils"; American Society of Agronomy, "Methods of Soil Analysis" 1965, 1982, 1986; Western States Laboratory Proficiency Testing Program, "Soil & Plant Analytical Methods"; and American Society for Testing Materials, "Annual Book of ASTM Standards". The samples were air dried and processed to remove and measure the coarse fragment content.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Reviewed by



Kathleen A. Smit – Laboratory Manager

Cc: Attn: Stephanie Ross
Golder Associates, Inc.
44 Union Blvd., Suite 300
Lakewood, CO 80228

Attachments: Chain of Custody (5)
Sample Receipt Checklist

nct

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
P O Box 30315
Billings, MT 59107
Telephone: (406) 254-7226
Fax: (406) 254-1389

REPORT TO: ATTN: STEPHANIE ROSS
GOLDER ASSOCIATES, INC.
44 UNION BLVD.; SUITE 300
LAKEWOOD, CO 80228

DATE: February 6, 2007
JOB NUMBER: 06-933-5
PAGE: 1 of 68
INVOICE NO.: 6110130

REPORT OF: Soil Analysis – South Heart Power Project

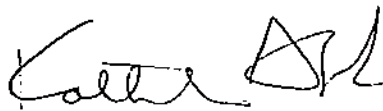
CASE NARRATIVE:

On October 26, 2006, these soil samples (laboratory numbers 2006110130-1 through -54) were received in our laboratory for analysis. The samples identified as "061005-S18-2550" and "061016-S28-4657" were not received at our laboratory. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "Diagnosis and Improvement of Saline and Alkali Soils"; American Society of Agronomy, "Methods of Soil Analysis" 1965, 1982, 1986; Western States Laboratory Proficiency Testing Program, "Soil & Plant Analytical Methods"; and American Society for Testing Materials, "Annual Book of ASTM Standards". The samples were air dried and processed to remove and measure the coarse fragment content.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Reviewed by



Kathleen A. Smit – Laboratory Manager

Cc: Judd Stark
Catena Consulting, LLC
P.O. Box 50538
716 Aronson Ave.
Billings, MT 59105

Attachments: Chain of Custody (5)
Sample Receipt Checklist

nct

As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of our clients and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. Test results apply specifically to the samples tested only. The entire report shall not be reproduced, except in full, without the written approval of the laboratory. Samples will be disposed of after testing is completed unless other arrangements are agreed to in writing.

Northern Analytical Laboratories, Inc.

Page 2

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-1	Description: 060929-S40-0006	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.07	mmhos/cm	10.3.3	01/23/2007
Saturation	65.5	%	27b	01/19/2007
Sand	7.5	%	15-5 Mod.	01/18/2007
Very Fine Sand	2.9	%	43-5.3	01/22/2007
Silt	46.2	%	15-5 Mod.	01/18/2007
Clay	46.3	%	15-5 Mod.	01/18/2007
Texture	Silty Clay	---	USDA	01/18/2007
Calcium Saturated Paste	4.53	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	4.17	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	3.40	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	1.63	---	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	4.95	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

Page 3

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-2	Description: 060929-S40-0613	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.8	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.84	mmhos/cm	10.3.3	01/23/2007
Saturation	79.4	%	27b	01/19/2007
Sand	6.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	3.8	%	43-5.3	01/22/2007
Silt	39.9	%	15-5 Mod.	01/18/2007
Clay	53.8	%	15-5 Mod.	01/18/2007
Texture	Clay	—	USDA	01/18/2007
Calcium Saturated Paste	1.51	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.20	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	6.82	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	5.86	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.76	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-3	Description: 060929-S40-1322	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.9	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10.3.3	01/23/2007
Saturation	83.1	%	27b	01/19/2007
Sand	3.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	2.1	%	43-5.3	01/22/2007
Silt	38.7	%	15-5 Mod.	01/18/2007
Clay	57.5	%	15-5 Mod.	01/18/2007
Texture	Clay	—	USDA	01/18/2007
Calcium Saturated Paste	1.07	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	0.85	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	8.53	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	8.69	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.38	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 5

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.:	2006110130-4	Description:	060929-S40-2228	Matrix:	SOIL
Date Received:	10/26/2006				
Date Collected:	09/29/2006	Collected by:	JUDD STARK		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	6.04	mmhos/cm	10.3.3	01/23/2007
Saturation	98.9	%	27b	01/19/2007
Sand	3.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	3.0	%	43-5.3	01/22/2007
Silt	36.2	%	15-5 Mod.	01/18/2007
Clay	60.0	%	15-5 Mod.	01/18/2007
Texture	Clay	—	USDA	01/18/2007
Calcium Saturated Paste	16.9	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	22.3	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	41.9	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	9.47	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.09	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 6

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-5	Description: 060929-S40-2836	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	8.63	mmhos/cm	10.3.3	01/23/2007
Saturation	98.1	%	27b	01/19/2007
Sand	6.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.6	%	43-5.3	01/22/2007
Silt	32.4	%	15-5 Mod.	01/18/2007
Clay	61.3	%	15-5 Mod.	01/18/2007
Texture	Clay	—	USDA	01/18/2007
Calcium Saturated Paste	25.8	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	39.4	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	63.9	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	11.2	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.18	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 7

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-6	Description: 060929-S40-3658	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	10.8	mmhos/cm	10.3.3	01/23/2007
Saturation	106	%	27b	01/19/2007
Sand	6.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.7	%	43-5.3	01/22/2007
Silt	32.4	%	15-5 Mod.	01/18/2007
Clay	61.3	%	15-5 Mod.	01/18/2007
Texture	Clay	—	USDA	01/18/2007
Calcium Saturated Paste	30.3	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	52.5	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	84.3	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	13.1	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.45	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 8

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-7	Description: 060929-S53-0009	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.5	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.67	mmhos/cm	10.3.3	01/23/2007
Saturation	54.7	%	27b	01/19/2007
Sand	11.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.0	%	43-5.3	01/22/2007
Silt	59.9	%	15-5 Mod.	01/18/2007
Clay	28.8	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	—	USDA	01/18/2007
Calcium Saturated Paste	3.85	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.02	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	1.66	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.97	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	4.26	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

Page 9

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-8	Description: 060929-S53-0921	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.7	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.65	mmhos/cm	10.3.3	01/23/2007
Saturation	54.2	%	27b	01/19/2007
Sand	13.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	9.6	%	43-5.3	01/22/2007
Silt	43.7	%	15-5 Mod.	01/18/2007
Clay	42.5	%	15-5 Mod.	01/18/2007
Texture	Silty Clay	---	USDA	01/18/2007
Calcium Saturated Paste	1.52	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	0.95	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	4.87	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	4.39	---	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.20	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

Page 10

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-9	Description: 060929-S53-2134	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	9.0	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.75	mmhos/cm	10.3.3	01/23/2007
Saturation	70.9	%	27b	01/19/2007
Sand	5.0	%	15-5 Mod.	01/18/2007
Very Fine Sand	4.0	%	43-5.3	01/22/2007
Silt	50.0	%	15-5 Mod.	01/18/2007
Clay	45.0	%	15-5 Mod.	01/18/2007
Texture	Silty Clay	—	USDA	01/18/2007
Calcium Saturated Paste	1.24	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	0.71	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	6.57	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	6.65	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.20	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-10 Description: 060929-S53-3457

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/29/2006

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.9	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	2.57	mmhos/cm	10.3.3	01/23/2007
Saturation	52.2	%	27b	01/19/2007
Sand	26.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	11.6	%	43-5.3	01/22/2007
Silt	43.7	%	15-5 Mod.	01/18/2007
Clay	30.0	%	15-5 Mod.	01/18/2007
Texture	Clay Loam	—	USDA	01/18/2007
Calcium Saturated Paste	2.52	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.63	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	26.7	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	18.5	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.74	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-11 Description: 060930-S11-0009

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/30/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.3	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.77	mmhos/cm	10.3.3	01/23/2007
Saturation	49.5	%	27b	01/19/2007
Sand	12.5	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.4	%	43-5.3	01/22/2007
Silt	57.5	%	15-5 Mod.	01/18/2007
Clay	30.0	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	---	USDA	01/18/2007
Calcium Saturated Paste	12.1	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	7.14	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	2.12	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.68	---	20b	01/24/2007
Coarse Fragment Content	0.3	%	D422	01/29/2007
Organic Matter Dry Basis	4.11	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-12 Description: 060930-S11-0920

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 09/30/2006

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.98	mmhos/cm	10.3.3	01/23/2007
Saturation	47.4	%	27b	01/19/2007
Sand	10.0	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.7	%	43-5.3	01/22/2007
Silt	50.0	%	15-5 Mod.	01/18/2007
Clay	40.0	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	—	USDA	01/18/2007
Calcium Saturated Paste	4.38	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.65	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	5.07	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	2.71	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.73	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-13 Description: 060930-S11-2032 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/30/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.8	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.07	mmhos/cm	10.3.3	01/23/2007
Saturation	47.8	%	27b	01/19/2007
Sand	13.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	10.5	%	43-5.3	01/22/2007
Silt	48.7	%	15-5 Mod.	01/18/2007
Clay	37.5	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	---	USDA	01/18/2007
Calcium Saturated Paste	2.03	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.45	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	8.28	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	6.27	---	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.00	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-14	Description: 060930-S11-3240	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/30/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.8	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.82	mmhos/cm	10.3.3	01/23/2007
Saturation	61.9	%	27b	01/19/2007
Sand	11.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	8.4	%	43-5.3	01/22/2007
Silt	48.7	%	15-5 Mod.	01/18/2007
Clay	40.0	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	---	USDA	01/18/2007
Calcium Saturated Paste	1.69	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.69	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	16.4	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	12.6	---	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.63	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-15 Description: 060930-S11-4057 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 09/30/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	8.56	mmhos/cm	10.3.3	01/23/2007
Saturation	55.7	%	27b	01/19/2007
Sand	13.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	8.6	%	43-5.3	01/22/2007
Silt	48.7	%	15-5 Mod.	01/18/2007
Clay	37.5	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	—	USDA	01/18/2007
Calcium Saturated Paste	20.6	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	29.8	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	69.7	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	13.9	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.15	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-16	Description: 061005-S17-0010	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/05/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.54	mmhos/cm	10.3.3	01/23/2007
Saturation	44.5	%	27b	01/19/2007
Sand	18.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	7.4	%	43-5.3	01/22/2007
Silt	46.2	%	15-5 Mod.	01/18/2007
Clay	35.0	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	—	USDA	01/18/2007
Calcium Saturated Paste	4.27	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.47	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	0.37	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.20	—	20b	01/24/2007
Coarse Fragment Content	1.0	%	D422	01/29/2007
Organic Matter Dry Basis	3.74	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-17 Description: 061005-S17-1019 Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/05/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.31	mmhos/cm	10.3.3	01/23/2007
Saturation	49.0	%	27b	01/19/2007
Sand	21.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	11.6	%	43-5.3	01/25/2007
Silt	36.2	%	15-5 Mod.	01/23/2007
Clay	42.5	%	15-5 Mod.	01/23/2007
Texture	Clay	---	USDA	01/23/2007
Calcium Saturated Paste	2.64	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.98	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	0.37	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.24	---	20b	01/24/2007
Coarse Fragment Content	0.3	%	D422	01/29/2007
Organic Matter Dry Basis	3.17	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-18	Description: 061005-S17-1926	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/05/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.46	mmhos/cm	10.3.3	01/23/2007
Saturation	40.0	%	27b	01/19/2007
Sand	36.3	%	15-5 Mod.	01/18/2007
Very Fine Sand	4.2	%	43-5.3	01/22/2007
Silt	29.9	%	15-5 Mod.	01/18/2007
Clay	33.8	%	15-5 Mod.	01/18/2007
Texture	Clay Loam	—	USDA	01/18/2007
Calcium Saturated Paste	3.71	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.85	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	0.65	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.36	—	20b	01/24/2007
Coarse Fragment Content	3.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.85	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-19 Description: 061005-S17-2641

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/05/2006

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	0.40	mmhos/cm	10.3.3	01/23/2007
Saturation	49.2	%	27b	01/19/2007
Sand	8.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.5	%	43-5.3	01/22/2007
Silt	51.2	%	15-5 Mod.	01/18/2007
Clay	40.0	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	—	USDA	01/18/2007
Calcium Saturated Paste	2.57	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.57	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	0.46	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.29	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.02	%	S-9.20	01/25/2007
Sample Preparation	----	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-20	Description: 061005-S18-0006	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/05/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.49	mmhos/cm	10.3.3	01/23/2007
Saturation	41.9	%	27b	01/19/2007
Sand	23.8	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.5	%	43-5.3	01/22/2007
Silt	46.2	%	15-5 Mod.	01/18/2007
Clay	30.0	%	15-5 Mod.	01/18/2007
Texture	Clay Loam	---	USDA	01/18/2007
Calcium Saturated Paste	5.55	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	6.03	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	5.18	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	2.15	---	20b	01/24/2007
Coarse Fragment Content	0.5	%	D422	01/29/2007
Organic Matter Dry Basis	3.19	%	S-9.20	01/25/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-21 Description: 061005-S18-0613 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 10/05/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/23/2007
Electrical Conductivity, Saturated Paste	1.62	mmhos/cm	10.3.3	01/26/2007
Saturation	44.4	%	27b	01/23/2007
Sand	37.5	%	15-5 Mod.	01/24/2007
Very Fine Sand	7.7	%	43-5.3	01/25/2007
Silt	28.7	%	15-5 Mod.	01/24/2007
Clay	33.8	%	15-5 Mod.	01/24/2007
Texture	Clay Loam	—	USDA	01/24/2007
Calcium Saturated Paste	3.06	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	3.99	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	9.94	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	5.29	—	20b	01/24/2007
Coarse Fragment Content	0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.13	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-22 Description: 061005-S18-1325 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 10/05/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	7.43	mmhos/cm	10.3.3	01/26/2007
Saturation	48.1	%	27b	01/23/2007
Sand	27.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	10.2	%	43-5.3	01/22/2007
Silt	32.5	%	15-5 Mod.	01/19/2007
Clay	40.0	%	15-5 Mod.	01/19/2007
Texture	Clay Loam	—	USDA	01/19/2007
Calcium Saturated Paste	25.0	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	36.4	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	48.8	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	8.81	—	20b	01/24/2007
Coarse Fragment Content	0.5	%	D422	01/29/2007
Organic Matter Dry Basis	1.93	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-23 Description: 061005-S18-2550 (DID NOT REC.) Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/05/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	NA	—	—	—
Saturation	NA	----	—	—
Sand	NA	—	—	----
Very Fine Sand	NA	—	—	—
Silt	NA	----	—	—
Clay	NA	—	—	----
Texture	NA	—	—	—
Calcium Saturated Paste	NA	—	----	
Magnesium Saturated Paste	NA	—	—	
Sodium Saturated Paste	NA	—	—	
Sodium Adsorption Ratio	NA	----	----	
Coarse Fragment Content	NA	—	—	----
Organic Matter Dry Basis	NA	—	—	—
Sample Preparation	—	----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-24 Description: 061006-S38-0006

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/06/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.8	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	2.69	mmhos/cm	10.3.3	01/26/2007
Saturation	43.3	%	27b	01/23/2007
Sand	17.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	9.2	%	43-5.3	01/22/2007
Silt	48.7	%	15-5 Mod.	01/19/2007
Clay	33.8	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	—	USDA	01/19/2007
Calcium Saturated Paste	11.2	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	18.9	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	3.91	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	1.01	—	20b	01/24/2007
Coarse Fragment Content	0.6	%	D422	01/29/2007
Organic Matter Dry Basis	3.86	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-25 Description: 061006-S38-0614

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/06/2006

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	1.01	mmhos/cm	10.3.3	01/26/2007
Saturation	52.3	%	27b	01/23/2007
Sand	12.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	7.5	%	43-5.3	01/22/2007
Silt	43.7	%	15-5 Mod.	01/19/2007
Clay	43.8	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	---	USDA	01/19/2007
Calcium Saturated Paste	2.85	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	5.78	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	4.62	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	2.23	---	20b	01/24/2007
Coarse Fragment Content	0.4	%	D422	01/29/2007
Organic Matter Dry Basis	3.72	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-26 Description: 061006-S38-1430 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 10/06/2006 Collected by: JUDD STARK.

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.8	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	0.76	mmhos/cm	10.3.3	01/26/2007
Saturation	80.1	%	27b	01/23/2007
Sand	12.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	7.6	%	43-5.3	01/22/2007
Silt	42.5	%	15-5 Mod.	01/19/2007
Clay	45.0	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	---	USDA	01/19/2007
Calcium Saturated Paste	1.13	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.30	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	5.99	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	5.43	---	20b	01/24/2007
Coarse Fragment Content	0.3	%	D422	01/29/2007
Organic Matter Dry Basis	2.68	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-27	Description: 061006-S38-3048	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/06/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	6.62	mmhos/cm	10.3.3	01/26/2007
Saturation	73.2	%	27b	01/23/2007
Sand	15.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	4.4	%	43-5.3	01/22/2007
Silt	43.7	%	15-5 Mod.	01/19/2007
Clay	41.3	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	—	USDA	01/19/2007
Calcium Saturated Paste	22.5	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	38.7	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	37.3	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	6.74	—	20b	01/24/2007
Coarse Fragment Content	1.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.08	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-28 Description: 061006-S38-4858 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 10/06/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste,	5.21	mmhos/cm	10.3.3	01/26/2007
Saturation	85.6	%	27b	01/23/2007
Sand	5.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	2.1	%	43-5.3	01/22/2007
Silt	52.5	%	15-5 Mod.	01/19/2007
Clay	42.5	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	---	USDA	01/19/2007
Calcium Saturated Paste	9.59	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	24.6	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	37.0	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	8.94	---	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.07	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-29	Description: 061006-S41-0008	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/06/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	12.0	mmhos/cm	10.3.3	01/26/2007
Saturation	85.6	%	27b	01/23/2007
Sand	5.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	0.3	%	43-5.3	01/22/2007
Silt	43.7	%	15-5 Mod.	01/19/2007
Clay	51.3	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	---	USDA	01/19/2007
Calcium Saturated Paste	21.4	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	29.4	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	139	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	27.6	---	20b	01/25/2007
Coarse Fragment Content	1.6	%	D422	01/29/2007
Organic Matter Dry Basis	3.77	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-30	Description: 061006-S41-0825	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/06/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.0	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	12.8	mmhos/cm	10.3.3	01/26/2007
Saturation	101	%	27b	01/23/2007
Sand	5.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	3.2	%	43-5.3	01/22/2007
Silt	28.7	%	15-5 Mod.	01/19/2007
Clay	66.3	%	15-5 Mod.	01/19/2007
Texture	Clay	---	USDA	01/19/2007
Calcium Saturated Paste	21.0	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	52.5	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	162	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	26.7	---	20b	01/25/2007
Coarse Fragment Content	0.4	%	D422	01/29/2007
Organic Matter Dry Basis	2.48	%	S-9.20	01/26/2007
Sample Preparation	----	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-31	Description: 061006-S41-2540	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/06/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	21.2	mmhos/cm	10.3.3	01/26/2007
Saturation	87.7	%	27b	01/23/2007
Sand	20.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	10.8	%	43-5.3	01/22/2007
Silt	42.5	%	15-5 Mod.	01/19/2007
Clay	37.5	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	—	USDA	01/19/2007
Calcium Saturated Paste	32.8	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	106	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	259	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	31.1	—	20b	01/25/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.39	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-32 Description: 061006-S41-4054

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/06/2006

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.8	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	12.5	mmhos/cm	10.3.3	01/26/2007
Saturation	65.1	%	27b	01/23/2007
Sand	20.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	14.5	%	43-5.3	01/22/2007
Silt	57.5	%	15-5 Mod.	01/19/2007
Clay	22.5	%	15-5 Mod.	01/19/2007
Texture	Silt Loam	—	USDA	01/19/2007
Calcium Saturated Paste	23.1	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	48.5	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	126	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	21.1	—	20b	01/25/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.31	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-33	Description: 061015-S05-0008	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.5	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	0.67	mmhos/cm	10.3.3	01/26/2007
Saturation	59.5	%	27b	01/23/2007
Sand	7.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	3.0	%	43-5.3	01/22/2007
Silt	65.0	%	15-5 Mod.	01/19/2007
Clay	27.5	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	---	USDA	01/19/2007
Calcium Saturated Paste	4.39	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.78	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	0.48	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.25	---	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	5.80	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-34	Description: 061015-S05-0818	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	0.56	mmhos/cm	10.3.3	01/26/2007
Saturation	51.2	%	27b	01/23/2007
Sand	12.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	10.1	%	43-5.3	01/22/2007
Silt	60.0	%	15-5 Mod.	01/19/2007
Clay	27.5	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	—	USDA	01/19/2007
Calcium Saturated Paste	4.36	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.51	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	0.58	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.31	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	3.32	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-35 Description: 061015-S05-1827

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/15/2006

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	0.62	mmhos/cm	10.3.3	01/26/2007
Saturation	43.1	%	27b	01/23/2007
Sand	27.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	19.3	%	43-5.3	01/22/2007
Silt	51.2	%	15-5 Mod.	01/19/2007
Clay	21.3	%	15-5 Mod.	01/19/2007
Texture	Silt Loam	—	USDA	01/19/2007
Calcium Saturated Paste	4.33	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	2.68	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	1.40	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.75	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.99	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-36	Description: 061015-S05-2755	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	1.83	mmhos/cm	10.3.3	01/26/2007
Saturation	49.8	%	27b	01/23/2007
Sand	10.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	7.6	%	43-5.3	01/22/2007
Silt	60.0	%	15-5 Mod.	01/19/2007
Clay	30.0	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	—	USDA	01/19/2007
Calcium Saturated Paste	7.86	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	5.84	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	7.38	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	2.82	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.19	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-37	Description: 061015-S11-0010	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.6	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	1.04	mmhos/cm	10.3.3	01/26/2007
Saturation	72.7	%	27b	01/23/2007
Sand	17.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	9.5	%	43-5.3	01/22/2007
Silt	40.0	%	15-5 Mod.	01/19/2007
Clay	42.5	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	---	USDA	01/19/2007
Calcium Saturated Paste	4.19	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	4.48	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	4.04	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	1.94	---	20b	01/24/2007
Coarse Fragment Content	0.4	%	D422	01/29/2007
Organic Matter Dry Basis	3.32	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-38	Description: 061015-S11-1021	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	9.1	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	0.97	mmhos/cm	10.3.3	01/26/2007
Saturation	85.0	%	27b	01/23/2007
Sand	20.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	13.1	%	43-5.3	01/22/2007
Silt	35.0	%	15-5 Mod.	01/19/2007
Clay	45.0	%	15-5 Mod.	01/19/2007
Texture	Clay	—	USDA	01/19/2007
Calcium Saturated Paste	1.46	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	1.23	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	8.49	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	7.32	—	20b	01/24/2007
Coarse Fragment Content	0.3	%	D422	01/29/2007
Organic Matter Dry Basis	2.28	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-39	Description: 061015-S11-2133	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.6	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	2.22	mmhos/cm	10.3.3	01/26/2007
Saturation	106	%	27b	01/23/2007
Sand	12.5	%	15-5 Mod.	01/19/2007
Very Fine Sand	5.3	%	43-5.3	01/22/2007
Silt	45.0	%	15-5 Mod.	01/19/2007
Clay	42.5	%	15-5 Mod.	01/19/2007
Texture	Silty Clay	—	USDA	01/19/2007
Calcium Saturated Paste	2.35	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	3.88	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	17.1	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	9.66	—	20b	01/24/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.25	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-40	Description: 061015-S11-3340	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/15/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	7.35	mmhos/cm	10.3.3	01/26/2007
Saturation	55.7	%	27b	01/23/2007
Sand	15.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	7.0	%	43-5.3	01/22/2007
Silt	46.2	%	15-5 Mod.	01/19/2007
Clay	38.8	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	---	USDA	01/19/2007
Calcium Saturated Paste	24.1	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	33.0	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	50.9	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	9.52	---	20b	01/24/2007
Coarse Fragment Content	0.5	%	D422	01/29/2007
Organic Matter Dry Basis	2.37	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-41 Description: 061015-S11-4053 Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/15/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	9.83	mmhps/cm	10.3.3	01/26/2007
Saturation	56.7	%	27b	01/25/2007
Sand	8.8	%	15-5 Mod.	01/23/2007
Very Fine Sand	4.5	%	43-5.3	01/25/2007
Silt	48.7	%	15-5 Mod.	01/23/2007
Clay	42.5	%	15-5 Mod.	01/23/2007
Texture	Silty Clay	---	USDA	01/23/2007
Calcium Saturated Paste	25.1	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	47.2	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	82.8	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	13.8	---	20b	01/25/2007
Coarse Fragment Content	1.0	%	D422	01/29/2007
Organic Matter Dry Basis	1.58	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-42 Description: 061015-S11-5360 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 10/15/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	5.85	mmhos/cm	10.3.3	01/26/2007
Saturation	89.4	%	27b	01/25/2007
Sand	11.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	8.8	%	43-5.3	01/25/2007
Silt	46.2	%	15-5 Mod.	01/23/2007
Clay	42.5	%	15-5 Mod.	01/23/2007
Texture	Silty Clay	—	USDA	01/23/2007
Calcium Saturated Paste	11.9	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	22.2	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	53.6	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	13.0	—	20b	01/25/2007
Coarse Fragment Content	1.3	%	D422	01/29/2007
Organic Matter Dry Basis	1.32	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-43	Description: 061016-S28-0007	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/16/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.49	mmhos/cm	10.3.3	01/26/2007
Saturation	54.6	%	27b	01/25/2007
Sand	13.8	%	15-5 Mod.	01/23/2007
Very Fine Sand	5.4	%	43-5.3	01/25/2007
Silt	47.4	%	15-5 Mod.	01/23/2007
Clay	38.8	%	15-5 Mod.	01/23/2007
Texture	Si Cl Lo	—	USDA	01/23/2007
Calcium Saturated Paste	4.23	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.14	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.69	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.36	—	20b	01/25/2007
Coarse Fragment Content	1.8	%	D422	01/29/2007
Organic Matter Dry Basis	3.04	%	S-9.20	01/30/2007
Sample Preparation	----	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-44	Description: 061016-S28-0712	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/16/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.54	mmhos/cm	10.3.3	01/26/2007
Saturation	51.4	%	27b	01/25/2007
Sand	16.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	7.1	%	43-5.3	01/25/2007
Silt	34.9	%	15-5 Mod.	01/23/2007
Clay	48.8	%	15-5 Mod.	01/23/2007
Texture	Clay	---	USDA	01/23/2007
Calcium Saturated Paste	3.63	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.62	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	1.49	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.78	---	20b	01/25/2007
Coarse Fragment Content	1.8	%	D422	01/29/2007
Organic Matter Dry Basis	2.86	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-45	Description: 061016-S28-1221	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/16/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	9.0	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	1.05	mmhos/cm	10.3.3	01/26/2007
Saturation	63.0	%	27b	01/25/2007
Sand	6.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	1.6	%	43-5.3	01/25/2007
Silt	37.4	%	15-5 Mod.	01/23/2007
Clay	56.3	%	15-5 Mod.	01/23/2007
Texture	Clay	—	USDA	01/23/2007
Calcium Saturated Paste	2.47	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.99	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	8.55	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	4.76	---	20b	01/25/2007
Coarse Fragment Content	1.4	%	D422	01/29/2007
Organic Matter Dry Basis	2.45	%	S-9.20	01/30/2007
Sample Preparation	—	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-46	Description: 061016-S28-2132	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/16/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	9.1	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	1.40	mmhos/cm	10.3.3	01/26/2007
Saturation	100	%	27b	01/25/2007
Sand	2.5	%	15-5 Mod.	01/23/2007
Very Fine Sand	1.8	%	43-5.3	01/25/2007
Silt	30.0	%	15-5 Mod.	01/23/2007
Clay	67.5	%	15-5 Mod.	01/23/2007
Texture	Clay	—	USDA	01/23/2007
Calcium Saturated Paste	1.09	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	2.65	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	12.6	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	9.20	—	20b	01/25/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.20	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-47 Description: 061016-S28-3246

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/16/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.2	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	6.64	mmhos/cm	10.3.3	01/26/2007
Saturation	86.6	%	27b	01/25/2007
Sand	5.0	%	15-5 Mod.	01/23/2007
Very Fine Sand	4.7	%	43-5.3	01/25/2007
Silt	75.0	%	15-5 Mod.	01/23/2007
Clay	20.0	%	15-5 Mod.	01/23/2007
Texture	Silt Loam	---	USDA	01/23/2007
Calcium Saturated Paste	23.9	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	33.6	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	40.5	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	7.54	---	20b	01/25/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	0.67	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-48 Description: 061016-S28-4657 (DID NOT REC.) Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/16/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	---	---	---
Electrical Conductivity Saturated Paste	NA	---	---	---
Saturation	NA	---	---	---
Sand	NA	----	---	---
Very Fine Sand	NA	---	---	----
Silt	NA	---	----	---
Clay	NA	----	---	---
Texture	NA	---	---	---
Calcium Saturated Paste	NA	---	----	---
Magnesium Saturated Paste	NA	----	---	---
Sodium Saturated Paste	NA	---	----	---
Sodium Adsorption Ratio	NA	---	---	---
Coarse Fragment Content	NA	----	---	---
Organic Matter Dry Basis	NA	---	---	----
Sample Preparation	---	---	3-5.1	---

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-49 Description: 061016-S29-0007

Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/16/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.6	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.57	mmhos/cm	10.3.3	01/26/2007
Saturation	50.4	%	27b	01/25/2007
Sand	23.8	%	15-5 Mod.	01/23/2007
Very Fine Sand	9.8	%	43-5.3	01/25/2007
Silt	44.9	%	15-5 Mod.	01/23/2007
Clay	31.3	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	4.41	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.07	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.41	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.21	—	20b	01/25/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	2.96	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-50	Description: 061016-S29-0717	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/16/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.57	mmhos/cm	10.3.3	01/26/2007
Saturation	46.6	%	27b	01/25/2007
Sand	21.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	6.8	%	43-5.3	01/25/2007
Silt	44.9	%	15-5 Mod.	01/23/2007
Clay	33.8	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	5.63	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	3.52	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.31	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.14	—	20b	01/25/2007
Coarse Fragment Content	1.6	%	D422	01/29/2007
Organic Matter Dry Basis	2.46	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-51 Description: 061016-S29-1737 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 10/16/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.6	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.38	mmhos/cm	10.3.3	01/26/2007
Saturation	49.1	%	27b	01/25/2007
Sand	28.8	%	15-5 Mod.	01/23/2007
Very Fine Sand	8.5	%	43-5.3	01/25/2007
Silt	39.9	%	15-5 Mod.	01/23/2007
Clay	31.3	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	---	USDA	01/23/2007
Calcium Saturated Paste	2.64	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	2.36	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.32	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.20	---	20b	01/25/2007
Coarse Fragment Content	3.3	%	D422	01/29/2007
Organic Matter Dry Basis	1.81	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-52 Description: 061016-S29-3758 Matrix: SOIL
Date Received: 10/26/2006
Date Collected: 10/16/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.9	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.50	mmhos/cm	10.3.3	01/26/2007
Saturation	43.8	%	27b	01/25/2007
Sand	16.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	6.6	%	43-5.3	01/25/2007
Silt	42.4	%	15-5 Mod.	01/23/2007
Clay	41.3	%	15-5 Mod.	01/23/2007
Texture	Silty Clay	—	USDA	01/23/2007
Calcium Saturated Paste	1.01	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	2.64	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	2.91	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	2.16	—	20b	01/25/2007
Coarse Fragment Content	0.7	%	D422	01/29/2007
Organic Matter Dry Basis	1.48	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-53 Description: 061005-S18-2537 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 10/05/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	9.47	mmhos/cm	10.3.3	01/26/2007
Saturation	72.3	%	27b	01/25/2007
Sand	20.0	%	15-5 Mod.	01/23/2007
Very Fine Sand	10.5	%	43-5.3	01/25/2007
Silt	42.5	%	15-5 Mod.	01/23/2007
Clay	37.5	%	15-5 Mod.	01/23/2007
Texture	Si Cl Lo	—	USDA	01/23/2007
Calcium Saturated Paste	21.0	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	44.4	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	76.0	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	13.3	—	20b	01/25/2007
Coarse Fragment Content	<0.1	%	D422	01/29/2007
Organic Matter Dry Basis	1.16	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-54 Description: 061005-S18-3750 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 10/05/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	15.0	mmhos/cm	10.3.3	01/26/2007
Saturation	48.2	%	27b	01/25/2007
Sand	26.3	%	15-5 Mod.	01/23/2007
Very Fine Sand	16.6	%	43-5.3	01/25/2007
Silt	36.2	%	15-5 Mod.	01/23/2007
Clay	37.5	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	—	USDA	01/23/2007
Calcium Saturated Paste	17.7	meq/l	3-5.4	01/30/2007
Magnesium Saturated Paste	61.8	meq/l	3-5.4	01/30/2007
Sodium Saturated Paste	110	meq/l	3-5.4	01/30/2007
Sodium Adsorption Ratio	17.4	—	20b	01/30/2007
Coarse Fragment Content	0.7	%	D422	01/29/2007
Organic Matter Dry Basis	1.18	%	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-55	Description: DUPLICATE OF 2006110130-1	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 09/29/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.4	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.13	mmhos/cm	10.3.3	01/23/2007
Saturation	64.1	%	27b	01/19/2007
Sand	7.5	%	15-5 Mod.	01/18/2007
Very Fine Sand	3.0	%	43-5.3	01/22/2007
Silt	46.2	%	15-5 Mod.	01/18/2007
Clay	46.3	%	15-5 Mod.	01/18/2007
Texture	Silty Clay	----	USDA	01/18/2007
Calcium Saturated Paste	4.95	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	4.58	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	3.68	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	1.69	---	20b	01/24/2007
Coarse Fragment Content	NA	----	----	---
Organic Matter Dry Basis	4.85	%	S-9.20	01/25/2007
Sample Preparation	----	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-56 Description: DUPLICATE OF 2006110130-11 Matrix: SOIL
 Date Received: 10/26/2006
 Date Collected: 09/30/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	7.3	S.U.	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	1.84	mmhos/cm	10.3.3	01/23/2007
Saturation	51.6	%	27b	01/19/2007
Sand	12.5	%	15-5 Mod.	01/18/2007
Very Fine Sand	5.0	%	43-5.3	01/22/2007
Silt	57.5	%	15-5 Mod.	01/18/2007
Clay	30.0	%	15-5 Mod.	01/18/2007
Texture	Si Cl Lo	----	USDA	01/18/2007
Calcium Saturated Paste	11.9	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	6.89	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	2.05	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	0.67	—	20b	01/24/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	4.51	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-57 Description: METHOD BLANK FOR 2006110130-1 Matrix: WATER
 Date Received: — TO 20
 Date Collected: — Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/23/2007
Saturation	NA	—	—	—
Sand	NA	—	—	—
Very Fine Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	<0.2	—	20b	01/24/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	<0.10	%	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-58 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ———— FOR 2006110130-1 TO 20
 Date Collected: ———— Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	100	% [97-103]	10.3.2	01/19/2007
Electrical Conductivity Saturated Paste	111	% [56-144]	10.3.3	01/23/2007
Saturation	100	% [70-130]	27b	01/19/2007
Sand	19	% [0-200]	15-5 Mod.	01/18/2007
Very Fine Sand	NA	—	—	—
Silt	122	% [55-145]	15-5 Mod.	01/18/2007
Clay	99	% [74-126]	15-5 Mod.	01/18/2007
Texture	Silty Clay	—	USDA	01/18/2007
Calcium Saturated Paste	119	% [76-124]	3-5.4	01/24/2007
Magnesium Saturated Paste	118	% [79-121]	3-5.4	01/24/2007
Sodium Saturated Paste	106	% [61-139]	3-5.4	01/24/2007
Sodium Adsorption Ratio	97	% [79-121]	20b	01/24/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	100	% [64-136]	S-9.20	01/25/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-59	Description: DUPLICATE OF 2006110130-21	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/05/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.5	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	1.64	mmhos/cm	10.3.3	01/26/2007
Saturation	42.6	%	27b	01/23/2007
Sand	36.3	%	15-5 Mod.	01/24/2007
Very Fine Sand	6.2	%	43-5.3	01/25/2007
Silt	31.2	%	15-5 Mod.	01/24/2007
Clay	32.5	%	15-5 Mod.	01/24/2007
Texture	Clay Loam	—	USDA	01/24/2007
Calcium Saturated Paste	2.85	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	3.92	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	9.86	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	5.36	—	20b	01/24/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	NA	—	—	—
Sample Preparation	—	—	3-5.1	

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-60 Description: DUPLICATE OF 2006110130-31 Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/06/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.1	S.U.	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	21.7	mmhos/cm	10.3.3	01/26/2007
Saturation	84.8	%	27b	01/23/2007
Sand	20.0	%	15-5 Mod.	01/19/2007
Very Fine Sand	11.2	%	43-5.3	01/22/2007
Silt	42.5	%	15-5 Mod.	01/19/2007
Clay	37.5	%	15-5 Mod.	01/19/2007
Texture	Si Cl Lo	—	USDA	01/19/2007
Calcium Saturated Paste	31.9	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	105	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	259	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	31.3	—	20b	01/25/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	2.09	%	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-61	Description: METHOD BLANK FOR	Matrix: WATER
Date Received: -----	2006110130-21 TO 40	
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	----	---	---
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/26/2007
Saturation	NA	---	---	----
Sand	NA	----	---	---
Very Fine Sand	NA	---	---	---
Silt	NA	---	---	----
Clay	NA	----	---	---
Texture	NA	---	---	---
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/24/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/24/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/24/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/24/2007
Coarse Fragment Content	NA	----	---	---
Organic Matter Dry Basis	<0.10	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-62	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: —	FOR 2006110130-21 TO 40	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	99	% [97-103]	10.3.2	01/23/2007
Electrical Conductivity Saturated Paste	112	% [56-144]	10.3.3	01/26/2007
Saturation	110	% [70-130]	27b	01/23/2007
Sand	57	% [0-200]	15-5 Mod.	01/19/2007
Very Fine Sand	NA	—	—	—
Silt	115	% [55-145]	15-5 Mod.	01/19/2007
Clay	99	% [74-126]	15-5 Mod.	01/19/2007
Texture	Silty Clay	—	USDA	01/19/2007
Calcium Saturated Paste	118	% [76-124]	3-5.4	01/24/2007
Magnesium Saturated Paste	117	% [79-121]	3-5.4	01/24/2007
Sodium Saturated Paste	98	% [61-139]	3-5.4	01/24/2007
Sodium Adsorption Ratio	91	% [79-121]	20b	01/24/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	123	% [64-136]	S-9.20	01/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-63 Description: DUPLICATE OF 2006110130-41 Matrix: SOIL

Date Received: 10/26/2006

Date Collected: 10/15/2006 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.3	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	9.99	mmhos/cm	10.3.3	01/26/2007
Saturation	52.9	%	27b	01/25/2007
Sand	10.0	%	15-5 Mod.	01/23/2007
Very Fine Sand	6.0	%	43-5.3	01/25/2007
Silt	46.2	%	15-5 Mod.	01/23/2007
Clay	43.8	%	15-5 Mod.	01/23/2007
Texture	Silty Clay	---	USDA	01/23/2007
Calcium Saturated Paste	25.5	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	47.2	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	81.7	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	13.6	---	20b	01/25/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	1.68	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-64	Description: DUPLICATE OF 2006110130-51	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/16/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	8.6	S.U.	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	0.38	mmhos/cm	10.3.3	01/26/2007
Saturation	55.5	%	27b	01/25/2007
Sand	28.8	%	15-5 Mod.	01/23/2007
Very Fine Sand	8.3	%	43-5.3	01/25/2007
Silt	38.7	%	15-5 Mod.	01/23/2007
Clay	32.5	%	15-5 Mod.	01/23/2007
Texture	Clay Loam	---	USDA	01/23/2007
Calcium Saturated Paste	2.70	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	2.38	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	0.32	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	0.20	---	20b	01/25/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	1.69	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-65	Description: METHOD BLANK FOR	Matrix: WATER
Date Received: ----	2006110130-41 TO 54	
Date Collected: ----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	---	---	---
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	01/26/2007
Saturation	NA	---	---	---
Sand	NA	---	---	---
Very Fine Sand	NA	----	----	---
Silt	NA	---	---	---
Clay	NA	---	---	---
Texture	NA	----	----	---
Calcium Saturated Paste	<0.05	meq/l	3-5.4	01/25/2007
Magnesium Saturated Paste	<0.08	meq/l	3-5.4	01/25/2007
Sodium Saturated Paste	<0.04	meq/l	3-5.4	01/25/2007
Sodium Adsorption Ratio	<0.2	---	20b	01/25/2007
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	<0.1	%	S-9.20	01/30/2007
Sample Preparation	---	---	3-5.1	

Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-66	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: —	FOR 2006110130-41 TO 54	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	101	% [97-103]	10.3.2	01/25/2007
Electrical Conductivity Saturated Paste	114	% [56-144]	10.3.3	01/26/2007
Saturation	98	% [70-130]	27b	01/25/2007
Sand	57	% [0-200]	15-5 Mod.	01/23/2007
Very Fine Sand	NA	—	—	—
Silt	115	% [55-145]	15-5 Mod.	01/23/2007
Clay	99	% [74-126]	15-5 Mod.	01/23/2007
Texture	Silty Clay	—	USDA	01/23/2007
Calcium Saturated Paste	107	% [76-124]	3-5.4	01/25/2007
Magnesium Saturated Paste	111	% [79-121]	3-5.4	01/25/2007
Sodium Saturated Paste	104	% [61-139]	3-5.4	01/25/2007
Sodium Adsorption Ratio	100	% [79-121]	20b	01/25/2007
Coarse Fragment Content	NA	—	—	—
Organic Matter Dry Basis	89	% [64-136]	S-9.20	01/30/2007
Sample Preparation	—	—	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: GOLDER ASSOCIATES, INC.

Project No.: NONE GIVEN

Project Name: SOUTH HEART SOIL

Sample No.: 2006110130-67	Description: DUPLICATE OF 2006110130-22	Matrix: SOIL
Date Received: 10/26/2006		
Date Collected: 10/05/2006	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
pH on Saturation Extract	NA	---	---	---
Electrical Conductivity Saturated Paste	NA	---	---	---
Saturation	NA	---	---	---
Sand	NA	---	---	---
Very Fine Sand	NA	---	---	---
Silt	NA	---	---	---
Clay	NA	---	---	---
Texture	NA	---	---	---
Calcium Saturated Paste	NA	---	---	---
Magnesium Saturated Paste	NA	---	---	---
Sodium Saturated Paste	NA	---	---	---
Sodium Adsorption Ratio	NA	---	---	---
Coarse Fragment Content	NA	---	---	---
Organic Matter Dry Basis	2.06	%	S-9.20	01/26/2007
Sample Preparation	---	---	3-5.1	

South Heart
Project or Site Name

Project Number

Judd Stark
Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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Centener
Report to (Firm or Agency)

716 Aronson Av.
Address

Billings MT
City State Zip

Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	2006 LAB NUMBER
9/29/06	1450	060929-S40-0006	G	Soil	1													1 ✓	
↓	↓	-0613	↓	↓	↓													2 ✓	
		-1322															3 ✓		
		-2228															4 ✓		
		-2836															5 ✓		
		-3658															6 ✓		
	1720	060929-S53-0009	↓	↓	↓													7 ✓	
↓	-0921																8 ✓		
	-2134																9 ✓		
	-3457																10 ✓		
↓																		—	
																		—	
Relinquished by: <u>Coak Z. Murch</u>			Date: <u>10/26/06</u>	Time: <u>1800</u>	Received by: <u>[Signature]</u>												Val 11/15/06		
Relinquished by:			Date:	Time:	Received by:														
Relinquished by:			Date:	Time:	Received by:														

5 of 9

South Hunt
Project or Site Name

Project Number

Jueld Stark
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER
9/30/06	1040	060930-Bil-0009	G	Soil	1												11 ✓
↓	↓	-0920	↓	↓	↓												12 ✓
↓	↓	-2032	↓	↓	↓												13 ✓
↓	↓	-3240	↓	↓	↓												14 ✓
↓	↓	-4057	↓	↓	↓												15 ✓
10/5/06	1625	061005-S17-0010															16 ✓
↓	↓	-1019	↓	↓	↓												17 ✓
↓	↓	-1926	↓	↓	↓												18 ✓
↓	↓	-2641	↓	↓	↓												19 ✓
↓	1720	061005-S18-0006	↓	↓	↓												20 ✓
↓	↓	-0613	↓	↓	↓												21 ✓
↓	↓	-1325	↓	↓	↓												22 ✓
Relinquished by: <u>Cook 2. March</u>			Date: <u>10/26/06</u>	Time: <u>1800</u>	Received by: <u>[Signature]</u>												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

South Heart
Project or Site Name

Project Number

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	2006 LAB NUMBER
10/5/06	1720	061005-S18-2550	G	soil	1												23		
10/6/06	1530	061006-538-0006															24✓		
		-0614															25✓		
		-1430															26✓		
		-3048															27✓		
	1645	061006-541-0008													OK new	28✓			
		-0825															29		
		-2540															30✓		
		-4054															31✓		
10/15/06	1100	061015-805-0008															32✓		
		-0818															33✓		
		-1827															34✓		
																	35✓		
Relinquished by: Cook L. Munk			Date: 10/26/06	Time: 1800	Received by: [Signature]														
Relinquished by:			Date:	Time:	Received by:														
Relinquished by:			Date:	Time:	Received by:														

Project or Site Name
 Project Number
 Judd Stark
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	2006 LAB NUMBER
10/15/06	1100	06/10/15-S05-2755	G	Soil	1													36✓	
	1305	06/10/15-B11-0010	G	Soil	1													37✓	
		-1021																38✓	
		-2133																39✓	
		-3340																40✓	
		-4053																41✓	
		-5360																42✓	
10/16/06	1345	06/10/16-S28-0007																43✓	
		-0712																44✓	
		-1221																45✓	
		-2132																46✓	
		-3246																47✓	
Relinquished by: Cook Z. Murch			Date: 10/26/06	Time: 1200	Received by: [Signature]														
Relinquished by:			Date:	Time:	Received by:														
Relinquished by:			Date:	Time:	Received by:														

South Heart
Project or Site Name

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Project Number

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Sampler Name (Printed)

Judd Stark
Project Manager, Report to

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	2006 LAB NUMBER
10/16/06	1345	061016-B28-4657	G	Soil	1												MISSING? Did Not Rec	48	
10/16/06	1420	061016-B29-0007			1													49 ✓	
		-0717																50 ✓	
		-1737																51 ✓	
		-3758																52 ✓	
10/13/06		061005-S18-2537		DECISION COAL													• Dup1 53 55 Dup41 61 63		
		061005-S18-3750		motor coal													• Dup11 54 56 Dup51 62 64		
				MB													MB 55 57 MB 63 65		
				HCS													HCS 56 58 HCS 64 66		
																	• Dup21 59 69		
																	• Dup31 58 60		
																	MB 59 61		
																	HCS 60 62		
Relinquished by:			Date	Time	Received by:														
<u>Coole T. Murch</u>			10/24/06	1800	<u>[Signature]</u>														
Relinquished by:			Date	Time	Received by:														
Relinquished by:			Date	Time	Received by:														



SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name Malden Date/Time Received 10/26/06 1800
Project S. Herot Soil Received by KS
Laboratory Number(s) 110127-130 Carrier Name HAND
Checklist Completed by 10/27/06 me Sample Type Soils
Initials / Date

	YES	NO		YES	NO
1. Shipping container in good condition?	☒	☐	14. pH check performed by: _____		
2. Custody seals present on shipping container? Condition: Intact _____ Broken _____	☐	☒	15. Metals bottle(s) pH <2?	<u>NA</u>	
3. Chain of custody present?	☒	☐	16. Nutrient bottle(s) pH <2?		
4. Chain of custody signed when relinquished and received?	☒	☐	17. Cyanide bottle(s) pH >12?		
5. Chain of custody agrees with sample labels?	☒	☒	18. Sulfide bottle(s) pH >9?		
6. Custody seals on sample bottles? Condition: Intact _____ Broken _____	☐	☒	19. TOC bottle(s) pH <2?		
7. Samples in proper container/bottle?*	☒	☐	20. Phenolics bottle(s) pH <2?		
8. Sample containers intact?*	☒	☐	21. Oil & grease bottle(s) pH <2? (checked by analyst)		
9. Sufficient sample volume for indicated test?*	☒	☐	22. EPH/DRO bottle(s) pH <2? (checked by analyst)		
10. Ice/Frozen Blue Ice present in shipping container? (circle one) container temperature 1. _____ 2. _____ 3. _____ * (if <0 or >10)	☐	☒	23. Volatiles (VOA) pH <2? (checked by analyst)		
11. All samples rec'd within holding time?*	☒	☐	24. Semivolatiles (525) pH <2? (checked by analyst)		
12. VOA vials have zero headspace? * (if contains >5mm headspace)	<u>NA</u>		25. Other test types		
13. Trip Blank received?	<u>X</u>		26. Client contacted?		
			27. Person contacted		
			28. Date contacted		

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: #5. See notes on Co/C's

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: July 30, 2007
JOB NUMBER: 07-911-1
PAGE: 1 of 30
INVOICE NO.: 7060147

REPORT OF: Soil Analysis – South Heart Soil Survey – Project No. 506021-134

CASE NARRATIVE:

On May 21, 2007, these soil samples (laboratory numbers 2007060147-1 through -39) were received in our laboratory for analysis. Samples were selected for analysis based upon the client's instructions. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, *"Diagnosis and Improvement of Saline and Alkali Soils"*; American Society of Agronomy, *"Methods of Soil Analysis"* 1965, 1982, 1986; and Western States Laboratory Proficiency Testing Program, *"Soil & Plant Analytical Methods"*.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

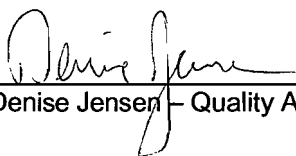
The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Footnotes used in this report are as follows:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

Reviewed by


Denise Jensen – Quality Assurance Coordinator

Attachments: Chain of Custody (4)
Sample Receipt Checklist

nct

Northern Analytical Laboratories, Inc.

Page 2

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-1	Description: 070425-TO1-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.2	%	29-3.5.2	07/09/2007
Very Fine Sand	7.8	%	43-5.3	07/02/2007
Sand	18.8	%	15-5 mod	06/28/2007
Silt	51.2	%	15-5 mod	06/28/2007
Clay	30.0	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	1.09	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	7.5	S.U.	21a	06/28/2007
Calcium saturated paste	7.73	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	1.55	meq/l	3-5.4	07/02/2007
Sodium saturated paste	0.38	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	0.17	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-2	Description: 070425-TO1-0718	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.0	%	29-3.5.2	07/09/2007
Very Fine Sand	5.7	%	43-5.3	07/02/2007
Sand	7.5	%	15-5 mod	06/28/2007
Silt	61.2	%	15-5 mod	06/28/2007
Clay	31.3	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	0.56	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	7.9	S.U.	21a	06/28/2007
Calcium saturated paste	3.17	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	1.27	meq/l	3-5.4	07/02/2007
Sodium saturated paste	0.65	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	0.44	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Northern Analytical Laboratories, Inc.

Page 4

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-3	Description: 070425-TO1-1824	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.7	%	29-3.5.2	07/09/2007
Very Fine Sand	9.2	%	43-5.3	07/02/2007
Sand	10.0	%	15-5 mod	06/28/2007
Silt	53.7	%	15-5 mod	06/28/2007
Clay	36.3	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	0.62	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.0	S.U.	21a	06/28/2007
Calcium saturated paste	1.68	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	1.83	meq/l	3-5.4	07/02/2007
Sodium saturated paste	2.25	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	1.70	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Northern Analytical Laboratories, Inc.

Page 5

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-4	Description: 070425-TO1-2460	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	0.7	%	29-3.5.2	07/09/2007
Very Fine Sand	7.9	%	43-5.3	07/02/2007
Sand	8.8	%	15-5 mod	06/28/2007
Silt	58.7	%	15-5 mod	06/28/2007
Clay	32.5	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	8.65	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.3	S.U.	21a	06/28/2007
Calcium saturated paste	14.0	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	27.9	meq/l	3-5.4	07/02/2007
Sodium saturated paste	77.7	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	17.0	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-5	Description: 070425-TO2-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.2	%	29-3.5.2	07/09/2007
Very Fine Sand	7.2	%	43-5.3	07/02/2007
Sand	10.0	%	15-5 mod	06/28/2007
Silt	55.0	%	15-5 mod	06/28/2007
Clay	35.0	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	32.4	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.1	S.U.	21a	06/28/2007
Calcium saturated paste	29.6	meq/l	3-5.4	07/05/2007
Magnesium saturated paste	161	meq/l	3-5.4	07/05/2007
Sodium saturated paste	416	meq/l	3-5.4	07/05/2007
Sodium Adsorption Ratio	42.6	----	20b	07/05/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-6	Description: 070425-TO2-0721	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	0.8	%	29-3.5.2	07/09/2007
Very Fine Sand	10.1	%	43-5.3	07/02/2007
Sand	12.5	%	15-5 mod	06/28/2007
Silt	47.5	%	15-5 mod	06/28/2007
Clay	40.0	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	52.9	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.3	S.U.	21a	06/28/2007
Calcium saturated paste	38.0	meq/l	3-5.4	07/05/2007
Magnesium saturated paste	501	meq/l	3-5.4	07/05/2007
Sodium saturated paste	839	meq/l	3-5.4	07/05/2007
Sodium Adsorption Ratio	51.1	----	20b	07/05/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-7	Description: 070425-TO2-2134	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	0.3	%	29-3.5.2	07/09/2007
Very Fine Sand	11.8	%	43-5.3	07/02/2007
Sand	13.8	%	15-5 mod	06/28/2007
Silt	36.2	%	15-5 mod	06/28/2007
Clay	50.0	%	15-5 mod	06/28/2007
Texture	Clay	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	22.3	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.5	S.U.	21a	06/28/2007
Calcium saturated paste	21.8	meq/l	3-5.4	07/05/2007
Magnesium saturated paste	82.2	meq/l	3-5.4	07/05/2007
Sodium saturated paste	260	meq/l	3-5.4	07/05/2007
Sodium Adsorption Ratio	36.1	----	20b	07/05/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-8	Description: 070425-TO2-3447	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	0.5	%	29-3.5.2	07/09/2007
Very Fine Sand	10.7	%	43-5.3	07/02/2007
Sand	12.5	%	15-5 mod	06/28/2007
Silt	38.7	%	15-5 mod	06/28/2007
Clay	48.8	%	15-5 mod	06/28/2007
Texture	Clay	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	18.2	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.5	S.U.	21a	06/28/2007
Calcium saturated paste	23.9	meq/l	3-5.4	07/05/2007
Magnesium saturated paste	47.5	meq/l	3-5.4	07/05/2007
Sodium saturated paste	208	meq/l	3-5.4	07/05/2007
Sodium Adsorption Ratio	34.7	----	20b	07/05/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-9	Description: 070425-TO2-4760	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	0.8	%	29-3.5.2	07/09/2007
Very Fine Sand	8.5	%	43-5.3	07/02/2007
Sand	10.0	%	15-5 mod	06/28/2007
Silt	45.0	%	15-5 mod	06/28/2007
Clay	45.0	%	15-5 mod	06/28/2007
Texture	Silty Clay	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	14.4	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.1	S.U.	21a	06/28/2007
Calcium saturated paste	24.1	meq/l	3-5.4	07/05/2007
Magnesium saturated paste	37.6	meq/l	3-5.4	07/05/2007
Sodium saturated paste	154	meq/l	3-5.4	07/05/2007
Sodium Adsorption Ratio	27.7	-----	20b	07/05/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-25 **Description:** 070427-TO4-0008 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 04/27/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.60	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	16.3	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	41.5	meq/l	3-5.4	07/02/2007
Sodium saturated paste	36.3	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	6.75	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-26	Description: 070427-TO4-0815	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	11.5	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	23.7	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	104	meq/l	3-5.4	07/02/2007
Sodium saturated paste	73.5	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	9.22	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-27	Description: 070427-TO4-1527	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	9.78	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	24.9	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	68.3	meq/l	3-5.4	07/02/2007
Sodium saturated paste	60.9	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	8.92	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-28	Description: 070427-TO4-2740	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.5	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	23.3	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	84.8	meq/l	3-5.4	07/02/2007
Sodium saturated paste	65.6	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	8.92	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-29	Description: 070427-TO4-4060	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	12.5	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	20.8	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	92.3	meq/l	3-5.4	07/02/2007
Sodium saturated paste	94.7	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	12.6	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-32	Description: 070427-TO5-1428	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.84	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	1.34	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	2.89	meq/l	3-5.4	07/02/2007
Sodium saturated paste	4.62	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	3.18	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-33	Description: 070427-TO5-2842	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.99	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	3.10	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	31.2	meq/l	3-5.4	07/02/2007
Sodium saturated paste	32.4	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	7.84	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-34	Description: 070427-TO5-4260	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.1	mmhos/cm	10-3.3	06/29/2007
Calcium saturated paste	18.7	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	78.9	meq/l	3-5.4	07/02/2007
Sodium saturated paste	62.6	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	8.97	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-35	Description: 070427-TO6-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.5	%	29-3.5.2	07/09/2007
Very Fine Sand	8.2	%	43-5.3	07/02/2007
Sand	12.5	%	15-5 mod	06/28/2007
Silt	56.2	%	15-5 mod	06/28/2007
Clay	31.3	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	0.48	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	6.5	S.U.	21a	06/28/2007
Calcium saturated paste	1.98	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	2.53	meq/l	3-5.4	07/02/2007
Sodium saturated paste	3.07	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	2.04	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-36 **Description:** 070427-TO6-0614

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/27/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.3	%	29-3.5.2	07/09/2007
Very Fine Sand	11.6	%	43-5.3	07/02/2007
Sand	15.0	%	15-5 mod	06/28/2007
Silt	45.0	%	15-5 mod	06/28/2007
Clay	40.0	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	0.58	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	7.5	S.U.	21a	06/28/2007
Calcium saturated paste	2.00	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	2.74	meq/l	3-5.4	07/02/2007
Sodium saturated paste	1.91	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	1.24	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-37 Description: 070427-TO6-1422 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 04/27/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.2	%	29-3.5.2	07/09/2007
Very Fine Sand	18.4	%	43-5.3	07/02/2007
Sand	21.3	%	15-5 mod	06/28/2007
Silt	38.7	%	15-5 mod	06/28/2007
Clay	40.0	%	15-5 mod	06/28/2007
Texture	Clay Loam	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	1.62	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.0	S.U.	21a	06/28/2007
Calcium saturated paste	2.48	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	4.81	meq/l	3-5.4	07/02/2007
Sodium saturated paste	10.7	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	5.60	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-38	Description: 070427-TO6-2238	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/27/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.0	%	29-3.5.2	07/09/2007
Very Fine Sand	11.9	%	43-5.3	07/02/2007
Sand	15.0	%	15-5 mod	06/28/2007
Silt	42.5	%	15-5 mod	06/28/2007
Clay	42.5	%	15-5 mod	06/28/2007
Texture	Silty Clay	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	6.14	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.2	S.U.	21a	06/28/2007
Calcium saturated paste	10.0	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	31.4	meq/l	3-5.4	07/02/2007
Sodium saturated paste	44.1	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	9.69	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-39 Description: 070427-TO6-3860

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/27/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.0	%	29-3.5.2	07/09/2007
Very Fine Sand	6.3	%	43-5.3	07/02/2007
Sand	10.0	%	15-5 mod	06/28/2007
Silt	46.2	%	15-5 mod	06/28/2007
Clay	43.8	%	15-5 mod	06/28/2007
Texture	Silty Clay	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	6.95	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.2	S.U.	21a	06/28/2007
Calcium saturated paste	6.82	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	28.9	meq/l	3-5.4	07/02/2007
Sodium saturated paste	58.8J	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	13.9	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-40	Description: DUPLICATE OF 2007060147-1	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.2	%	29-3.5.2	07/09/2007
Very Fine Sand	7.3	%	43-5.3	07/02/2007
Sand	18.8	%	15-5 mod	06/28/2007
Silt	51.2	%	15-5 mod	06/28/2007
Clay	30.0	%	15-5 mod	06/28/2007
Texture	Si Cl Lo	----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	1.19	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	7.5	S.U.	21a	06/28/2007
Calcium saturated paste	8.26	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	1.69	meq/l	3-5.4	07/02/2007
Sodium saturated paste	0.37	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	0.17	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-41	Description: DUPLICATE OF 2007060147-27	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/25/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	----	----	----
Very Fine Sand	NA	----	----	----
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	9.32	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	NA	----	----	----
Calcium saturated paste	24.4	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	67.9	meq/l	3-5.4	07/02/2007
Sodium saturated paste	59.7	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	8.79	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-42 Description: METHOD BLANK FOR 2007060147-1 Matrix: SOIL/WATER
 Date Received: ----- TO -9 & -35 TO -39
 Date Collected: ----- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	<0.10	%	29-3.5.2	07/09/2007
Very Fine Sand	NA	----	----	----
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	NA	----	----	----
Calcium saturated paste	<0.05	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/02/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	<0.2	----	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-43	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: -----	FOR 2007060147-1 TO -9 & -35 TO	
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	83	% [42-158]	29-3.5.2	07/09/2007
Very Fine Sand	NA	-----	-----	-----
Sand	75	% [0-200]	15-5 mod	06/28/2007
Silt	112	% [55-145]	15-5 mod	06/28/2007
Clay	99	% [74-126]	15-5 mod	06/28/2007
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	112	%[56-144]	10-3.3	06/29/2007
pH Saturated Paste	100	% [94-106]	21a	06/28/2007
Calcium saturated paste	108	% [76-124]	3-5.4	07/02/2007
Magnesium saturated paste	105	% [79-121]	3-5.4	07/02/2007
Sodium saturated paste	110	% [61-139]	3-5.4	07/02/2007
Sodium Adsorption Ratio	106	% [79-121]	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-44 Description: DUPLICATE OF 2007060147-39 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 04/27/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.2	%	29-3.5.2	07/09/2007
Very Fine Sand	6.1	%	43-5.3	06/29/2007
Sand	10.0	%	15-5 mod	06/28/2007
Silt	46.2	%	15-5 mod	06/28/2007
Clay	43.8	%	15-5 mod	06/28/2007
Texture	Silty Clay	-----	USDA	06/28/2007
Electrical Conductivity Saturated Paste	5.66	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	8.2	S.U.	21a	06/28/2007
Calcium saturated paste	5.79	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	23.0	meq/l	3-5.4	07/02/2007
Sodium saturated paste	44.1 (6)	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	11.6	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-46	Description: METHOD BLANK FOR	Matrix: SOIL/WATER
Date Received: -----	2007060147-25 TO -29 & -32 TO -34	
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	-----	-----	-----
Very Fine Sand	NA	-----	-----	-----
Sand	NA	-----	-----	-----
Silt	NA	-----	-----	-----
Clay	NA	-----	-----	-----
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	06/29/2007
pH Saturated Paste	NA	-----	-----	-----
Calcium saturated paste	<0.05	meq/l	3-5.4	07/02/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/02/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/02/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/02/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060147-47 **Description:** LABORATORY CONTROL SAMPLE **Matrix:** SOIL
Date Received: ----- FOR 2007060147-25 TO -29 & -32 TO
Date Collected: ----- **Collected by:** PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	----	----	----
Very Fine Sand	NA	----	----	----
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	115	%[56-144]	10-3.3	06/29/2007
pH Saturated Paste	NA	----	----	----
Calcium saturated paste	110	% [76-124]	3-5.4	07/02/2007
Magnesium saturated paste	111	% [79-121]	3-5.4	07/02/2007
Sodium saturated paste	119	% [61-139]	3-5.4	07/02/2007
Sodium Adsorption Ratio	113	% [79-121]	20b	07/02/2007
Sample Preparation	----	----	3-5.1	

South Heart Soil Survey
Project or Site Name

506 021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
Ph: 406-254-7226 • Fax: 406-254-1389
nlabs@wtp.net

Catena Consulting, LLC
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						As/sac	Al										
4/25/07	10:30	070425-T01-0007	G	Soil	1	X	X									1	
		0718				X										2	
		1824				X										3	
		2460				X										4	
4/25/07	1:00	070425-T02-0007				X										5	
		0721				X										6	
		2134				X										7	
		3447				X										8	
		4760				X										9	
Relinquished by: Matt Usuriello			Date: 5/21/07	Time: 1315	Received by: M. W. H. H.										1 of 4		
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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Billings, Montana 59101
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Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR	AlI										
4/27/07	8:00	070427-T01-0006	G	Soil	1												10
		0615															11
		1527															12
		2744															13
		4460															14
4/27/07	9:30	070427-T02-0004															15
		0410															16
		1024															17
		2440															18
		4060															19
Relinquished by: Matt Usurillo			Date	Time	Received by: [Signature]										Zrf4		
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506 021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER	
						EC/SAL	PH	TOC	TD	Ca	Mg	Na+K	Fe	Mn	Zn			Cu
			G	Soil	1	EC/SAL	PH	TOC	TD	Ca	Mg	Na+K	Fe	Mn	Zn	Cu		2007 LAB NUMBER
4/27/07	11:30	070427-T03-0005																20
		0512																21
		1222																22
		2240																23
		4060																24
4/27/07	1:00	070427-T04-0008																25
		0815																26
		1527																27
		2740																28
		4060																29
Relinquished by: Matt Usariello			Date: 5/21/07	Time: 1315	Received by: M. Walter										3+4			
Relinquished by:			Date:	Time:	Received by:													
Relinquished by:			Date:	Time:	Received by:													

South Heart Soil Survey

Project or Site Name

506021-134

Project Number

Sampler Name (Printed)

Judd Stark

Project Manager, Report to

CHAIN OF CUSTODY RECORD

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nlabs@wtp.net

Catena Consulting, LLC

Report to (Firm or Agency)

716 Aronson Ave

Address

Billings MT

59105

City

State

Zip

406 671-3961

Phone

jstark@catenaconsulting.com

Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAP	ALL										
			G	Soil	1												060147
4/27/07	2:00	070427-T05-0007															30
		0714															31
		1428					X										32
		2842					X										33
		4260					X										34
4/27/07	3:00	070427-T06-0006															35
		0614															36
		1422					X										37
		2238					X										38
		3860					X										39
Relinquished by: Matt Usuriello			Date	Time	Received by: M. Walton										4 of 4		
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name <u>Caterra</u>	Date/Time Received <u>5/21/07</u> <u>1315</u> Date / Time
Project <u>SH Soil</u>	Received by <u>MRW</u>
Laboratory Number(s) <u>060147, 165, 179, 219</u>	Carrier Name <u>HAND</u>
Checklist Completed by <u>MRW</u> <u>6/18/07</u> Initials / Date	Sample Type <u>Soil</u>

	YES	NO		YES	NO
1. Shipping container in good condition?	<u>NA</u>	<u> </u>	14. pH check performed by: _____		
2. Custody seals present on shipping container? Condition: Intact <u> </u> Broken <u> </u>	<u> </u>	<u> </u>	15. Metals bottle(s) pH <2?	<u>NA</u>	<u> </u>
3. Chain of custody present?	<u> </u>	<u> </u>	16. Nutrient bottle(s) pH <2?	<u> </u>	<u> </u>
4. Chain of custody signed when relinquished and received?	<u> </u>	<u> </u>	17. Cyanide bottle(s) pH >12?	<u> </u>	<u> </u>
5. Chain of custody agrees with sample labels?	<u> </u>	<u> </u>	18. Sulfide bottle(s) pH >9?	<u> </u>	<u> </u>
6. Custody seals on sample bottles? Condition: Intact <u> </u> Broken <u> </u>	<u> </u>	<u> </u>	19. TOC bottle(s) pH <2?	<u> </u>	<u> </u>
7. Samples in proper container/bottle?*	<u> </u>	<u> </u>	20. Phenolics bottle(s) pH <2?	<u> </u>	<u> </u>
8. Sample containers intact?*	<u> </u>	<u> </u>	21. Oil & grease bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
9. Sufficient sample volume for indicated test?*	<u> </u>	<u> </u>	22. EPH/DRO bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
10. Ice/Frozen Blue Ice present in shipping container? (circle one)	<u> </u>	<u> </u>	23. Volatiles (VOA) pH <2? (checked by analyst)	<u> </u>	<u> </u>
container temperature 1. _____ 2. _____ 3. _____ * (if <0 or >10)			24. Semivolatiles (525) pH <2? (checked by analyst)	<u> </u>	<u> </u>
11. All samples rec'd within holding time?*	<u> </u>	<u> </u>	25. Other test types	<u> </u>	<u> </u>
12. VOA vials have zero headspace? * (if contains >5mm headspace)	<u>NA</u>	<u> </u>	26. Client contacted?	<u> </u>	<u> </u>
13. Trip Blank received?	<u> </u>	<u> </u>	27. Person contacted	<u> </u>	<u> </u>
			28. Date contacted	<u> </u>	<u> </u>

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: _____

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: July 27, 2007
JOB NUMBER: 07-911-1
PAGE: 1 of 48
INVOICE NO.: 7060165

REPORT OF: Soil Analysis – South Heart Soil Survey – Project No. 506021-134

CASE NARRATIVE:

On May 21, 2007, these soil samples (laboratory numbers 2007060165-1 through -39) were received in our laboratory for analysis. Samples were selected for analysis based upon the client's instructions. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, *"Diagnosis and Improvement of Saline and Alkali Soils"*; American Society of Agronomy, *"Methods of Soil Analysis"* 1965, 1982, 1986; and Western States Laboratory Proficiency Testing Program, *"Soil & Plant Analytical Methods"*.

The results of analysis of the sample identified as "070428-TO4-3042" (2007060165-17) will be reported at a later date.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Footnotes used in this report are as follows:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

INSF – An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Reviewed by


Sara Sanderson – Project Manager

Attachments: Chain of Custody (4)
Sample Receipt Checklist

not

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-2	Description: 070428-TO1-0718	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.73	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.26	meq/l	3-5.4	07/26/2007
Sodium saturated paste	2.57	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	1.82	----	20b	07/26/2007
Sample Preparation	-----	---	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-3	Description: 070428-TO1-1829	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.03	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.57	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.88	meq/l	3-5.4	07/26/2007
Sodium saturated paste	8.54	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	6.50	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-4	Description: 070428-TO1-2945	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.30	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.00	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.47	meq/l	3-5.4	07/26/2007
Sodium saturated paste	12.6	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	11.3	---	20b	07/26/2007
Sample Preparation	---	---	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-5 Description: 070428-TO1-4560 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 04/28/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.27	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.71	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	3.36	meq/l	3-5.4	07/26/2007
Sodium saturated paste	23.8	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	15.0	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-6	Description: 070428-TO2-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.7	%	29-3.5.2	07/09/2007
Very Fine Sand	9.8	%	43-5.3	07/05/2007
Sand	22.5	%	15-5 mod	07/03/2007
Silt	40.0	%	15-5 mod	07/03/2007
Clay	37.5	%	15-5 mod	07/03/2007
Texture	Clay Loam	----	USDA	07/03/2007
Electrical Conductivity Saturated Paste	0.99	mmhos/cm	10-3.3	07/05/2007
pH Saturated Paste	6.8	S.U.	21a	07/03/2007
Calcium saturated paste	5.79	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.84	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.48	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.23	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-7 Description: 070428-TO2-0722 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 04/28/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.2	%	29-3.5.2	07/09/2007
Very Fine Sand	8.1	%	43-5.3	07/05/2007
Sand	20.0	%	15-5 mod	07/03/2007
Silt	42.5	%	15-5 mod	07/03/2007
Clay	37.5	%	15-5 mod	07/03/2007
Texture	Si Cl Lo	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	0.40	mmhos/cm	10-3.3	07/05/2007
pH Saturated Paste	7.7	S.U.	21a	07/03/2007
Calcium saturated paste	2.12	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.55	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.40	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.30	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-8 Description: 070428-TO2-2231

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/28/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.8	%	29-3.5.2	07/09/2007
Very Fine Sand	8.5	%	43-5.3	07/05/2007
Sand	17.5	%	15-5 mod	07/03/2007
Silt	30.0	%	15-5 mod	07/03/2007
Clay	52.5	%	15-5 mod	07/03/2007
Texture	Clay	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	0.71	mmhos/cm	10-3.3	07/05/2007
pH Saturated Paste	7.9	S.U.	21a	07/03/2007
Calcium saturated paste	0.99	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.33	meq/l	3-5.4	07/26/2007
Sodium saturated paste	3.14	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	2.92	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-10	Description: 070428-TO3-0715	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.62	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	2.88	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.91	meq/l	3-5.4	07/26/2007
Sodium saturated paste	1.46	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.86	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-11	Description: 070428-TO3-1526	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.80 J	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	0.94	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.58	meq/l	3-5.4	07/26/2007
Sodium saturated paste	8.54	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	7.61	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-12	Description: 070428-TO3-2642	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.58	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	0.89	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	3.84	meq/l	3-5.4	07/26/2007
Sodium saturated paste	25.0	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	16.3	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-13 Description: 070428-TO3-4260

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/28/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.90	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	2.66	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	8.79	meq/l	3-5.4	07/26/2007
Sodium saturated paste	42.6	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	17.8	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-15	Description: 070428-TO4-0715	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.55	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	2.44	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.56	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.63	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.40	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-16 Description: 070428-TO4-1530 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 04/28/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.48	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.03	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.54	meq/l	3-5.4	07/26/2007
Sodium saturated paste	5.34	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	4.70	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-17	Description: 070428-TO4-3042	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.32	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	*	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	*	meq/l	3-5.4	07/26/2007
Sodium saturated paste	*	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	*	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

*Re-analysis is being performed on these analytes.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-18	Description: 070428-TO4-4260	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.82	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.18	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	4.05	meq/l	3-5.4	07/26/2007
Sodium saturated paste	16.8	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	10.4	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-19 Description: 070430-TO1-0005

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/30/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.50	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	1.73	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.32	meq/l	3-5.4	07/26/2007
Sodium saturated paste	1.10	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.89	----	20b	07/26/2007
Sample Preparation	----	---	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-20	Description: 070430-TO1-0514	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.03	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	24.5	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	25.4	meq/l	3-5.4	07/26/2007
Sodium saturated paste	40.6	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	8.13	—	20b	07/26/2007
Sample Preparation	—	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-21	Description: 070430-TO1-1424	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	11.7	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	22.6	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	62.6	meq/l	3-5.4	07/10/2007
Sodium saturated paste	101	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	15.5	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-22 Description: 070430-TO1-2433

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/30/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	13.7	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	25.3	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	66.2	meq/l	3-5.4	07/10/2007
Sodium saturated paste	119	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	17.6	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-23	Description: 070430-TO1-3360	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	11.0	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	24.0	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	51.9	meq/l	3-5.4	07/10/2007
Sodium saturated paste	93.6	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	15.2	—	20b	07/10/2007
Sample Preparation	—	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-24	Description: 070430-TO2-0005	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	1.72	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.87	meq/l	3-5.4	07/10/2007
Sodium saturated paste	2.03	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	1.79	—	20b	07/10/2007
Sample Preparation	----	—	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-25 Description: 070430-TO2-0510 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 04/30/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.40	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	3.60	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.15	meq/l	3-5.4	07/10/2007
Sodium saturated paste	25.2	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	16.3	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-26	Description: 070430-TO2-1024	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.0	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	33.5	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	9.02	meq/l	3-5.4	07/10/2007
Sodium saturated paste	104	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	22.6	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-27	Description: 070430-TO2-2440	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.72	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	13.5	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	3.40	meq/l	3-5.4	07/10/2007
Sodium saturated paste	78.3	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	26.9	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007060165-28	Description:	070430-TO2-4060	Matrix:	SOIL
Date Received:	05/21/2007				
Date Collected:	04/30/2007	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	8.41	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	6.44	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.76	meq/l	3-5.4	07/10/2007
Sodium saturated paste	96.3	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	47.5	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-29 Description: 070501-TO1-0007

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.0	%	29-3.5.2	07/09/2007
Very Fine Sand	11.4	%	43-5.3	07/05/2007
Sand	25.0	%	15-5 mod	07/03/2007
Silt	40.0	%	15-5 mod	07/03/2007
Clay	35.0	%	15-5 mod	07/03/2007
Texture	Clay Loam	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	0.69	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	7.5	S.U.	21a	07/03/2007
Calcium saturated paste	4.43	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	2.01	meq/l	3-5.4	07/10/2007
Sodium saturated paste	0.90	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	0.50	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-30 Description: 070501-TO1-0714 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.2	%	29-3.5.2	07/09/2007
Very Fine Sand	16.1	%	43-5.3	07/05/2007
Sand	22.5	%	15-5 mod	07/03/2007
Silt	37.5	%	15-5 mod	07/03/2007
Clay	40.0	%	15-5 mod	07/03/2007
Texture	Clay Loam	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	0.97	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	8.1	S.U.	21a	07/03/2007
Calcium saturated paste	1.67	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.52	meq/l	3-5.4	07/10/2007
Sodium saturated paste	6.30	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	4.99	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-31 Description: 070501-TO1-1420 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.9	%	29-3.5.2	07/09/2007
Very Fine Sand	16.0	%	43-5.3	07/05/2007
Sand	22.5	%	15-5 mod	07/03/2007
Silt	37.5	%	15-5 mod	07/03/2007
Clay	40.0	%	15-5 mod	07/03/2007
Texture	Clay Loam	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	8.99	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	8.2	S.U.	21a	07/03/2007
Calcium saturated paste	16.3	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	30.9	meq/l	3-5.4	07/10/2007
Sodium saturated paste	78.1	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	16.1	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-32 Description: 070501-TO1-2035

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.1	%	29-3.5.2	07/09/2007
Very Fine Sand	12.4	%	43-5.3	07/05/2007
Sand	17.5	%	15-5 mod	07/03/2007
Silt	37.5	%	15-5 mod	07/03/2007
Clay	45.0	%	15-5 mod	07/03/2007
Texture	Clay	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	14.6	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	8.3	S.U.	21a	07/03/2007
Calcium saturated paste	21.8	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	60.1	meq/l	3-5.4	07/10/2007
Sodium saturated paste	142	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	22.2	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-33 Description: 070501-TO1-3544

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.2	%	29-3.5.2	07/09/2007
Very Fine Sand	10.4	%	43-5.3	07/05/2007
Sand	12.5	%	15-5 mod	07/03/2007
Silt	40.0	%	15-5 mod	07/03/2007
Clay	47.5	%	15-5 mod	07/03/2007
Texture	Silty Clay	---	USDA	07/03/2007
Electrical Conductivity Saturated Paste	23.0	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	8.5	S.U.	21a	07/03/2007
Calcium saturated paste	26.4	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	126	meq/l	3-5.4	07/10/2007
Sodium saturated paste	252	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	28.9	---	20b	07/10/2007
Sample Preparation	---	---	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-34 Description: 070501-TO1-4460

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	19.5	%	29-3.5.2	07/09/2007
Very Fine Sand	9.8	%	43-5.3	07/05/2007
Sand	12.5	%	15-5 mod	07/03/2007
Silt	40.0	%	15-5 mod	07/03/2007
Clay	47.5	%	15-5 mod	07/03/2007
Texture	Silty Clay	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	21.1	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	8.4	S.U.	21a	07/03/2007
Calcium saturated paste	21.6	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	126	meq/l	3-5.4	07/10/2007
Sodium saturated paste	213	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	24.8	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-35 Description: 070501-TO2-0006 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.18	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	3.47	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	1.04	meq/l	3-5.4	07/10/2007
Sodium saturated paste	22.8	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	15.2	-----	20b	07/10/2007
Sample Preparation	---	---	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-36 Description: 070501-TO2-0618 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.00	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	1.29	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.33	meq/l	3-5.4	07/10/2007
Sodium saturated paste	8.80	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	9.79	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-37 Description: 070501-TO2-1827

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.68	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	1.68	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.42	meq/l	3-5.4	07/10/2007
Sodium saturated paste	5.21	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	5.08	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-38	Description: 070501-TO2-2742	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.71	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	3.03	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.55	meq/l	3-5.4	07/10/2007
Sodium saturated paste	14.9	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	11.1	—	20b	07/10/2007
Sample Preparation	—	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-39 Description: 070501-TO2-4260

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.86	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	2.80	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	0.45	meq/l	3-5.4	07/10/2007
Sodium saturated paste	16.7	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	13.1	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-40 Description: DUPLICATE OF 2007060165-8 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 04/28/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	—	—	—
Very Fine Sand	NA	—	—	—
Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Electrical Conductivity Saturated Paste	0.59	mmhos/cm	10-3.3	07/05/2007
pH Saturated Paste	8.0	S.U.	21a	07/03/2007
Calcium saturated paste	NA	—	—	—
Magnesium saturated paste	NA	—	—	—
Sodium saturated paste	NA	—	—	—
Sodium Adsorption Ratio	NA	—	—	—
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-41	Description: DUPLICATE OF 2007060165-11	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/28/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.03 (6)	mmhos/cm	10-3.3	07/05/2007
Calcium saturated paste	NA	—	—	—
Magnesium saturated paste	NA	—	—	—
Sodium saturated paste	NA	—	—	—
Sodium Adsorption Ratio	NA	—	—	—
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-42	Description: METHOD BLANK FOR 2007060165-1	Matrix: SOIL/WATER
Date Received: —	TO -20	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	<0.10	%	29-3.5.2	07/09/2007
Very Fine Sand	NA	—	—	—
Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/05/2007
pH Saturated Paste	NA	—	—	—
Calcium saturated paste	<0.05	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/26/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	<0.2	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-43 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ----- FOR 2007060165-1 TO -20
 Date Collected: ----- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	69	% [42-158]	29-3.5.2	07/09/2007
Very Fine Sand	NA	-----	-----	-----
Sand	0	% [0-200]	15-5 mod	07/03/2007
Silt	125	% [55-145]	15-5 mod	07/03/2007
Clay	99	% [74-126]	15-5 mod	07/03/2007
Texture	Silty Clay	-----	USDA	07/03/2007
Electrical Conductivity Saturated Paste	126	% [56-144]	10-3.3	07/05/2007
pH Saturated Paste	99	% [94-106]	21a	07/03/2007
Calcium saturated paste	121	% [76-124]	3-5.4	07/26/2007
Magnesium saturated paste	100	% [74-126]	3-5.4	07/26/2007
Sodium saturated paste	123	% [70-130]	3-5.4	07/26/2007
Sodium Adsorption Ratio	115	% [78-122]	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-44	Description: DUPLICATE OF 2007060165-21	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 04/30/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	12.2	mmhos/cm	10-3.3	07/06/2007
Calcium saturated paste	22.7	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	61.4	meq/l	3-5.4	07/10/2007
Sodium saturated paste	101	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	15.5	—	20b	07/10/2007
Sample Preparation	----	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-45	Description: DUPLICATE OF 2007060165-31	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/01/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	—	—	—
Very Fine Sand	NA	—	—	—
Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Electrical Conductivity Saturated Paste	9.32	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	NA	—	—	—
Calcium saturated paste	17.8	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	32.5	meq/l	3-5.4	07/10/2007
Sodium saturated paste	77.8	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	15.5	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-46	Description: METHOD BLANK FOR	Matrix: SOIL/WATER
Date Received: —	2007060165-21 TO -39	
Date Collected: —	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	—	—	—
Very Fine Sand	NA	—	—	—
Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/06/2007
pH Saturated Paste	NA	—	—	—
Calcium saturated paste	<0.05	meq/l	3-5.4	07/10/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/10/2007
Sodium saturated paste	<0.2	meq/l	3-5.4	07/10/2007
Sodium Adsorption Ratio	<0.04	—	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-47 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL
 Date Received: ——— FOR 2007060165-21 TO -39
 Date Collected: ——— Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	—	—	—
Very Fine Sand	NA	—	—	—
Sand	NA	—	—	—
Silt	NA	—	—	—
Clay	NA	—	—	—
Texture	NA	—	—	—
Electrical Conductivity Saturated Paste	114	%[56-144]	10-3.3	07/06/2007
pH Saturated Paste	NA	—	—	—
Calcium saturated paste	113	% [76-124]	3-5.4	07/10/2007
Magnesium saturated paste	120	% [79-121]	3-5.4	07/10/2007
Sodium saturated paste	110	% [61-139]	3-5.4	07/10/2007
Sodium Adsorption Ratio	103	% [79-121]	20b	07/10/2007
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-48 Description: DUPLICATE OF 2007060165-30 Matrix: SOIL
 Date Received: 05/21/2007
 Date Collected: 05/01/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.1	%	29-3.5.2	07/09/2007
Very Fine Sand	15.5	%	43-5.3	07/05/2007
Sand	22.5	%	15-5 mod	07/03/2007
Silt	37.5	%	15-5 mod	07/03/2007
Clay	40.0	%	15-5 mod	07/03/2007
Texture	Clay Loam	—	USDA	07/03/2007
Electrical Conductivity Saturated Paste	NA	—	—	
pH Saturated Paste	NA	—	—	
Calcium saturated paste	NA	—	—	
Magnesium saturated paste	NA	—	—	
Sodium saturated paste	NA	—	—	
Sodium Adsorption Ratio	NA	—	—	
Sample Preparation	—	—	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-49 Description: DUPLICATE OF 2007060165-10 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 04/28/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	—	—	
Calcium saturated paste	2.64	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.60	meq/l	3-5.4	07/26/2007
Sodium saturated paste	1.15	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.71	—	20b	07/26/2007
Sample Preparation	—	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060165-50 Description: DUPLICATE OF 2007060165-15 Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 04/28/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	—	—	
Calcium saturated paste	2.69	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.85	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.64	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.39	—	20b	07/26/2007
Sample Preparation	—	—	3-5.1	

506 021-134
Project Number

Judd Stark
Project Manager, Report to

NORTHERN

**602 South 25th Street
Billings, Montana 59101**
Ph: 406-254-7226 • Fax: 406-254-1389
nlabs@wtp.net

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	LAB NUMBER	
						EC/SAR	Al											
4/28/07	1:00	070428-TC1-0007	G	Soil	1													2007 LAB NUMBER 060165
		0718				X												1
		1829				X												2
		2945				X												3
		4560				X												4
4/28/07	2:00	070428-TC2-0007																5
		0722				X												6
		2231				X												7
																		8
Relinquished by: Matt Usuiello			Date	Time	Received by: M. Walter													
Relinquished by:			Date	Time	Received by:													
Relinquished by:			Date	Time	Received by:													

South Heart Soil Survey
Project or Site Name

506 021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
Ph: 406-254-7226 • Fax: 406-254-1389
nlabs@wtp.net

Catena Consulting, LLC
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAE	Al										
4/28/07	3:30	C7C428-TC3-0007	G	Soil	1												9
		C715															10
		1526															11
		2642															12
		4260															13
4/28/07	4:00	C70428-TC4-0007															14
		C715															15
		1530															16
		3042															17
		4260															18
Relinquished by: Matt Usuriello			Date	Time	Received by: M. Walter												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506 021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR	ALL										
4/30/07	11:00	076430-T01-0005	G	Soil	1	X										19	
		0514				X										20	
		1424				X										21	
		2433				X										22	
		3360				X										23	
4/30/07	1:00	076430-T02-0005				X										24	
		0510				X										25	
		1024				X										26	
		2440				X										27	
		4060				X										28	
Relinquished by: <u>Matt Usurietto</u>			Date	Time	Received by: <u>M. Walton</u>												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

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Catena Consulting LLC
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						GC/MS	ALL										
5/1/07	8:00	070501-TC1-0007	G	Soil	1	X										Dup X ²¹⁹⁰⁷ 40	29
		0714				X										Spl 11 ^{OK} 41	30
		1420				X										MB 42	31
		2035				X ^{TC}										LCS 43	32
		3544				X										Dup 21 ^{OK} 44	33
		4460				X										Spl 31 ^{OK} 45	34
5/1/07	10:00	070501-TC2-0006				X										MB 46	35
		0618				X										LCS 47	36
		1827				X											37
		2742				X											38
		4260				X											39
Relinquished by: Matt Usuriotto			Date: 5/21/07	Time: 1315	Received by: M. Usuriotto												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												



SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name Caterra Date/Time Received 5/21/07 1315
Project SH Soil Received by MW
Laboratory Number(s) 060147, 165, 179, 219 Carrier Name HAND
Checklist Completed by MW 6/18/07 Sample Type Soil
Initials / Date

	YES	NO		YES	NO
1. Shipping container in good condition?	<u>NA</u>	<u> </u>	14. pH check performed by: _____		
2. Custody seals present on shipping container?	<u> </u>	<u> </u>	15. Metals bottle(s) pH <2?	<u>NA</u>	<u> </u>
Condition: Intact <u> </u> Broken <u> </u>			16. Nutrient bottle(s) pH <2?	<u> </u>	<u> </u>
3. Chain of custody present?	<u> </u>	<u> </u>	17. Cyanide bottle(s) pH >12?	<u> </u>	<u> </u>
4. Chain of custody signed when relinquished and received?	<u> </u>	<u> </u>	18. Sulfide bottle(s) pH >9?	<u> </u>	<u> </u>
5. Chain of custody agrees with sample labels?	<u> </u>	<u> </u>	19. TOC bottle(s) pH <2?	<u> </u>	<u> </u>
6. Custody seals on sample bottles?	<u> </u>	<u> </u>	20. Phenolics bottle(s) pH <2?	<u> </u>	<u> </u>
Condition: Intact <u> </u> Broken <u> </u>			21. Oil & grease bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
7. Samples in proper container/bottle?*	<u> </u>	<u> </u>	22. EPH/DRO bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
8. Sample containers intact?*	<u> </u>	<u> </u>	23. Volatiles (VOA) pH <2? (checked by analyst)	<u> </u>	<u> </u>
9. Sufficient sample volume for indicated test?*	<u> </u>	<u> </u>	24. Semivolatiles (525) pH <2? (checked by analyst)	<u> </u>	<u> </u>
10. Ice/Frozen Blue Ice present in shipping container? (circle one)	<u> </u>	<u> </u>	25. Other test types	<u> </u>	<u> </u>
container temperature 1. <u> </u> 2. <u> </u> 3. <u> </u>			26. Client contacted?	<u> </u>	<u> </u>
* (if <0 or >10)			27. Person contacted	<u> </u>	<u> </u>
11. All samples rec'd within holding time?*	<u> </u>	<u> </u>	28. Date contacted	<u> </u>	<u> </u>
12. VOA vials have zero headspace? * (if contains >5mm headspace)	<u>NA</u>	<u> </u>			
13. Trip Blank received?	<u> </u>	<u> </u>			

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: _____

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

Revised: July 30, 2007
DATE: July 19, 2007
JOB NUMBER: 07-911-1
PAGE: 1 of 48
INVOICE NO.: 7060219

REPORT OF: Soil Analysis – South Heart Soil Survey – Project No. 506021-134

CASE NARRATIVE:

On May 21, 2007, these soil samples (laboratory numbers 2007060219-1 through -60) were received in our laboratory for analysis. Samples were selected for analysis based upon the client's instructions. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, "*Diagnosis and Improvement of Saline and Alkali Soils*"; American Society of Agronomy, "*Methods of Soil Analysis*" 1965, 1982, 1986; and Western States Laboratory Proficiency Testing Program, "*Soil & Plant Analytical Methods*".

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

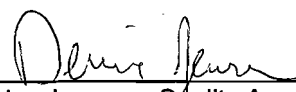
Footnotes used in this report are as follows:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the stated quality control limit. The associated sample results have been footnoted with a data qualifier.

INSF – An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Reviewed by


Denise Jensen – Quality Assurance Coordinator

Revision: The cation results for the following samples have been revised. 2007060219-25, -26, -27, -35, -36, -37, -38, -39, -40, -41, -42, -43, -44, -45, -46, -59, -60, -66, -69.

Attachments: Chain of Custody (6)
Sample Receipt Checklist

nct

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-1	Description: 070511-S33-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.6	%	LOI @ 440 C	07/16/2007
Very Fine Sand	10.5	%	43-5.3	07/14/2007
Sand	15.0	%	15-5 mod	07/13/2007
Silt	66.2	%	15-5 mod	07/13/2007
Clay	18.8	%	15-5 mod	07/13/2007
Texture	Silt Loam	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.89	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	6.2	S.U.	21a	07/12/2007
Calcium saturated paste	5.09	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.07	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.15	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.66	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-2	Description: 070511-S33-0610	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.6	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.4	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	51.2	%	15-5 mod	07/13/2007
Clay	36.3	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	1.05	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.8	S.U.	21a	07/12/2007
Calcium saturated paste	1.95	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.38	meq/l	3-5.4	07/16/2007
Sodium saturated paste	10.1	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	9.34	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-3	Description: 070511-S33-1019	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.0	%	LOI @ 440 C	07/16/2007
Very Fine Sand	9.9	%	43-5.3	07/14/2007
Sand	10.0	%	15-5 mod	07/13/2007
Silt	51.2	%	15-5 mod	07/13/2007
Clay	38.8	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	1.18	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.4	S.U.	21a	07/12/2007
Calcium saturated paste	0.81	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.19	meq/l	3-5.4	07/16/2007
Sodium saturated paste	12.6	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	17.8	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-4	Description: 070511-S33-1930	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.5	%	LOI @ 440 C	07/16/2007
Very Fine Sand	12.2	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	67.5	%	15-5 mod	07/13/2007
Clay	20.0	%	15-5 mod	07/13/2007
Texture	Silt Loam	-----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	4.81	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.6	S.U.	21a	07/12/2007
Calcium saturated paste	2.71	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.72	meq/l	3-5.4	07/16/2007
Sodium saturated paste	59.0	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	45.1	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-5	Description: 070511-S33-3049	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.6	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.7	%	43-5.3	07/14/2007
Sand	13.8	%	15-5 mod	07/13/2007
Silt	69.9	%	15-5 mod	07/13/2007
Clay	16.3	%	15-5 mod	07/13/2007
Texture	Silt Loam	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	14.5	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.1	S.U.	21a	07/12/2007
Calcium saturated paste	29.3	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	6.77	meq/l	3-5.4	07/16/2007
Sodium saturated paste	193	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	45.4	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-6	Description: 070511-S34-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	5.3	%	LOI @ 440 C	07/16/2007
Very Fine Sand	12.1	%	43-5.3	07/14/2007
Sand	17.5	%	15-5 mod	07/13/2007
Silt	46.2	%	15-5 mod	07/13/2007
Clay	36.3	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.99	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.3	S.U.	21a	07/12/2007
Calcium saturated paste	1.12	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.41	meq/l	3-5.4	07/16/2007
Sodium saturated paste	9.50	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	10.9	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-7	Description: 070511-S34-0617	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.8	%	LOI @ 440 C	07/16/2007
Very Fine Sand	12.5	%	43-5.3	07/14/2007
Sand	18.8	%	15-5 mod	07/13/2007
Silt	44.9	%	15-5 mod	07/13/2007
Clay	36.3	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	-----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	3.90	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.8	S.U.	21a	07/12/2007
Calcium saturated paste	12.5	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	4.62	meq/l	3-5.4	07/16/2007
Sodium saturated paste	29.5	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	10.1	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-8	Description: 070511-S34-1729	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.4	%	LOI @ 440 C	07/16/2007
Very Fine Sand	7.3	%	43-5.3	07/14/2007
Sand	10.0	%	15-5 mod	07/13/2007
Silt	43.7	%	15-5 mod	07/13/2007
Clay	46.3	%	15-5 mod	07/13/2007
Texture	Silty Clay	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.5	S.U.	21a	07/12/2007
Calcium saturated paste	2.16	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.04	meq/l	3-5.4	07/16/2007
Sodium saturated paste	38.1	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	30.1	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-9	Description: 070511-S34-2949	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	0.5	%	LOI @ 440 C	07/16/2007
Very Fine Sand	8.7	%	43-5.3	07/14/2007
Sand	10.0	%	15-5 mod	07/13/2007
Silt	63.7	%	15-5 mod	07/13/2007
Clay	26.3	%	15-5 mod	07/13/2007
Texture	Silt Loam	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	10.3	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.2	S.U.	21a	07/12/2007
Calcium saturated paste	21.7	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	10.1	meq/l	3-5.4	07/16/2007
Sodium saturated paste	108	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	27.1	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-25 **Description:** 070513-S04-2736 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 05/13/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.24	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	1.53	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.69	meq/l	3-5.4	07/26/2007
Sodium saturated paste	7.93	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	6.24	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-26	Description: 070513-S04-3646	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.23 J	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	1.35	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.59	meq/l	3-5.4	07/26/2007
Sodium saturated paste	15.3	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	12.6	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-27	Description: 070513-S04-4654	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.83	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	2.49	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	3.18	meq/l	3-5.4	07/26/2007
Sodium saturated paste	21.1	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	12.5	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-35	Description: 070513-S20-1021	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.75	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	1.82	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.21	meq/l	3-5.4	07/26/2007
Sodium saturated paste	7.36	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	5.18	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-36	Description: 070513-S20-2131	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.20	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	4.16	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	6.40	meq/l	3-5.4	07/26/2007
Sodium saturated paste	21.9	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	9.54	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-37	Description: 070513-S20-3145	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.96	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	27.2	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	40.4	meq/l	3-5.4	07/26/2007
Sodium saturated paste	65.7	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	11.3	----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-38	Description: 070513-S20-4560	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	12.6	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	23.0	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	60.3	meq/l	3-5.4	07/26/2007
Sodium saturated paste	110	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	17.0	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-39	Description: 070515-S39-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/15/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.39	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	9.73	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	3.25	meq/l	3-5.4	07/26/2007
Sodium saturated paste	5.42	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	2.13	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-40 **Description:** 070515-S39-0617

Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/15/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.23	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	3.47	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	3.21	meq/l	3-5.4	07/26/2007
Sodium saturated paste	34.5	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	18.9	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-41 **Description:** 070515-S39-1734 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 05/15/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	13.4	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	24.5	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	49.1	meq/l	3-5.4	07/26/2007
Sodium saturated paste	126	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	20.8	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-42	Description: 070515-S39-3441	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/15/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	14.7	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	25.3	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	63.5	meq/l	3-5.4	07/26/2007
Sodium saturated paste	160	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	24.0	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-43	Description: 070515-S51-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/15/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.66	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	4.08	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.15	meq/l	3-5.4	07/26/2007
Sodium saturated paste	1.97	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	1.11	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-44	Description: 070515-S51-0718	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/15/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	2.09	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.94	meq/l	3-5.4	07/26/2007
Sodium saturated paste	11.7	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	8.27	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-45	Description: 070515-S51-1825	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/15/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.86	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	26.7	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	16.6	meq/l	3-5.4	07/26/2007
Sodium saturated paste	24.8	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	5.33	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-46	Description: 070515-S51-2531	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/15/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.16	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	28.5	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	15.9	meq/l	3-5.4	07/26/2007
Sodium saturated paste	28.5	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	6.05	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-47	Description: 070516-S01-0007	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.8	%	LOI @ 440 C	07/16/2007
Very Fine Sand	13.1	%	43-5.3	07/14/2007
Sand	20.0	%	15-5 mod	07/13/2007
Silt	50.0	%	15-5 mod	07/13/2007
Clay	30.0	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.4	S.U.	21a	07/12/2007
Calcium saturated paste	6.27	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.98	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.09	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.54	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-48	Description: 070516-S01-0714	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.7	%	LOI @ 440 C	07/16/2007
Very Fine Sand	14.0	%	43-5.3	07/14/2007
Sand	18.8	%	15-5 mod	07/13/2007
Silt	49.9	%	15-5 mod	07/13/2007
Clay	31.3	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.59	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.6	S.U.	21a	07/12/2007
Calcium saturated paste	3.57	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.36	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.31	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.83	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-49	Description: 070516-S01-1424	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.7	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.2	%	43-5.3	07/14/2007
Sand	15.0	%	15-5 mod	07/13/2007
Silt	51.2	%	15-5 mod	07/13/2007
Clay	33.8	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.94	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.5	S.U.	21a	07/12/2007
Calcium saturated paste	4.16	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.53	meq/l	3-5.4	07/16/2007
Sodium saturated paste	3.50	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	1.91	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-50	Description: 070516-S01-2434	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.8	%	LOI @ 440 C	07/16/2007
Very Fine Sand	13.3	%	43-5.3	07/14/2007
Sand	15.0	%	15-5 mod	07/13/2007
Silt	42.5	%	15-5 mod	07/13/2007
Clay	42.5	%	15-5 mod	07/13/2007
Texture	Silty Clay	-----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.8	S.U.	21a	07/12/2007
Calcium saturated paste	2.82	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.67	meq/l	3-5.4	07/16/2007
Sodium saturated paste	8.39	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	5.07	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY**Sample No.:** 2007060219-51 **Description:** 070516-S01-3449**Matrix:** SOIL**Date Received:** 05/21/2007**Date Collected:** 05/16/2007**Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.2	%	LOI @ 440 C	07/16/2007
Very Fine Sand	18.0	%	43-5.3	07/14/2007
Sand	20.0	%	15-5 mod	07/13/2007
Silt	36.2	%	15-5 mod	07/13/2007
Clay	43.8	%	15-5 mod	07/13/2007
Texture	Clay	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.98	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.0	S.U.	21a	07/12/2007
Calcium saturated paste	0.93	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.06	meq/l	3-5.4	07/16/2007
Sodium saturated paste	8.23	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	8.26	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-52	Description: 070516-S01-4960	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.2	%	LOI @ 440 C	07/16/2007
Very Fine Sand	9.9	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	46.2	%	15-5 mod	07/13/2007
Clay	41.3	%	15-5 mod	07/13/2007
Texture	Silty Clay	-----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.7	S.U.	21a	07/12/2007
Calcium saturated paste	1.47	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.10	meq/l	3-5.4	07/16/2007
Sodium saturated paste	18.6	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	13.9	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-53	Description: 070516-S02-0006	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	4.1	%	LOI @ 440 C	07/16/2007
Very Fine Sand	9.3	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	48.7	%	15-5 mod	07/13/2007
Clay	38.8	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.4	S.U.	21a	07/12/2007
Calcium saturated paste	5.35	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.41	meq/l	3-5.4	07/16/2007
Sodium saturated paste	0.99	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.50	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-54	Description: 070516-S02-0616	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.3	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.1	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	51.2	%	15-5 mod	07/13/2007
Clay	36.3	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	-----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.6	S.U.	21a	07/12/2007
Calcium saturated paste	2.48	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.46	meq/l	3-5.4	07/16/2007
Sodium saturated paste	2.15	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	1.53	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007060219-55	Description:	070516-S02-1636	Matrix:	SOIL
Date Received:	05/21/2007				
Date Collected:	05/16/2007	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	5.3	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.7	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	53.7	%	15-5 mod	07/13/2007
Clay	33.8	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.87	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.1	S.U.	21a	07/12/2007
Calcium saturated paste	1.10	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.81	meq/l	3-5.4	07/16/2007
Sodium saturated paste	8.22	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	8.43	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007060219-56	Description:	070516-S02-3649	Matrix:	SOIL
Date Received:	05/21/2007				
Date Collected:	05/16/2007	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.3	%	LOI @ 440 C	07/16/2007
Very Fine Sand	14.3	%	43-5.3	07/14/2007
Sand	15.0	%	15-5 mod	07/13/2007
Silt	43.7	%	15-5 mod	07/13/2007
Clay	41.3	%	15-5 mod	07/13/2007
Texture	Silty Clay	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	8.62	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.0	S.U.	21a	07/12/2007
Calcium saturated paste	18.2	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	23.0	meq/l	3-5.4	07/16/2007
Sodium saturated paste	79.8	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	17.6	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-57	Description: 070516-S02-4961	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.5	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.6	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	48.7	%	15-5 mod	07/13/2007
Clay	38.8	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	11.0	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	8.2	S.U.	21a	07/12/2007
Calcium saturated paste	21.5	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	31.0	meq/l	3-5.4	07/16/2007
Sodium saturated paste	104	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	20.3	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-59	Description: 070516-S04-0612	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/16/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.64	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	28.2	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	26.2	meq/l	3-5.4	07/26/2007
Sodium saturated paste	26.5	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	5.09	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-60 **Description:** 070516-S04-1234 **Matrix:** SOIL

Date Received: 05/21/2007

Date Collected: 05/16/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	11.1	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	23.1	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	40.0	meq/l	3-5.4	07/26/2007
Sodium saturated paste	101	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	18.0	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-61	Description: DUPLICATE OF 2007060219-1	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	5.0	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.6	%	43-5.3	07/14/2007
Sand	15.0	%	15-5 mod	07/13/2007
Silt	66.2	%	15-5 mod	07/13/2007
Clay	18.8	%	15-5 mod	07/13/2007
Texture	Silt Loam	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.87	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	6.3	S.U.	21a	07/12/2007
Calcium saturated paste	5.19	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.07	meq/l	3-5.4	07/16/2007
Sodium saturated paste	1.13	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	0.64	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-62	Description: DUPLICATE OF 2007060219-2	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/11/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.8	%	LOI @ 440 C	07/16/2007
Very Fine Sand	11.3	%	43-5.3	07/14/2007
Sand	12.5	%	15-5 mod	07/13/2007
Silt	51.2	%	15-5 mod	07/13/2007
Clay	36.3	%	15-5 mod	07/13/2007
Texture	Si Cl Lo	----	USDA	07/13/2007
Electrical Conductivity Saturated Paste	0.92	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	7.9	S.U.	21a	07/12/2007
Calcium saturated paste	1.50	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	0.31	meq/l	3-5.4	07/16/2007
Sodium saturated paste	7.94	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	8.35	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-63	Description: METHOD BLANK	Matrix: SOIL
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	<0.10	%	LOI @ 440 C	07/16/2007
Very Fine Sand	NA	-----	-----	-----
Sand	NA	-----	-----	-----
Silt	NA	-----	-----	-----
Clay	NA	-----	-----	-----
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/13/2007
pH Saturated Paste	NA	-----	-----	-----
Calcium saturated paste	<0.05	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/16/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-64 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: -----

Date Collected: ----- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	137	% [42-158]	LOI @ 440 C	07/16/2007
Very Fine Sand	NA	-----	-----	-----
Sand	75	% [0-200]	15-5 mod	07/13/2007
Silt	115	% [55-145]	15-5 mod	07/13/2007
Clay	97	% [74-126]	15-5 mod	07/13/2007
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	112	% [56-144]	10-3.3	07/13/2007
pH Saturated Paste	101	% [94-106]	21a	07/12/2007
Calcium saturated paste	107	% [76-124]	3-5.4	07/16/2007
Magnesium saturated paste	109	% [79-121]	3-5.4	07/16/2007
Sodium saturated paste	112	% [61-139]	3-5.4	07/16/2007
Sodium Adsorption Ratio	108	% [79-121]	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-65 Description: DUPLICATE OF 2007060219-25 Matrix: SOIL
Date Received: 05/21/2007
Date Collected: 05/13/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.29	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	NA	----	----	----
Magnesium saturated paste	NA	----	----	----
Sodium saturated paste	NA	----	----	----
Sodium Adsorption Ratio	NA	----	----	----
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-66	Description: DUPLICATE OF 2007060219-26	Matrix: SOIL
Date Received: 05/21/2007		
Date Collected: 05/13/2007	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.66 (6)	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	NA	----	----	----
Magnesium saturated paste	NA	----	----	----
Sodium saturated paste	NA	----	----	----
Sodium Adsorption Ratio	NA	----	----	----
Sample Preparation	-----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-67 Description: METHOD BLANK Matrix: SOIL

Date Received: -----

Date Collected: ----- Collected by: PREREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/13/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/26/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-68 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: -----

Date Collected: ----- Collected by: PREREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	127	% [56-144]	10-3.3	07/13/2007
Calcium saturated paste	109	% [76-124]	3-5.4	07/26/2007
Magnesium saturated paste	94	% [74-126]	3-5.4	07/26/2007
Sodium saturated paste	110	% [70-130]	3-5.4	07/26/2007
Sodium Adsorption Ratio	108	% [78-122]	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-69 Description: DUPLICATE OF 2007060219-35 Matrix: SOIL

Date Received: 05/21/2007

Date Collected: 05/13/2007 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	----	----	----
Calcium saturated paste	1.81	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.01	meq/l	3-5.4	07/26/2007
Sodium saturated paste	6.52	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	4.72	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060219-70 **Description:** DUPLICATE OF 2007060219-44 **Matrix:** SOIL
Date Received: 05/21/2007
Date Collected: 05/15/2007 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	----	----	----
Calcium saturated paste	2.02	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.88	meq/l	3-5.4	07/26/2007
Sodium saturated paste	11.6	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	8.30	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

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Phone Fax

South Heart Soil Survey
Project or Site Name

506 021-134
Project Number

Sampler Name (Printed)

Judd Stark
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CHAIN OF CUSTODY RECORD

NORTHERN

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City State Zip

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR	Al										
5/13/07	11:11	070513-S02-0006	G	Soil	1												10
		0612															11
		1218															12
		1830															13
		3048															14
		4858															15
5/13/07	11:30	070513-S03-0007															16
		0721															17
		2129															18
		2940															19
		4049															20
		4960															21
Relinquished by: Matt Usuriello			Date	Time	Received by: M. Watten												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SA	ALL										
5/13/07	12:15	070513-S04-0006	G	Soil	1												22
		0617															23
		1727															24
		2736															25
		3646															26
		4654															27
5/13/07	3:06	070513-S14-0006															28
		0612															29
		1217															30
		1732															31
		3238															32
		3851															33
Relinquished by: Matt Uscorillo			Date	Time	Received by: M. Walten												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
Ph: 406-254-7226 • Fax: 406-254-1389
nlabs@wtp.net

Catena Consulting, LLC
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SP	ALL										
5/13/07	4:20	070513-S28-0010	G	Soil	1	X											34
		1021				X											35
		2131				X											36
		8145				X											37
		4560				X											38
5/15/07	2:55	070515-S39-0006				X											39
		0617				X											40
		1734				X											41
		3441				X											42
Relinquished by: <u>Matt Uscorillo</u>			Date	Time	Received by: <u>M. Walter</u>												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
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Catena Consulting LLC
Report to (Firm or Agency)

716 Aronson
Address

Billings MT 59105
City State Zip

406 671-3961
Phone Fax

506021.134

Project Number

Stark

Sampler Name (Printed)

Judd Stark

Project Manager, Report to

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SP	PH										
5/15/07	4:50	070515-S51-0007	G	Soil	1	x											43
		0718				x											44
		1825				x											45
		2531				x											46
5/16/07	9:30	070516-S01-0007															47
		0714				x											48
		1424				x											49
		2434				x											50
		3449				x											51
		4960				x											52
Relinquished by: Matt Usuniello			Date	Time	Received by: M. Walter												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

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Billings, Montana 59101
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Catena Consulting, LLC
Report to (Firm or Agency)

716 Aronson Ave
Address

Billings MT 59105
City State Zip

406 671-3961 jstark@catenaconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SPR	ALL										
5/16/07	10:00	070516-SC2-C006	G	Soil	1		X									Dup 1 61	53
		0616					X									Spl Dup 2 62	54
		1636					X									MB 63	55
		3649					X									LCS 64	56
		4961					X									Dup 2/25 65	57
5/16/07	10:54	070516-SC4-C006														Spl Dup 26 66	58
		0612					X									MB 67	59
		1734					X									LCS 68	60
																Dup 41 69	—
																Spl Dup 51 70	—
																MB 71	—
																LCS 72	—
Relinquished by: Matt Usarella			Date: 5/21/07	Time: 1315	Received by: MW Walter										MW 5/25/07		
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name <u>Catoma</u>	Date/Time Received <u>5/21/07</u> <u>1315</u> Date / Time
Project <u>SH Soil</u>	Received by <u>MW</u>
Laboratory Number(s) <u>060147, 165, 179, 219</u>	Carrier Name <u>HAND</u>
Checklist Completed by <u>MW</u> <u>6/18/07</u> Initials / Date	Sample Type <u>Soil</u>

- | | YES | NO | | YES | NO |
|---|-----------|-----------|---|-----------|-----------|
| 1. Shipping container in good condition? | <u>NA</u> | <u> </u> | 14. pH check performed by: _____ | | |
| 2. Custody seals present on shipping container?
Condition: Intact _____ Broken _____ | <u> </u> | <u> </u> | 15. Metals bottle(s) pH <2? | <u>NA</u> | <u> </u> |
| 3. Chain of custody present? | <u> </u> | <u> </u> | 16. Nutrient bottle(s) pH <2? | <u> </u> | <u> </u> |
| 4. Chain of custody signed when relinquished and received? | <u> </u> | <u> </u> | 17. Cyanide bottle(s) pH >12? | <u> </u> | <u> </u> |
| 5. Chain of custody agrees with sample labels? | <u> </u> | <u> </u> | 18. Sulfide bottle(s) pH >9? | <u> </u> | <u> </u> |
| 6. Custody seals on sample bottles?
Condition: Intact _____ Broken _____ | <u> </u> | <u> </u> | 19. TOC bottle(s) pH <2? | <u> </u> | <u> </u> |
| 7. Samples in proper container/bottle?* | <u> </u> | <u> </u> | 20. Phenolics bottle(s) pH <2? | <u> </u> | <u> </u> |
| 8. Sample containers intact?* | <u> </u> | <u> </u> | 21. Oil & grease bottle(s) pH <2?
(checked by analyst) | <u> </u> | <u> </u> |
| 9. Sufficient sample volume for indicated test?* | <u> </u> | <u> </u> | 22. EPH/DRO bottle(s) pH <2?
(checked by analyst) | <u> </u> | <u> </u> |
| 10. Ice/Frozen Blue Ice present in shipping container? (circle one)
container temperature 1. _____ 2. _____ 3. _____
* (if <0 or >10) | <u> </u> | <u> </u> | 23. Volatiles (VOA) pH <2?
(checked by analyst) | <u> </u> | <u> </u> |
| 11. All samples rec'd within holding time?* | <u> </u> | <u> </u> | 24. Semivolatiles (525) pH <2?
(checked by analyst) | <u> </u> | <u> </u> |
| 12. VOA vials have zero headspace?
* (if contains >5mm headspace) | <u>NA</u> | <u> </u> | 25. Other test types | <u> </u> | <u> </u> |
| 13. Trip Blank received? | <u> </u> | <u> </u> | 26. Client contacted? | <u> </u> | <u> </u> |
| | | | 27. Person contacted | <u> </u> | <u> </u> |
| | | | 28. Date contacted | <u> </u> | <u> </u> |

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: _____

REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: July 27, 2007
JOB NUMBER: 07-911-1
PAGE: 1 of 27
INVOICE NO.: 7060320

REPORT OF: Soil Analysis – South Heart Soil Survey – Project No. 506021-134

CASE NARRATIVE:

On June 25, 2007, these soil samples (laboratory numbers 2007060320-1 through -22) were received in our laboratory for analysis. Samples were selected for analysis based upon the client's instructions. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, *"Diagnosis and Improvement of Saline and Alkali Soils"*; American Society of Agronomy, *"Methods of Soil Analysis"* 1965, 1982, 1986; and Western States Laboratory Proficiency Testing Program, *"Soil & Plant Analytical Methods"*.

The results of analyses of the samples identified as "070523-TO1-0005" (2007060320-5), "070524-TO1-2135" (2007060320-15) and "070524-TO1-3560" (2007060320-16) will be reported at a later date.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

Footnotes used in this report are as follows:

INSF – An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Reviewed by 
Sara Sanderson – Project Manager

Attachments: Chain of Custody (3)
Sample Receipt Checklist

nct

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-1	Description: 070522-T01-0006	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/22/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.3	%	29-3.5.2	07/18/2007
Very Fine Sand	6.6	%	43-5.3	07/18/2007
Sand	7.5	%	15-5 mod	07/17/2007
Silt	37.5	%	15-5 mod	07/17/2007
Clay	55.0	%	15-5 mod	07/17/2007
Texture	Clay	----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	7.7	S.U.	21a	07/13/2007
Calcium saturated paste	2.24	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.78	meq/l	3-5.4	07/16/2007
Sodium saturated paste	5.64	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	3.98	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-2 Description: 070522-T01-0618 Matrix: SOIL
 Date Received: 06/25/2007
 Date Collected: 05/22/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.8	%	29-3.5.2	07/18/2007
Very Fine Sand	5.7	%	43-5.3	07/18/2007
Sand	6.3	%	15-5 mod	07/17/2007
Silt	38.7	%	15-5 mod	07/17/2007
Clay	55.0	%	15-5 mod	07/17/2007
Texture	Clay	----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	1.32	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	8.1	S.U.	21a	07/13/2007
Calcium saturated paste	2.66	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.17	meq/l	3-5.4	07/16/2007
Sodium saturated paste	14.3	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	9.19	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-3 Description: 070522-T01-1833 Matrix: SOIL
 Date Received: 06/25/2007
 Date Collected: 05/22/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.0	%	29-3.5.2	07/18/2007
Very Fine Sand	9.5	%	43-5.3	07/18/2007
Sand	10.0	%	15-5 mod	07/17/2007
Silt	37.5	%	15-5 mod	07/17/2007
Clay	52.5	%	15-5 mod	07/17/2007
Texture	Clay	-----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	5.86	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	8.0	S.U.	21a	07/13/2007
Calcium saturated paste	25.7	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	22.2	meq/l	3-5.4	07/16/2007
Sodium saturated paste	38.8	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	7.93	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-4 Description: 070522-T01-3360 Matrix: SOIL
 Date Received: 06/25/2007
 Date Collected: 05/22/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.4	%	29-3.5.2	07/18/2007
Very Fine Sand	9.6	%	43-5.3	07/18/2007
Sand	10.0	%	15-5 mod	07/17/2007
Silt	38.7	%	15-5 mod	07/17/2007
Clay	51.3	%	15-5 mod	07/17/2007
Texture	Clay	----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	7.69	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	8.2	S.U.	21a	07/13/2007
Calcium saturated paste	15.8	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	20.8	meq/l	3-5.4	07/16/2007
Sodium saturated paste	68.1	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	15.9	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-6	Description: 070523-T01-0517	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/23/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.64	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	4.10	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.54	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.28	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.17	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007060320-7	Description:	070523-T01-1726	Matrix:	SOIL
Date Received:	06/25/2007				
Date Collected:	05/23/2007	Collected by:	JUDD STARK		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.94	mmhos/cm	10-3.3	07/27/2007
Calcium saturated paste	*	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	*	meq/l	3-5.4	07/26/2007
Sodium saturated paste	*	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	*	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

*Re-analysis is being performed on these analytes.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-8	Description: 070523-T01-2660	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/23/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.12	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	2.42	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.06	meq/l	3-5.4	07/26/2007
Sodium saturated paste	7.82	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	5.23	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-9	Description: 070523-T02-0006	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/23/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.87	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	8.59	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.18	meq/l	3-5.4	07/26/2007
Sodium saturated paste	<0.05	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.01	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-10	Description: 070523-T02-0615	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/23/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.45	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	3.05	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	0.64	meq/l	3-5.4	07/26/2007
Sodium saturated paste	<0.05	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.03	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-11	Description: 070523-T02-1521	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/23/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.37	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	2.19	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.60	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.21	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.16	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-13	Description: 070524-T01-0615	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/24/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.47	mmhos/cm	10-3.3	07/27/2007
Calcium saturated paste	1.00	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	1.00	meq/l	3-5.4	07/26/2007
Sodium saturated paste	4.24	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	4.24	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-14	Description: 070524-T01-1521	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/24/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	INSF	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	2.06	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	3.71	meq/l	3-5.4	07/26/2007
Sodium saturated paste	16.1	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	9.47	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

INSF - An insufficient amount of saturated paste extract liquid was produced in order to perform this analysis.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-15	Description: 070524-T01-2135	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/24/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.09	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste		meq/l	3-5.4	07/26/2007
Magnesium saturated paste		meq/l	3-5.4	07/26/2007
Sodium saturated paste		meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio		----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

*Re-analysis is being performed on these analytes.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-16	Description: 070524-T01-3560	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/24/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	8.75	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste		meq/l	3-5.4	07/26/2007
Magnesium saturated paste		meq/l	3-5.4	07/26/2007
Sodium saturated paste		meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio		-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

*Re-analysis is being performed on these analytes.

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-20 Description: 070524-T03-2432

Matrix: SOIL

Date Received: 06/25/2007

Date Collected: 05/24/2007

Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.72	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	2.88	meq/l	3-5.4	07/27/2007
Magnesium saturated paste	2.27	meq/l	3-5.4	07/27/2007
Sodium saturated paste	0.57	meq/l	3-5.4	07/27/2007
Sodium Adsorption Ratio	0.36	----	20b	07/27/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-21	Description: 070524-T03-3244	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/24/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.51	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	2.37	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.16	meq/l	3-5.4	07/26/2007
Sodium saturated paste	0.70	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	0.47	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-22	Description: 070524-T03-4460	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/24/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	1.57	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	2.09	meq/l	3-5.4	07/26/2007
Sodium saturated paste	2.38	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	1.76	----	20b	07/26/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-23 Description: DUPLICATE OF 2007060320-1 Matrix: SOIL
 Date Received: 06/25/2007
 Date Collected: 05/22/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.6	%	29-3.5.2	07/18/2007
Very Fine Sand	NA	----	----	----
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	0.87	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	7.8	S.U.	21a	07/13/2007
Calcium saturated paste	2.20	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	1.75	meq/l	3-5.4	07/16/2007
Sodium saturated paste	5.73	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	4.08	----	20b	07/16/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-24	Description: DUPLICATE OF 2007060320-2	Matrix: SOIL
Date Received: 06/25/2007		
Date Collected: 05/22/2007	Collected by: JUDD STARK	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.7	%	29-3.5.2	07/18/2007
Very Fine Sand	5.8	%	43-5.3	07/18/2007
Sand	6.3	%	15-5 mod	07/17/2007
Silt	38.7	%	15-5 mod	07/17/2007
Clay	55.0	%	15-5 mod	07/17/2007
Texture	Clay	-----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	1.44	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	8.2	S.U.	21a	07/13/2007
Calcium saturated paste	2.58	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	2.10	meq/l	3-5.4	07/16/2007
Sodium saturated paste	13.8	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	9.03	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-25 **Description:** METHOD BLANK FOR 2007060320-1 **Matrix:** SOIL/WATER
Date Received: ----- TO -20
Date Collected: ----- **Collected by:** PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	<0.10	%	29-3.5.2	07/18/2007
Very Fine Sand	NA	-----	-----	-----
Sand	NA	-----	-----	-----
Silt	NA	-----	-----	-----
Clay	NA	-----	-----	-----
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/18/2007
pH Saturated Paste	NA	-----	-----	-----
Calcium saturated paste	<0.05	meq/l	3-5.4	07/16/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/16/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/16/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-26 **Description:** LABORATORY CONTROL SAMPLE **Matrix:** SOIL
Date Received: ----- FOR 2007060320-1 TO -20
Date Collected: ----- **Collected by:** PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	114	% [42-158]	29-3.5.2	07/18/2007
Very Fine Sand	NA	-----	-----	-----
Sand	75	% [0-200]	15-5 mod	07/17/2007
Silt	122	% [55-145]	15-5 mod	07/17/2007
Clay	92	% [74-126]	15-5 mod	07/17/2007
Texture	Silty Clay	-----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	119	% [56-144]	10-3.3	07/18/2007
pH Saturated Paste	101	% [94-106]	21a	07/13/2007
Calcium saturated paste	119	% [76-124]	3-5.4	07/16/2007
Magnesium saturated paste	119	% [74-126]	3-5.4	07/16/2007
Sodium saturated paste	126	% [70-130]	3-5.4	07/16/2007
Sodium Adsorption Ratio	116	% [78-122]	20b	07/16/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-27 Description: DUPLICATE OF 2007060320-21 Matrix: SOIL

Date Received: 06/25/2007

Date Collected: 05/24/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.49	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	NA	----	----	----
Magnesium saturated paste	NA	----	----	----
Sodium saturated paste	NA	----	----	----
Sodium Adsorption Ratio	NA	----	----	----
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-28 Description: DUPLICATE OF 2007060320-22 Matrix: SOIL

Date Received: 06/25/2007

Date Collected: 05/24/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.46	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	NA	----	----	----
Magnesium saturated paste	NA	----	----	----
Sodium saturated paste	NA	----	----	----
Sodium Adsorption Ratio	NA	----	----	----
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-29	Description: METHOD BLANK FOR	Matrix: SOIL/WATER
Date Received: -----	2007060320-21 TO -22	
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10-3.3	07/18/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	07/26/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	07/26/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	07/26/2007
Sodium Adsorption Ratio	<0.2	-----	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-30	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: -----	FOR 2007060320-21 TO -22	
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	121	% [56-144]	10-3.3	07/18/2007
Calcium saturated paste	109	% [76-124]	3-5.4	07/26/2007
Magnesium saturated paste	94	% [74-126]	3-5.4	07/26/2007
Sodium saturated paste	110	% [70-130]	3-5.4	07/26/2007
Sodium Adsorption Ratio	108	% [78-122]	20b	07/26/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021.134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007060320-31 Description: DUPLICATE OF 2007060320-4 Matrix: SOIL
Date Received: 06/25/2007
Date Collected: 05/22/2007 Collected by: JUDD STARK

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	NA	----	----	
Very Fine Sand	10.0	%	43-5.3	07/18/2007
Sand	10.0	%	15-5 mod	07/17/2007
Silt	38.7	%	15-5 mod	07/17/2007
Clay	51.3	%	15-5 mod	07/17/2007
Texture	Clay	----	USDA	07/17/2007
Electrical Conductivity Saturated Paste	NA	----	----	
pH Saturated Paste	NA	----	----	
Calcium saturated paste	NA	----	----	
Magnesium saturated paste	NA	----	----	
Sodium saturated paste	NA	----	----	
Sodium Adsorption Ratio	NA	----	----	
Sample Preparation	----	----	3-5.1	

Project or Site Name

506021.134

Project Number

Judd Stark

Sampler Name (Printed)

Leah Stark

Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

**602 South 25th Street
Billings, Montana 59101**

Ph: 406-254-7226 • Fax: 406-254-1389

nrlabs@wtp.net

Catena Consulting LLC
Report to (Firm or Agency)

Report to (Firm or Agency)

716 Armon Ave

Address

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jstark@catenaconsulting.com

Fax

• Comm:

[illegible]

SOUTH HEART SOIL SURVEY
Project or Site Name

506021.134
Project Number

JUDD STARK
Sampler Name (Printed)

↓
Project Manager, Report to

CHAIN OF CUSTODY RECORD

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716 ARONSON AVE
Address

BILLINGS MT 59105
City State Zip

406.671.3961 jstark@catenacconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC	SAR										
5/23/07	12:00	070523-701-0005	G	Soil	1												5 +
		0517				X											6 2
		1726				X											7 3
		2660				X											8 4
5/23/07	12:30	070523-702-0006				X											9 5
		0615				X											10 6
		1521				X											11 2
		2160				X											NOT COLLECTED
Relinquished by: <u>Cook Z. Murrell</u>			Date: <u>6/25/07</u>	Time: <u>0955</u>	Received by: <u>Norma C. Trankle</u>												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

SOUTH HEART SOIL SURVEY
Project or Site Name

SD60021.134
Project Number

Judd Starke
Sampler Name (Printed)

4
Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

Analytical Laboratories, Inc.

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Billings, Montana 59101
Ph: 406-254-7226 • Fax: 406-254-1389
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CATENA CONSULTING, LLC
Report to (Firm or Agency)

716 Armonson Ave
Address

Billings MT 59105
City State Zip

406-671-3961 jstarke@catenacconsulting.com
Phone Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC	pH	DO	ORP	Temp	TSS	SS	MLSS	Hardness	Chloride		
5/24/07	10:00	070524-701-0006	G	Soil	1											Dup 1 23	12
		0615				X										Dup #2 24	13
		1521				X										MB 25	14
		2135				X										LCS 26	15
		3560				X											16
5/24/07	12:15	070524-703-0007														Dup 21 27	
		0715														Dup 21 22 28	17
		1524														MB 29	18
		2432				X										LCS 30	19
		3244				X											20
		4460				X											21
																	22
Relinquished by: <u>Cook 2. Mink</u>			Date: <u>6/25/07</u>	Time: <u>0955</u>	Received by: <u>Norma C. Frankle</u>												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												



SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name Catman Date/Time Received 6/05/07 0955
Project S. Heart Received by NT
Laboratory Number(s) 040186 & 060320 Carrier Name Hand
Checklist Completed by MMW 6/05/07 Sample Type Soil (OB)
Initials / Date

	YES	NO		YES	NO
1. Shipping container in good condition?	<u>NA</u>	<u> </u>	14. pH check performed by: _____		
2. Custody seals present on shipping container?	<u> </u>	<u> </u>	15. Metals bottle(s) pH <2?	<u>NA</u>	<u> </u>
Condition: Intact _____ Broken _____			16. Nutrient bottle(s) pH <2?	<u> </u>	<u> </u>
3. Chain of custody present?	<u> </u>	<u> </u>	17. Cyanide bottle(s) pH >12?	<u> </u>	<u> </u>
4. Chain of custody signed when relinquished and received?	<u> </u>	<u> </u>	18. Sulfide bottle(s) pH >9?	<u> </u>	<u> </u>
5. Chain of custody agrees with sample labels?	<u> </u>	<u> </u>	19. TOC bottle(s) pH <2?	<u> </u>	<u> </u>
6. Custody seals on sample bottles?	<u> </u>	<u> </u>	20. Phenolics bottle(s) pH <2?	<u> </u>	<u> </u>
Condition: Intact _____ Broken _____			21. Oil & grease bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
7. Samples in proper container/bottle?*	<u> </u>	<u> </u>	22. EPH/DRO bottle(s) pH <2? (checked by analyst)	<u> </u>	<u> </u>
8. Sample containers intact?*	<u> </u>	<u> </u>	23. Volatiles (VOA) pH <2? (checked by analyst)	<u> </u>	<u> </u>
9. Sufficient sample volume for indicated test?*	<u> </u>	<u> </u>	24. Semivolatiles (525) pH <2? (checked by analyst)	<u> </u>	<u> </u>
10. Ice/Frozen Blue Ice present in shipping container? (circle one)	<u> </u>	<u> </u>	25. Other test types	<u> </u>	<u> </u>
container temperature 1. _____ 2. _____ 3. _____			26. Client contacted?	<u> </u>	<u> </u>
* (if <0 or >10)			27. Person contacted	<u> </u>	<u> </u>
11. All samples rec'd within holding time?*	<u> </u>	<u> </u>	28. Date contacted	<u> </u>	<u> </u>
12. VOA vials have zero headspace? * (if contains >5mm headspace)	<u>NA</u>	<u> </u>			
13. Trip Blank received?	<u> </u>	<u> </u>			

NOTES: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

* Critical item - if marked "NO" contact lab manager.

COMMENTS: _____

NORTHERN

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REPORT TO: ATTN: JUDD STARK
CATENA CONSULTING, LLC
P.O. BOX 50538
716 ARONSON AVENUE
BILLINGS, MT 59105

DATE: June 20, 2007
JOB NUMBER: 07-911-1
PAGE: 1 of 209

REPORT OF: Soil Analysis – South Heart Soil Survey – Project No. 506021.134

CASE NARRATIVE:

On April 17, 2007, these soil samples (laboratory numbers 2007040184-1-75, 2007040185-1-47, 2007040186-1-65, 2007040187-1-52 and 2007040188-1-21) were received in our laboratory for analysis. Chain of custody documentation is enclosed. On April 23, 2007, the client requested selected samples be analyzed. Tests were conducted in accordance with U.S. Department of Agriculture Handbook No. 60, *"Diagnosis and Improvement of Saline and Alkali Soils"*; and American Society of Agronomy, *"Methods of Soil Analysis"* 1965, 1982, 1986. The samples were air dried and processed to remove the coarse fragments. Coarse fragment content was not measured.

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable. The coarse fragment content for each sample is reported on a weight percent basis. Sample results are not corrected for analyte blank concentrations. Values in brackets are the quality control limits for the associated quality control test.

Footnotes used in this report include the following:

J – The associated value is an estimated quantity.

(6) The recovery or replication is outside the quality control limit for replicates. The associated sample results have been footnoted with a data qualifier.

Reviewed by



Sara Sanderson – Project Manager

Attachments: Chain of Custody (26)

nct

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-3	Description: 060808-TO1-1623	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/08/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.99	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	2.84	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	2.83	meq/l	3-5.4	05/10/2007
Sodium saturated paste	6.02	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	3.58	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-4	Description: 060808-TO1-2335	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/08/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.32	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.55	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	2.32	meq/l	3-5.4	05/10/2007
Sodium saturated paste	9.87	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	7.09	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-5 **Description:** 060808-TO1-3547 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 08/08/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.65	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	2.83	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	5.97	meq/l	3-5.4	05/10/2007
Sodium saturated paste	19.9	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	9.47	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-6	Description: 060808-TO1-4760	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/08/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.16	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	24.0	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	37.4	meq/l	3-5.4	05/10/2007
Sodium saturated paste	34.5	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	6.23	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Northern Analytical Laboratories, Inc.

Page 6

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-8 **Description:** 060822-TO1-0613 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 08/22/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.39	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	12.2	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	13.5	meq/l	3-5.4	05/10/2007
Sodium saturated paste	37.3	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	10.4	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-9	Description: 060822-TO1-1320	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.96	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	22.0	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	30.0	meq/l	3-5.4	05/10/2007
Sodium saturated paste	72.1	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	14.1	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040184-10	Description:	060822-TO1-2028	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	08/22/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.01	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	24.2	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	17.3	meq/l	3-5.4	05/10/2007
Sodium saturated paste	33.6	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	7.38	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-11	Description: 060822-TO1-2841	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.65	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	4.73	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	4.95	meq/l	3-5.4	05/10/2007
Sodium saturated paste	9.62	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	4.37	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-13	Description: 060822-TO7-0006	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	4.08	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	2.44	meq/l	3-5.4	05/10/2007
Sodium saturated paste	2.72	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	1.51	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-14	Description: 060822-TO7-0620	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.78	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	0.67	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	0.51	meq/l	3-5.4	05/10/2007
Sodium saturated paste	7.32	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	9.54	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-15	Description: 060822-TO7-2036	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.68	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	16.5	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	28.2	meq/l	3-5.4	05/10/2007
Sodium saturated paste	70.5	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	14.9	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-16	Description: 060822-TO7-3660	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.1	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	19.2	meq/l	3-5.4	05/18/2007
Magnesium saturated paste	39.5	meq/l	3-5.4	05/18/2007
Sodium saturated paste	92.3	meq/l	3-5.4	05/18/2007
Sodium Adsorption Ratio	17.0	----	20b	05/18/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-18	Description: 060823-TO1-0610	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/23/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	3.29	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	2.76	meq/l	3-5.4	05/10/2007
Sodium saturated paste	3.61	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	2.07	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-19	Description: 060823-TO1-1019	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/23/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.47	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.21	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	0.90	meq/l	3-5.4	05/10/2007
Sodium saturated paste	3.00	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	2.91	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-20	Description: 060823-TO1-1926	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/23/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.82	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	25.4	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	15.5	meq/l	3-5.4	05/10/2007
Sodium saturated paste	13.7	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	3.04	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040184-21	Description:	060823-TO1-2640	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	08/23/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.33	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	26.1	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	31.4	meq/l	3-5.4	05/10/2007
Sodium saturated paste	43.1	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	8.03	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-23	Description: 060822-TO4-0005	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.63	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	3.29	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.24	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.80	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.48	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-24	Description: 060822-TO4-0512	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.79	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	5.12	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.17	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.83	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.41	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-25	Description: 060822-TO4-1222	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.97	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	28.9	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	12.2	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.94	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.43	----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-26	Description: 060822-TO4-2235	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.99	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	24.7	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	37.1	meq/l	3-5.4	05/24/2007
Sodium saturated paste	28.1	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.06	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-29	Description: 060822-TO5-0716	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	0.99	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.04	meq/l	3-5.4	05/24/2007
Sodium saturated paste	8.66	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	8.61	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040184-30	Description:	060822-TO5-1626	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	08/22/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.2	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	51.8	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	93.0	meq/l	3-5.4	05/24/2007
Sodium saturated paste	179	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	21.0	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-31 **Description:** 060822-TO5-2641 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 08/22/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	9.35	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	21.3	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	38.4	meq/l	3-5.4	05/24/2007
Sodium saturated paste	79.4	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	14.5	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-35 **Description:** 060822-TO2-1017 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 08/22/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.30	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	0.76	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.40	meq/l	3-5.4	05/24/2007
Sodium saturated paste	11.4	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	11.0	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-36	Description: 060822-TO2-1730	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	----	----	----
Calcium saturated paste	1.56	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	9.55	meq/l	3-5.4	05/19/2007
Sodium saturated paste	38.8 J	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	16.4	----	20b	05/19/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-38	Description: 060822-TO2-4360	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	15.6	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	26.5	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	126	meq/l	3-5.4	05/19/2007
Sodium saturated paste	161J	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	18.5	-----	20b	05/19/2007
Sample Preparation	----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-39	Description: 060822-TO3-0010 (0110 ON BAG)	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.02	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	22.2	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	22.0	meq/l	3-5.4	05/19/2007
Sodium saturated paste	59.4	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	12.6	----	20b	05/19/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-40	Description: 060822-TO3-1022	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	8.90	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	21.2	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	31.6	meq/l	3-5.4	05/19/2007
Sodium saturated paste	82.5	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	16.1	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-41	Description: 060822-TO3-2240	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	8.98	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	9.26	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	25.8	meq/l	3-5.4	05/19/2007
Sodium saturated paste	92.6	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	22.1	----	20b	05/19/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-45	Description: 060822-TO9-2437	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.35	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.69	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	1.57	meq/l	3-5.4	05/19/2007
Sodium saturated paste	0.98	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	0.77	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-46	Description: 060822-TO9-3750	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.51	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.25	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	1.92	meq/l	3-5.4	05/19/2007
Sodium saturated paste	2.84	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	2.25	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-47	Description: 060822-TO9-5060	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.61	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	0.55	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	1.07	meq/l	3-5.4	05/19/2007
Sodium saturated paste	5.05	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	5.61	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-65	Description: 060920-T03-0618	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/20/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.45	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.49	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	2.00	meq/l	3-5.4	05/19/2007
Sodium saturated paste	1.57	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	1.18	----	20b	05/19/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-66 Description: 060920-T03-1834 (060922 ON BAG) Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 09/20/2006

Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.57	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.02	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	1.47	meq/l	3-5.4	05/19/2007
Sodium saturated paste	3.72	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	3.34	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-67 **Description:** 060920-T03-3441 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 09/20/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.92	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	26.8	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	25.2	meq/l	3-5.4	05/19/2007
Sodium saturated paste	21.1	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	4.14	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-68	Description: 060920-T03-4160	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/20/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.13	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	26.4	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	36.7	meq/l	3-5.4	05/19/2007
Sodium saturated paste	34.4	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	6.12	----	20b	05/19/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-69	Description: 060926-T03A-0006	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	3.78	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	1.36	meq/l	3-5.4	05/19/2007
Sodium saturated paste	0.38	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	0.24	-----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-70	Description: 060926-T03A-0616	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.51	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	31.3	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	7.53	meq/l	3-5.4	05/19/2007
Sodium saturated paste	0.53	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	0.12	----	20b	05/19/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-71	Description: 060926-T03A-1660	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.42	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	22.9	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	32.6	meq/l	3-5.4	06/07/2007
Sodium saturated paste	6.40	meq/l	3-5.4	06/07/2007
Sodium Adsorption Ratio	1.21	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-76	Description: DUPLICATE OF 2007040184-4	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/08/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.31	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	1.51	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	2.25	meq/l	3-5.4	05/10/2007
Sodium saturated paste	9.72	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	7.09	----	20b	05/10/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-77	Description: DUPLICATE OF 2007040184-13	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	4.02	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	2.30	meq/l	3-5.4	05/10/2007
Sodium saturated paste	2.85	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	1.61	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-78	Description: DUPLICATE OF 2007040184-24	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 08/22/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.69	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	4.16	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.52	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.73	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.40	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040184-79	Description:	DUPLICATE OF 2007040184-38	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	08/22/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	13.1	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	23.6	meq/l	3-5.4	05/19/2007
Magnesium saturated paste	98.1	meq/l	3-5.4	05/19/2007
Sodium saturated paste	119 (6)	meq/l	3-5.4	05/19/2007
Sodium Adsorption Ratio	15.3	----	20b	05/19/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-80	Description: METHOD BLANK	Matrix: SOIL
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	05/10/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	05/10/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	05/10/2007
Sodium Adsorption Ratio	<0.2	-----	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-81 **Description:** LABORATORY CONTROL SAMPLE **Matrix:** SOIL
Date Received: -----
Date Collected: ----- **Collected by:** PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	107	% [56-144]	10.3.3	05/11/2007
Calcium saturated paste	104	% [76-124]	3-5.4	05/10/2007
Magnesium saturated paste	99	% [79-121]	3-5.4	05/10/2007
Sodium saturated paste	108	% [61-139]	3-5.4	05/10/2007
Sodium Adsorption Ratio	107	% [79-121]	20b	05/10/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-82	Description: METHOD BLANK	Matrix: SOIL
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	05/11/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	05/24/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	<0.2	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040184-83 **Description:** LABORATORY CONTROL SAMPLE **Matrix:** SOIL

Date Received: -----

Date Collected: ----- **Collected by:** PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	112	% [56-144]	10.3.3	05/11/2007
Calcium saturated paste	89	% [76-124]	3-5.4	05/24/2007
Magnesium saturated paste	89	% [79-121]	3-5.4	05/24/2007
Sodium saturated paste	96	% [61-139]	3-5.4	05/24/2007
Sodium Adsorption Ratio	102	% [79-121]	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040185-2	Description:	060924-S41-0718	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/24/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	31.3	%	15-5 mod	05/17/2007
Silt	47.4	%	15-5 mod	05/17/2007
Clay	21.3	%	15-5 mod	05/17/2007
Texture	Loam	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.62	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.45	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.51	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.60 J	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.35 J	----	20b	05/24/2007
Sample Preparation	----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-3	Description: 060924-S41-1833	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/24/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	18.8	%	15-5 mod	05/17/2007
Silt	59.9	%	15-5 mod	05/17/2007
Clay	21.3	%	15-5 mod	05/17/2007
Texture	Silt Loam	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.40	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.16	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.29	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.77	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.58	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-4	Description: 060924-S41-3349	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/24/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	16.3	%	15-5 mod	05/17/2007
Silt	62.4	%	15-5 mod	05/17/2007
Clay	21.3	%	15-5 mod	05/17/2007
Texture	Silt Loam	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	1.03	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	0.89	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.02	meq/l	3-5.4	05/24/2007
Sodium saturated paste	6.68	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.78	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-5	Description: 060924-S41-4958	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/24/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	*	%	15-5 mod	05/17/2007
Silt	*	%	15-5 mod	05/17/2007
Clay	*	%	15-5 mod	05/17/2007
Texture	*	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	*	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	*	meq/l	3-5.4	
Magnesium saturated paste	*	meq/l	3-5.4	
Sodium saturated paste	*	meq/l	3-5.4	
Sodium Adsorption Ratio	*	----	20b	
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-6	Description: 060924-S42-0006	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/24/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.50	%	LOI @ 440	06/01/2007
Sand	10.0	%	15-5 mod	05/17/2007
Silt	46.2	%	15-5 mod	05/17/2007
Clay	43.8	%	15-5 mod	05/17/2007
Texture	Silty Clay	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.70	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	6.7	S.U.	21a	05/16/2007
Calcium saturated paste	3.66	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.19	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.40	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.22	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-7	Description: 060924-S42-0610	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/24/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.52	%	LOI @ 440	06/01/2007
Sand	13.8	%	15-5 mod	05/17/2007
Silt	39.9	%	15-5 mod	05/17/2007
Clay	46.3	%	15-5 mod	05/17/2007
Texture	Clay	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.53	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	7.5	S.U.	21a	05/16/2007
Calcium saturated paste	2.57	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.29	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.43	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.27	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-8	Description: 060924-S42-1018	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/24/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.55	%	LOI @ 440	06/01/2007
Sand	18.8	%	15-5 mod	05/17/2007
Silt	38.7	%	15-5 mod	05/17/2007
Clay	42.5	%	15-5 mod	05/17/2007
Texture	Clay	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.40	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	7.8	S.U.	21a	05/16/2007
Calcium saturated paste	1.75	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.95	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.50	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.37	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-9 Description: 060924-S42-1831 Matrix: SOIL
 Date Received: 04/17/2007
 Date Collected: 09/24/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	3.14	%	LOI @ 440	06/01/2007
Sand	6.3	%	15-5 mod	05/17/2007
Silt	44.9	%	15-5 mod	05/17/2007
Clay	48.8	%	15-5 mod	05/17/2007
Texture	Silty Clay	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.53	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	7.8	S.U.	21a	05/16/2007
Calcium saturated paste	1.68	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.14	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.58	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	1.14	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-10 Description: 060924-S42-3154

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 09/24/2006

Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	2.90	%	LOI @ 440	06/01/2007
Sand	8.8	%	15-5 mod	05/17/2007
Silt	44.9	%	15-5 mod	05/17/2007
Clay	46.3	%	15-5 mod	05/17/2007
Texture	Silty Clay	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	1.00	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	8.1	S.U.	21a	05/16/2007
Calcium saturated paste	1.72	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.70	meq/l	3-5.4	05/24/2007
Sodium saturated paste	7.56	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.78	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-11 Description: 060924-S42-5460

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 09/24/2006

Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	1.82	%	LOI @ 440	06/01/2007
Sand	13.8	%	15-5 mod	05/17/2007
Silt	39.9	%	15-5 mod	05/17/2007
Clay	46.3	%	15-5 mod	05/17/2007
Texture	Clay	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	3.14	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	8.4	S.U.	21a	05/16/2007
Calcium saturated paste	6.85	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	8.09	meq/l	3-5.4	05/24/2007
Sodium saturated paste	14.6	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.35	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040185-14	Description:	060925-S01-1230	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/25/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.66 J	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.32	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.77	meq/l	3-5.4	05/24/2007
Sodium saturated paste	3.48 J	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.80 J	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-15	Description: 060925-S01-3046	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.77	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.49	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.80	meq/l	3-5.4	05/24/2007
Sodium saturated paste	14.3	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	7.51	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-16 **Description:** 060925-S01-4660 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 09/25/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.45	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	24.3	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	27.7	meq/l	3-5.4	05/24/2007
Sodium saturated paste	27.8	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.46	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-18 Description: 060925-S02-0610

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 09/25/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.56	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	2.32	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.89	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.52	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.32	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040185-19	Description:	060925-S02-1020	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/25/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.50	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.36	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.67	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.39	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.98	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-20	Description: 060925-S02-2031	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.80	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.84	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.19	meq/l	3-5.4	05/24/2007
Sodium saturated paste	4.46 J	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	3.14 J	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-21	Description: 060925-S02-3148	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.26	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	11.0	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	15.1	meq/l	3-5.4	05/24/2007
Sodium saturated paste	15.8	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.37	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-22	Description: 060925-S04-0006	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.64	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	4.39	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.83	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.34	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.19	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-23	Description: 060925-S04-0614	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.53	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.34	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.07	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.37	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.22	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-24 **Description:** 060925-S04-1420 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 09/25/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.39	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.88	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.49	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.28	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-26	Description: 060925-S03-0610	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.89 J	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.69 J	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.62 J	meq/l	3-5.4	05/24/2007
Sodium saturated paste	5.85 J	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.54 J	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-27	Description: 060925-S03-1018	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.61	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	6.53	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	7.62	meq/l	3-5.4	05/24/2007
Sodium saturated paste	15.3	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.76	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-28	Description: 060925-S03-1828	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.63	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	27.7	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	30.3	meq/l	3-5.4	05/24/2007
Sodium saturated paste	38.4	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	7.13	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-29	Description: 060925-S03-2842	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.67	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	25.4	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	36.4	meq/l	3-5.4	05/24/2007
Sodium saturated paste	54.2	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	9.75	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-30	Description: 060925-S03-4255	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.37	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	24.2	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	31.8	meq/l	3-5.4	05/24/2007
Sodium saturated paste	54.0	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	10.2	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY**Sample No.:** 2007040185-33 **Description:** 060926-T01A-1830**Matrix:** SOIL**Date Received:** 04/17/2007**Date Collected:** 09/26/2006 **Collected by:** TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.83	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.87	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.09	meq/l	3-5.4	05/24/2007
Sodium saturated paste	3.94	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.50	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-34	Description: 060926-T01A-3042	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.11	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	25.3	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	35.0	meq/l	3-5.4	05/24/2007
Sodium saturated paste	17.3	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	3.15	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-35	Description: 060926-T01A-4260	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.54	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	25.7	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	37.4	meq/l	3-5.4	05/24/2007
Sodium saturated paste	22.0	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	3.92	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-37	Description: 060926-T02A-0611	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.41	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	2.01	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.16	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.46	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.32	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-38	Description: 060926-T02A-1125	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.43	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.84	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.20	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.80	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.57	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-39	Description: 060926-T02A-2536	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.63	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.00 J	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.46 J	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.49	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.90	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-40	Description: 060926-T02A-3648	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.96	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	33.2	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	23.4	meq/l	3-5.4	05/24/2007
Sodium saturated paste	5.02	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.94	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-41	Description: 060926-T02A-4860	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/26/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.11	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	28.0	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	30.6	meq/l	3-5.4	05/24/2007
Sodium saturated paste	6.80	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	1.26	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-42	Description: 060927-S02-0006	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/27/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	16.3	%	15-5 mod	05/17/2007
Silt	56.2	%	15-5 mod	05/17/2007
Clay	27.5	%	15-5 mod	05/17/2007
Texture	Si Cl Lo	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	1.17	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	5.44	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.71	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.43	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.20	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-43	Description: 060927-S02-0616	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/27/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	13.8	%	15-5 mod	05/17/2007
Silt	52.4	%	15-5 mod	05/17/2007
Clay	33.8	%	15-5 mod	05/17/2007
Texture	Si Cl Lo	----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.73	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	4.02	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.94	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.86	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.46	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-44	Description: 060927-S02-1630	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/27/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	11.3	%	15-5 mod	05/17/2007
Silt	48.7	%	15-5 mod	05/17/2007
Clay	40.0	%	15-5 mod	05/17/2007
Texture	Si Cl Lo	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.99	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.50 J	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.82	meq/l	3-5.4	05/24/2007
Sodium saturated paste	6.99 J	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.42 J	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-45	Description: 060927-S02-3039	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/27/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.12	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	2.98	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	16.3	meq/l	3-5.4	05/24/2007
Sodium saturated paste	42.0	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	13.5	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-46	Description: 060927-S02-3951	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/27/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	9.85	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.67	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	50.3	meq/l	3-5.4	05/24/2007
Sodium saturated paste	92.6	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	17.8	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-47	Description: 060927-S02-5160	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/27/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	9.22	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.09	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	45.8	meq/l	3-5.4	05/24/2007
Sodium saturated paste	82.9	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	16.8	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-48 Description: DUPLICATE OF 2007040185-2 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/24/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	31.3	%	15-5 mod	05/17/2007
Silt	47.4	%	15-5 mod	05/17/2007
Clay	21.3	%	15-5 mod	05/17/2007
Texture	Loam	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	2.96	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.13	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.24 (6)	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.15 (6)	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-49 Description: DUPLICATE OF 2007040185-14 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/25/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.93 (6)	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	1.88	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.62	meq/l	3-5.4	05/24/2007
Sodium saturated paste	5.73 (6)	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	3.82 (6)	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-50	Description: DUPLICATE OF 2007040185-26	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/25/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.49 (6)	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	3.03 (6)	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.88	meq/l	3-5.4	05/24/2007
Sodium saturated paste	10.3 (6)	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	6.00 (6)	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-51 Description: DUPLICATE OF 2007040185-39 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/26/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	2.30	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.89	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.43	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.99	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-52 Description: METHOD BLANK

Matrix: WATER

Date Received: ----

Date Collected: ----

Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	<0.10	%	LOI @ 440	06/01/2007
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	05/24/2007
pH Saturated Paste	NA	----	----	----
Calcium saturated paste	<0.05	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	05/24/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	<0.2	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-53 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: -----

Date Collected: -----

Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Organic Matter dry basis	92	% [64-136]	LOI @ 440	06/01/2007
Sand	57	% [0-200]	15-5 mod	05/17/2007
Silt	46.2	% [55-145]	15-5 mod	05/17/2007
Clay	94	% [74-126]	15-5 mod	05/17/2007
Texture	Silty Clay	-----	USDA	05/17/2007
Electrical Conductivity Saturated Paste	114	% [56-144]	10.3.3	05/24/2007
pH Saturated Paste	98	% [94-106]	21a	05/16/2007
Calcium saturated paste	111	% [76-124]	3-5.4	05/24/2007
Magnesium saturated paste	114	% [79-121]	3-5.4	05/24/2007
Sodium saturated paste	115	% [61-139]	3-5.4	05/24/2007
Sodium Adsorption Ratio	108	% [79-121]	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-54	Description: METHOD BLANK	Matrix: SOIL
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	NA	-----	-----	-----
Silt	NA	-----	-----	-----
Clay	NA	-----	-----	-----
Texture	NA	-----	-----	-----
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	05/24/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	05/24/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	<0.2	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040185-55 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: ----

Date Collected: ----

Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Sand	NA	----	----	----
Silt	NA	----	----	----
Clay	NA	----	----	----
Texture	NA	----	----	----
Electrical Conductivity Saturated Paste	115	% [56-144]	10.3.3	05/24/2007
Calcium saturated paste	112	% [76-124]	3-5.4	05/24/2007
Magnesium saturated paste	114	% [79-121]	3-5.4	05/24/2007
Sodium saturated paste	113	% [61-139]	3-5.4	05/24/2007
Sodium Adsorption Ratio	107	% [79-121]	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-1	Description: 060928-S02-0009	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.67	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.05	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.78	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.07	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.69	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-2	Description: 060928-S02-0916	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.82	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.50	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	4.23	meq/l	3-5.4	05/24/2007
Sodium saturated paste	2.66	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	1.45	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-3	Description: 060928-S02-1623	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.73	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.44	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.04	meq/l	3-5.4	05/24/2007
Sodium saturated paste	4.25	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	3.23	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-4	Description: 060928-S02-2332	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.01	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.12	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.43	meq/l	3-5.4	05/24/2007
Sodium saturated paste	9.97	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	8.82	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-5	Description: 060928-S02-3245	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.90	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.16	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.13	meq/l	3-5.4	05/24/2007
Sodium saturated paste	16.1	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	12.5	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-6	Description: 060928-S02-4557	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.73	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	21.3	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	46.0	meq/l	3-5.4	05/24/2007
Sodium saturated paste	50.8	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	8.75	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-7	Description: 060928-S03-0008	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.04	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	4.12	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	4.61	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.01	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.48	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-8 Description: 060928-S03-0820 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/28/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.66	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.58	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.14	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.49	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.88	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040186-9	Description:	060928-S03-2035	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/28/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.60	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.20	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.57	meq/l	3-5.4	05/24/2007
Sodium saturated paste	3.22	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.74	----	20b	05/24/2007
Sample Preparation	-----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-10	Description: 060928-S03-3554	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.89	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.04	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.45	meq/l	3-5.4	05/24/2007
Sodium saturated paste	6.52	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.85	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-11	Description: 060928-S03-5462	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.03	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	25.5	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	27.1	meq/l	3-5.4	05/24/2007
Sodium saturated paste	21.8	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.25	----	20b	05/24/2007
Sample Preparation	----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-13	Description: 060928-T02-0723	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.58	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.15	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.32	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.75	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	1.17	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-14 Description: 060928-T02-2333 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/28/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.66	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.83	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.00	meq/l	3-5.4	05/24/2007
Sodium saturated paste	3.45	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.49	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-15	Description: 060928-T02-3347	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.76	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.56	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.43	meq/l	3-5.4	05/24/2007
Sodium saturated paste	4.70	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	3.85	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-16	Description: 060928-T02-4760	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.08	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.24	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.88	meq/l	3-5.4	05/24/2007
Sodium saturated paste	7.62	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.30	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040186-18	Description:	060928-T03-0614	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/28/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.98	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.38	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	4.21	meq/l	3-5.4	05/24/2007
Sodium saturated paste	4.68	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.58	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-19	Description: 060928-T03-1428	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.16	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	12.2	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	23.5	meq/l	3-5.4	05/24/2007
Sodium saturated paste	20.5	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.85	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040186-20	Description:	060928-T03-2838	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/28/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.51	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.93	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	3.09	meq/l	3-5.4	05/24/2007
Sodium saturated paste	12.9	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	8.12	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-21	Description: 060928-T03-3860	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/28/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.55	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	25.1	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	57.6	meq/l	3-5.4	05/24/2007
Sodium saturated paste	40.4	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	6.28	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-24 Description: 060929-T03-1531

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 09/29/2006

Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.16	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	4.06	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	4.79	meq/l	3-5.4	05/24/2007
Sodium saturated paste	14.6	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	6.96	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-25	Description: 060929-T03-3138	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/29/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.71	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	3.09	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	4.42	meq/l	3-5.4	05/24/2007
Sodium saturated paste	10.3	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.31	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-26 Description: 060929-T03-3860

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 09/29/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.11	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	0.57	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.99	meq/l	3-5.4	05/24/2007
Sodium saturated paste	18.1	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	16.0	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-29	Description: 060930-T01-1329	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.43	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.59	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.49	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.41	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	1.13	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-30	Description: 060930-T01-2943	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.12	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.89	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.34	meq/l	3-5.4	05/24/2007
Sodium saturated paste	9.37	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.98	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-31 Description: 060930-T01-4360 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/30/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.13	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	23.7	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	24.0	meq/l	3-5.4	05/24/2007
Sodium saturated paste	23.1	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.73	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-38	Description: 060930-T04-0004	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.34	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	9.26	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	24.1	meq/l	3-5.4	05/24/2007
Sodium saturated paste	45.9	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	11.2	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-39	Description: 060930-T04-0411	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	16.5	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	22.0	meq/l	3-5.4	05/31/2007
Magnesium saturated paste	141	meq/l	3-5.4	05/31/2007
Sodium saturated paste	139	meq/l	3-5.4	05/31/2007
Sodium Adsorption Ratio	15.3	-----	20b	05/31/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-40	Description: 060930-T04-1128	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	17.9	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	22.7	meq/l	3-5.4	05/31/2007
Magnesium saturated paste	157	meq/l	3-5.4	05/31/2007
Sodium saturated paste	156	meq/l	3-5.4	05/31/2007
Sodium Adsorption Ratio	16.5	-----	20b	05/31/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-41 Description: 060930-T04-2840 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/30/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	20.7	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	24.3	meq/l	3-5.4	05/31/2007
Magnesium saturated paste	184	meq/l	3-5.4	05/31/2007
Sodium saturated paste	202	meq/l	3-5.4	05/31/2007
Sodium Adsorption Ratio	19.8	----	20b	05/31/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-42	Description: 060930-T04-4050	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	20.3	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	23.8	meq/l	3-5.4	05/31/2007
Magnesium saturated paste	179	meq/l	3-5.4	05/31/2007
Sodium saturated paste	196	meq/l	3-5.4	05/31/2007
Sodium Adsorption Ratio	19.5	-----	20b	05/31/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-43	Description: 060930-T04-5060	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/30/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	19.2	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	22.6	meq/l	3-5.4	05/31/2007
Magnesium saturated paste	133	meq/l	3-5.4	05/31/2007
Sodium saturated paste	183	meq/l	3-5.4	05/31/2007
Sodium Adsorption Ratio	20.8	----	20b	05/31/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-56	Description: 061005-T01-1021	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/05/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.58	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.06	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.66	meq/l	3-5.4	05/24/2007
Sodium saturated paste	3.28	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.81	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-57	Description: 061005-T01-2133	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/05/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.87	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	0.91	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.17	meq/l	3-5.4	05/24/2007
Sodium saturated paste	8.02	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	7.86	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-58 Description: 061005-T01-3346 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/05/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.92	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.03	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.21	meq/l	3-5.4	05/24/2007
Sodium saturated paste	15.4	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	10.6	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-59 Description: 061005-T01-4660

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 10/05/2006

Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	8.44	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	27.6	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	35.1	meq/l	3-5.4	05/24/2007
Sodium saturated paste	59.5	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	10.6	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-61	Description: 061005-T02-0515	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/05/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.52	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.53	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.55	meq/l	3-5.4	05/24/2007
Sodium saturated paste	0.73	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.46	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-62	Description: 061005-T02-1528	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/05/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.87	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	26.3	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	15.8	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.84	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.40	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-63	Description: 061005-T02-2844	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/05/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.87	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	24.7	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	42.7	meq/l	3-5.4	05/24/2007
Sodium saturated paste	9.99	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	1.72	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-64	Description: 061005-T02-4460	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/05/2006	Collected by: TOM	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.54	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	16.5	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	53.2	meq/l	3-5.4	05/24/2007
Sodium saturated paste	30.3	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.13	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040186-65	Description:	DUPLICATE OF 2007040186-1	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	09/28/2006	Collected by:	TOM		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.64	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	2.02	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	2.75	meq/l	3-5.4	05/24/2007
Sodium saturated paste	1.07	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	0.69	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-66 Description: DUPLICATE OF 2007040186-11 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/28/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.23	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	26.0	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	28.3	meq/l	3-5.4	05/24/2007
Sodium saturated paste	22.4	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	4.31	----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-67	Description: METHOD BLANK	Matrix: WATER
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	05/24/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	<0.2	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-68 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: -----

Date Collected: -----

Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	111	%[56-144]	10.3.3	05/29/2007
Calcium saturated paste	109	% [76-124]	3-5.4	05/24/2007
Magnesium saturated paste	111	% [79-121]	3-5.4	05/24/2007
Sodium saturated paste	105	% [61-139]	3-5.4	05/24/2007
Sodium Adsorption Ratio	101	% [79-121]	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-69 Description: DUPLICATE OF 2007050186-25 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/29/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.453	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	3.01	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	4.28	meq/l	3-5.4	05/24/2007
Sodium saturated paste	10.3	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	5.40	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-70 Description: DUPLICATE OF 2007040186-56 Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 10/05/2006 Collected by: TOM

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.57	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	1.06	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	1.64	meq/l	3-5.4	05/24/2007
Sodium saturated paste	3.44	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	2.96	-----	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-71	Description: METHOD BLANK	Matrix: WATER
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	05/29/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	05/24/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	05/24/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	05/24/2007
Sodium Adsorption Ratio	<0.2	----	20b	05/24/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040186-72 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: ----

Date Collected: ----

Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	116	%[56-144]	10.3.3	05/29/2007
Calcium saturated paste	116	% [76-124]	3-5.4	05/24/2007
Magnesium saturated paste	114	% [79-121]	3-5.4	05/24/2007
Sodium saturated paste	106	% [61-139]	3-5.4	05/24/2007
Sodium Adsorption Ratio	99	% [79-121]	20b	05/24/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-1	Description: 061006-T01-0004	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.17	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.09	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.80	meq/l	3-5.4	06/05/2007
Sodium saturated paste	18.1	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	13.0	----	20b	06/05/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-2	Description: 061006-T01-0417	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	15.0	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	24.3	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	77.6	meq/l	3-5.4	06/07/2007
Sodium saturated paste	141	meq/l	3-5.4	06/07/2007
Sodium Adsorption Ratio	19.7	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-3	Description: 061006-T01-1723	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	17.5	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	24.1	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	99.8	meq/l	3-5.4	06/07/2007
Sodium saturated paste	173	meq/l	3-5.4	06/07/2007
Sodium Adsorption Ratio	22.0	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040187-4	Description:	061006-T01-2330	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/06/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	14.7	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	21.6	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	78.6	meq/l	3-5.4	06/07/2007
Sodium saturated paste	134	meq/l	3-5.4	06/07/2007
Sodium Adsorption Ratio	18.9	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-7 Description: 061006-T02-0610 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/06/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.76	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	4.65	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	3.20	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.79	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.40	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-8	Description: 061006-T02-1019	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.49	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.67	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.79	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.81	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.54	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040187-9	Description:	061006-T02-1929	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/06/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.09	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	3.10	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	3.98	meq/l	3-5.4	06/07/2007
Sodium saturated paste	4.11	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	2.18	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-10	Description: 061006-T02-2945	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.94	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	4.51	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	6.03	meq/l	3-5.4	06/07/2007
Sodium saturated paste	10.3	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	4.47	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-11	Description: 061006-T02-4560	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	9.22	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	21.4	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	58.3	meq/l	3-5.4	06/07/2007
Sodium saturated paste	59.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	9.48	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-13	Description: 061006-T03-0512	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.06	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	29.9	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	7.95	meq/l	3-5.4	06/07/2007
Sodium saturated paste	4.19	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.96	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-14 **Description:** 061006-T03-1231 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 10/06/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.49	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	26.2	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	36.2	meq/l	3-5.4	06/07/2007
Sodium saturated paste	32.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	5.86	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-17	Description: 061007-T01-0822	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.07	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.59	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	3.07	meq/l	3-5.4	06/07/2007
Sodium saturated paste	6.68	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	4.38	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-18	Description: 061007-T01-2231	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	8.46	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	20.9	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	57.3	meq/l	3-5.4	06/07/2007
Sodium saturated paste	46.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	7.49	----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040187-19	Description:	061007-T01-3156	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/07/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	11.8	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	22.5	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	90.0 J	meq/l	3-5.4	06/07/2007
Sodium saturated paste	81.6	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	10.9	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040187-20	Description:	061007-T01-5660 (DID NOT REC.)	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/07/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	-----	-----	
Calcium saturated paste	NA	-----	-----	
Magnesium saturated paste	NA	-----	-----	
Sodium saturated paste	NA	-----	-----	
Sodium Adsorption Ratio	NA	-----	-----	
Sample Preparation	NA	-----	-----	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-22	Description: 061007-T02-0615	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.74	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.74	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	2.17	meq/l	3-5.4	06/07/2007
Sodium saturated paste	13.4	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	9.58	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-23 Description: 061007-T02-1522 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/07/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	9.99	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	26.8	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	43.0	meq/l	3-5.4	06/07/2007
Sodium saturated paste	77.3	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	13.1	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-24 Description: 061007-T02-2238

Matrix: SOIL

Date Received: 04/17/2007

Date Collected: 10/07/2006

Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.99	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	22.0	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	22.6	meq/l	3-5.4	06/07/2007
Sodium saturated paste	50.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	10.8	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-25	Description: 061007-T02-3860	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	18.5	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	24.4	meq/l	3-5.4	06/11/2007
Magnesium saturated paste	95.3	meq/l	3-5.4	06/11/2007
Sodium saturated paste	196	meq/l	3-5.4	06/11/2007
Sodium Adsorption Ratio	25.3	-----	20b	06/11/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-27	Description: 061007-T03-0712	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.65	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	3.21	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	2.82	meq/l	3-5.4	06/05/2007
Sodium saturated paste	0.84	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.49	----	20b	06/05/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-28	Description: 061007-T03-1223	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.36	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.07	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.85	meq/l	3-5.4	06/05/2007
Sodium saturated paste	0.32	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.23	----	20b	06/05/2007
Sample Preparation	-----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-29	Description: 061007-T03-2360	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.81	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	0.75	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.58	meq/l	3-5.4	06/05/2007
Sodium saturated paste	5.95	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	5.51	-----	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-32 **Description:** 061007-T04-2036 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 10/07/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.42	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.62	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.91	meq/l	3-5.4	06/05/2007
Sodium saturated paste	0.23	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.15	-----	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC
Project No.: 506021-134
Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040187-33	Description:	061007-T04-3660 (DID NOT REC.)	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/07/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	NA	----	----	
Calcium saturated paste	NA	----	----	
Magnesium saturated paste	NA	----	----	
Sodium saturated paste	NA	----	----	
Sodium Adsorption Ratio	NA	----	----	
Sample Preparation	NA	----	----	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-36	Description: 061007-T05-1526	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.70	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.09	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.56	meq/l	3-5.4	06/05/2007
Sodium saturated paste	0.70	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.52	----	20b	06/05/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-37	Description: 061007-T05-2633	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.91	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.03	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.76	meq/l	3-5.4	06/05/2007
Sodium saturated paste	0.87	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.63	-----	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-39	Description: 061010-T01-0612	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/10/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.27	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.23	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.00	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.40	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.38	---	20b	06/07/2007
Sample Preparation	---	---	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-40 **Description:** 061010-T01-1228 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 10/10/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.57	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.75	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	2.28	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.03	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.65	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-41	Description: 061010-T01-2837	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/10/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.83	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.25	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	2.16	meq/l	3-5.4	06/07/2007
Sodium saturated paste	5.80	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	4.44	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-42	Description: 061010-T01-3760	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/10/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.86	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.57	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	16.9	meq/l	3-5.4	06/07/2007
Sodium saturated paste	50.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	16.3	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-44 Description: 061010-T02-0612 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/10/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.39	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.78	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.13	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.34	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.24	----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-45 **Description:** 061010-T02-1218 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 10/10/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.59	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	29.4	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	10.0	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.18	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.27	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-46	Description: 061010-T02-1860	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/10/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	5.20	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	25.5	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	32.0	meq/l	3-5.4	06/07/2007
Sodium saturated paste	20.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	3.89	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-47	Description: 061014-S01-0006	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/14/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.55	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	6.40	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	8.93	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.97	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.71	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-48	Description: 061014-S01-0613	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/14/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.00	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	3.34	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	5.00	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.78	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.87	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040187-49	Description:	061014-S01-1325	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/14/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.68	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.50	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	2.14	meq/l	3-5.4	06/07/2007
Sodium saturated paste	3.50	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	2.59	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-50	Description: 061014-S01-2540	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/14/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	INSF*	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	3.31	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	3.99	meq/l	3-5.4	06/07/2007
Sodium saturated paste	8.13	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	4.26	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

*INSF = Insufficient sample available to perform the requested analysis.

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-51	Description: 061014-S01-4050	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/14/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	3.63	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	6.71	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	11.9	meq/l	3-5.4	06/07/2007
Sodium saturated paste	23.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	7.80	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-52	Description: 061014-S01-5059	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/14/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	7.35	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	25.4	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	46.3	meq/l	3-5.4	06/07/2007
Sodium saturated paste	39.5	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	6.61	---	20b	06/07/2007
Sample Preparation	---	---	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-53	Description: DUPLICATE OF 2007040187-1	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.21	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.99	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	1.75	meq/l	3-5.4	06/05/2007
Sodium saturated paste	17.8	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	13.0	-----	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-54	Description: DUPLICATE OF 2007040187-14	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/06/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	6.48	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	25.5	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	36.3	meq/l	3-5.4	06/07/2007
Sodium saturated paste	34.6	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	6.22	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-55	Description: METHOD BLANK	Matrix: WATER
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	06/05/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	<0.2	-----	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-56	Description: LABORATORY CONTROL SAMPLE	Matrix: SOIL
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	106	%[56-144]	10.3.3	06/01/2007
Calcium saturated paste	111	% [76-124]	3-5.4	06/05/2007
Magnesium saturated paste	110	% [79-121]	3-5.4	06/05/2007
Sodium saturated paste	95	% [61-139]	3-5.4	06/05/2007
Sodium Adsorption Ratio	91	% [79-121]	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-57	Description: DUPLICATE OF 2007040187-28	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/07/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.38	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.14	meq/l	3-5.4	06/05/2007
Magnesium saturated paste	2.04	meq/l	3-5.4	06/05/2007
Sodium saturated paste	0.30	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.21	-----	20b	06/05/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-58 **Description:** DUPLICATE OF 2007040187-45 **Matrix:** SOIL

Date Received: 04/17/2007

Date Collected: 10/10/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	2.55	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	27.7	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	9.11	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.23	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.29	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-59	Description: METHOD BLANK	Matrix: WATER
Date Received: -----		
Date Collected: -----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	06/07/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	<0.2	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040187-60 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: -----

Date Collected: ----- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	121	%[56-144]	10.3.3	06/01/2007
Calcium saturated paste	110	% [76-124]	3-5.4	06/07/2007
Magnesium saturated paste	117	% [79-121]	3-5.4	06/07/2007
Sodium saturated paste	114	% [61-139]	3-5.4	06/05/2007
Sodium Adsorption Ratio	108	% [79-121]	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-2	Description: 061016-S27-0923	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/16/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.42	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.04	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.31	meq/l	3-5.4	06/07/2007
Sodium saturated paste	2.14	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	1.97	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-3	Description: 061016-S27-2330	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/16/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.61	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.05	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.38	meq/l	3-5.4	06/07/2007
Sodium saturated paste	3.79	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	3.44	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-4	Description: 061016-S27-3040	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/16/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.00	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.63	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.75	meq/l	3-5.4	06/07/2007
Sodium saturated paste	6.98	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	5.36	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-5	Description: 061016-S27-4058	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/16/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.91	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	5.40	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	7.09	meq/l	3-5.4	06/07/2007
Sodium saturated paste	9.74	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	3.90	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-7 Description: 061015-S08-0612 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/15/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.75	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	0.79	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.07	meq/l	3-5.4	06/07/2007
Sodium saturated paste	6.09	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	6.32	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-8	Description: 061015-S08-1217	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/15/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	1.25	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	0.62	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.07	meq/l	3-5.4	06/07/2007
Sodium saturated paste	11.1	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	12.1	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-9	Description: 061015-S08-1726	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/15/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	4.78	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	3.17	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	13.6	meq/l	3-5.4	06/07/2007
Sodium saturated paste	40.6	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	14.0	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-10	Description: 061015-S08-2639	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/15/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.7	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	29.5	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	66.3	meq/l	3-5.4	06/07/2007
Sodium saturated paste	80.6	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	11.6	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-11	Description: 061015-S08-3957	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/15/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.5	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	27.9	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	51.6	meq/l	3-5.4	06/07/2007
Sodium saturated paste	80.5	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	12.8	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-14	Description: 061016-S30-1529	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/16/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.40	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.93	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.00	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.85 J	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.60 J	----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-15 Description: 061016-S30-2937 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/16/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.44	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.22	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	0.64	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.02	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.86	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.:	2007040188-16	Description:	061016-S30-3753	Matrix:	SOIL
Date Received:	04/17/2007				
Date Collected:	10/16/2006	Collected by:	CLIENT		

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.63	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.18	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	0.38	meq/l	3-5.4	06/07/2007
Sodium saturated paste	4.20	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	4.76	---	20b	06/07/2007
Sample Preparation	---	---	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-18 **Description:** 060920-S15-1021 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 09/20/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.58	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	3.35	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	2.80	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.51	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.29	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-19 **Description:** 060920-S15-2127 **Matrix:** SOIL
Date Received: 04/17/2007
Date Collected: 09/20/2006 **Collected by:** CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.42	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.30	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.70	meq/l	3-5.4	06/07/2007
Sodium saturated paste	1.11	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.91	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-20	Description: 060920-S15-2745	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 09/20/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.86	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	0.61	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.26	meq/l	3-5.4	06/07/2007
Sodium saturated paste	6.09	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	6.30	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-21 Description: 060920-S15-4556 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 09/20/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	10.1	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	14.9	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	57.3	meq/l	3-5.4	06/07/2007
Sodium saturated paste	80.0	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	13.3	---	20b	06/07/2007
Sample Preparation	---	---	3-5.1	

Northern Analytical Laboratories, Inc.

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Client Name: CATENA CONSULTING, LLC**Project No.:** 506021-134**Project Name:** SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-22	Description: DUPLICATE OF 2007040188-2	Matrix: SOIL
Date Received: 04/17/2007		
Date Collected: 10/16/2006	Collected by: CLIENT	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.47	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	1.08	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	1.41	meq/l	3-5.4	06/07/2007
Sodium saturated paste	2.17	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	1.94	-----	20b	06/07/2007
Sample Preparation	-----	-----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-23 Description: DUPLICATE OF 2007040188-14 Matrix: SOIL
Date Received: 04/17/2007
Date Collected: 10/16/2006 Collected by: CLIENT

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	0.42	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	2.80	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	0.86	meq/l	3-5.4	06/07/2007
Sodium saturated paste	0.49 (6)	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	0.36 (6)	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

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Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-24	Description: METHOD BLANK	Matrix: WATER
Date Received: ----		
Date Collected: ----	Collected by: PREPARED BY LAB	

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	<0.01	mmhos/cm	10.3.3	06/01/2007
Calcium saturated paste	<0.05	meq/l	3-5.4	06/07/2007
Magnesium saturated paste	<0.08	meq/l	3-5.4	06/07/2007
Sodium saturated paste	<0.04	meq/l	3-5.4	06/05/2007
Sodium Adsorption Ratio	<0.2	----	20b	06/07/2007
Sample Preparation	----	----	3-5.1	

Client Name: CATENA CONSULTING, LLC

Project No.: 506021-134

Project Name: SOUTH HEART SOIL SURVEY

Sample No.: 2007040188-25 Description: LABORATORY CONTROL SAMPLE Matrix: SOIL

Date Received: -----

Date Collected: ----- Collected by: PREPARED BY LAB

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
SOUTH HEART SOIL SURVEY				
Electrical Conductivity Saturated Paste	105	%[56-144]	10.3.3	06/01/2007
Calcium saturated paste	104	% [76-124]	3-5.4	06/07/2007
Magnesium saturated paste	104	% [79-121]	3-5.4	06/07/2007
Sodium saturated paste	97	% [61-139]	3-5.4	06/05/2007
Sodium Adsorption Ratio	95	% [79-121]	20b	06/07/2007
Sample Preparation	---	---	3-5.1	

Project or Site Name

506 021-134

Project Number

Tom
Sampler Name (Printed)

Judd stark
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07-911-1

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC	IS	AR									
8/8/06	4:30	060808-T01-0009	G	Soil		EC	IS	AR									1
		0916															2
		1623				X											3
		2335				X											4
		3547				X											5
		4760				X											6
8/22/06	9:30	060822-T01-0006															7
		0613				X											8
		1320				X											9
		2028				X											10
		2841				X											11
		4160															12
Relinquished by: Matt Usurb			Date	Time	Received by: M. Walter												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart
 Project or Site Name
506021-134
 Project Number
Tom
 Sampler Name (Printed)
Judd Stark
 Project Manager, Report to

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER		
						EC/SAR													
8/22/06	3:00		G	Soil															
8/22/06	3:00	060822-T07-0006																	13
		0620																	14
		2036																	15
↓	↓	↓ 3660																	16
8/23/06	11:00	060823-T01-0006																	17
		0610																	18
		1019																	19
		1926																	20
		2640																	21
↓	↓	↓ 4860																	22
Relinquished by: <u>Matt Usenitz</u>			Date	Time	Received by: <u>M. Walter</u>														
Relinquished by:			Date	Time	Received by:														
Relinquished by:			Date	Time	Received by:														

Project or Site Name

506021-134

Project Number

Tom

Sampler Name (Printed)

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER	
						EC	SC	TD	ORP	DO	PH	TEMP	CO ₂	HAZ	HAZ			HAZ
8/22/06	12:00	060822-T04-0005	G	Soil		X	EC/SCAP											23
		0512				X												24
		1222				X												25
		2235				X												26
		3560																27
8/22/06	1:30	060822T05-0007																28
		0716				X												29
		1626				X												30
		2641				X												31
		4160																32
Relinquished by: <i>Matt Usnik</i>			Date: <i>4/17/07</i>	Time: <i>3:45</i>	Received by: <i>M. W. Carter</i>													
Relinquished by:			Date:	Time:	Received by:													
Relinquished by:			Date:	Time:	Received by:													

South Mead Soil Survey
Project or Site Name

506021-134
Project Number

Tom
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED								NOTES	LAB NUMBER
8/22/06	10:30	060822-T02-0006	G	Soil											2007 040184
		MW - missing → 0610													33
		1017				X									34
		1730 ✓				X									35
		3043 ✓				X									36 → 37
		4360				X									38
8/22/06	12:30	060822-T03-0010				X								01-10 on Bag	39
		1022				X									40
		2240				X									41
		4060													42
Relinquished by: Matt Wacker			Date: 4/17/07	Time: 3:45	Received by: MW Wacker										
Relinquished by:			Date:	Time:	Received by:										
Relinquished by:			Date:	Time:	Received by:										

South Heart Soil Survey
 Project or Site Name
 506021-134
 Project Number
 Tom
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 Judd Stark
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED												NOTES	2009 LAB NUMBER 040184
8/22/06	4:00	060822-T09 0006	G	Soil	1														43
		0624																	44
		2437																	45
		3750																	46
		5060																	47
8/23/06	8:30	060823-T10 0006																	48
		0612																	49
		1229																	50
		2133																	51
		3360																	52
Relinquished by: <i>Platt Usurell</i>			Date	Time	Received by: <i>M. Walter</i>														
Relinquished by:			Date	Time	Received by:														
Relinquished by:			Date	Time	Received by:														

South Heart Soil Survey

Project or Site Name

506021-134

Project Number

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC	SAR										
9/21/06	11:00	060921-T02-0006	G	Soil		EC/SAR											53
		0613															54
		1325															55
		2541															56
		4160															57
9/21/06	12:00	060921-T03-0006															58
		0613															59
		1319															60
		1926															61
		2637															62
		3760															63
Relinquished by: Matt Usevill			Date	Time	Received by: Mike Walter												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

Soil in Heart Soil Survey
 Project or Site Name
 506021-134
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	LAB NUMBER
						EC/5AP											
			G	Soil		EC/5AP											8007 LAB NUMBER 040184
9/20/06	3:30	060920-T03-0006															64
		0618					x										65
		1834					x								060922 on Bag		66
		3441					x										67
		4160					x										68
9/26/06	1:00	060926-T03A 0006					x								Dup 4		69
		0616					x								DUP 13		70
		1660				(Missing)	x								DUP 24		71
9/26/06	3:00	060926-T03B 0006													DUP 38		72
		0615													MB		73
		1528													LCS		74
		2860															75
Relinquished by: <i>Matt Usnell</i>			Date	Time	Received by: <i>Mike Walter</i>												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Tom
Sampler Name (Printed)

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED								NOTES	LAB NUMBER
						EC/DO	TEXT	pH	OM						
9/24/06	5:04	060924-S41-0007	G	Soil											2007 LAB NUMBER 040183
		0718				X	X								1
		1833				X	X								2
		3349				X	X								3
		4958+				X	X								4
9/24/06	6:00	060924-S42-0006				X	X	X	X						5
		0610				X	X	X	X						6
		1018				X	X	X	X						7
		1831				X	X	X	X						8
		3154				X	X	X	X						9
		5460				X	X	X	X						10
															11
Relinquished by: Matt Usur			Date	Time	Received by: M. Walter										
Relinquished by:			Date	Time	Received by:										
Relinquished by:			Date	Time	Received by:										

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South Heart Soil Survey

Project or Site Name

506021-134

Project Number

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER 040185
						EC/SAR											
9/25/06	11:45	060925-S04-0006				X											22
↓	↓	0614	G	Soil		X											23
↓	↓	1420				X											24
9/25/06	10:30	060925-S03-0006															25
		0610				X											26
		1018				X											27
		1828				X											28
		2842				X											29
↓	↓	4255+				X											30
Relinquished by:		Platt Usimith	Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Hearty Soil Survey
 Project or Site Name
506021-134
 Project Number
1
 Sampler Name (Printed)
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2006 LAB NUMBER <u>040185</u> 040186	
						EC/5AR												
9/26/06	1:00	060926-T01A-0006	6	Soil														31
		0618																32
		1830																33
		3042																34
✓	✓	✓ 4260																35
9/26/06	12:00	060926T02A 0006																36
		0611																37
		1125																38
		2536																39
		3648																40
✓	✓	✓ 4860																41
Relinquished by: <u>Matt Chumbley</u>			Date	Time	Received by: <u>Neu Walter</u>													
Relinquished by:			Date	Time	Received by:													
Relinquished by:			Date	Time	Received by:													

Project or Site Name

506021-134

Project Number

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER		
						PC/SAR	Text	Turn											
			G	Soil															
9/27/06	3:35	060927-502-0006																	42
		0616																	43
		1630																	44
		3039																	45
		3951																	46
		5160*																	47
																			48
																			49
																			50
																			51
																			52
																			53
Relinquished by: Matt Usui			Date	Time	Received by: M. Walter														
Relinquished by:			Date	Time	Received by:														
Relinquished by:			Date	Time	Received by:														

South Heart Soil Survey

Project or Site Name

506 021-134

Project Number

5

Sampler Name (Printed)

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	LAB NUMBER
						EC	SC	PC	IC	OC	GC	AC	IC	OC	GC		
9/28/06	8:45	060928-S02-0009	G	Soil		X										1	
		0916				X										2	
		1623				X										3	
		2332				X										4	
		3245				X										5	
		4557				X										6	
9/28/06	9:20	060928-S03-0008				X										7	
		0820				X										8	
		2035				X										9	
		3554				X										10	
		5462				X										11	
Relinquished by: Matt Usink			Date	Time	Received by: M. Walton												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey

Project or Site Name

506 021-134

Project Number

Tom

Sampler Name (Printed)

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR											
9/28/06	2:30	060928-T02-0007	G	Soil													12
		0723															13
		2333															14
		3347															15
		4760															16
9/28/06	4:00	060928-T03-0006															17
		0614															18
		1428															19
		2838															20
		3860															21
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Tom
Sampler Name (Printed)

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406 671-3961 jstark@catenaconsulting.com
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC	TS	SR	AS	AR	OR	IR	IC	IS	IR		
9/29/06	10:00	060929-T03-0007	G	Soil													22
		0715															23
		1531															24
		3138															25
		3860															26
9/30/06	9:00	060930-T01-0006															27
		0613															28
		1329															29
		2943															30
		4360															31
Relinquished by: Matt Umholtz			Date	Time	Received by: M. Walter												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey

Project or Site Name

506021-134

Project Number

Sampler Name (Printed)

Judd Stark

Project Manager, Report to

CHAIN OF CUSTODY RECORD

NORTHERN

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER		
						EC	SC	TC	PC	DC	OC	IC	AC	CC	CC			CC	
			G	Soil		EC/SC													
9/30/06	10:30	060930-T02-0006																	32
		0609																	33
		0918																	34
		1823																	35
		2334																	36
		3460																	37
9/30/06	4:00	060930-T04-0007																	38
		0411																	39
		1128																	40
		2840																	41
		4050																	42
		5060																	43
Relinquished by: Matt Usen			Date	Time	Received by: M. Walter														
Relinquished by:			Date	Time	Received by:														
Relinquished by:			Date	Time	Received by:														

South Heart Soil Survey
Project or Site Name

506 021-134
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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	LAB NUMBER
						EC	SAR										
			G	Soil													2008 LAB NUMBER 040187 040186
10/1/06	1:00	061001-T01-0006															44
		0615															45
		1523															46
		2328															47
↓	↓	↓ 2860															48
10/1/06	2:00	061001-T03-0006															49
		0610															50
		1017															51
		1726															52
↓	↓	↓ 2660															53
																	—
			↓	↓													—
Relinquished by: <i>Platt</i>			Date	Time	Received by: <i>W. Walton</i>												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER	
						EC	SAR											
			G	Soil														
10/5/06	1:00	061005-T01-0005																54
		0510																55
		1021																56
		2133																57
		3346																58
		4660																59
10/5/06	3:00	061005-T02-0005																60
		0515																61
		1528																62
		2844																63
		4460																64
Relinquished by: Matt Usault			Date	Time	Received by: M. Walter			DUP 1 65			Dup 25 69							
Relinquished by:			Date	Time	Received by:			DUP 11 66			Dup 56 70							
Relinquished by:			Date	Time	Received by:			MB 67			MB 71							
Relinquished by:			Date	Time	Received by:			LCS 68			LCS 72							

South Heart Soil Survey
Project or Site Name

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR											
10/16/06	9:00	061006-T01-0004	G	Soil		X										1	
		0417				X										2	
		1723				X										3	
		2330				X										4	
✓	✓	✓ 3060														5	
10/16/06	11:00	061006-T02-0006														6	
		0610				X										7	
		1019				X										8	
		1929				X										9	
		2945				X										10	
✓	✓	✓ 4560				X										11	
			✓	✓													
Relinquished by: Matt Usen			Date	Time	Received by: M. Walton												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South West Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark
Project Manager, Report to

CHAIN OF CUSTODY RECORD



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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC	SAR										
10/6/06	1:00	061006-T03-0005	G	Soil		EC/SAR											12
		0512				X											13
		1231				X											14
↓	↓	↓ 3160															15
10/07/06	9:00	061007-T01-0007															16
		0822				X											17
		2231				X											18
		3156				X											19
↓	↓	↓ 5660	X			X									missing		20
																	—
																	—
			↓	↓													—
Relinquished by: Matt Usunk			Date	Time	Received by: M. Walton												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506 021-134
Project Number

Sampler Name (Printed)

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR											
10/7/06	10:00	061007-T02-0006	G	Soil													21
		0615															22
		1522															23
		2238															24
		3860															25
10/7/06	11:00	061007-T03-0007															26
		0712															27
		1223															28
		2360															29
Relinquished by:	Date	Time	Received by:														
Relinquished by:	Date	Time	Received by:														
Relinquished by:	Date	Time	Received by:														

South Heart Soil Survey
Project or Site Name

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAR											
			G	Soil													
10/7/06	1:00	061007-T04-0007															30
		0720															31
		2036															32
↓	↓	↓ 3660	*													missing	33
10/7/06	2:00	061007-T05-0007															34
		0715															35
		1526															36
↓	↓	↓ 2633															37
Relinquished by: <i>Platt Usault</i>			Date	Time	Received by: <i>M. Walter</i>												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey

Project or Site Name

506021-134

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2009 LAB NUMBER
						EC/SPR											
10/10/06	9:00	061010-T01-0006	G	Soil													38
		0612															39
		1228															40
		2837															41
		3760															42
10/10/06	10:00	061010-T02-0006															43
		0612															44
		1218															45
		1860															46
Relinquished by:			Date	Time	Received by:												
			4/17/07	3:45	M. Walton												
Relinquished by:			Date	Time	Received by:												
Relinquished by:			Date	Time	Received by:												

South Heart Soil Survey
Project or Site Name

506021-134
Project Number

Sampler Name (Printed)

Judd Stark

Project Manager, Report to

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	2007 LAB NUMBER
						EC/SAP											
10/14/06	10:30	061014-S01-0006	G	Soil		X										47	
		0613				X										48	
		1325				X										49	
		2540				X										50	
		4050				X										51	
		5059*				X										52	
															Dup 1	53	
															Dup 14	54	
															MB 28	55	
															LCS 45	56	
															Dup 28	57	
															Dup 45	58	
Relinquished by: Matt Usuals	Date 4/17/07	Time 3:45	Received by: M. Walton												MB	59	
Relinquished by:	Date	Time	Received by:												LCS	60	
Relinquished by:	Date	Time	Received by:														

South Heart Soil Survey

Project or Site Name

506021-134

Project Number

S

Sampler Name (Printed)

Judd Stark

Project Manager, Report to

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DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	LAB NUMBER
						EC/SAR											
10/16/06	12:15	061016-S27-0009	G	Soil													2007
		0923															1
		2330															2
		3040															3
		4058+															4
																	5
10/15/06	12:10	061015-S08-0006															6
		0612															7
		1217															8
		1726															9
		2639															10
		3957															11
Relinquished by: <i>Matt Uvill</i>			Date: 4/17/07	Time: 3:45	Received by: <i>MWalter</i>												
Relinquished by:			Date:	Time:	Received by:												
Relinquished by:			Date:	Time:	Received by:												

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10 7/1