



ENVIRONMENTAL & PROPERTY CONSULTANTS

3000 SE Grimes Boulevard, Suite 500, Grimes, Iowa 50111 • 515.986.5151 www.trileaf.com

March 29, 2011

CON 12-15
Doc # 24168

Mr. Hylton Jackson
Iowa Department of Natural Resources
Contaminated Sites Section
502 E. 9th Street
Des Moines, IA 50319-0034

Re: Submittal of Groundwater Sample Analysis

Allison Ag Center
250 N. Main Street
Allison, Iowa
IDNR Contaminated Sites ID# 977
Trileaf Project # 500835

Mr. Jackson:

In response to your February 11, 2011 letter to Mr. Jim Michaelson with United Suppliers Inc., Trileaf was retained to collect groundwater and surface water samples at this agricultural chemical facility.

On March 14, 2011, Trileaf collected groundwater samples from TW1, TW2, TW3, TW4, and TW5. Groundwater samples were submitted to an Iowa Certified Laboratory and analyzed for ammonia, nitrites, and nitrates.

Enclosed are copies of the analytical data for this sampling event. Analytical results seem to show a decreasing trend for concentrations. Following the next September 2011 sampling event, Trileaf will prepare an analysis of all historical data available. If there are any questions, feel free to contact our office at (515) 986-5151.

Sincerely,
Trileaf Corporation


Todd Prevette
Group Manager

37924 AM 9:34 04/04/11

Enclosures
cc: Steve Nielsen, United Suppliers, Inc.

SAMPLING DATA FOR 3/14/2011

SAMPLE #	DATE SAMPLED	TIME SAMPLED	RESULT, NITROGEN/AMMONIA (mg/l)	RESULT NITROGEN/NITRATE (mg/l)	RESULT NITROGEN/NITRATE (mg/l)	Top of Casing Elevations (Old) Ft ASL	Top of Casing Elevations (New) Ft ASL	Water Levels - Ft below casing	Water Level- Ft ASL	NOTES
SW-1	11/12/2010	12:05	4.2		3.5					
SW-2	10/28/2010	14:30	28.0		<0.1					
SW-3	10/28/2010	14:20	30.0		56.9					
SW-4	11/12/2010	11:17	6.4		8.7					
SW-5	11/12/2010	11:15	2.0		2.3					
SW-6	11/12/2010	11:22	3.1		4.4					
TW1	11/12/2010	10:43	1.8		128	1048.6	1048.56	7.28	1041.28	Located near entrance
TW1	3/14/2011	13:47	1.2	<5.0	112	1048.6	1048.56	6.55	1042.01	Located at Entrance. Top 3 feet of casing snapped due to snow plow and snow pile
TW2	11/12/2010	10:42	87.4		1450	1049.65	1049.95	9.07	1040.88	Located near to load pad
TW2	3/14/2011	13:13	65.6	<5.0	950	1049.65	1049.95	7.87	1042.08	Located near to load pad
TW3	11/12/2010	10:39	271		237	1048.1	1048.08	8.05	1040.03	Located between fertilizer containment and Sump SW-3 (Southwest sump)
TW3	3/14/2011	13:20	52	<0.1	199	1048.1	1048.08	6.02	1042.06	Located between fertilizer containment and Sump SW-3 (Southwest sump)
TW4	11/12/2010	10:14	36.8		<0.1	1047.05	1047.81	7.47	1040.34	Located near Sump SW-2 (Northwest sump)
TW4	3/14/2011	13:27	4.4	<0.1	<0.1	1047.05	1047.81	5.45	1042.36	Located near Sump SW-2 (Northwest sump) (dead animal remains from well)
TW5	11/12/2010	10:41	14.9		168	1048.15	1047.82	7.40	1040.42	Located 1/2 distance between MW-3 and MW-4
TW5	3/14/2011	13:35	16.2	<0.1	147	1048.15	1047.82	5.78	1042.04	Located 1/2 distance between MW-3 and MW-4

HISTORICAL MONITORING WELL AND SURFACE WATER SAMPLING DATA

	NH3	NH3	NO3	NO3	NO2
	12-Nov-10	14-Mar-11	12-Nov-10	14-Mar-11	14-Mar-11
TW1	1.8	1.2	128	112	<5.0
TW2	87.4	65.3	1450	950	<5.0
TW3	271	52.4	237	199	<0.1
TW4	36.8	4.4	0	0.1	<0.1
TW5	14.9	16.2	168	147	<0.1

	NH3	NO3
	12-Nov-10	12-Nov-10
SW-1	4.2	3.5
SW-2	28.0	0
SW-3	30.0	56.9
SW-4	6.4	8.7
SW-5	2.0	2.3
SW-6	3.1	4.4

23 March 2011

Jarad Prescott
Trileaf Corporation
3000 SE Grimes Blvd - Suite 500
Grimes, IA 50111

RE: UST-Iowa

Allison Ag Center

Enclosed are the results of analyses for samples received by the laboratory on 03/15/11 12:05. If you have any questions concerning this report, please feel free to contact me at 1-800-858-5227.

ANALYTICAL REPORT FOR SAMPLES

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1	11C0767-01	Water	03/14/11 13:47	03/15/11 12:05
2	11C0767-02	Water	03/14/11 13:13	03/15/11 12:05
3	11C0767-03	Water	03/14/11 13:20	03/15/11 12:05
4	11C0767-04	Water	03/14/11 13:27	03/15/11 12:05
5	11C0767-05	Water	03/14/11 13:35	03/15/11 12:05

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Project: UST-Iowa
Project Number: Allison Ag Center
Project Manager: Jarad Prescott

Reported
03/23/11 14:07

1

11C0767-01 (Water)

Date Sampled: 3/14/2011 1:47:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Conventional Chemistry Parameters

Nitrogen, Ammonia	1.2	1.0	mg/l	1	IC11573	03/17/11	03/17/11 15:32	SM 4500-NH3 F	
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Determination of Inorganic Anions

Nitrogen, Nitrite	ND	5.0	mg/l	50	IC11833	03/16/11	03/16/11 13:49	EPA 9056	QC-5
Nitrogen, Nitrate	112	5.0	"	"	"	"	"	"	QC-06

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Reported
03/23/11 14:07

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11C0767-02 (Water)

Date Sampled: 3/14/2011 1:13:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Conventional Chemistry Parameters

Nitrogen, Ammonia	65.3	1.0	mg/l	1	1C11573	03/17/11	03/17/11 15:32	SM 4500-NH3 F	
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Determination of Inorganic Anions

Nitrogen, Nitrite	ND	5.0	mg/l	50	1C11833	03/16/11	03/16/11 14:07	EPA 9056	QC-5
Nitrogen, Nitrate	950	10.0	"	100	1C11845	03/17/11	03/17/11 11:02	"	QC-06

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Reported
03/23/11 14:07

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11C0767-03 (Water)

Date Sampled: 3/14/2011 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Conventional Chemistry Parameters

Nitrogen, Ammonia	52.4	1.0	mg/l	1	1C11573	03/17/11	03/17/11 15:32	SM 4500-NH3 F	
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Determination of Inorganic Anions

Nitrogen, Nitrite	ND	0.1	mg/l	1	1C11682	03/15/11	03/15/11 19:10	EPA 9056	
Nitrogen, Nitrate	199	5.0	"	50	1C11833	03/16/11	03/16/11 14:25	"	QC-06

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Reported
03/23/11 14:07

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11C0767-04 (Water)

Date Sampled: 3/14/2011 1:27:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Conventional Chemistry Parameters

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nitrogen, Ammonia	4.4	1.0	mg/l	1	1C11573	03/17/11	03/17/11 15:32	SM 4500-NH3 F	

Determination of Inorganic Anions

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nitrogen, Nitrite	ND	0.1	mg/l	1	1C11682	03/15/11	03/15/11 19:28	EPA 9056	
Nitrogen, Nitrate	ND	0.1	"	"	"	"	"	"	

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Reported
03/23/11 14:07

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11C0767-05 (Water)

Date Sampled: 3/14/2011 1:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Conventional Chemistry Parameters

Nitrogen, Ammonia	16.2	1.0	mg/l	1	IC11573	03/17/11	03/17/11 15:32	SM 4500-NH3 F	
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Determination of Inorganic Anions

Nitrogen, Nitrite	ND	0.1	mg/l	1	IC11682	03/15/11	03/15/11 19:46	EPA 9056	
Nitrogen, Nitrate	147	5.0	"	50	IC11833	03/16/11	03/16/11 15:01	"	QC-06

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Project Number: Allison Ag Center
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Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1C11573 - Wet Chem Preparation

Blank (1C11573-BLK1)

Prepared & Analyzed: 03/17/11

Nitrogen, Ammonia	ND	1.0	mg/l
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Blank (1C11573-BLK2)

Prepared & Analyzed: 03/17/11

Nitrogen, Ammonia	ND	1.0	mg/l
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Matrix Spike (1C11573-MS1)

Source: 11C0687-12

Prepared & Analyzed: 03/17/11

Nitrogen, Ammonia	10.1	2.0	mg/l	10.0000	ND	101	86-140
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Matrix Spike (1C11573-MS2)

Source: 11C0896-01

Prepared & Analyzed: 03/17/11

Nitrogen, Ammonia	8.84	2.0	mg/l	10.0000	ND	88.4	86-140
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Matrix Spike Dup (1C11573-MSD1)

Source: 11C0687-12

Prepared & Analyzed: 03/17/11

Nitrogen, Ammonia	10.2	2.0	mg/l	10.0000	ND	102	86-140	0.789	10
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Matrix Spike Dup (1C11573-MSD2)

Source: 11C0896-01

Prepared & Analyzed: 03/17/11

Nitrogen, Ammonia	8.72	2.0	mg/l	10.0000	ND	87.2	86-140	1.37	10
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Reported
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Determination of Inorganic Anions - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1C11682 - General Prep HPLC/IC

Blank (1C11682-BLK1)

Prepared & Analyzed: 03/15/11

Nitrogen, Nitrite	ND	0.1	mg/l
Nitrogen, Nitrate	ND	0.1	"

LCS (1C11682-BS1)

Prepared & Analyzed: 03/15/11

Nitrogen, Nitrite	4.57	0.1	mg/l	4.41545	104	87-113
Nitrogen, Nitrate	5.10	0.1	"	4.98865	102	89-116

Matrix Spike (1C11682-MS1)

Source: 11C0716-03RE1

Prepared & Analyzed: 03/15/11

Nitrogen, Nitrite	4.60	0.1	mg/l	4.41545	ND	104	81-116
Nitrogen, Nitrate	7.56	0.1	"	4.98865	2.50	102	83-122

Matrix Spike Dup (1C11682-MSD1)

Source: 11C0716-03RE1

Prepared & Analyzed: 03/15/11

Nitrogen, Nitrite	4.60	0.1	mg/l	4.41545	ND	104	81-116	0.0435	11
Nitrogen, Nitrate	7.63	0.1	"	4.98865	2.50	103	83-122	0.882	10

Batch 1C11833 - General Prep HPLC/IC

Blank (1C11833-BLK1)

Prepared & Analyzed: 03/16/11

Nitrogen, Nitrite	ND	0.1	mg/l
Nitrogen, Nitrate	ND	0.1	"

LCS (1C11833-BS1)

Prepared & Analyzed: 03/16/11

Nitrogen, Nitrite	4.51	0.1	mg/l	4.41545	102	87-113
Nitrogen, Nitrate	5.28	0.1	"	4.98865	106	89-116

Matrix Spike (1C11833-MS1)

Source: 11C0787-03RE1

Prepared & Analyzed: 03/16/11

Nitrogen, Nitrite	4.85	0.1	mg/l	4.41545	ND	110	81-116
Nitrogen, Nitrate	5.12	0.1	"	4.98865	ND	103	83-122

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Determination of Inorganic Anions - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1C11833 - General Prep HPLC/IC

Matrix Spike Dup (1C11833-MSD1)

Source: 11C0787-03RE1

Prepared & Analyzed: 03/16/11

Nitrogen, Nitrite	4.55	0.1	mg/l	4.41545	ND	103	81-116	6.36	11	
Nitrogen, Nitrate	5.18	0.1	"	4.98865	ND	104	83-122	1.18	10	

Batch 1C11845 - General Prep HPLC/IC

Blank (1C11845-BLK1)

Prepared & Analyzed: 03/17/11

Nitrogen, Nitrate	ND	0.1	mg/l							
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LCS (1C11845-BS1)

Prepared & Analyzed: 03/17/11

Nitrogen, Nitrate	5.27	0.1	mg/l	4.98865		106	89-116			
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Matrix Spike (1C11845-MS1)

Source: 11C0902-02RE1

Prepared & Analyzed: 03/17/11

Nitrogen, Nitrate	7.17	0.1	mg/l	4.98865	1.84	107	83-122			
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Matrix Spike Dup (1C11845-MSD1)

Source: 11C0902-02RE1

Prepared & Analyzed: 03/17/11

Nitrogen, Nitrate	7.15	0.1	mg/l	4.98865	1.84	106	83-122	0.321	10	
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Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 9056 in Water	Nitrogen, Nitrite	NELAC,KS-NT
	Nitrogen, Nitrate	NELAC,KS-NT
SM 4500-NH3 F in Water	Nitrogen, Ammonia	SIA1X

Code	Certifying Authority	Certificate Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2011
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2011
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2011
SIA1X	Iowa Department of Natural Resources	95	02/01/2012

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record. This analytical report must be reproduced in its entirety.

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Trileaf Corporation
3000 SE Grimes Blvd - Suite 500
Grimes IA, 50111

Project: UST-Iowa
Project Number: Allison Ag Center
Project Manager: Jarad Prescott

Reported
03/23/11 14:07

Notes and Definitions

QC-5 Sample was originally analyzed within hold time. However, it was determined that positive interference was contributing to the sample result. So the sample was reanalyzed at a dilution to eliminate the interference.

QC-06 Sample was originally analyzed within recommended hold time. However, the sample concentration was over the calibration range. The sample was diluted and reanalyzed outside of the recommended hold time.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Trileaf Corporation
3000 SE Grimes Blvd - Suite 500
Grimes IA, 50111

Project: UST-Iowa
Project Number: Allison Ag Center
Project Manager: Jarad Prescott

Reported
03/23/11 14:07

Sue Thompson

Sue Thompson
Project Manager I

Keystone

LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
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☐ 1155 Adams, Suite 120
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Bryn Hendricks
SITE NAME: Allison Ag Center
ADDRESS: N. Railroad Ave
CITY/ST/ZIP: Allison, IA
PHONE: _____

REPORT TO:
NAME: Eric Muegggenberg
COMPANY NAME: Trileaf
ADDRESS: 3000 SE Grimes Blvd. St 500
CITY/ST/ZIP: Grimes IA 50111
PHONE: 515-986-5151
FAX: _____

BILL TO:
NAME: _____
COMPANY NAME: SAME
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____
Keystone Quote No.: _____
(If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY	
							Nitrate - EN 7056	Ammonia - ISE										
1	3-14	13:47	1	2	GW	G	X	X									LABORATORY WORK ORDER NO.	
2		13:13	2	2	GW	G	X	X										
3		13:20	3	2	GW	G	X	X									SAMPLE TEMPERATURE UPON RECEIPT: _____ °C	
4		13:27	4	2	GW	G	X	X										
5		13:35	5	2	GW	G	X	X									LABORATORY SAMPLE NUMBER	
																	SAMPLE CONDITION/COMMENTS	

Relinquished by: (Signature) <u>Bryn Hendricks</u>	Date <u>3-14-11</u> Time <u>5:02pm</u>	Received by: (Signature) <u>Fridge</u>	Date <u>3-14-11</u> Time <u>5:02pm</u>	Turn-Around: ☒ Standard ☐ Rush _____ Contact Lab Prior to Submission
Relinquished by: (Signature)	Date Time	Received for Lab by: (Signature) <u>[Signature]</u>	Date <u>3/15/11</u> Time <u>10:00am</u>	Remarks: <u>Well #4: Animal remains were observed in water while boiling.</u>