CHS

CON 12-15
Doc #19262

5500 Cenex Drive
Inver Grove Heights, MN
55077

651-355-6000
chsinc.com

January 12, 2008

Tami Rice
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines Iowa 50319

Subject: 2008 Site Monitoring Reports
Algona, Buffalo Center and Rockwell, Iowa

Dear Ms Rice:

Enclosed you will find the 2008 Site Monitoring Report for the former Thermogas in Algona, Buffalo Center and Rockwell, Iowa. The reports summarize site activities completed in 2008.

Please contact me at 651.355.6343 if you have any questions or need additional information.

Sincerely,

Todd A. King
Director of Environmental Affairs

Enc.

[illegible] 8:40 [illegible] /10/09

2008 SITE MONITORING REPORT

Former Thermogas Facility
311 2nd Ave. SW
Buffalo Center, Iowa

Prepared for:

CHS Inc.
5500 Cenex Drive
Inver Grove Heights, MN 55077

December 30, 2008
Seneca Job #6270403

Prepared by:

Seneca Environmental Services
4140 NE 14th Street
Des Moines, Iowa 50313

Table of Contents

LIST OF TABLES

APPENDICES

2008 Site Monitoring Report
Former Thermogas Facility
311 2nd Avenue SW
Buffalo Center, Iowa

1.0 INTRODUCTION

CHS Inc. retained Seneca Environmental Services to complete a Site Monitoring Report at the above referenced site under the supervision of the Iowa Department of Natural Resources. The following report is intended to provide CHS Inc. and the Iowa Department of Natural Resources with an accurate evaluation of the present risk posed to human health and the environment by groundwater and/or soil contamination discovered during the Phase I/II Site Investigation completed in 1996 by Terracon Environmental, Inc. The monitoring program has been designed to provide an ongoing evaluation of potential changes to human health risk factors.

2.0 SITE HISTORY

2.1 Phase I/II Site Investigation

The site began operation as a propane distributor in the 1950s and began retailing row crop production products in 1975. Storage and handling of liquid fertilizer and pesticide products ceased in 1985. The Phase I/II report documents that in 1996 Thermogas Energy operated the site as a retail sale outlet for propane, packaged lawn care products, and lignin. A scaled site map showing the location and current layout of buildings and structures is included in Appendix 1.

During the Phase I/II Site Investigation, soil samples were collected from three (3) boring at depths of two (2) feet and six (6) feet below grade surface (bgs) and analyzed for selected pesticides, Ammonia Nitrogen, and Nitrate-Nitrite. Pesticide concentrations in soils from B-1 and B-3 ranged from below detectable limits (BDL) to 1.7 ppm (mg/kg) for Alachlor. Ammonia Nitrogen concentrations from B-1 and B-2 ranged from 292 ppm to 4,138 ppm and Nitrate-Nitrite levels ranged from <1 ppm to 222 ppm. Action levels for selected pesticides, Ammonia Nitrogen, and Nitrate-Nitrite in soil were not available.

A groundwater sample was collected from soil boring, B-3, adjacent to the packaged goods load-in/load-out area during the Phase I/II Site Investigation and analyzed for selected pesticides, Ammonia Nitrogen, and Nitrate-Nitrite. Concentrations greater than EPA established Maximum Contaminant Level (MCL) and/or Health Advisory Limit (HAL) standards were not identified during the Phase I/II.

2.2 Post Phase I/II Site Activities

2.2.1 Soil Excavation(s)

Thermogas and Cenex agreed to utilize 1,600 ppm as a clean-up level for total nitrogen (Ammonia Nitrogen plus Nitrate-Nitrite) since action levels for soil were not available during the Phase I/II Site Investigation. Excavation of contaminated soils in the vicinity of B-1 where Ammonia Nitrogen ranged from 1,461 ppm to 4,138 ppm was initiated on April 22, 1997. Ninety (90) cubic yards (135 tons) of soil was removed from a pit measuring thirteen (13) feet by fifteen (15) feet by twelve (12) feet. Twenty-one (21) confirmation samples were collected from the floor and walls of the excavation. Six (6) of the confirmation samples indicated total nitrogen concentrations above the 1,600 ppm clean-up level but the excavation was limited to the north by the property boundary, to the east and south by the concrete pad, and to the west by the lignin tanks.

2.2.2 Groundwater Monitoring

Permanent monitoring wells were not installed at the site following the Phase I/II Site Investigation. No historic hydrologic information is available since groundwater flow direction and gradient were not determined during the Phase I/II.

Seneca Companies performed a Chapter 133 Site Assessment in 2003 and installed four (4) monitoring wells (MW1, MW2, MW3, and MW4) in which dissolved phase concentrations of three (3) pesticides, Alachlor, Cyanazine, and Metribuzin, as well as Ammonia Nitrogen and Nitrate-Nitrite exceeded EPA established MCL and/or HAL standards. The Site Assessment identified conditions that were consistent with a Significant Risk status as defined in Chapter 133 of the Iowa Administrative Code. The DNR reviewed the Site Assessment Report and in a letter dated July 5, 2004 stated that groundwater monitoring should continue with additional investigation to the north and east of the site. Eight (8) additional monitoring wells have been installed to define the contaminant plumes. Biannual monitoring has been completed at the site with the submittal of an annual Site Monitoring Report since the Site Assessment was completed in 2003. The most recent report, the 2007 Site Monitoring Report, was submitted on February 15, 2008. In a letter dated, May 27, 2008, the DNR stated that continued monitoring of all wells is required.

3.0 CURRENT SITE CONDITIONS AND RECEPTOR SURVEYS

3.1 Water Well Survey

An initial five-hundred (500) foot radius visual survey conducted by Seneca personnel and a one (1) mile radius search conducted by the Iowa Geological Survey Bureau were utilized to identify water well

locations in the site vicinity. A current Online DNR Well Search at a radius of one-thousand (1,000) feet and one (1) mile have been completed and are included in Appendix 6. No supply wells are located on-site and only one (1) well was identified within one-thousand (1,000) feet of the site. This well, #4374 is listed as the Price well and is actually located two-thousand (2,000) feet west of the subject property, at a former skating rink. The Price well was sampled in 2004 and all concentrations were less than EPA established standards. All wells identified on the one (1) mile radius search have been previously identified and are either located upgradient or at a significant distance from the subject property. The Winnebago County Sanitarian, Jack Bradley, was contacted on December 11, 2008 and indicated that no new wells have been installed within one-thousand (1,000) feet of the subject property.

4.0 2008 FIELD ACTIVITIES

4.1 Agricultural Chemical Sampling Procedures

Biannual groundwater monitoring was conducted at the Buffalo Center facility during May and November 2008. Groundwater samples were analyzed for selected pesticides using Method 8141 and nutrients, specifically, Ammonia Nitrogen and Nitrate-Nitrite, using methods SM 4500-NH3 F and EPA 353.2, respectively.

Purging and sampling processes were adopted after U.S. EPA protocols for groundwater sampling and monitoring well purging. The utilized methodology assures minimum risk of cross-contamination and allows for collection of groundwater that is representative of the surrounding geologic medium. Well purging consisted of three (3) casing volumes or until the well was dry. Groundwater was then allowed to recover following purging. Groundwater samples were obtained using clean disposable bailers, poly string, and disposable gloves. The samples were visually inspected for the presence of emulsions or chemical sheens. The samples were then transferred to laboratory cleaned containers, iced, and shipped to Keystone Laboratories, Inc. for analysis.

The chemicals that were historically monitored and/or chemicals that presently exceed EPA established MCL and/or HAL standards are summarized in Table 1 of this report. Complete analytical results for all chemicals in the analytical suite are provided in Appendix 5 of this report.

5.0 DATA COMPILATION AND REPORTING

5.1 Groundwater Plume Definition

The current investigation utilizes the most recent groundwater concentrations from each monitoring well to define the lateral extent of the groundwater contaminant plume(s) at the subject property. Monitoring

well MW6 has not been sampled since 2005 because the well was asphalted over when the City of Buffalo Center resurfaced the city hall/garage parking lot located adjacent to the subject property on the north. Groundwater samples have been collected from areas up gradient, cross gradient, and down gradient from the location(s) of the assumed maximum chemical concentration(s) or source area(s) at the site. The maximum Ammonia Nitrogen concentration is found at MW2 and the contaminant plume is defined but extends offsite to the north and west. Two (2) Nitrate-Nitrite contaminant plumes are depicted; one (1) plume is centered on MW3 and the other plume is located offsite and encompasses monitoring wells MW5, MW10, and MW11.

The groundwater flow and contoured contaminant plume maps were generated using the Surfer surface mapping software developed by Golden Software, Inc. The Surfer software version utilized does not recognize "less than" values (i.e. <1.0); therefore, all "less than" analytical values were converted to rational numeric values (i.e. <0.1 to 0.1) for the purposes of contaminant plume contouring. It should also be noted that the Surfer program utilizes a mathematical interpolation method to contour the data set for a selected chemical. The contaminant plumes generated by Surfer provide a reasonable representation of contaminant distributions; however, the generated plumes do not account for the effects of groundwater flow direction, chemical attenuation, or biodegradation. Contaminant plume maps for each identified chemical of concern with concentrations greater than EPA established MCL and/or HAL standards are supplied in Appendix 3 of this report.

5.2 Plume Stability and Concentration Trends

Concentrations for Ammonia Nitrogen and Nitrate-Nitrate are greater than EPA established MCL and/or HAL standards. In order to evaluate concentration trends, data for chemicals of concern at impacted wells were graphed using Excel, see Appendix 4. Linear interpolation was performed on the graphed data to evaluate historical trends. The following are evaluations of the graphs broken down by chemical of concern.

Ammonia Nitrogen: Ammonia Nitrogen concentrations exceeding the HAL of 30 ppm were identified in MW2 (68.3 ppm) and MW4 (43.3 ppm). Linear trend analysis suggests a decreasing or stable concentration trend in both wells. The contaminant plume for Ammonia Nitrogen extends offsite to the north and west. Reviewing contaminant plume maps for the past two (2) years shows that the Ammonia Nitrogen plume has remained relatively stable in size and extent.

Nitrate-Nitrite: Nitrate-Nitrite concentrations exceeding the MCL/HAL of 10 ppm were identified in MW3 (19.9 ppm), MW5 (17.2 ppm), MW10 (15.4 ppm), and MW11 (16.8 ppm). Linear trend analysis suggests a decreasing or stable concentration trend in monitoring wells MW3 and MW5 and an increasing concentration trend at MW10 and MW11. Reviewing contaminant plume maps for the past two (2) years shows that the Nitrate-Nitrite contaminant plume has decreased in extent but remains undefined to the north and west.

6.0 DISCUSSION

6.1 Groundwater Contamination Impacts

Chapter 133 of the Iowa Administrative Code did not establish groundwater clean-up levels; therefore, contaminated sites evaluated under Chapter 133 are regulated under the federal Drinking Water Standards, established by the EPA following enactment of the Safe Drinking Water Act. Preparation of this document utilized the Maximum Contaminant Levels (MCL) and/or Health Advisory Limits (HAL) published by the EPA in the *2002 Edition of the Drinking Water Standards and Health Advisories*. The applicable MCL and/or HAL standards are displayed in Table 1.

Contaminant plume maps are provided for two (2) chemicals of concern, Ammonia Nitrogen and Nitrate-Nitrite in Appendix 3. Metribuzin concentrations were less than EPA established target levels in 2008. Review of the Summary of Groundwater Monitoring Data table and contaminant plume maps show that six (6) monitoring wells still have concentrations above the EPA established MCL and/or HAL standards. The Ammonia Nitrogen contaminant plume is centered on MW2 located to the northwest of the former liquid fertilizer offload area (B2) and extends offsite to the north and west. Two (2) Nitrate-Nitrite contaminant plumes are depicted; one (1) plume is centered on MW3 and the other plume is located offsite and encompasses monitoring wells MW5, MW10, and MW11. Only the Nitrate-Nitrite contaminant plume is undefined north and west of MW10 and MW11. However, due to the low Nitrate-Nitrite concentrations identified in MW10 and MW11, further plume definition northwest of the site is not recommended at this time.

Current groundwater flow maps for the site are included in Appendix 2 of this report. Comparison of groundwater flow maps from 2003 and 2004 with limited groundwater data (four (4) monitoring wells) show that the groundwater flow direction was to the east. Since 2005 when eight (8) additional monitoring wells were installed, groundwater flow has been radial from MW5.

Based on the nature of the known contaminants at the site, Seneca Companies does not believe vertical differentiation of the contaminant plume within the shallow, unconfined, water bearing unit is occurring. The vertical extent of the plume, for the purposes of this investigation, is considered to extend uniformly throughout the entire thickness of the unconfined strata.

7.0 CONCLUSIONS

Dissolved phase concentrations of Ammonia Nitrogen and Nitrate-Nitrite are greater than EPA established MCL and/or HAL standards at the Buffalo Center facility. Current receptor surveys did not reveal any designated use water bodies, drinking water wells, or land use practices in the site vicinity that would constitute an Aggravated Risk condition as defined under Chapter 133 of the Iowa Administrative Code; therefore, the site is considered a Significant Risk. The closest private well, #4374 (Price), located approximately two-thousand (2,000) feet west of the site, was sampled in 2004 and all concentrations were less than EPA established MCL and/or HAL standards. Seneca believes impact on the Price and other down gradient wells is improbable. Seneca recommends that all available monitoring wells be monitored biannually in 2009 and if trend analysis shows stable or decreasing concentration trend for all chemicals of concern, reclassification of the site will be requested.

Table 1: Summary of Groundwater Monitoring Data

Buffalo Center Nu Way (Former Thermogas Co. Facility)

Well ID	Date	Top of Casing	Static Water Level	Alachlor	Atrazine	Butylate	Cyanazine	EPTC	Metolachlor	Metribuzin	Pendimethalin	Prometon	Trifluralin	Ammonia Nitrogen (NH_3)	Nitrate-Nitrite (NO_2 + NO_3)
MW-1	6/6/2003	100.00	96.86	<0.1	0.2	<0.1	<0.1	<0.1	0.5	<0.1	<0.5	NA	0.2	<1.0	2
	9/17/2003	100.00	95.60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	<0.2
	4/28/2004	100.00	93.69	0.5	0.4	<0.1	<0.1	<0.1	0.9	0.2	<0.5	NA	<0.1	<1.0	1.2
	10/20/2004	100.00	95.95	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	5.3	0.3
	10/3/2005	100.00	97.39	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	0.45
	12/13/2005	100.00	95.35	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	1.39
	4/27/2006	100.00	96.84	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	0.1	<0.5	NA	<0.1	<1.0	3.65
	11/7/2006	100.00	93.68	1.3	<0.1	<0.1	<0.1	<0.1	24.8	10.1	0.7	NA	<0.1	16.7	4.42
	5/2/2007	100.00	96.69	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	1.22
	12/5/2007	100.00	95.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	3.02
	5/6/2008	100.00	97.82	0.2	<0.1	<0.1	<0.1	<0.1	0.9	<0.1	<0.5	NA	<0.1	<1.0	0.60
	11/11/2008	100.00	95.43	<0.1	0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	<0.20
MW-2	6/6/2003	99.92	96.75	**3.2**	0.9	<0.1	0.8	<0.1	7.7	163	6.3	NA	<0.1	**42.7**	**11.4**
	9/17/2003	99.92	96.61	<0.1	<0.1	<0.1	<0.1	<0.1	2.6	50.2	<0.5	NA	<0.1	**219**	**44.2**
	4/28/2004	99.92	94.20	<0.1	0.5	<0.1	<0.1	<0.1	1.7	11.4	<0.5	NA	<0.1	29.9	**13.1**
	10/20/2004	99.92	97.02	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	16.9	<0.5	NA	<0.1	16	**68.8**
	10/3/2005	99.92	98.14	<0.1	<0.1	<0.1	<0.1	<0.1	1.0	17	<0.5	NA	<0.1	**72.6**	9.54
	12/13/2005	99.92	96.44	<0.1	<0.1	<0.1	<0.1	<0.1	1.3	28.7	<0.5	NA	<0.1	**150**	**14.3**
	4/27/2006	99.92	97.81	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	11.1	<0.5	NA	<0.1	13.5	6.92
	11/7/2006	99.92	95.05	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	31.3	<0.5	NA	<0.1	**106**	9.62
	5/2/2007	99.92	97.67	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	19.3	<0.5	NA	<0.1	29.7	4.63
	12/5/2007	99.92	96.32	<0.1	<0.1	<0.1	<0.1	<0.1	1.1	16.6	<0.5	NA	<0.1	**63.9**	1.89
	5/6/2008	99.92	98.87	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	9.6	7.1	NA	<0.1	**47.5**	**20.9**
	11/11/2008	99.92	96.62	<0.1	<0.1	0.8	<0.1	<0.1	0.6	16.4	<0.5	NA	<0.1	**68.3**	5.18
EPA - Maximum Contaminant Level (MCL)				**2**	**3**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**10**
EPA - Health Advisory Limit (HAL)				**SNA**	**SNA**	**400**	**1**	**SNA**	**100**	**200**	**SNA**	**SNA**	**5**	**30**	**10**

Table 1: Summary of Groundwater Monitoring Data

Buffalo Center Nu Way (Former Thermogas Co. Facility)

Well ID	Date	Top of Casing	Static Water Level	Alachlor	Atrazine	Butylate	Cyanazine	EPTC	Metolachlor	Metribuzin	Pendimethalin	Prometon	Trifluralin	Ammonia Nitrogen (NH_3)	Nitrate-Nitrite ($NO_2 + NO_3$)
MW-3	6/6/2003	98.95	95.95	0.9	<0.1	<0.1	0.3	<0.1	16.9	6.4	<0.5	NA	<0.1	6.2	**14**
	9/17/2003	98.95	95.58	1.5	0.1	<0.1	0.4	<0.1	21.3	10	<0.5	NA	<0.1	9.9	2.3
	4/28/2004	98.95	93.12	1.7	<0.1	<0.1	0.3	<0.1	18.2	10.8	<0.5	NA	<0.1	12.4	**17.3**
	10/20/2004	98.95	95.84	<0.1	0.1	<0.1	0.8	<0.1	13.7	36.9	<0.5	NA	<0.1	20.4	**28.6**
	10/3/2005	98.95	96.60	1.7	<0.1	<0.1	0.1	<0.1	6.6	17.6	<0.5	NA	<0.1	15.7	0.83
	4/27/2006	98.95	96.85	1.1	<0.1	<0.1	0.1	<0.1	19.5	10.5	0.5	NA	<0.1	8.3	**13.2**
	11/7/2006	98.95	94.26	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	0.49
	5/2/2007	98.95	96.86	0.8	<0.1	<0.1	<0.1	<0.1	48.6	9.2	0.6	NA	0.3	9.9	1.08
	12/5/2007	98.95	94.10	0.9	<0.1	<0.1	<0.1	<0.1	67.1	8.2	<0.5	NA	<0.1	13.6	9.62
	5/6/2008	98.95	97.77	0.7	<0.1	<0.1	<0.1	<0.1	37.3	5.2	12.3	NA	<0.1	10.1	**11.2**
	11/11/2008	98.95	96.80	0.7	0.3	<0.1	<0.1	<0.1	51.2	4.7	1.0	NA	<0.1	11.4	**19.9**
MW-4	6/6/2003	100.22	96.32	**3.2**	0.9	<0.1	0.8	<0.1	7.8	164	6.4	NA	<0.1	**42.1**	**17**
	9/17/2003	100.22	95.16	**3.3**	1.2	0.2	**1.3**	<0.1	9.5	**251**	7.7	NA	<0.1	**60.2**	7.3
	4/28/2004	100.22	94.24	**2.1**	0.6	<0.1	0.4	<0.1	5.4	**200**	7.3	NA	<0.1	**36.7**	7
	10/20/2004	100.22	96.19	<0.1	0.3	<0.1	<0.1	<0.1	3.4	**201**	<0.5	NA	<0.1	21.7	5.2
	10/3/2005	100.22	96.64	1.5	0.5	0.1	0.3	<0.1	6.7	**229**	6.6	NA	<0.1	**63.2**	3.1
	12/13/2005	100.22	95.12	<0.1	0.9	0.2	0.8	<0.1	20.7	**332**	18.1	NA	<0.1	**70.6**	3.83
	4/27/2006	100.22	96.62	<0.1	0.5	0.1	<0.1	<0.1	7.2	195	9.7	NA	<0.1	18.2	5.44
	11/7/2006	100.22	94.26	**3.0**	0.7	0.2	0.7	<0.1	11.7	**251**	14.8	NA	<0.1	**55.1**	2.97
	5/2/2007	100.22	96.61	1.6	0.6	0.2	0.4	<0.1	7.1	**239**	14.0	NA	<0.1	**34.8**	5.89
	12/5/2007	100.22	95.19	1.0	0.7	0.2	0.4	<0.1	11.9	**267**	12.5	NA	<0.1	**44.2**	3.60
	5/6/2008	100.22	97.25	1.2	0.6	0.4	0.5	<0.1	15.4	124	16.3	NA	<0.1	27.1	2.07
	11/11/2008	100.22	95.08	0.9	0.4	<0.1	0.3	<0.1	6.6	172	15.1	NA	<0.1	**43.3**	1.06
MW-5	2/15/2005	101.1	97.53	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	8.3	<0.5	NA	<0.1	29.7	**36.5**
	10/3/2005	101.1	98.96	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	7.2	<0.5	NA	<0.1	**36.4**	**43.6**
	12/13/2005	101.1	97.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	9.5	<0.5	NA	<0.1	**40.2**	**38.6**
	4/27/2006	101.1	98.49	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	7.4	<0.5	NA	<0.1	16.3	**29.7**
	11/7/2006	101.1	95.69	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	6.0	<0.5	NA	<0.1	23.4	**29.6**
	5/2/2007	101.1	98.41	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	10.2	<0.5	NA	<0.1	28.7	**32.9**
	12/5/2007	101.1	97.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	6.8	<0.5	NA	<0.1	27.5	**34.5**
	5/6/2008	101.1	99.08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	6.3	<0.5	NA	<0.1	**30.1**	**59.8**
	11/11/2008	101.1	97.95	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	3.4	<0.5	NA	<0.1	13.0	**17.2**
EPA - Maximum Contaminant Level (MCL)				**2**	**3**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**10**
EPA - Health Advisory Limit (HAL)				**SNA**	**SNA**	**400**	**1**	**SNA**	**100**	**200**	**SNA**	**SNA**	**5**	**30**	**10**

Table 1: Summary of Groundwater Monitoring Data

Buffalo Center Nu Way (Former Thermogas Co. Facility)

Well ID	Date	Top of Casing	Static Water Level	Alachlor	Atrazine	Butylate	Cyanazine	EPTC	Metolachlor	Metribuzin	Pendimethalin	Prometon	Trifluralin	Ammonia Nitrogen (NH_3)	Nitrate-Nitrite ($NO_2 + NO_3$)
MW-6	2/15/2005	99.74	94.63	<0.1	0.2	<0.1	0.4	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	5.1
	4/27/2006	No Sample - Asphalted over													
	11/7/2006	No Sample - Asphalted over													
MW-7	2/15/2005	99.22	96.34	0.6	0.3	<0.1	<0.1	<0.1	1.0	0.2	<0.5	NA	<0.1	<1.0	3.1
	10/3/2005	99.22	95.84	0.7	0.3	0.1	<0.1	<0.1	0.5	0.2	<0.5	NA	<0.1	<1.0	0.37
	12/13/2005	99.22	94.24	0.9	0.3	<0.1	<0.1	<0.1	1.4	0.2	<0.5	NA	<0.1	<1.0	0.4
	4/27/2006	99.22	95.74	0.4	0.4	<0.1	<0.1	<0.1	1.0	0.1	<0.5	NA	<0.1	<1.0	1.26
	11/7/2006	99.22	96.22	0.4	0.3	<0.1	<0.1	<0.1	0.7	<0.1	<0.5	NA	<0.1	<1.0	0.72
	5/2/2007	99.22	95.75	0.4	0.1	<0.1	<0.1	<0.1	0.7	0.1	<0.5	NA	<0.1	<1.0	4.62
	12/5/2007	99.22	94.44	0.4	0.2	<0.1	<0.1	<0.1	1.0	0.1	<0.5	NA	<0.1	<1.0	3.98
	5/6/2008	99.22	96.32	0.4	0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	1.1	3.47
	11/11/2008	99.22	94.42	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	<0.1	<0.5	NA	<0.1	<1.0	3.05
MW-8	2/15/2005	99.9	94.61	**2.1**	0.1	<0.1	0.5	<0.1	3.6	88.9	<0.5	NA	<0.1	6.8	**19**
	10/3/2005	99.9	96.09	1.1	<0.1	<0.1	<0.1	<0.1	3.0	48.5	<0.5	NA	<0.1	4.5	4.87
	12/13/2005	99.9	94.65	<0.1	0.2	<0.1	<0.1	<0.1	3.0	77.9	<0.5	NA	<0.1	8.5	8.07
	4/27/2006	99.9	96.09	**2.1**	0.1	0.2	<0.1	<0.1	4.5	84.3	<0.5	NA	<0.1	10.9	9.99
	11/7/2006	99.9	92.79	1.6	<0.1	<0.1	<0.1	<0.1	3.0	79.3	<0.5	NA	<0.1	11.0	4.54
	5/2/2007	99.9	96.14	1.1	<0.1	0.2	<0.1	<0.1	2.0	77.1	<0.5	NA	<0.1	3.5	6.20
	12/5/2007	99.9	94.73	0.9	<0.1	<0.1	<0.1	<0.1	3.9	90.0	<0.5	NA	<0.1	7.9	2.49
	5/6/2008	99.9	96.83	0.6	0.1	0.2	<0.1	<0.1	2.2	35.0	<0.5	NA	<0.1	4.3	5.08
	11/11/2008	99.9	94.68	0.3	<0.1	<0.1	<0.1	0.1	1.3	23.3	<0.5	NA	<0.1	3.2	1.64
MW-9	2/15/2005	99.63	94.02	0.5	0.2	<0.1	0.5	<0.1	0.6	4.6	<0.5	NA	<0.1	1.5	**12.4**
	12/13/2005	99.63	94.98	<0.1	0.3	0.2	<0.1	<0.1	0.5	5.3	<0.5	NA	<0.1	1.6	5.69
	4/27/2006	99.63	95.79	1.8	0.1	0.2	<0.1	<0.1	3.9	73.8	<0.5	NA	<0.1	10.0	**10.2**
	11/7/2006	99.63	94.19	<0.1	0.3	0.2	<0.1	<0.1	<0.5	4.8	<0.5	NA	<0.1	1.2	3.58
	5/2/2007	99.63	96.68	0.2	0.2	0.3	<0.1	<0.1	0.6	5.0	<0.5	NA	<0.1	2.2	6.77
	12/5/2007	99.63	95.10	<0.1	0.2	0.2	<0.1	<0.1	0.6	4.7	<0.5	NA	<0.1	1.3	5.77
	5/6/2008	99.63	97.26	<0.1	1.5	<0.1	<0.1	<0.1	<0.5	0.3	<0.5	NA	3.2	1.3	1.42
	11/11/2008	99.63	94.92	<0.1	0.2	0.2	<0.1	<0.1	0.6	5.0	<0.5	NA	<0.1	<1.0	5.54
EPA - Maximum Contaminant Level (MCL)				**2**	**3**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**10**
EPA - Health Advisory Limit (HAL)				**SNA**	**SNA**	**400**	**1**	**SNA**	**100**	**200**	**SNA**	**SNA**	**5**	**30**	**10**

Table 1: Summary of Groundwater Monitoring Data

Buffalo Center Nu Way (Former Thermogas Co. Facility)

Well ID	Date	Top of Casing	Static Water Level	Alachlor	Atrazine	Butylate	Cyanazine	EPTC	Metolachlor	Metribuzin	Pendimethalin	Prometon	Trifluralin	Ammonia Nitrogen (NH_3)	Nitrate-Nitrite (NO_2 + NO_3)
MW10	10/4/2005	100.84	93.07	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	3.1	<0.5	NA	<0.1	<1.0	**17.9**
	12/13/2005	100.84	94.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	3.4	<0.5	NA	<0.1	<1.0	**14.2**
	4/27/2006	100.84	95.36	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	3.2	<0.5	NA	<0.1	<1.0	**17.3**
	11/7/2006	100.84	93.73	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	1.9	<0.5	NA	<0.1	<1.0	**10.9**
	5/2/2007	100.84	95.41	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	1.2	<0.5	NA	<0.1	<1.0	**19.4**
	12/5/2007	100.84	94.36	<0.1	<0.1	0.1	<0.1	<0.1	<0.5	0.9	<0.5	NA	<0.1	<1.0	**15.8**
	5/6/2008	100.84	96.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	0.6	4.3	NA	<0.1	<1.0	**21.9**
	11/11/2008	100.84	94.43	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	0.8	<0.5	NA	<0.1	<1.0	**15.4**
MW11	10/4/2005	99.28	92.38	<0.1	0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	3.25
	4/27/2006	99.28	95.77	<0.1	<0.1	<0.1	<0.1	<0.1	<0.6	<0.1	<0.6	NA	<0.1	<1.0	6.02
	11/7/2006	99.28	93.28	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	**14.0**
	5/2/2007	99.28	95.80	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	**26.0**
	12/5/2007	99.28	94.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	**38.1**
	5/6/2008	99.28	96.41	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	1.3	**20.5**
	11/11/2008	99.28	94.58	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	**16.8**
MW12	10/4/2005	98.84	84.54	<0.1	0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	5.08
	12/13/2005	98.84	94.54	<0.1	0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	2.94
	4/27/2006	98.84	95.70	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	1.76
	11/7/2006	98.84	92.76	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	3.71
	5/2/2007	98.84	95.94	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	0.1	<1.0	1.76
	12/5/2007	98.84	94.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	5.20
	5/6/2008	98.84	96.73	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	**12.4**
	11/11/2008	98.84	94.76	<0.1	0.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.5	NA	<0.1	<1.0	2.06
EPA - Maximum Contaminant Level (MCL)				**2**	**3**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**10**
EPA - Health Advisory Limit (HAL)				**SNA**	**SNA**	**400**	**1**	**SNA**	**100**	**200**	**SNA**	**SNA**	**5**	**30**	**10**

Table 1: Summary of Groundwater Monitoring Data

Buffalo Center Nu Way (Former Thermogas Co. Facility)

Well ID	Date	Top of Casing	Static Water Level	Alachlor	Atrazine	Butylate	Cyanazine	EPTC	Metolachlor	Metribuzin	Pendimethalin	Prometon	Trifluralin	Ammonia Nitrogen (NH_3)	Nitrate-Nitrite (NO_2 + NO_3)
MW13	10/4/2005	99.54	96.79	<0.1	<0.1	<0.1	0.1	<0.1	<0.5	3.8	<0.5	NA	<0.1	<1.0	4.69
	12/13/2005	99.54	95.04	<0.1	<0.1	<0.1	0.3	<0.1	<0.5	7.3	<0.5	NA	<0.1	<1.0	4.77
	4/27/2006	99.54	96.78	<0.1	<0.1	<0.1	0.2	<0.1	<0.5	5.8	<0.5	NA	<0.1	<1.0	3.54
	11/7/2006	99.54	93.84	<0.1	<0.1	<0.1	0.2	<0.1	<0.5	6.0	<0.5	NA	<0.1	<1.0	5.65
	5/2/2007	99.54	96.66	0.2	<0.1	<0.1	0.2	<0.1	<0.5	7.1	<0.5	NA	<0.1	<1.0	4.32
	12/5/2007	99.54	95.33	<0.1	<0.1	0.2	0.2	<0.1	<0.5	4.9	<0.5	NA	<0.1	<1.0	2.52
	5/6/2008	99.54	97.39	<0.1	<0.1	<0.1	0.1	<0.1	0.5	4.7	<0.5	NA	<0.1	<1.0	3.11
	11/11/2008	99.54	95.34	<0.1	<0.1	<0.1	0.2	<0.1	0.5	3.8	<0.5	NA	<0.1	<1.0	2.93
PW-1 (Price)	10/20/2004	NA	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.5	NA	<0.1	<1.0	0.9
EPA - Maximum Contaminant Level (MCL)				**2**	**3**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**SNA**	**10**
EPA - Health Advisory Limit (HAL)				**SNA**	**SNA**	**400**	**1**	**SNA**	**100**	**200**	**SNA**	**SNA**	**5**	**30**	**10**

* - the relative standard deviation (RSD) for this analyte failed to meet the % RSD acceptance criteria for the initial calibration.

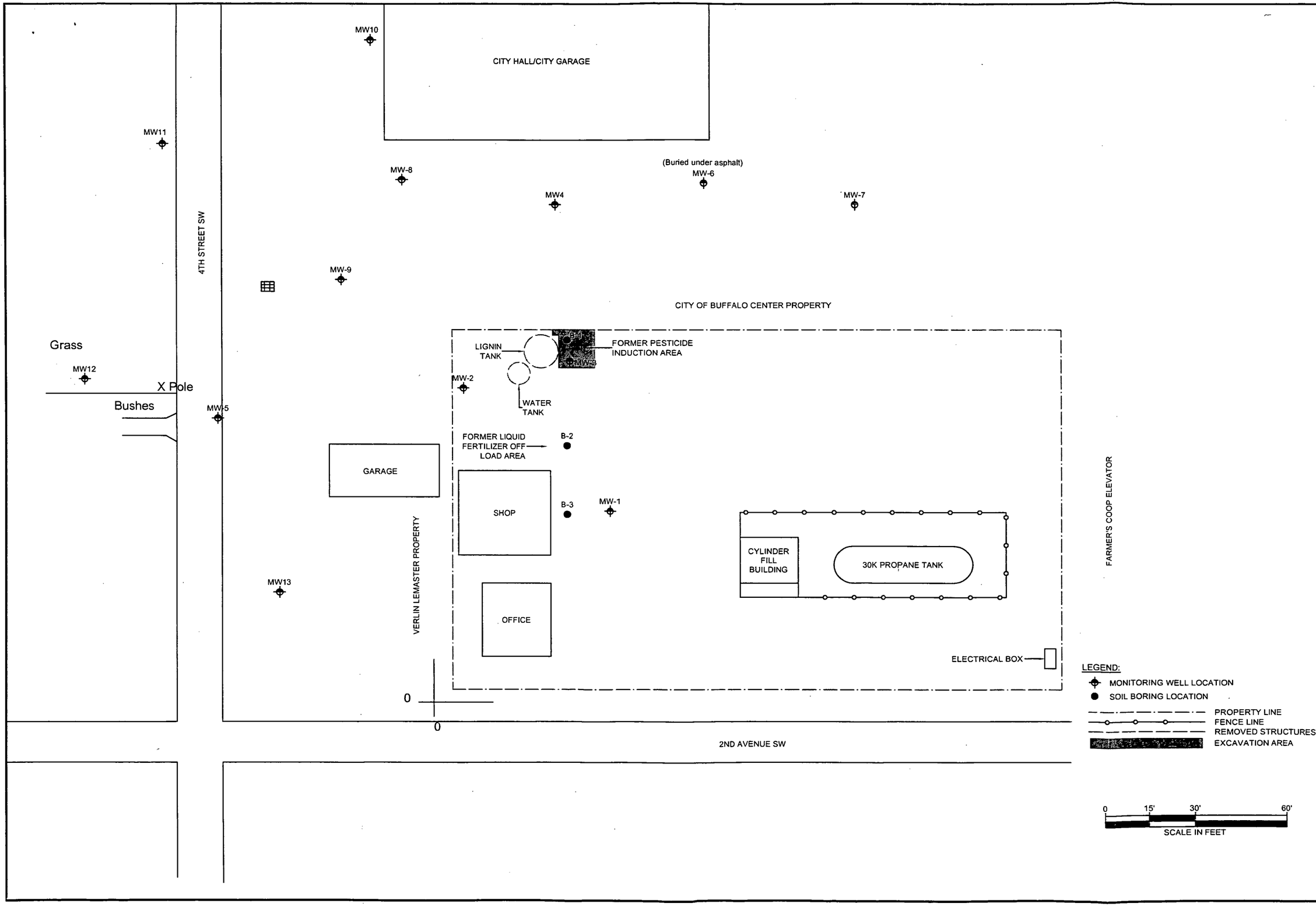
** - Internal standard area outside acceptable QC criteria on duplicate analysis.

Concentrations of pesticides are stated in ppb (ug/L). Concentrations of Ammonia Nitrogen and Nitrate-Nitrite are stated in ppm (mg/L).

NA - Not Analyzed for COC. SNA - Standard not available

Appendix 1

Site Plan Map



REVISION:	BY:

N
W E
S

SENECA
ENVIRONMENTAL SERVICES
DES MOINES, IA 50313 (800) 369-3500

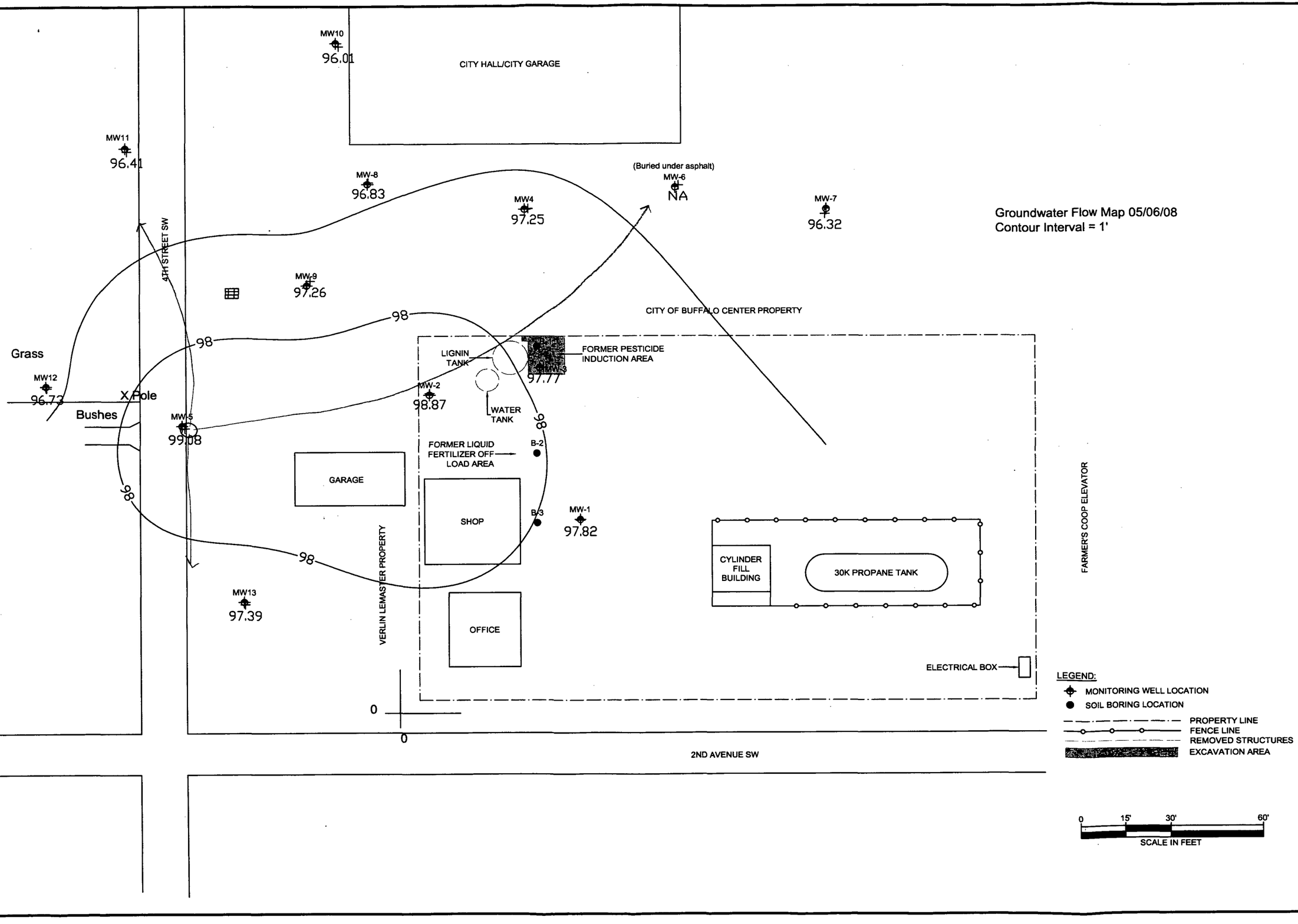
JOB DESCRIPTION: Former Thermogas Facility
CHS Inc.
311 2ND AVENUE SW
BUFFALO CENTER, IOWA

SHEET TITLE: SCALED SITE PLAN

DATE:	9/29/03
DRAWN BY:	DARRICK WORRALL
CHECKED BY:	MIKE STEENHOEK
SCALE:	1"=30'
FILENAME:	BUFFALO CENTER
PROJECT NO:	6235000
SHEET NO.	1 OF 1

Appendix 2

Groundwater Flow Maps



REVISION:	BY:

N
W E
S

SENECA
ENVIRONMENTAL SERVICES
DES MOINES, IA 50313 (800) 369-3500

JOB DESCRIPTION:
Former Thermogas Facility
CHS Inc.
311 2ND AVENUE SW
BUFFALO CENTER, IOWA

SHEET TITLE:
SCALED SITE PLAN

DATE:	9/29/03
DRAWN BY:	DARRICK WORRALL
CHECKED BY:	MIKE STEENHOEK
SCALE:	1"=30'
FILENAME:	BUFFALO CENTER
PROJECT NO:	6235000
SHEET NO.	1 OF 1

Groundwater Flow Map 11/11/08
Contour Interval = 1'

MW10
94.43

CITY HALL/CITY GARAGE

MW11
94.58

(Buried under asphalt)
MW-6
NA

MW-8
94.68

MW4
95.08

MW-7
94.42

4TH STREET SW

MW-9
94.92

96.2

CITY OF BUFFALO CENTER PROPERTY

Grass

MW12
94.76

96.2

96.2

X Pole

Bushes

LIGNIN TANK

FORMER-PESTICIDE INDUCTION AREA

MW3
96.8

MW-2
96.62

WATER TANK

MW-5
97.95

FORMER LIQUID FERTILIZER OFF-LOAD AREA

B-2
96.2

GARAGE

SHOP

B-3

MW-1
95.43

96.2

CYLINDER FILL BUILDING

30K PROPANE TANK

FARMER'S COOP ELEVATOR

MW13
95.34

VERLIN LEMASTER PROPERTY

OFFICE

ELECTRICAL BOX

0

0

2ND AVENUE SW

LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- PROPERTY LINE
- FENCE LINE
- REMOVED STRUCTURES
- EXCAVATION AREA

0 15' 30' 60'
SCALE IN FEET

N
W E
S

REVISION:	BY:

SENECA
ENVIRONMENTAL SERVICES
DES MOINES, IA 50313 (800) 369-3500

JOB DESCRIPTION:
Former Thermogas Facility
CHS Inc.
311 2ND AVENUE SW
BUFFALO CENTER, IOWA

SHEET TITLE:
SCALED SITE PLAN

DATE: 9/29/03
DRAWN BY: DARRICK WORRALL
CHECKED BY: MIKE STEENHOEK
SCALE: 1"=30'
FILENAME: BUFFALO CENTER
PROJECT NO: 6235000
SHEET NO: 1 OF 1

Appendix 3

Contaminant Plume Maps

Ammonia Nitrogen
HAL = 30 ppm
Contour Interval = 20 ppm

CITY HALL/CITY GARAGE

MW10 1

MW11 1

MW-8 3.2

(Buried under asphalt)
MW-6 1

MW-7 1

MW4 43.3

30

MW-9 1

4TH STREET SW

CITY OF BUFFALO CENTER PROPERTY

Grass

MW12 1

X Pole

Bushes

MW-5 1.3

LIGNIN TANK

FORMER PESTICIDE INDUCTION AREA

MW-3 11.4

MW-2 68.3

WATER TANK

FORMER LIQUID FERTILIZER OFF LOAD AREA

B-2

GARAGE

SHOP

B-3

MW-1 1

CYLINDER FILL BUILDING

30K PROPANE TANK

FARMER'S COOP ELEVATOR

MW13 1

VERLIN LEMASTER PROPERTY

OFFICE

ELECTRICAL BOX

0
0

2ND AVENUE SW

LEGEND:
- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- PROPERTY LINE
- FENCE LINE
- REMOVED STRUCTURES
- EXCAVATION AREA

0 15' 30' 60'
SCALE IN FEET

REVISION:	BY:

N W E S

SENECA
ENVIRONMENTAL SERVICES
DES MOINES, IA 50313 (800) 369-3500

JOB DESCRIPTION: Former Thermogas Facility
CHS Inc.
311 2ND AVENUE SW
BUFFALO CENTER, IOWA

SHEET TITLE: SCALED SITE PLAN

DATE: 9/29/03
DRAWN BY: DARRICK WORRALL
CHECKED BY: MIKE STEENHOEK
SCALE: 1"=30'
FILENAME: BUFFALO CENTER
PROJECT NO: 6235000
SHEET NO. 1 OF 1

MW10
15.4

CITY HALL/CITY GARAGE

MW11
16.8

4TH STREET SW

Nitrate-Nitrite
MCL/HAL = 10 ppm
Contour Interval = 10 ppm

(Buried under asphalt)

MW-8
1.64

MW-6
5.1

MW4
1.06

MW-7
3.05

MW-9
5.54

10

CITY OF BUFFALO CENTER PROPERTY

Grass

MW12
2.06

X Pole

Bushes

MW-5
17.2

LIGNIN TANK

FORMER PESTICIDE INDUCTION AREA

MW-3
19.9

MW-2
5.18

WATER TANK

FORMER LIQUID FERTILIZER OFF LOAD AREA

B-2

GARAGE

SHOP

B-3

MW-1
0.2

CYLINDER FILL BUILDING

30K PROPANE TANK

FARMER'S COOP ELEVATOR

MW13
2.93

VERLIN LEMASTER PROPERTY

OFFICE

ELECTRICAL BOX

0

0

2ND AVENUE SW

LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION
- PROPERTY LINE
- FENCE LINE
- REMOVED STRUCTURES
- EXCAVATION AREA

0 15' 30' 60'
SCALE IN FEET

N
W E
S

REVISION:	BY:

SENECA
ENVIRONMENTAL SERVICES
DES MOINES, IA 50313 (800) 369-3500

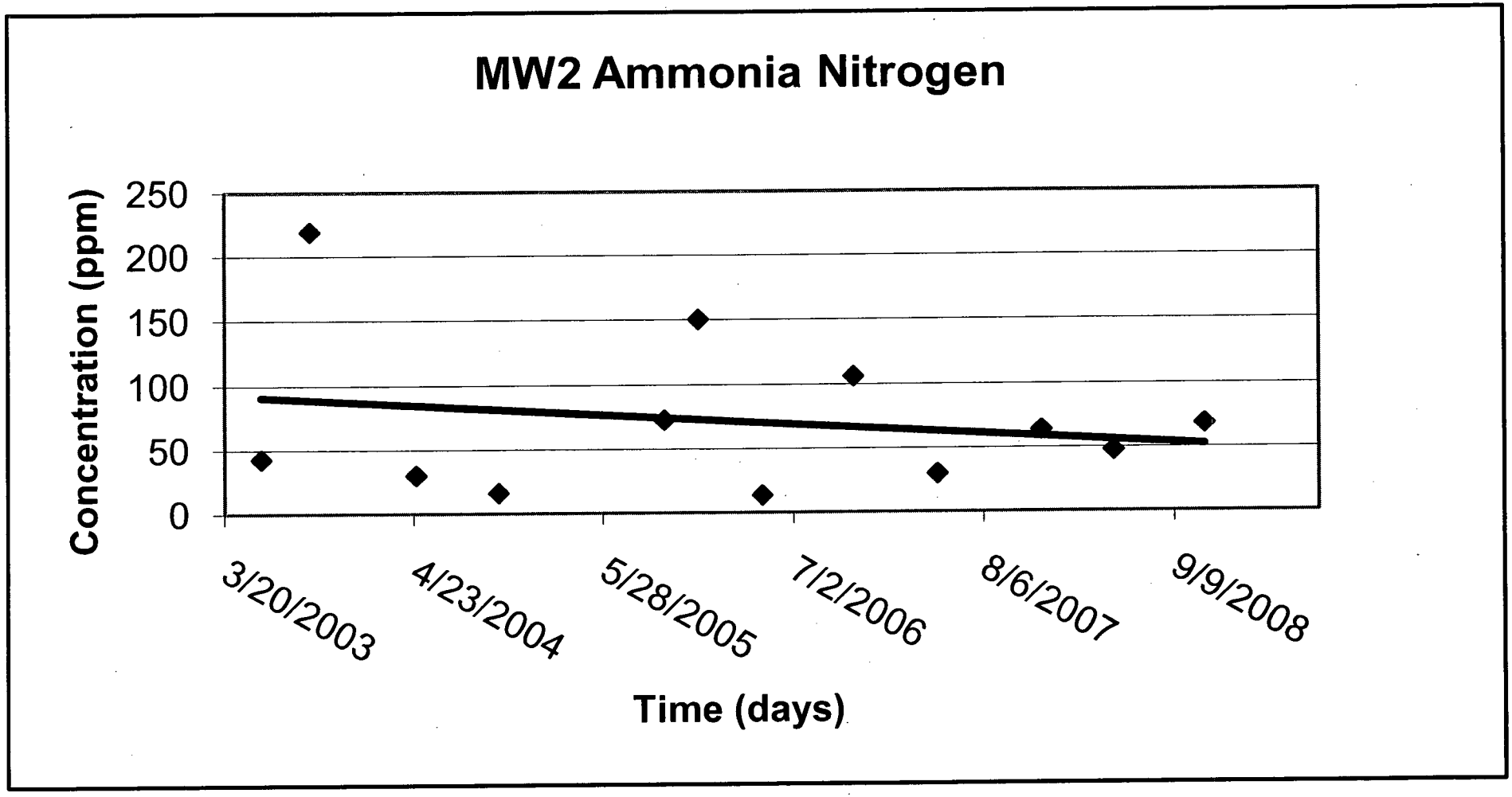
JOB DESCRIPTION:
Former Thermogas Facility
CHS Inc.
311 2ND AVENUE SW
BUFFALO CENTER, IOWA

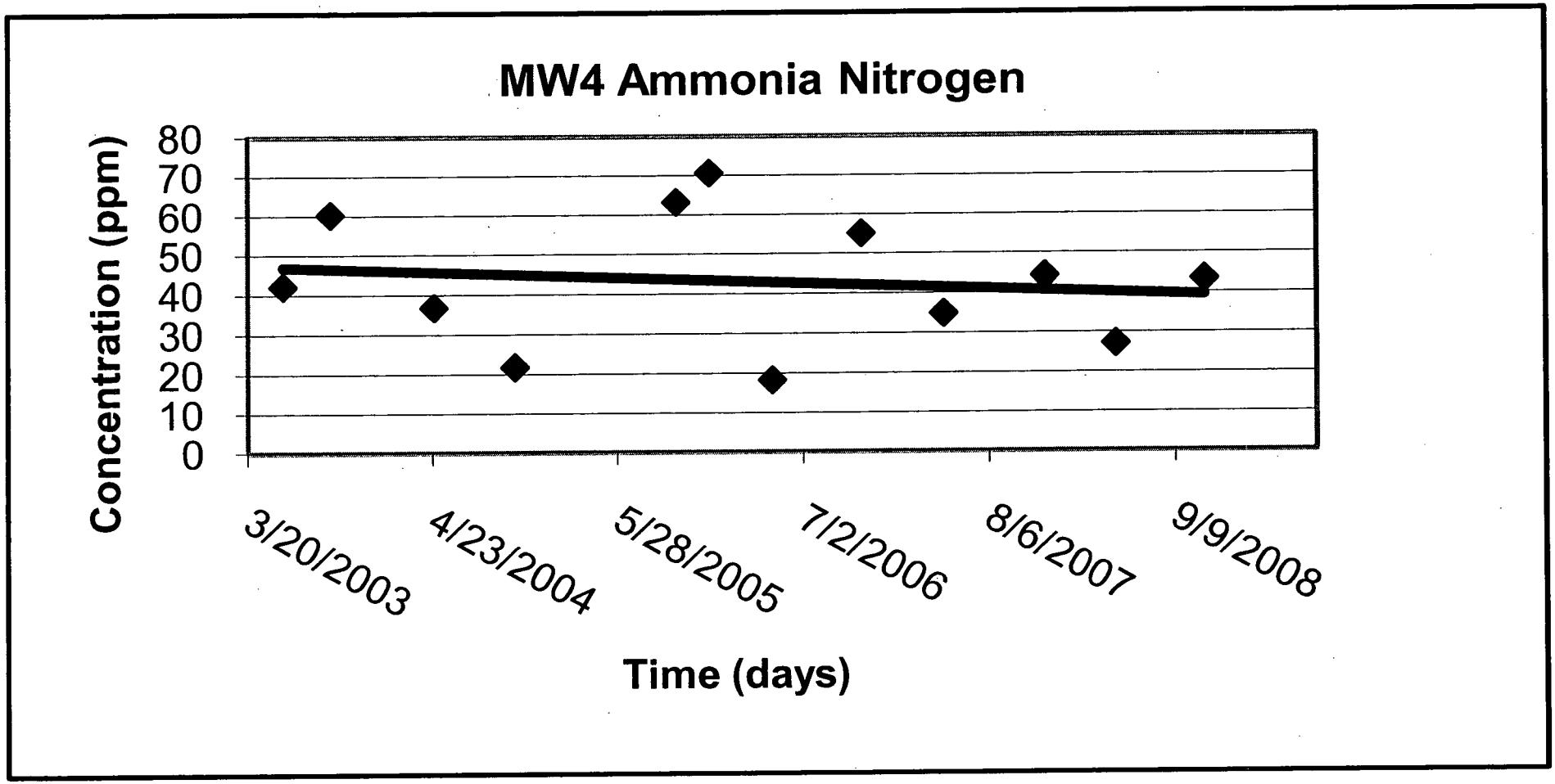
SHEET TITLE:
SCALED SITE PLAN

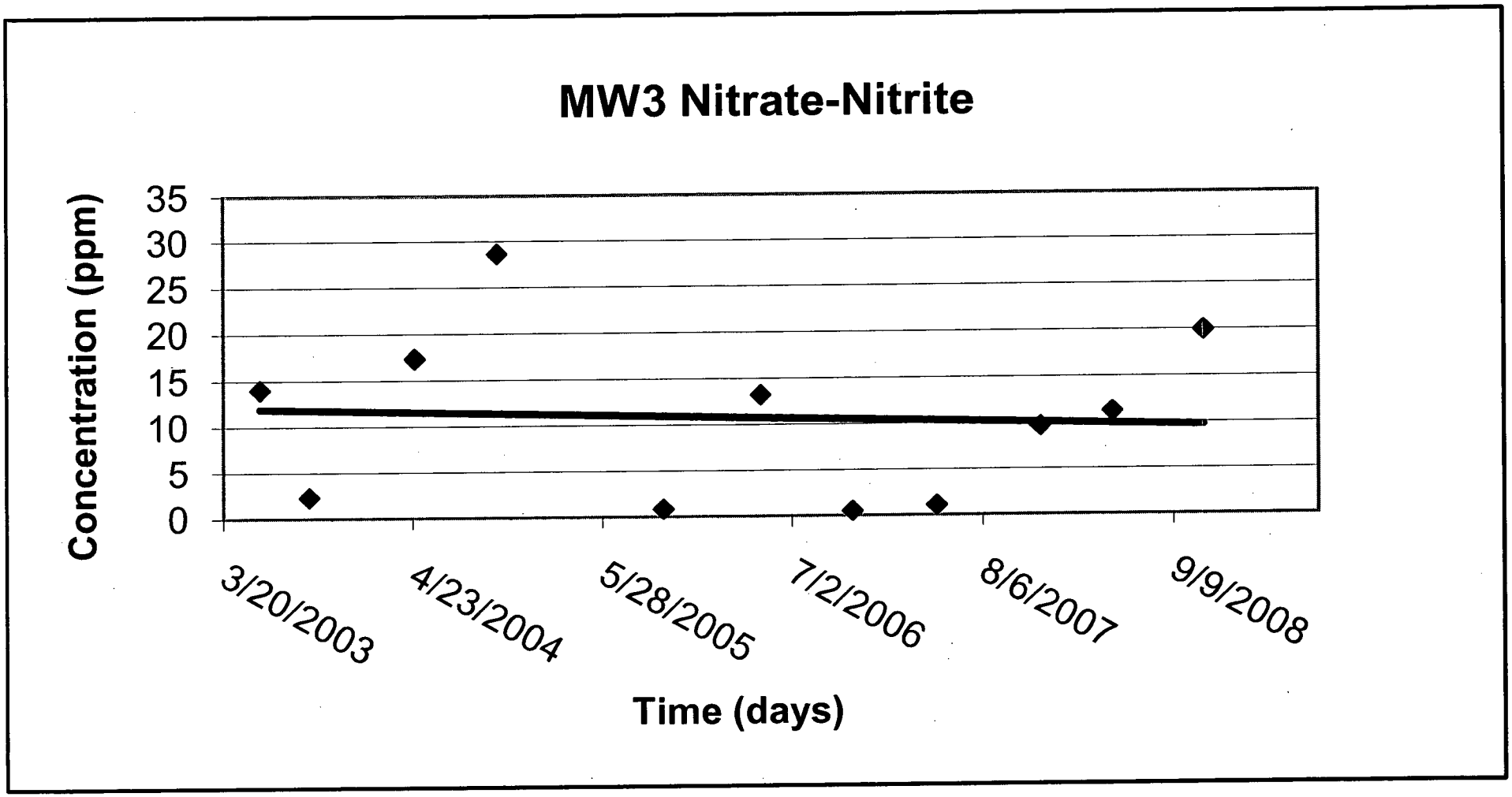
DATE: 9/29/03
DRAWN BY: DARRICK WORRALL
CHECKED BY: MIKE STEENHOEK
SCALE: 1"=30'
FILENAME: BUFFALO CENTER
PROJECT NO: 6235000
SHEET NO.
1 OF 1

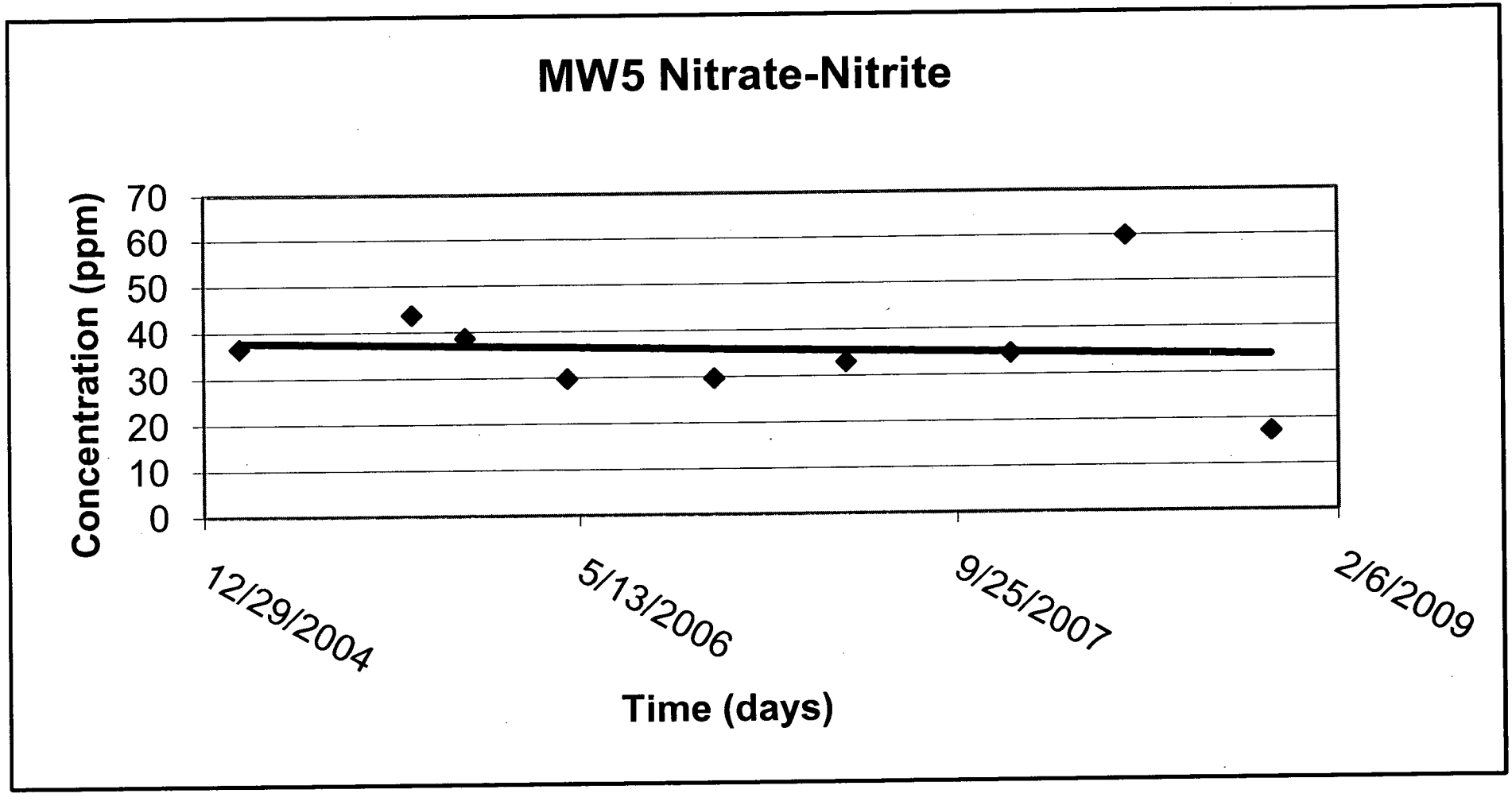
Appendix 4

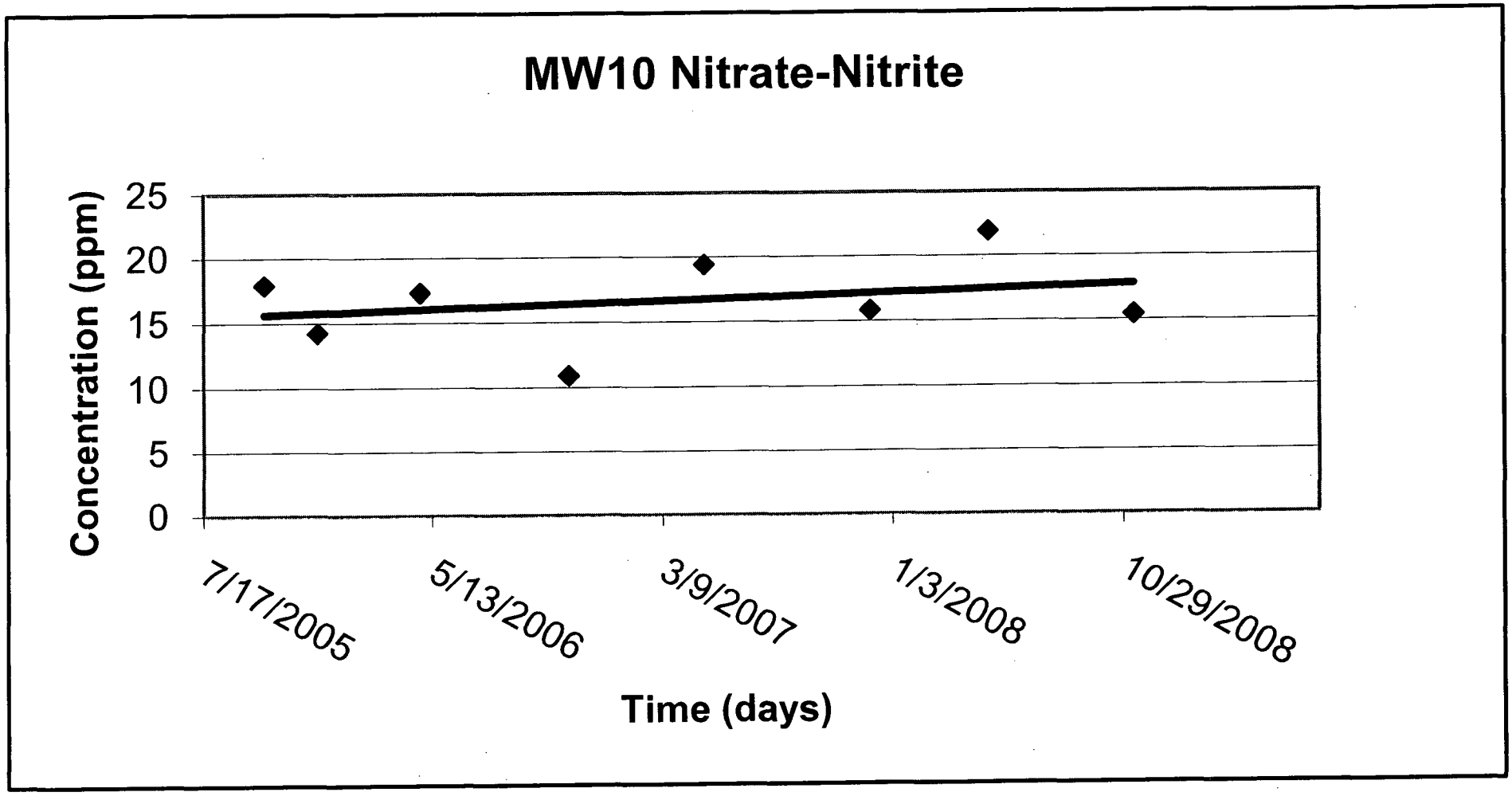
Data Plots/Trend Analysis

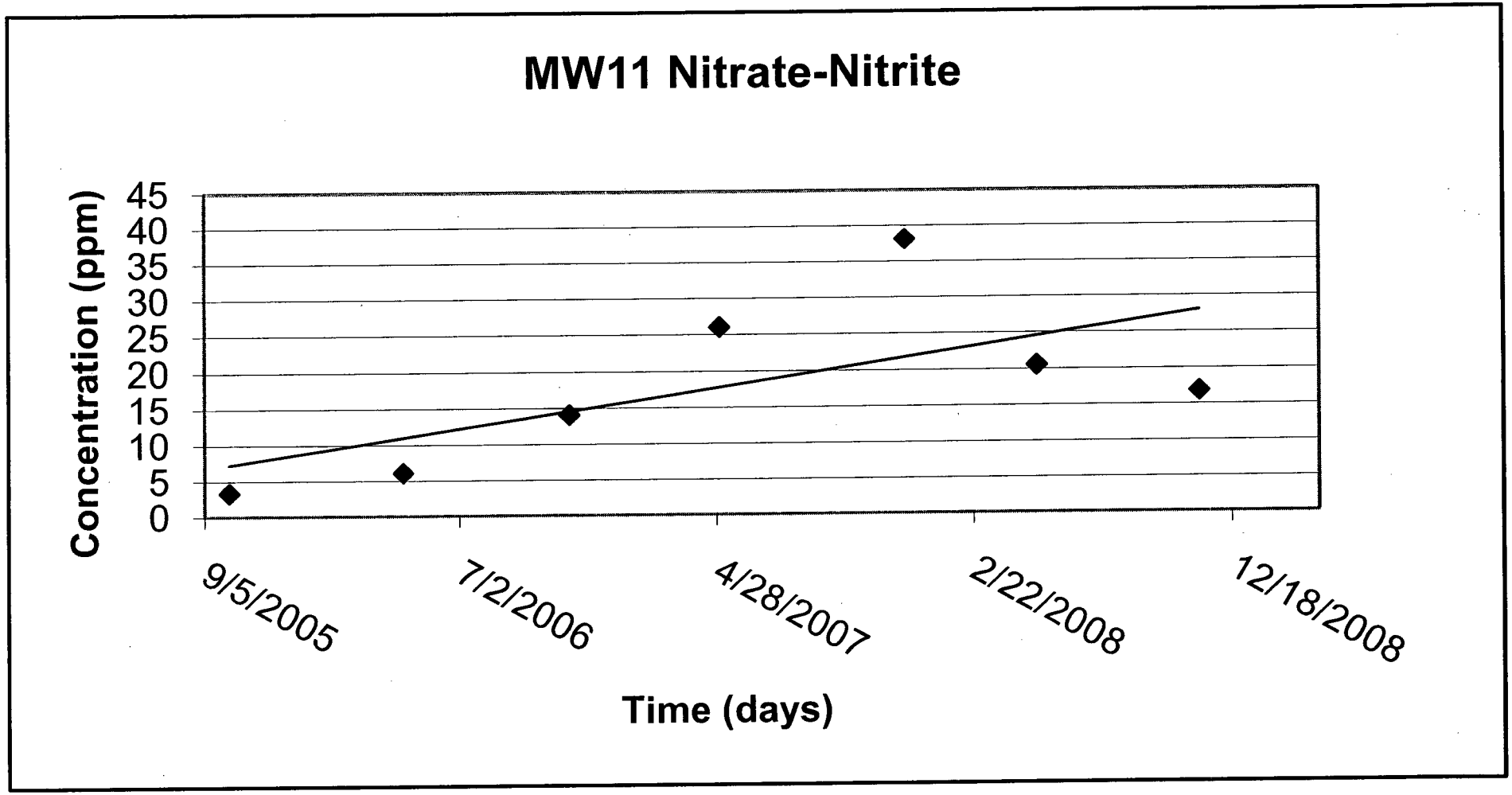

MW2 Ammonia Nitrogen
Concentration (ppm)
250
200
150
100
50
0
3/20/2003
4/23/2004
5/28/2005
7/2/2006
8/6/2007
9/9/2008
Time (days)


MW4 Ammonia Nitrogen
Concentration (ppm)
80
70
60
50
40
30
20
10
0
3/20/2003
4/23/2004
5/28/2005
7/2/2006
8/6/2007
9/9/2008
Time (days)


MW3 Nitrate-Nitrite
Concentration (ppm)
35
30
25
20
15
10
5
0
3/20/2003
4/23/2004
5/28/2005
7/2/2006
8/6/2007
9/9/2008
Time (days)


MW5 Nitrate-Nitrite
Concentration (ppm)
70
60
50
40
30
20
10
0
12/29/2004
5/13/2006
9/25/2007
2/6/2009
Time (days)


MW10 Nitrate-Nitrite
Concentration (ppm)
25
20
15
10
5
0
7/17/2005
5/13/2006
3/9/2007
1/3/2008
10/29/2008
Time (days)


MW11 Nitrate-Nitrite
Concentration (ppm)
45
40
35
30
25
20
15
10
5
0
9/5/2005
7/2/2006
4/28/2007
2/22/2008
12/18/2008
Time (days)

Appendix 5

Analytical Results

Keystone
LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

09 June 2008

JUN 12 2008

Jennifer Carpenter
Seneca Environmental Services
4140 NE. 14th St.
Des Moines, IA 50316

RE: Buffalo Center
6270403

Enclosed are the results of analyses for samples received by the laboratory on 05/08/08 09:30. 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
MW13	18E0399-01	Water	05/06/08 17:05	05/08/08 09:30
MW8	18E0399-02	Water	05/06/08 17:10	05/08/08 09:30
MW1	18E0399-03	Water	05/06/08 17:15	05/08/08 09:30
MW7	18E0399-04	Water	05/06/08 17:20	05/08/08 09:30
MW12	18E0399-05	Water	05/06/08 17:25	05/08/08 09:30
MW9	18E0399-06	Water	05/06/08 17:30	05/08/08 09:30
MW3	18E0399-07	Water	05/06/08 17:35	05/08/08 09:30
MW10	18E0399-08	Water	05/06/08 17:40	05/08/08 09:30
MW2	18E0399-09	Water	05/06/08 17:45	05/08/08 09:30
MW5	18E0399-10	Water	05/06/08 17:50	05/08/08 09:30
MW11	18E0399-11	Water	05/06/08 17:55	05/08/08 09:30
MW4	18E0399-12	Water	05/06/08 18:00	05/08/08 09:30

Phone 641-792-8451
600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Sincerely,

Keystone Laboratories, Inc.

Sue Thompson

Sue Thompson

Project Manager I

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW13

18E0399-01 (Water)

Date Sampled:5/6/2008 5:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81249	05/12/08	05/19/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**4.7**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.5**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	**0.1**	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*90.1 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1E81329	05/13/08	05/14/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**3.11**	0.20	"	"	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW8

18E0399-02 (Water)

Date Sampled:5/6/2008 5:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81249	05/12/08	05/19/08	EPA 8141	
Butylate	**0.2**	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.1**	0.1	"	"	"	"	"	"	
Simazine	**3.2**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.6**	0.1	"	"	"	"	"	"	
Metribuzin	**35.0**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**2.2**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*83.2 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**4.3**	1.0	mg/l	1	1E81329	05/13/08	05/14/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**5.08**	0.20	"	"	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW1

18E0399-03 (Water)

Date Sampled:5/6/2008 5:15:00PM

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81249	05/12/08	05/19/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.2**	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.9**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**0.3**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*79.0 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1E81329	05/13/08	05/14/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**0.60**	0.20	"	"	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW7

18E0399-04 (Water)

Date Sampled:5/6/2008 5:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.2**	0.1	"	"	"	"	"	"	
Simazine	**0.1**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.4**	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**0.2**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*79.0 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**1.1**	1.0	mg/l	1	1E81329	05/13/08	05/14/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**3.47**	0.20	"	"	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW12

18E0399-05 (Water)

Date Sampled:5/6/2008 5:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	**0.1**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*72.3 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1E81329	05/13/08	05/14/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**12.4**	0.40	"	2	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW9

18E0399-06 (Water)

Date Sampled:5/6/2008 5:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	**3.2**	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**1.5**	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**0.3**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**2.4**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*79.7 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**1.3**	1.0	mg/l	1	1E81329	05/13/08	05/14/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**1.42**	0.20	"	"	1E81415	05/14/08	05/15/08	EPA 353.2	

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW3

18E0399-07 (Water)

Date Sampled:5/6/2008 5:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.7**	0.1	"	"	"	"	"	"	
Metribuzin	**5.2**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**47.6**	0.5	"	"	"	"	"	"	E
Pendimethalin	**12.3**	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**0.2**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*80.2 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**10.1**	1.0	mg/l	1	1E81911	05/19/08	05/21/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**11.2**	0.40	"	2	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW3

18E0399-07RE1 (Water)

Date Sampled:5/6/2008 5:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
Metolachlor	**37.3**	2.5	ug/l	5	1E81332	05/13/08	05/27/08	EPA 8141	
Surrogate: 2-Nitro-m-xylene		*63.1 %*	*50-139*		"	"	"	"	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW10

18E0399-08 (Water)

Date Sampled:5/6/2008 5:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**0.6**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	**4.3**	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**0.7**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*75.1 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1E81911	05/19/08	05/21/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**21.9**	1.00	"	5	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW2

18E0399-09 (Water)

Date Sampled:5/6/2008 5:45:00PM

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**9.6**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.7**	0.5	"	"	"	"	"	"	
Pendimethalin	**7.1**	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**0.2**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*67.7 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**47.5**	1.0	mg/l	1	1E81911	05/19/08	05/21/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**20.9**	1.00	"	5	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW5

18E0399-10 (Water)

Date Sampled:5/6/2008 5:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**6.3**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*72.7 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**30.1**	1.0	mg/l	1	1E81911	05/19/08	05/21/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**59.8**	2.00	"	10	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451 600 East 17th Street South Newton, IA 50208 Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW11

18E0399-11 (Water)

Date Sampled:5/6/2008 5:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*75.2 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**1.3**	1.0	mg/l	1	1E81911	05/19/08	05/21/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**20.5**	2.00	"	10	1E81415	05/14/08	05/15/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW4

18E0399-12 (Water)

Date Sampled:5/6/2008 6:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1E81332	05/13/08	05/27/08	EPA 8141	
Butylate	**0.4**	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.6**	0.1	"	"	"	"	"	"	
Simazine	**0.1**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**1.2**	0.1	"	"	"	"	"	"	
Metribuzin	**144**	0.1	"	"	"	"	"	"	E
Atrazine Desisopropyl	**0.5**	0.2	"	"	"	"	"	"	
Metolachlor	**15.4**	0.5	"	"	"	"	"	"	
Pendimethalin	**16.3**	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	**0.5**	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*74.4 %*	*50-139*		"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**27.1**	1.0	mg/l	1	1E81911	05/19/08	05/21/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**2.07**	0.20	"	"	1E81415	05/14/08	05/15/08	EPA 353.2	

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

MW4

18E0399-12RE1 (Water)

Date Sampled:5/6/2008 6:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
Metribuzin	**124**	1.0	ug/l	10	1E81332	05/13/08	05/27/08	EPA 8141	
Surrogate: 2-Nitro-m-xylene		*60.6 %*	*50-139*		"	"	"	"	

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 18E2020 - 1E81249										
Calibration Check (18E2020-CCV1)				Prepared: 05/17/08 Analyzed: 05/18/08						
EPTC	1.21		ug/l	1.20000		101	80-120			
Butylate	1.20		"	1.20000		100	80-120			
Propachlor	1.19		"	1.20000		99.3	80-120			
Trifluralin	1.17		"	1.20000		97.4	80-120			
Terbufos	1.25		"	1.20000		104	80-120			
Atrazine	1.24		"	1.20000		103	80-120			
Simazine	1.31		"	1.20000		109	80-120			
Alachlor	1.17		"	1.20000		97.6	80-120			
Metribuzin	1.25		"	1.20000		104	80-120			
Metolachlor	1.15		"	1.20000		96.0	80-120			
Pendimethalin	1.21		"	1.20000		101	80-120			
Butachlor	1.14		"	1.20000		94.8	80-120			
Cyanazine	1.28		"	1.20000		106	80-120			
Acetochlor	1.17		"	1.20000		97.5	80-120			
Surrogate: 2-Nitro-m-xylene	*0.933*		"	*0.982400*		*95.0*	*80-120*			
Calibration Check (18E2020-CCV2)				Prepared: 05/17/08 Analyzed: 05/19/08						
EPTC	1.19		ug/l	1.20000		99.0	80-120			
Butylate	1.17		"	1.20000		97.8	80-120			
Propachlor	1.15		"	1.20000		96.2	80-120			
Trifluralin	1.14		"	1.20000		95.1	80-120			
Terbufos	1.36		"	1.20000		114	80-120			
Atrazine	1.22		"	1.20000		102	80-120			
Simazine	1.38		"	1.20000		115	80-120			
Alachlor	1.14		"	1.20000		95.1	80-120			
Metribuzin	1.22		"	1.20000		102	80-120			
Metolachlor	1.11		"	1.20000		92.6	80-120			
Pendimethalin	1.19		"	1.20000		98.8	80-120			
Butachlor	1.10		"	1.20000		91.9	80-120			
Cyanazine	1.26		"	1.20000		105	80-120			
Acetochlor	1.14		"	1.20000		95.2	80-120			
Surrogate: 2-Nitro-m-xylene	*0.912*		"	*0.982400*		*92.8*	*80-120*			

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 18E2816 - 1E81332										
Calibration Check (18E2816-CCV1)				Prepared & Analyzed: 05/26/08						
EPTC	1.17		ug/l	1.20000		97.6	80-120			
Butylate	1.18		"	1.20000		98.0	80-120			
Propachlor	1.04		"	1.20000		86.5	80-120			
Trifluralin	1.08		"	1.20000		89.6	80-120			
Terbufos	1.12		"	1.20000		93.2	80-120			
Atrazine	1.36		"	1.20000		113	80-120			
Simazine	1.44		"	1.20000		120	80-120			
Alachlor	1.25		"	1.20000		104	80-120			
Metribuzin	1.32		"	1.20000		110	80-120			
Metolachlor	1.22		"	1.20000		102	80-120			
Pendimethalin	1.24		"	1.20000		103	80-120			
Butachlor	1.26		"	1.20000		105	80-120			
Cyanazine	1.22		"	1.20000		102	80-120			
Acetochlor	1.28		"	1.20000		106	80-120			
Surrogate: 2-Nitro-m-xylene	*0.892*		*"*	*0.982400*		*90.8*	*80-120*			
Calibration Check (18E2816-CCV2)				Prepared: 05/26/08 Analyzed: 05/27/08						
EPTC	1.07		ug/l	1.20000		88.9	80-120			
Butylate	1.06		"	1.20000		88.4	80-120			
Propachlor	1.09		"	1.20000		91.2	80-120			
Trifluralin	0.99		"	1.20000		82.6	80-120			
Terbufos	1.18		"	1.20000		98.6	80-120			
Atrazine	1.08		"	1.20000		90.2	80-120			
Simazine	1.31		"	1.20000		109	80-120			
Alachlor	1.11		"	1.20000		92.7	80-120			
Metribuzin	1.05		"	1.20000		87.7	80-120			
Metolachlor	1.09		"	1.20000		90.7	80-120			
Pendimethalin	1.14		"	1.20000		95.3	80-120			
Butachlor	1.10		"	1.20000		91.8	80-120			
Cyanazine	1.09		"	1.20000		90.7	80-120			
Acetochlor	1.11		"	1.20000		92.2	80-120			
Surrogate: 2-Nitro-m-xylene	*0.819*		*"*	*0.982400*		*83.4*	*80-120*			

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 18E2906 - 1E81332										
Calibration Check (18E2906-CCV1)				Prepared & Analyzed: 05/27/08						
EPTC	1.00		ug/l	1.20000		83.2	80-120			
Butylate	0.99		"	1.20000		82.6	80-120			
Propachlor	1.35		"	1.20000		112	80-120			
Trifluralin	1.02		"	1.20000		84.8	80-120			
Terbufos	1.12		"	1.20000		93.2	80-120			
Atrazine	1.06		"	1.20000		88.3	80-120			
Simazine	1.34		"	1.20000		111	80-120			C-17
Alachlor	1.03		"	1.20000		85.6	80-120			
Metribuzin	1.22		"	1.20000		101	80-120			
Metolachlor	1.07		"	1.20000		88.9	80-120			
Pendimethalin	1.29		"	1.20000		108	80-120			
Butachlor	1.08		"	1.20000		89.7	80-120			
Cyanazine	1.09		"	1.20000		91.0	80-120			
Acetochlor	1.03		"	1.20000		85.5	80-120			
Surrogate: 2-Nitro-m-xylene	*0.786*		"	*0.982400*		*80.0*	*80-120*			
Batch 1E81249 - 3510C NP/OC Sep Fnl										
Blank (1E81249-BLK1)				Prepared: 05/12/08 Analyzed: 05/18/08						
EPTC	ND	0.1	ug/l							
Butylate	ND	0.1	"							
Propachlor	ND	0.1	"							
Trifluralin	ND	0.1	"							
Terbufos	ND	0.1	"							
Atrazine	ND	0.1	"							
Simazine	ND	0.1	"							
Atrazine Desethyl	ND	0.2	"							
Alachlor	ND	0.1	"							
Metribuzin	ND	0.1	"							
Atrazine Desisopropyl	ND	0.2	"							
Metolachlor	ND	0.5	"							
Pendimethalin	ND	0.5	"							
Butachlor	ND	0.5	"							
Cyanazine	ND	0.1	"							
Acetochlor	ND	0.2	"							
Surrogate: 2-Nitro-m-xylene	*9.20*		"	*9.82400*		*93.7*	*50-139*			

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E81249 - 3510C NP/OC Sep Fnl										
LCS (1E81249-BS1)				Prepared: 05/12/08 Analyzed: 05/19/08						
EPTC	2.74	0.1	ug/l	3.00000		91.3	54-128			
Butylate	2.62	0.1	"	3.00000		87.3	55-121			
Propachlor	2.67	0.1	"	3.00000		89.0	56-127			
Trifluralin	2.58	0.1	"	3.00000		85.8	57-119			
Terbufos	3.24	0.1	"	3.00000		108	53-143			
Atrazine	2.89	0.1	"	3.00000		96.3	65-128			
Simazine	3.40	0.1	"	3.00000		114	61-128			
Alachlor	2.82	0.1	"	3.00000		93.8	62-124			
Metribuzin	2.42	0.1	"	3.00000		80.7	50-127			
Metolachlor	2.82	0.5	"	3.00000		94.0	61-125			
Pendimethalin	2.72	0.5	"	3.00000		90.5	65-119			
Butachlor	2.80	0.5	"	3.00000		93.2	63-123			
Cyanazine	2.06	0.1	"	3.00000		68.5	55-119			
Acetochlor	2.86	0.2	"	3.00000		95.5	59-124			
Surrogate: 2-Nitro-m-xylene	*8.66*		"	*9.82400*		*88.2*	*50-139*			
LCS Dup (1E81249-BSD1)				Prepared: 05/12/08 Analyzed: 05/19/08						
EPTC	2.80	0.1	ug/l	3.00000		93.2	54-128	1.99	22	
Butylate	2.68	0.1	"	3.00000		89.5	55-121	2.45	23	
Propachlor	2.66	0.1	"	3.00000		88.8	56-127	0.187	30	
Trifluralin	2.64	0.1	"	3.00000		88.2	57-119	2.68	29	
Terbufos	3.32	0.1	"	3.00000		111	53-143	2.59	30	
Atrazine	2.78	0.1	"	3.00000		92.5	65-128	4.06	25	
Simazine	3.12	0.1	"	3.00000		104	61-128	8.58	29	
Alachlor	2.82	0.1	"	3.00000		94.2	62-124	0.355	25	
Metribuzin	2.23	0.1	"	3.00000		74.3	50-127	8.17	25	
Metolachlor	2.83	0.5	"	3.00000		94.3	61-125	0.354	21	
Pendimethalin	2.87	0.5	"	3.00000		95.7	65-119	5.55	19	
Butachlor	2.77	0.5	"	3.00000		92.3	63-123	0.898	19	
Cyanazine	1.14	0.1	"	3.00000		37.8	55-119	57.7	30	QR-04, QS-03
Acetochlor	2.87	0.2	"	3.00000		95.7	59-124	0.174	24	
Surrogate: 2-Nitro-m-xylene	*8.82*		"	*9.82400*		*89.8*	*50-139*			

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E81249 - 3510C NP/OC Sep Fnl										
Reference (1E81249-SRM1)				Prepared: 05/12/08 Analyzed: 05/19/08						
EPTC	2.94	0.1	ug/l	3.00000		97.8	70-130			
Butylate	2.92	0.1	"	3.00000		97.2	70-130			
Propachlor	2.86	0.1	"	3.00000		95.2	70-130			
Trifluralin	2.71	0.1	"	3.00000		90.3	70-130			
Terbufos	3.52	0.1	"	3.00000		117	70-130			
Atrazine	3.03	0.1	"	3.00000		101	70-130			
Simazine	3.68	0.1	"	3.00000		122	70-130			
Alachlor	2.88	0.1	"	3.00000		96.0	70-130			
Metribuzin	2.99	0.1	"	3.00000		99.7	70-130			
Metolachlor	2.85	0.5	"	3.00000		95.0	70-130			
Pendimethalin	2.91	0.5	"	3.00000		97.0	70-130			
Butachlor	2.74	0.5	"	3.00000		91.5	70-130			
Cyanazine	3.04	0.1	"	3.00000		102	70-130			
Acetochlor	2.88	0.2	"	3.00000		96.2	70-130			
Surrogate: 2-Nitro-m-xylene	*9.64*		"	*9.82400*		*98.1*	*50-139*			
Batch 1E81332 - 3510C NP/OC Sep Fnl										
Blank (1E81332-BLK1)				Prepared: 05/13/08 Analyzed: 05/26/08						
EPTC	ND	0.1	ug/l							
Butylate	ND	0.1	"							
Propachlor	ND	0.1	"							
Trifluralin	ND	0.1	"							
Terbufos	ND	0.1	"							
Atrazine	ND	0.1	"							
Simazine	ND	0.1	"							
Atrazine Desethyl	ND	0.2	"							
Alachlor	ND	0.1	"							
Metribuzin	ND	0.1	"							
Atrazine Desisopropyl	ND	0.2	"							
Metolachlor	ND	0.5	"							
Pendimethalin	ND	0.5	"							
Butachlor	ND	0.5	"							
Cyanazine	ND	0.1	"							
Acetochlor	ND	0.2	"							
Surrogate: 2-Nitro-m-xylene	*8.36*		"	*9.82400*		*85.1*	*50-139*			

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E81332 - 3510C NP/OC Sep Fnl										
LCS (1E81332-BS1)				Prepared: 05/13/08 Analyzed: 05/27/08						
EPTC	2.56	0.1	ug/l	3.00000		85.3	54-128			
Butylate	2.54	0.1	"	3.00000		84.5	55-121			
Propachlor	2.86	0.1	"	3.00000		95.2	56-127			
Trifluralin	2.54	0.1	"	3.00000		84.5	57-119			
Terbufos	2.78	0.1	"	3.00000		92.7	53-143			
Atrazine	2.61	0.1	"	3.00000		87.0	65-128			
Simazine	2.82	0.1	"	3.00000		94.0	61-128			
Alachlor	2.72	0.1	"	3.00000		90.5	62-124			
Metribuzin	2.46	0.1	"	3.00000		82.0	50-127			
Metolachlor	2.63	0.5	"	3.00000		87.7	61-125			
Pendimethalin	2.86	0.5	"	3.00000		95.3	65-119			
Butachlor	2.84	0.5	"	3.00000		94.7	63-123			
Cyanazine	1.16	0.1	"	3.00000		38.8	55-119			QS-03
Acetochlor	2.72	0.2	"	3.00000		90.8	59-124			
Surrogate: 2-Nitro-m-xylene	*7.30*		"	*9.82400*		*74.3*	*50-139*			
LCS Dup (1E81332-BSD1)				Prepared: 05/13/08 Analyzed: 05/27/08						
EPTC	2.72	0.1	ug/l	3.00000		90.7	54-128	6.06	22	
Butylate	2.71	0.1	"	3.00000		90.3	55-121	6.67	23	
Propachlor	2.58	0.1	"	3.00000		86.0	56-127	10.1	30	
Trifluralin	2.76	0.1	"	3.00000		91.8	57-119	8.32	29	
Terbufos	3.03	0.1	"	3.00000		101	53-143	8.61	30	
Atrazine	2.90	0.1	"	3.00000		96.7	65-128	10.5	25	
Simazine	3.44	0.1	"	3.00000		115	61-128	20.0	29	
Alachlor	3.01	0.1	"	3.00000		100	62-124	10.3	25	
Metribuzin	2.79	0.1	"	3.00000		93.0	50-127	12.6	25	
Metolachlor	2.96	0.5	"	3.00000		98.8	61-125	12.0	21	
Pendimethalin	2.98	0.5	"	3.00000		99.2	65-119	3.94	19	
Butachlor	2.90	0.5	"	3.00000		96.8	63-123	2.26	19	
Cyanazine	2.32	0.1	"	3.00000		77.3	55-119	66.3	30	QR-04
Acetochlor	2.96	0.2	"	3.00000		98.7	59-124	8.27	24	
Surrogate: 2-Nitro-m-xylene	*7.80*		"	*9.82400*		*79.4*	*50-139*			

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E81332 - 3510C NP/OC Sep Fnl										
Reference (1E81332-SRM1)				Prepared: 05/13/08 Analyzed: 05/27/08						
EPTC	2.70	0.1	ug/l	3.00000		89.8	70-130			
Butylate	2.68	0.1	"	3.00000		89.2	70-130			
Propachlor	2.91	0.1	"	3.00000		97.0	70-130			
Trifluralin	2.44	0.1	"	3.00000		81.2	70-130			
Terbufos	2.92	0.1	"	3.00000		97.5	70-130			
Atrazine	2.76	0.1	"	3.00000		92.2	70-130			
Simazine	3.36	0.1	"	3.00000		112	70-130			
Alachlor	2.74	0.1	"	3.00000		91.2	70-130			
Metribuzin	2.63	0.1	"	3.00000		87.7	70-130			
Metolachlor	2.76	0.5	"	3.00000		91.8	70-130			
Pendimethalin	2.82	0.5	"	3.00000		94.0	70-130			
Butachlor	2.78	0.5	"	3.00000		92.8	70-130			
Cyanazine	2.70	0.1	"	3.00000		90.2	70-130			
Acetochlor	2.82	0.2	"	3.00000		94.0	70-130			
Surrogate: 2-Nitro-m-xylene	*7.92*		"	*9.82400*		*80.6*	*50-139*			

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

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
Batch 18E1402 - 1E81329										
Calibration Check (18E1402-CCV1)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	5.48		mg/l	5.00000		110	90-110			
Calibration Check (18E1402-CCV2)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	4.85		mg/l	5.00000		97.0	90-110			
Calibration Check (18E1402-CCV3)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	5.37		mg/l	5.00000		107	90-110			
Calibration Check (18E1402-CCV4)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	4.87		mg/l	5.00000		97.4	90-110			
Calibration Check (18E1402-CCV5)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	5.50		mg/l	5.00000		110	90-110			
Calibration Check (18E1402-CCV6)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	4.84		mg/l	5.00000		96.8	90-110			
Calibration Check (18E1402-CCV7)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	5.08		mg/l	5.00000		102	90-110			
Calibration Check (18E1402-CCV8)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	4.94		mg/l	5.00000		98.8	90-110			
Initial Cal Check (18E1402-ICV1)				Prepared & Analyzed: 05/14/08						
Nitrogen, Ammonia	4.96		mg/l	5.00000		99.2	90-110			
Batch 18E1517 - 1E81417										
Calibration Check (18E1517-CCV1)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.75		mg/l	3.83000		98.0	90-110			

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

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
Batch 18E1517 - 1E81417										
Calibration Check (18E1517-CCV2)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	4.12		mg/l	3.83000		108	90-110			
Calibration Check (18E1517-CCV3)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.90		mg/l	3.83000		102	90-110			
Calibration Check (18E1517-CCV4)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	4.06		mg/l	3.83000		106	90-110			
Calibration Check (18E1517-CCV5)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.92		mg/l	3.83000		102	90-110			
Calibration Check (18E1517-CCV6)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.86		mg/l	3.83000		101	90-110			
Calibration Check (18E1517-CCV7)				Prepared & Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.85		mg/l	3.83000		101	90-110			
Batch 18E1914 - 1E81946										
Calibration Check (18E1914-CCV1)				Prepared: 05/19/08 Analyzed: 05/21/08						
Nitrogen, Ammonia	4.86		mg/l	5.00000		97.2	90-110			
Calibration Check (18E1914-CCV2)				Prepared: 05/19/08 Analyzed: 05/21/08						
Nitrogen, Ammonia	4.68		mg/l	5.00000		93.6	90-110			
Calibration Check (18E1914-CCV3)				Prepared: 05/19/08 Analyzed: 05/21/08						
Nitrogen, Ammonia	4.79		mg/l	5.00000		95.8	90-110			

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

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
Batch 18E1914 - 1E81946										
Calibration Check (18E1914-CCV4)				Prepared: 05/19/08 Analyzed: 05/21/08						
Nitrogen, Ammonia	4.55		mg/l	5.00000		91.0	90-110			
Initial Cal Check (18E1914-ICV1)				Prepared: 05/19/08 Analyzed: 05/21/08						
Nitrogen, Ammonia	5.05		mg/l	5.00000		101	90-110			
Batch 1E81329 - Wet Chem Preparation										
Blank (1E81329-BLK1)				Prepared: 05/13/08 Analyzed: 05/14/08						
Nitrogen, Ammonia	ND	1.0	mg/l							
Matrix Spike (1E81329-MS1)		Source: 18E0399-05		Prepared: 05/13/08 Analyzed: 05/14/08						
Nitrogen, Ammonia	5.37	1.0	mg/l	5.00000	ND	107	64-129			
Matrix Spike Dup (1E81329-MSD1)		Source: 18E0399-05		Prepared: 05/13/08 Analyzed: 05/14/08						
Nitrogen, Ammonia	5.28	1.0	mg/l	5.00000	ND	106	64-129	1.69	12	
Batch 1E81415 - Wet Chem Preparation										
Blank (1E81415-BLK1)				Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	ND	0.20	mg/l							
Blank (1E81415-BLK2)				Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	ND	0.20	mg/l							
Blank (1E81415-BLK3)				Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	ND	0.20	mg/l							

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

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
Batch 1E81415 - Wet Chem Preparation										
LCS (1E81415-BS1)				Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.64	0.40	mg/l	4.00000		91.1	86-116			
LCS (1E81415-BS2)				Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	3.84	0.40	mg/l	4.00000		96.1	86-116			
LCS (1E81415-BS3)				Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	4.02	0.40	mg/l	4.00000		100	86-116			
Matrix Spike (1E81415-MS1)		Source: 18E0397-04		Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	2.63	0.20	mg/l	2.04082	0.72	93.7	72-116			
Matrix Spike (1E81415-MS2)		Source: 18E0399-03		Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	2.51	0.20	mg/l	2.04082	0.60	93.8	72-116			
Matrix Spike (1E81415-MS3)		Source: 18E0443-02		Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	45.4	2.00	mg/l	20.0000	15.6	149	72-116			QM-22
Matrix Spike Dup (1E81415-MSD1)		Source: 18E0397-04		Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	2.83	0.20	mg/l	2.04082	0.72	103	72-116	7.18	17	
Matrix Spike Dup (1E81415-MSD2)		Source: 18E0399-03		Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	2.53	0.20	mg/l	2.04082	0.60	94.9	72-116	0.849	17	
Matrix Spike Dup (1E81415-MSD3)		Source: 18E0443-02		Prepared: 05/14/08 Analyzed: 05/15/08						
Nitrogen, Nitrate+Nitrite	41.1	2.00	mg/l	20.0000	15.6	127	72-116	9.85	17	QM-22
Batch 1E81911 - Wet Chem Preparation										
Blank (1E81911-BLK1)				Prepared: 05/19/08 Analyzed: 05/21/08						
Nitrogen, Ammonia	ND	1.0	mg/l							

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

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
Batch 1E81911 - Wet Chem Preparation										
Matrix Spike (1E81911-MS1)	**Source: 18E0453-01**			Prepared: 05/19/08		Analyzed: 05/21/08				
Nitrogen, Ammonia	4.99	1.0	mg/l	5.00000	ND	99.8	64-129			
Matrix Spike Dup (1E81911-MSD1)	**Source: 18E0453-01**			Prepared: 05/19/08		Analyzed: 05/21/08				
Nitrogen, Ammonia	4.87	1.0	mg/l	5.00000	ND	97.4	64-129	2.43	12	

Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 353.2 in Water		
	Nitrogen, Nitrate+Nitrite	IA-NT,KS-NT,NELAC
EPA 8141 in Water		
	Butylate	IA-NT
	Trifluralin	IA-NT
	Terbufos	IA-NT
	Atrazine	IA-NT
	Atrazine Desethyl	IA-NT
	Alachlor	IA-NT
	Metribuzin	IA-NT
	Atrazine Desisopropyl	IA-NT
	Metolachlor	IA-NT
	Cyanazine	IA-NT
	Acetochlor	IA-NT
SM 4500-NH3 F in Water		
	Nitrogen, Ammonia	IA-NT

Code	Certifying Authority	Certificate Number	Expires
IA-NT	Iowa Department of Natural Resources	095	02/01/2008
KS-NT	Kansas Department of Health and Environment	E-10287	07/31/2008
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2008

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.

Phone 641-792-8451 | 600 East 17th Street South, Newton, IA 50208 | Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 06/09/08 09:20

Notes and Definitions

QS-03	The blank spike recovery was below established acceptance limits.
QR-04	The RPD for this analyte exceeded acceptance limits.
QM-22	The recovery for the MS and/or MSD are outside the established laboraratory control limits due to the dilution of the sample extract to overcome high non-target analyte concentrations.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
C-17	The CCV recovery was outside established QC acceptance limits.
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

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.
600 East 17th Street South
Newton, IA 50208
641-792-8451

Printed: 4/28/2008 2:32:51PM
www.keystonelabs.cor

SITE INFORMATION
Sampler: J. Gunn
Project: Buffalo Center
6270403

SPECIAL INSTRUCTIONS
None

Turn Around Time
[X] Standard [ ] RUSH, need by 5/1

REPORT TO
Jennifer Carpenter
Seneca Environmental Services
4140 NE. 14th St.
Des Moines, IA 50316

INVOICE TO
Gayle Tate
Seneca Environmental Services - Billing
P.O. Box 3360
Des Moines, IA 50313

LAB USE ONLY
Work Order 8E0399
Temperature
Turn-Cooler: No

[ ] Custody Seal
[ ] Containers Intact
[ ] COC/Labels Agree
[ ] Preservation Confirmed
[ ] Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
01-001	MW13	Water		5/6/08	1705	2	nh3-probe-4500 nox-353.2 8141-103	01
02-001	MW8	Water		1	1710	2	nh3-probe-4500 nox-353.2 8141-103	02
03-001	MW1	Water		1	1715	2	nh3-probe-4500 nox-353.2 8141-103	03
04-001	MW7	Water		1	1720	2	nh3-probe-4500 nox-353.2 8141-103	04
05-001	MW12	Water		1	1725	2	nh3-probe-4500 nox-353.2 8141-103	05
06-001	MW9	Water		1	1730	2	nh3-probe-4500 nox-353.2 8141-103	06
07-001	MW3	Water		1	1735	2	nh3-probe-4500 nox-353.2 8141-103	07

Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time
Bill 5/5/08 9:30 Am
Received for Lab By Date/Time

Remarks:
PO# 220433 CL

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.
600 East 17th Street South
Newton, IA 50208
641-792-8451

Printed: 4/28/2008 2:32:51PM
www.keystonelabs.com

SITE INFORMATION
Sampler: J. Gunn
Project: Buffalo Center
6270403

REPORT TO
Jennifer Carpenter
Seneca Environmental Services
4140 NE. 14th St.
Des Moines, IA 50316

INVOICE TO
Gayle Tate
Seneca Environmental Services - Billing
P.O. Box 3360
Des Moines, IA 50313

SPECIAL INSTRUCTIONS
None

Turn Around Time
☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY
Work Order 18E0399
Temperature
Turn-Cooler: No

☐ Custody Seal
☐ Containers Intact
☐ COC/Labels Agree
☐ Preservation Confirmed
☐ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
08-001	MW10	Water		5/6/08	1740	2	nh3-probe-4500 nox-353.2 8141-103	08
09-001	MW2	Water		1 / 1	1745	2	nh3-probe-4500 nox-353.2 8141-103	09
10-001	MW5	Water		1 / 1	1750	2	nh3-probe-4500 nox-353.2 8141-103	10
11-001	MW11	Water		1 / 1	1755	2	nh3-probe-4500 nox-353.2 8141-103	11
12-001	MW4	Water		1 / 1	1800	2	nh3-probe-4500 nox-353.2 8141-103	12

Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time
Bill 5/8/08 9:30 Am

Received for Lab By Date/Time

Remarks:
PO# 220433 CL

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

Keystone
LABORATORIES, INC.

ACCREDITED IN ACCORDANCE WITH nelac

MEMBER ACIL

26 November 2008

DEC 01 2008

Jennifer Carpenter
Seneca Environmental Services
4140 NE. 14th St.
Des Moines, IA 50316

RE: Buffalo Center
6270403

Enclosed are the results of analyses for samples received by the laboratory on 11/12/08 12:00. 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
MW13	18K0501-01	Water	11/11/08 12:18	11/12/08 12:00
MW8	18K0501-02	Water	11/11/08 11:57	11/12/08 12:00
MW1	18K0501-03	Water	11/11/08 11:22	11/12/08 12:00
MW7	18K0501-04	Water	11/11/08 12:38	11/12/08 12:00
MW12	18K0501-05	Water	11/11/08 12:11	11/12/08 12:00
MW9	18K0501-06	Water	11/11/08 12:10	11/12/08 12:00
MW3	18K0501-07	Water	11/11/08 12:30	11/12/08 12:00
MW10	18K0501-08	Water	11/11/08 11:56	11/12/08 12:00
MW2	18K0501-09	Water	11/11/08 12:27	11/12/08 12:00
MW5	18K0501-10	Water	11/11/08 12:15	11/12/08 12:00
MW11	18K0501-11	Water	11/11/08 12:04	11/12/08 12:00
MW4	18K0501-12	Water	11/11/08 12:03	11/12/08 12:00

Phone 641-792-8451
600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Project Number: Project Manager:	Buffalo Center 6270403 Jennifer Carpenter	Reported 11/26/08 07:18

Sincerely,

Keystone Laboratories, Inc.

Sue Thompson

Sue Thompson

Project Manager I

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW13

18K0501-01 (Water)

Date Sampled:11/11/2008 12:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**3.8**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.5**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	**0.2**	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*74.3 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**2.93**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

MW8

18K0501-02 (Water)

Date Sampled:11/11/2008 11:57:00AM

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	**0.1**	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	**3.5**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.3**	0.1	"	"	"	"	"	"	
Metribuzin	**23.3**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**1.3**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*70.0 %*		*50-139*		"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**3.2**	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**1.64**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW1

18K0501-03 (Water)

Date Sampled:11/11/2008 11:22:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.1**	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*69.8 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	ND	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW7

18K0501-04 (Water)

Date Sampled:11/11/2008 12:38:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.7**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*71.3 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**3.05**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW12

18K0501-05 (Water)

Date Sampled:11/11/2008 12:11:00PM

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.1**	0.1	"	"	"	"	"	"	
Simazine	**0.1**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.6**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*79.1 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**2.06**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

MW9

18K0501-06 (Water)

Date Sampled:11/11/2008 12:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	**0.2**	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.2**	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**5.0**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.6**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	**0.2**	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*79.8 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**5.54**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW3

18K0501-07 (Water)

Date Sampled:11/11/2008 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.3**	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.7**	0.1	"	"	"	"	"	"	
Metribuzin	**4.7**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**46.1**	0.5	"	"	"	"	"	"	E
Pendimethalin	**1.0**	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*67.2 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**11.4**	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**19.9**	0.40	"	2	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW3

18K0501-07RE1 (Water)

Date Sampled:11/11/2008 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
Metolachlor	**51.2**	2.5	ug/l	5	1K81826	11/18/08	11/24/08	EPA 8141	
Surrogate: 2-Nitro-m-xylene		*73.5 %*	*50-139*		"	"	"	"	

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

MW10

18K0501-08 (Water)

Date Sampled:11/11/2008 11:56:00AM

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**0.8**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*79.7 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**15.4**	0.40	"	2	1K82007	11/20/08	11/24/08	EPA 353.2	

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW2

18K0501-09 (Water)

Date Sampled:11/11/2008 12:27:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	**0.8**	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**16.4**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**0.6**	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*74.5 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**68.3**	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**5.18**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project:	Buffalo Center	Reported
4140 NE. 14th St.	Project Number:	6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager:	Jennifer Carpenter	

MW5

18K0501-10 (Water)

Date Sampled:11/11/2008 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	**3.4**	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*75.6 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**13.0**	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**17.2**	1.00	"	5	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW11

18K0501-11 (Water)

Date Sampled:11/11/2008 12:04:00PM

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	ND	0.1	"	"	"	"	"	"	
Simazine	ND	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	ND	0.1	"	"	"	"	"	"	
Metribuzin	ND	0.1	"	"	"	"	"	"	
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	ND	0.5	"	"	"	"	"	"	
Pendimethalin	ND	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	ND	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*75.5 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	ND	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**16.8**	1.00	"	5	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

MW4

18K0501-12 (Water)

Date Sampled:11/11/2008 12:03:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
EPTC	ND	0.1	ug/l	1	1K81826	11/18/08	11/21/08	EPA 8141	
Butylate	ND	0.1	"	"	"	"	"	"	
Propachlor	ND	0.1	"	"	"	"	"	"	
Trifluralin	ND	0.1	"	"	"	"	"	"	
Terbufos	ND	0.1	"	"	"	"	"	"	
Atrazine	**0.4**	0.1	"	"	"	"	"	"	
Simazine	**0.1**	0.1	"	"	"	"	"	"	
Atrazine Desethyl	ND	0.2	"	"	"	"	"	"	
Alachlor	**0.9**	0.1	"	"	"	"	"	"	
Metribuzin	**168**	0.1	"	"	"	"	"	"	E
Atrazine Desisopropyl	ND	0.2	"	"	"	"	"	"	
Metolachlor	**6.6**	0.5	"	"	"	"	"	"	
Pendimethalin	**15.1**	0.5	"	"	"	"	"	"	
Butachlor	ND	0.5	"	"	"	"	"	"	
Cyanazine	**0.3**	0.1	"	"	"	"	"	"	
Acetochlor	ND	0.2	"	"	"	"	"	"	
Surrogate: 2-Nitro-m-xylene		*70.7 %*		*50-139*	"	"	"	"	
Determination of Conventional Chemistry Parameters									
Nitrogen, Ammonia	**43.3**	1.0	mg/l	1	1K81904	11/19/08	11/19/08	SM 4500-NH3 F	
Nitrogen, Nitrate+Nitrite	**1.06**	0.20	"	"	1K82007	11/20/08	11/24/08	EPA 353.2	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

MW4

18K0501-12RE1 (Water)

Date Sampled:11/11/2008 12:03:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Nitrogen/Phosphorus Herbicides & Insecticides									
Metribuzin	**172**	1.0	ug/l	10	1K81826	11/18/08	11/24/08	EPA 8141	
Surrogate: 2-Nitro-m-xylene		*74.3 %*	*50-139*		"	"	"	"	

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.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 18K2409 - 1K81848										
Calibration Check (18K2409-CCV1)				Prepared: 11/20/08 Analyzed: 11/21/08						
EPTC	0.50		ug/l	0.500000		99.6	80-120			
Butylate	0.50		"	0.500000		99.2	80-120			
Propachlor	0.48		"	0.500000		95.8	80-120			
Trifluralin	0.44		"	0.500000		87.6	80-120			
Terbufos	0.55		"	0.500000		110	80-120			
Atrazine	0.50		"	0.500000		100	80-120			
Simazine	0.53		"	0.500000		106	80-120			
Alachlor	0.47		"	0.500000		93.2	80-120			
Metribuzin	0.50		"	0.500000		99.8	80-120			
Metolachlor	0.51		"	0.500000		102	80-120			
Pendimethalin	0.49		"	0.500000		98.8	80-120			
Butachlor	0.50		"	0.500000		99.2	80-120			
Cyanazine	0.48		"	0.500000		95.2	80-120			
Acetochlor	0.48		"	0.500000		96.2	80-120			
Surrogate: 2-Nitro-m-xylene	*1.81*		"	*1.96480*		*92.3*	*80-120*			
Calibration Check (18K2409-CCV2)				Prepared: 11/20/08 Analyzed: 11/22/08						
EPTC	0.49		ug/l	0.500000		98.0	80-120			
Butylate	0.50		"	0.500000		99.0	80-120			
Propachlor	0.49		"	0.500000		98.0	80-120			
Trifluralin	0.44		"	0.500000		88.2	80-120			
Terbufos	0.44		"	0.500000		89.0	80-120			
Atrazine	0.49		"	0.500000		97.2	80-120			
Simazine	0.51		"	0.500000		101	80-120			
Alachlor	0.47		"	0.500000		93.6	80-120			
Metribuzin	0.49		"	0.500000		97.8	80-120			
Metolachlor	0.50		"	0.500000		99.8	80-120			
Pendimethalin	0.50		"	0.500000		99.0	80-120			
Butachlor	0.54		"	0.500000		108	80-120			
Cyanazine	0.46		"	0.500000		92.0	80-120			
Acetochlor	0.48		"	0.500000		95.6	80-120			
Surrogate: 2-Nitro-m-xylene	*1.73*		"	*1.96480*		*88.1*	*80-120*			

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 18K2409 - 1K81848										
Calibration Check (18K2409-CCV3)				Prepared: 11/20/08 Analyzed: 11/23/08						
EPTC	0.50		ug/l	0.500000		101	80-120			
Butylate	0.51		"	0.500000		101	80-120			
Propachlor	0.50		"	0.500000		99.0	80-120			
Trifluralin	0.45		"	0.500000		90.6	80-120			
Terbufos	0.43		"	0.500000		86.6	80-120			
Atrazine	0.49		"	0.500000		98.4	80-120			
Simazine	0.51		"	0.500000		103	80-120			
Alachlor	0.49		"	0.500000		97.8	80-120			
Metribuzin	0.50		"	0.500000		100	80-120			
Metolachlor	0.54		"	0.500000		108	80-120			
Pendimethalin	0.53		"	0.500000		106	80-120			
Butachlor	0.56		"	0.500000		112	80-120			
Cyanazine	0.47		"	0.500000		94.2	80-120			
Acetochlor	0.50		"	0.500000		99.0	80-120			
Surrogate: 2-Nitro-m-xylene	*1.77*		"	*1.96480*		*90.1*	*80-120*			
Batch 18K2523 - 1K81848										
Calibration Check (18K2523-CCV1)				Prepared & Analyzed: 11/24/08						
Surrogate: 2-Nitro-m-xylene	*1.14*		*ug/l*	*1.08064*		*105*	*80-120*			
Calibration Check (18K2523-CCV2)				Prepared: 11/24/08 Analyzed: 11/25/08						
Surrogate: 2-Nitro-m-xylene	*1.08*		*ug/l*	*1.08064*		*99.6*	*80-120*			
Batch 1K81826 - 3510C NP/OC Sep Fnl										
Blank (1K81826-BLK1)				Prepared: 11/18/08 Analyzed: 11/21/08						
EPTC	ND	0.1	ug/l							
Butylate	ND	0.1	"							
Propachlor	ND	0.1	"							
Trifluralin	ND	0.1	"							
Terbufos	ND	0.1	"							
Atrazine	ND	0.1	"							
Simazine	ND	0.1	"							
Atrazine Desethyl	ND	0.2	"							
Alachlor	ND	0.1	"							
Metribuzin	ND	0.1	"							
Metolachlor	ND	0.5	"							
Atrazine Desisopropyl	ND	0.2	"							
Pendimethalin	ND	0.5	"							
Butachlor	ND	0.5	"							

Phone 641-792-8451
600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

Determination of Nitrogen/Phosphorus Herbicides & Insecticides - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1K81826 - 3510C NP/OC Sep Fnl										
Blank (1K81826-BLK1)				Prepared: 11/18/08 Analyzed: 11/21/08						
Cyanazine	ND	0.1	ug/l							
Acetochlor	ND	0.2	"							
Surrogate: 2-Nitro-m-xylene	*7.48*		"	*9.82400*		*76.1*	*50-139*			
LCS (1K81826-BS1)				Prepared: 11/18/08 Analyzed: 11/21/08						
EPTC	2.40	0.1	ug/l	2.50000		96.2	54-128			
Butylate	2.40	0.1	"	2.50000		96.2	55-121			
Propachlor	2.40	0.1	"	2.50000		95.8	56-127			
Trifluralin	2.16	0.1	"	2.50000		86.4	57-119			
Terbufos	2.20	0.1	"	2.50000		88.2	53-143			
Atrazine	2.45	0.1	"	2.50000		98.0	65-128			
Simazine	2.54	0.1	"	2.50000		101	61-128			
Alachlor	2.40	0.1	"	2.50000		96.2	62-124			
Metribuzin	2.41	0.1	"	2.50000		96.4	50-127			
Metolachlor	2.66	0.5	"	2.50000		106	61-125			
Pendimethalin	2.56	0.5	"	2.50000		102	65-119			
Butachlor	2.75	0.5	"	2.50000		110	63-123			
Cyanazine	1.60	0.1	"	2.50000		64.0	55-119			
Acetochlor	2.46	0.2	"	2.50000		98.6	59-124			
Surrogate: 2-Nitro-m-xylene	*8.18*		"	*9.82400*		*83.3*	*50-139*			
LCS Dup (1K81826-BSD1)				Prepared: 11/18/08 Analyzed: 11/21/08						
EPTC	2.22	0.1	ug/l	2.50000		89.0	54-128	7.78	22	
Butylate	2.27	0.1	"	2.50000		90.8	55-121	5.78	23	
Propachlor	2.42	0.1	"	2.50000		96.8	56-127	1.04	30	
Trifluralin	2.24	0.1	"	2.50000		89.4	57-119	3.41	29	
Terbufos	2.26	0.1	"	2.50000		90.6	53-143	2.68	30	
Atrazine	2.53	0.1	"	2.50000		101	65-128	3.21	25	
Simazine	2.64	0.1	"	2.50000		106	61-128	4.06	29	
Alachlor	2.46	0.1	"	2.50000		98.2	62-124	2.06	25	
Metribuzin	2.49	0.1	"	2.50000		99.6	50-127	3.27	25	
Metolachlor	2.68	0.5	"	2.50000		107	61-125	0.562	21	
Pendimethalin	2.58	0.5	"	2.50000		103	65-119	0.778	19	
Butachlor	2.69	0.5	"	2.50000		108	63-123	2.21	19	
Cyanazine	1.89	0.1	"	2.50000		75.6	55-119	16.6	30	
Acetochlor	2.54	0.2	"	2.50000		102	59-124	3.00	24	
Surrogate: 2-Nitro-m-xylene	*7.30*		"	*9.82400*		*74.3*	*50-139*			

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

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
Batch 18K1901 - 1K81904										
Calibration Check (18K1901-CCV1)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.82		mg/l	5.00000		96.4	90-110			
Calibration Check (18K1901-CCV2)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.62		mg/l	5.00000		92.4	90-110			
Calibration Check (18K1901-CCV3)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.91		mg/l	5.00000		98.2	90-110			
Calibration Check (18K1901-CCV4)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.71		mg/l	5.00000		94.2	90-110			
Initial Cal Check (18K1901-ICV1)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.84		mg/l	5.00000		96.8	90-110			
Batch 18K2407 - 1K82007										
Calibration Check (18K2407-CCV1)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.67		mg/l	3.83000		95.8	90-110			
Calibration Check (18K2407-CCV2)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.93		mg/l	3.83000		103	90-110			
Calibration Check (18K2407-CCV3)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	4.03		mg/l	3.83000		105	90-110			
Calibration Check (18K2407-CCV4)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.91		mg/l	3.83000		102	90-110			

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project: Buffalo Center	Reported
4140 NE. 14th St.	Project Number: 6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager: Jennifer Carpenter	

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
Batch 18K2407 - 1K82007										
Calibration Check (18K2407-CCV5)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	4.00		mg/l	3.83000		104	90-110			
Calibration Check (18K2407-CCV6)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.73		mg/l	3.83000		97.4	90-110			
Calibration Check (18K2407-CCV7)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.80		mg/l	3.83000		99.1	90-110			
Calibration Check (18K2407-CCV8)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.80		mg/l	3.83000		99.2	90-110			
Calibration Check (18K2407-CCV9)				Prepared & Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.82		mg/l	3.83000		99.8	90-110			
Batch 1K81904 - Wet Chem Preparation										
Blank (1K81904-BLK1)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	ND	1.0	mg/l							
Blank (1K81904-BLK2)				Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	ND	1.0	mg/l							
Matrix Spike (1K81904-MS1)		Source: 18K0279-07		Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.99	1.0	mg/l	5.00000	ND	99.8	64-129			
Matrix Spike (1K81904-MS2)		Source: 18K0504-03		Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	4.93	1.0	mg/l	5.00000	ND	98.6	64-129			

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

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
Batch 1K81904 - Wet Chem Preparation										
Matrix Spike Dup (1K81904-MSD1)	**Source: 18K0279-07**			Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	5.04	1.0	mg/l	5.00000	ND	101	64-129	0.997	12	
Matrix Spike Dup (1K81904-MSD2)	**Source: 18K0504-03**			Prepared & Analyzed: 11/19/08						
Nitrogen, Ammonia	5.01	1.0	mg/l	5.00000	ND	100	64-129	1.61	12	
Batch 1K82007 - Wet Chem Preparation										
Blank (1K82007-BLK1)				Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	ND	0.20	mg/l							
Blank (1K82007-BLK2)				Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	ND	0.20	mg/l							
Blank (1K82007-BLK3)				Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	ND	0.20	mg/l							
LCS (1K82007-BS1)				Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.73	0.40	mg/l	4.00000		93.2	86-116			
LCS (1K82007-BS2)				Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.69	0.40	mg/l	4.00000		92.2	86-116			
LCS (1K82007-BS3)				Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	3.66	0.40	mg/l	4.00000		91.5	86-116			
Matrix Spike (1K82007-MS1)	**Source: 18K0501-03**			Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	1.98	0.20	mg/l	2.04082	0.09	92.9	72-116			

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services 4140 NE. 14th St. Des Moines IA, 50316	Project: Buffalo Center Project Number: 6270403 Project Manager: Jennifer Carpenter	Reported 11/26/08 07:18

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
Batch 1K82007 - Wet Chem Preparation										
Matrix Spike (1K82007-MS2)	**Source: 18K0506-01**			Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	5.55	0.20	mg/l	2.04082	4.02	75.3	72-116			
Matrix Spike (1K82007-MS3)	**Source: 18K0641-01**			Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	4.61	0.20	mg/l	2.04082	2.88	84.8	72-116			
Matrix Spike Dup (1K82007-MSD1)	**Source: 18K0501-03**			Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	2.04	0.20	mg/l	2.04082	0.09	95.5	72-116	2.59	17	
Matrix Spike Dup (1K82007-MSD2)	**Source: 18K0506-01**			Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	5.58	0.20	mg/l	2.04082	4.02	76.4	72-116	0.403	17	
Matrix Spike Dup (1K82007-MSD3)	**Source: 18K0641-01**			Prepared: 11/20/08 Analyzed: 11/24/08						
Nitrogen, Nitrate+Nitrite	4.66	0.20	mg/l	2.04082	2.88	87.0	72-116	0.991	17	

Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 353.2 in Water		
	Nitrogen, Nitrate+Nitrite	IA-NT,KS-NT,NELAC
EPA 8141 in Water		
	Trifluralin	IA-NT
	Terbufos	IA-NT
	Atrazine	IA-NT,KS-NT
	Simazine	KS-NT
	Atrazine Desethyl	IA-NT
	Alachlor	IA-NT
	Metribuzin	IA-NT
	Atrazine Desisopropyl	IA-NT
	Metolachlor	IA-NT
	Cyanazine	IA-NT
	Acetochlor	IA-NT
SM 4500-NH3 F in Water		
	Nitrogen, Ammonia	IA-NT

Phone 641-792-8451
600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Seneca Environmental Services	Project:	Buffalo Center	Reported
4140 NE. 14th St.	Project Number:	6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager:	Jennifer Carpenter	

Code	Certifying Authority	Certificate Number	Expires
IA-NT	Iowa Department of Natural Resources	095	02/01/2010
KS-NT	Kansas Department of Health and Environment	E-10287	07/31/2009
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2009

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Seneca Environmental Services	Project:	Buffalo Center	Reported
4140 NE. 14th St.	Project Number:	6270403	11/26/08 07:18
Des Moines IA, 50316	Project Manager:	Jennifer Carpenter	

Notes and Definitions

E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
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

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.
600 East 17th Street South
Newton, IA 50208
641-792-8451

Printed: 10/31/2008 7:37:14AM
www.keystonelabs.com

SITE INFORMATION
Sampler: Baker/Carpenter
Project: Buffalo Center
6270403

REPORT TO
Jennifer Carpenter
Seneca Environmental Services
4140 NE. 14th St.
Des Moines, IA 50316

INVOICE TO
Gayle Tate
Seneca Environmental Services - Billing
P.O. Box 3360
Des Moines, IA 50313

SPECIAL INSTRUCTIONS
None

Turn Around Time
☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY
Work Order 18K0501
Temperature
Turn-Cooler: No

☐ Custody Seal
☐ Containers Intact
☐ COC/Labels Agree
☐ Preservation Confirmed
☐ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
01-001	MW13	Water	Composite	11/11/08	1218	2	nh3-probe-4500 nox-353.2 8141-103	01
02-001	MW8	Water		11	1157		nh3-probe-4500 nox-353.2 8141-103	02
03-001	MW1	Water		11	1122		nh3-probe-4500 nox-353.2 8141-103	03
04-001	MW7	Water		11	1238		nh3-probe-4500 nox-353.2 8141-103	04
05-001	MW12	Water		11	1211		nh3-probe-4500 nox-353.2 8141-103	05
06-001	MW9	Water		11	1210		nh3-probe-4500 nox-353.2 8141-103	06
07-001	MW3	Water		11	1230		nh3-probe-4500 nox-353.2 8141-103	07

J. Carpenter 11/12/08 9am
Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time

Bill 11/12/08 12:00 Pm
Received for Lab By Date/Time

Remarks:
PO# 226707CL

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

CHAIN OF CUSTODY RECORD

Keystone LABORATORIES, INC.
600 East 17th Street South
Newton, IA 50208
641-792-8451

Printed: 10/31/2008 7:37:14AM
www.keystonelabs.co

SITE INFORMATION
Sampler: Baker / Carpenter
Project: Buffalo Center
6270403

REPORT TO
Jennifer Carpenter
Seneca Environmental Services
4140 NE. 14th St.
Des Moines, IA 50316

INVOICE TO
Gayle Tate
Seneca Environmental Services - Billing
P.O. Box 3360
Des Moines, IA 50313

SPECIAL INSTRUCTIONS
None

Turn Around Time
☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY
Work Order 18K0501
Temperature
Turn-Cooler: No

☐ Custody Seal
☐ Containers Intact
☐ COC/Labels Agree
☐ Preservation Confirmed
☐ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
08-001	MW10	Water	Composite	11/11/08	1156	2	nh3-probe-4500 nox-353.2 8141-103	08
09-001	MW2	Water		11	1227		nh3-probe-4500 nox-353.2 8141-103	09
10-001	MW5	Water		11	1215		nh3-probe-4500 nox-353.2 8141-103	10
11-001	MW11	Water		11	1204		nh3-probe-4500 nox-353.2 8141-103	11
12-001	MW4	Water		11	1203		nh3-probe-4500 nox-353.2 8141-103	12

J. Carpenter 11/12/08 Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time

Bill 11/12/08 12:00 PM Received for Lab By Date/Time

Remarks: PO# 226707CL

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

Appendix 6

Water Well Results

Re-Start

Well Search

Print | Help |

Well Search Report

Search Method: By City/Map

Subject: XY UTM Coordinates: 423029/4804041
Search Radius(ft.): 1000

Date: 12/23/2008

Prepared By: jcarpenter

Included in search	No. of wells	Database
X	1	IGS well database General well database maintained by IGS, location accuracy varies 3,730 to 25 ft., last updated 8/2005.
X	0	Public wells Muncipal and nonmunicipal public well databases maintained by IGS, location varies 3,730 to 25 ft., under development.
X	0	SDWIS public wells Public well database developed from the Safe Drinking Water Information System database maintained by IDNR, estimated locational accuracy varies from 15m. to 3300m. Created from 5/2005 data.
X	0	Private well tracking system IDNR database management system for Grants-to-counties-covered wells. Locational accuracy unknown, assumed to be +/- 17 m., Last update 7/2005.
X	0	Wells registered for testing Wells tested under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Permitted private wells Wells permitted under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Registered abandoned wells Wells abandoned under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Water use facilities Wells used by facilities permitted to withdraw >25,000 gallons per day, locational accuracy is +/-20m to 1150 m. Created from 7/2005 data.
X	0	Municipal wells and intakes Locational accuracy 220 m., last updated 8/96.
X	0	Ag drainage wells Locational accuracy 100 m., last updated 4/98.

Well Search Detail

Subject: XY UTM Coordinates: 423029/4804041
Search Radius (ft.): 1000

IGS Well Database

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
11369	4374	T. 99 N., R. 26 W., Sec. 17, SW, SW, SE	Calc. +/- 140m.	212 (m)	148	unkn	Price	Bedrock depth 120 ft.

Public Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

SDWIS public wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Wells Registered For Testing

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Permitted Private Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Abandoned Wells (plugged)

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Water Use Facilities

Map	Well	Location	Accuracy	Dist.	Well	Construction/	Owner/Permittees	Other

ID	No.	From Point	Depth	Permit Date	Information
No records found from this data source					

Municipal Wells And Intakes

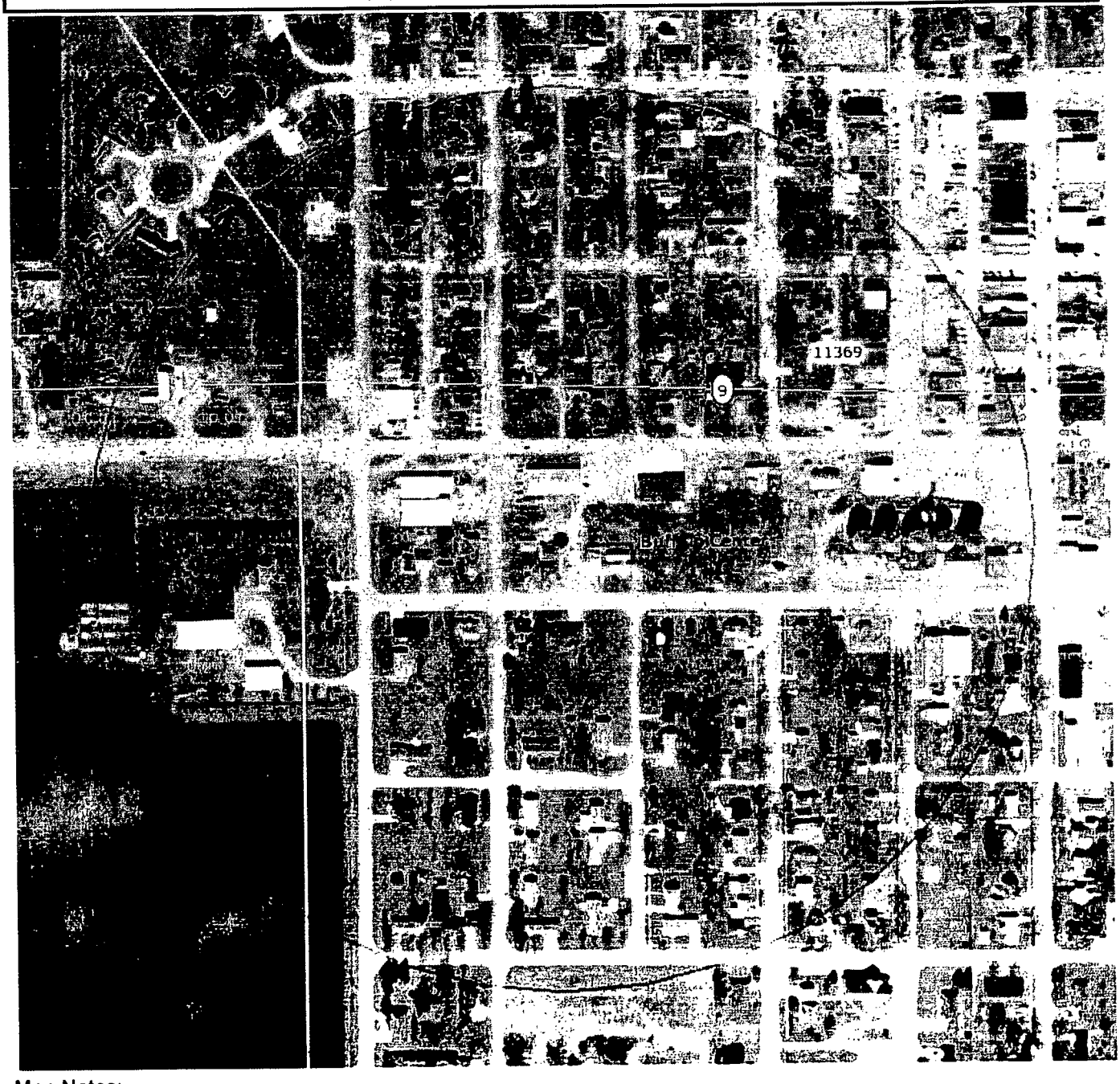
Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source							

Ag Drainage Wells

Map ID	Well No.	Location Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source							

Well Search Buffered Map

Subject: XY UTM Coordinates: 423029/4804041
Search Radius (ft.): 1000



Map Notes:

- ⊙ UST
- ★ LUST
- Please refer to the Accuracy column in Well Search Detail.
- Since multiple points can be at the same spot (as those located to the center of a quarter section), points were randomly dispersed within 10 meters around that spot so all points can be seen.
- Aerial photos were flown in 2002.

Search by Interactive Map

Re-Start **Well Search** Print | Help |

Well Search Report

Search Method: By City/Map

Subject: XY UTM Coordinates: 423029/4804041
Search Radius(ft.): 5280

Date: 12/23/2008

Prepared By: jcarpenter

Included in search	No. of wells	Database
X	9	IGS well database General well database maintained by IGS, location accuracy varies 3,730 to 25 ft., last updated 8/2005.
X	3	Public wells Muncipal and nonmunicipal public well databases maintained by IGS, location varies 3,730 to 25 ft., under development.
X	0	SDWIS public wells Public well database developed from the Safe Drinking Water Information System database maintained by IDNR, estimated locational accuracy varies from 15m. to 3300m. Created from 5/2005 data.
X	2	Private well tracking system IDNR database management system for Grants-to-counties-covered wells. Locational accuracy unknown, assumed to be +/- 17 m., Last update 7/2005.
X	4	Wells registered for testing Wells tested under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Permitted private wells Wells permitted under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	3	Registered abandoned wells Wells abandoned under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Water use facilities Wells used by facilities permitted to withdraw >25,000 gallons per day, locational accuracy is +/-20m to 1150 m. Created from 7/2005 data.
X	2	Municipal wells and intakes Locational accuracy 220 m., last updated 8/96.
X	0	Ag drainage wells Locational accuracy 100 m., last updated 4/98.

Well Search Detail

Subject: XY UTM Coordinates: 423029/4804041
Search Radius (ft.): 5280

IGS Well Database

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
11769	2341	T. 99 N., R. 26 W., Sec. 20, NW, NE, SW	Calc. +/- 140m.	467 (m)	147	unkn	Buckholt, Mrs.	Bedrock depth 125 ft.
11401	5103	T. 99 N., R. 26 W., Sec. 17, SW, SE, SE, SW	Calc. +/- 70m.	538 (m)	190	unkn	Buffalo Center Creamery	Bedrock depth 120 ft.
11238	36958	T. 99 N., R. 26 W., Sec. 17, SW, SE, NW, SW	Calc. +/- 70m.	457 (m)	425	1/01/1925	Buffalo Center, City Of	Bedrock depth unkn
11118	10664	T. 99 N., R. 26 W., Sec. 18, SE, NE, SW, SE, SE	Calc. +/- 35m.	511 (m)	500	1/01/1959	Buffalo Center, City Of	Bedrock depth 120 ft.
11072	16406	T. 99 N., R. 26 W., Sec. 18, SE, NE, SW, SE, SW	Calc. +/- 35m.	555 (m)	465	3/22/1964	Buffalo Center, City Of	Bedrock depth 120 ft.
11312	16100	T. 99 N., R. 26 W., Sec. 18, SW, SE, SE, NE	Calc. +/- 70m.	952 (m)	155	11/16/1963	Meyers, W.	Bedrock depth 125 ft.
11369	4374	T. 99 N., R. 26 W., Sec. 17, SW, SW, SE	Calc. +/- 140m.	212 (m)	148	unkn	Price	Bedrock depth 120 ft.
12907	22081	T. 99 N., R. 26 W., Sec. 20, SW, SW, SW, NW	Calc. +/- 70m.	1426 (m)	180	6/26/1969	Wessels, Marvin	Bedrock depth 110 ft.
12176	16496	T. 99 N., R. 26 W., Sec. 20, NE, SW, SW, SE	Calc. +/- 70m.	1103 (m)	147	2/28/1964	Wessels, Raymond	Bedrock depth 120 ft.

Public Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
11246	36958	T. 99 N., R. 26 W., Sec. 17, SW, SE, NW, SW	Calc. +/- 70m.	448 (m)	425	1/01/1925	Buffalo Center, City Of	Bedrock depth unkn; Well status: Inactive; Local id: #1
11119	10664	T. 99 N., R. 26 W., Sec. 18, SE, NE, SW, SE, SE	Calc. +/- 35m.	508 (m)	500	1/01/1959	Buffalo Center, City Of	Bedrock depth: 120; Well status: Active; Local id: #1
11088	16406	T. 99 N., R. 26	Calc. +/-	545	465	3/22/1964	Buffalo Center,	Bedrock depth:

		W., Sec. 18, SE, NE, SW, SE, SW	35m.	(m)			City Of	120; Well status: Active; Local id: #2

SDWIS public wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
11407	2081066	T. 99 N., R. 26 W., Sec. 17, SE SW SW SW NE	nom. +/- 25m.	766 (m)	125	3/22/1944	Hutchins, Alana	Status: Plugged Use: Household
11354	2117921	T. 99 N., R. 26 W., Sec. 18, SW SE SE NW SE	nom. +/- 25m.	992 (m)	unkn	unkn	Meyers, Bruce	Status: Permitted Use: Household

Wells Registered For Testing

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
11656	66487	T. 99 N., R. 26 W., Sec. 19, NW, NW	Calc. +/- 285m.	1470 (m)	unkn	unkn	Hasebrook, Hasley	Drilling method: Steel; Well depth is uncertain
12804	66462	T. 99 N., R. 26 W., Sec. 19, SE, SE	Calc. +/- 285m.	1410 (m)	176	1978	Hofbauer, Alvin L.	Drilling method: Drilled; Known well depth
11273	66489	T. 99 N., R. 26 W., Sec. 18, SE, SW	Calc. +/- 285m.	728 (m)	unkn	unkn	Venteicher, Bruce	Drilling method: Steel; Well depth is uncertain
12213	83042	T. 99 N., R. 26 W., Sec. 19	Calc. +/- 1135m.	1183 (m)	15	unkn	Wessels, Denny	Drilling method: Unknown; Estimated well depth

Permitted Private Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Abandoned Wells (plugged)

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information

11568	21648	T. 99 N., R. 26 W., Sec. 20, NW, NE, NE	Calc. +/- 140m.	580 (m)	100	n.a.	Hassebroek, Robert A.	Well plugged: 10/13/1995; Well type: < 18" dia.
11569	21649	T. 99 N., R. 26 W., Sec. 20, NW, NE, NE	Calc. +/- 140m.	574 (m)	80	n.a.	Hassebroek, Robert A.	Well plugged: 10/13/1995; Well type: not reported
10992	9760	T. 99 N., R. 26 W., Sec. 17, --, SW, NE	Calc. +/- 140m.	782 (m)	20	n.a.	Winnebago County, Winnebago County	Well plugged: 8/11/1992; Well type: < 18" dia.

Water Use Facilities

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Municipal Wells And Intakes

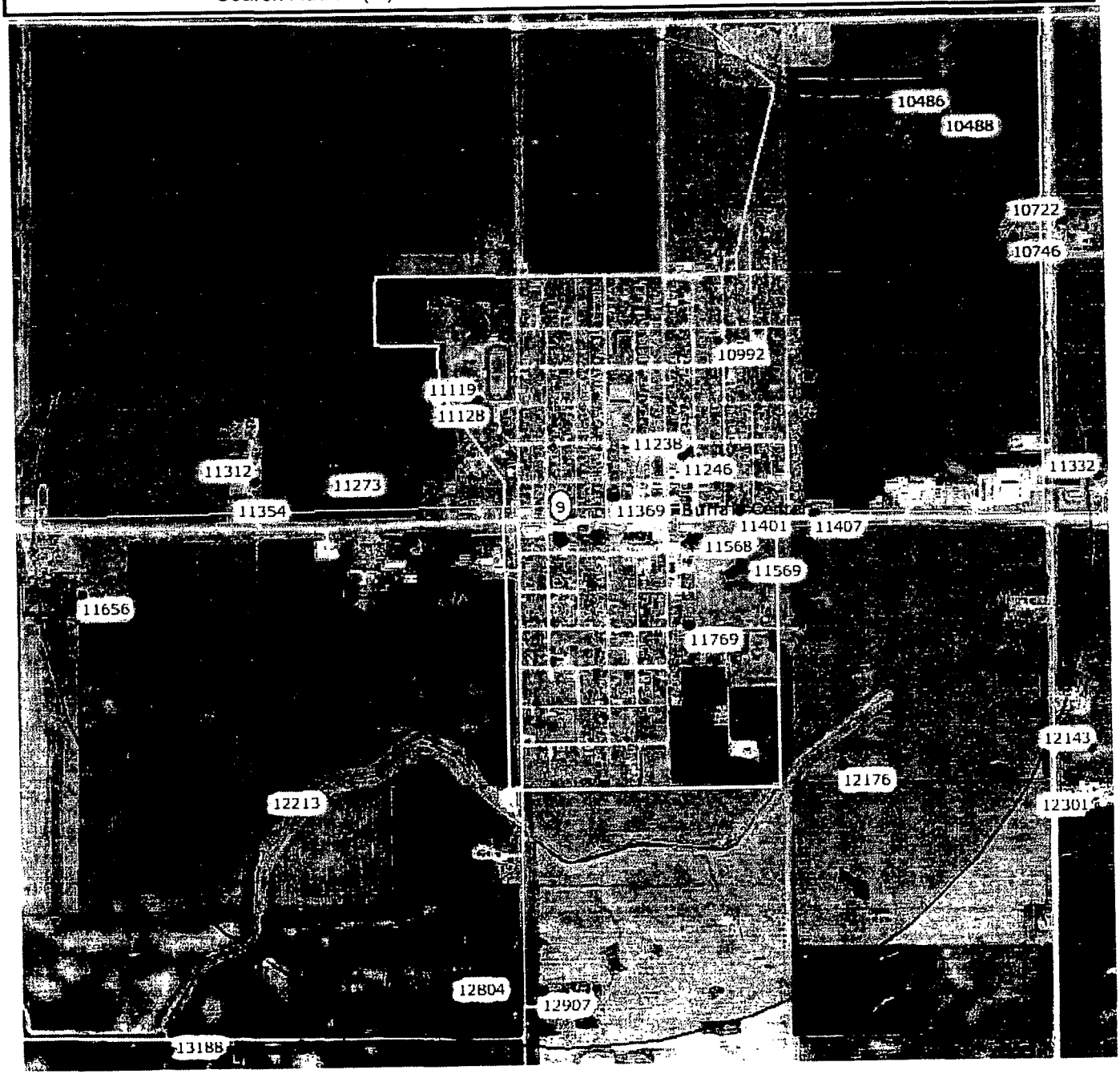
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
11109	6386	T99N, R26W, Sec. 18	Calc. +/- 1135m.	583 (m)	n.a.	n.a.	Buffalo Center	n.a.
11128	6386	T99N, R26W, Sec. 18	Calc. +/- 1135m.	577 (m)	n.a.	n.a.	Buffalo Center	n.a.

Ag Drainage Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Well Search Buffered Map

Subject: XY UTM Coordinates: 423029/4804041
Search Radius (ft.): 5280



Map Notes:

- ⊙ UST
- ★ LUST
- Please refer to the Accuracy column in Well Search Detail.
- Since multiple points can be at the same spot (as those located to the center of a quarter section), points were randomly dispersed within 10 meters around that spot so all points can be seen.
- Aerial photos were flown in 2002.

Search by Interactive Map