KOCH

KOCH NITROGEN COMPANY LLC

July 30, 2014

UPS Tracking # ***1Z6936610397841552***

Chief - RCRA Corrective Action & Permits Branch
Air, RCRA and Toxic Division
U.S. Environmental Protection Agency - Region VII
11201 Renner Blvd
Lenexa, Kansas 66219

RE: Koch Nitrogen Company, LLC – Dodge City, Kansas
EPA ID No. KSD044625010
Quarterly Progress Report for Second Quarter 2014

Ladies/Gentlemen:

In accordance with Section C.13 of the above referenced Permit, Koch Nitrogen Company, LLC (KNC) hereby submits the enclosed Quarterly Progress Report for the Second Quarter of 2014.

If you have any questions about the attachments, please contact Cory Zellers at (620) 371-7914.

Sincerely,

Rachel L. Moore
Plant Manager

cc w/ encl:

UPS Tracking #: ***1Z6936610398152563***
Andrea Stone, U.S. Environmental Protection Agency (CD-electronic copy)
Region VII, Lenexa, KS

UPS Tracking #: ***1Z6936610396942178***
Chief, Hazardous Waste Permits Section, Bureau of Waste Management
Kansas Department of Health and Environment, Topeka, KS

620.227.8631 Tel
620.227.6016 Fax

11559 U.S. Highway 50
P.O. Box 1337
Dodge City, Kansas 67801-1337

QUARTERLY PROGRESS REPORT
2nd QUARTER 2014

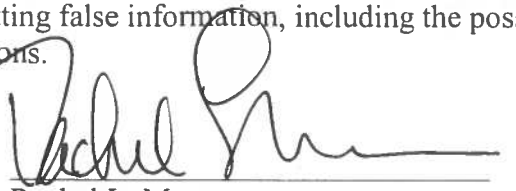
DODGE CITY NITROGEN PLANT
KOCH NITROGEN COMPANY, LLC

EPA ID NO. KSD044625010

July 30, 2014

CERTIFICATION STATEMENT

In accordance with Sections B.2.b and B.22 of the Part II Permit, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

By: 

Rachel L. Moore
Plant Manager

A description of the work completed (Part II Permit Section C.13.a): This Quarterly Report covers activities in the Second quarter of 2014, during which KNC accomplished the following work:

- Although not a part of the Part II permit requirements, the Second quarter groundwater sampling event was completed on April 23, 2014. As requested by EPA, KNC has supplemented our approved SAP methods to include differentiation between trivalent chromium (Cr+3) and the hexavalent form (Cr+6), and between nitrate (NO3) and nitrite (NO2).

- Following the August 30, 2010 inspection and repair of the liner of the Recovery RO Equalization Basin, KNC continued to monitor the leak detection system of the basin. Based on discussions with KDHE, KNC intends to submit a permit modification request. These modifications include replacing the Basin with an aboveground tank.

Summaries of all findings, including summaries of laboratory data (Part II Permit Section C.13.b): Second quarter findings include the following:

Laboratory results from the Second quarter 2014 groundwater sampling event were evaluated during the quarter. The results were consistent with those of the previous quarter. Only small changes in chromium and nitrate concentrations were observed. KNC has sampled the new perimeter wells during each quarter since the 3rd quarter 2011. Results from the new wells are displayed on the attached figure, "Groundwater Analytical Results for New Monitoring Wells." Section 3.6 of the approved Phase II RFI Work Plan Addendum: Groundwater Characterization states, "KNC will continue to sample the wells quarterly for one year." Sampling results have now been collected for more than one year from the wells installed in 2011 and for 2 quarters from the wells installed in 2013. KNC will continue to sample the new wells during the quarterly groundwater sampling events and proposed changes to the monitoring or recovery well network in the Permit renewal application submitted in October 2012 and the supplement to the application, dated February 28, 2013.

- KNC will continue evaluating the analytical results of the Phase II Tier II sampling program completed in June 2013 and will summarize the findings in a future submittal.

Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems (Part II Permit Section C.13.c):

- During the 2nd Quarter Groundwater Sampling event, 4 of the new perimeter wells (MW-22S, MW-24, MW-25, and MW-26) were observed to be dry. MW-24 and MW-26 have been dry since they were installed in 2011. MW-25 has been dry since the 3rd quarter 2012. MW-22S has been dry since the 3rd quarter 2013.

- By letter dated June 6, 2014, KNC notified EPA and KDHE of a release of recovered groundwater to the soil from the recovered water header near TW-30 and from subsequent disposition of the hydroexcavation materials. On the evening of May 27, 2014, KNC personnel discovered water coming out of the ground northwest of recovery well TW-30. KNC immediately shut down the recovery well system to stop the flow. Calculations based on the estimated flow and duration of the release indicate approximately 7,000 gallons of recovered groundwater were released to the soil. On May 29, 2014, contractors engaged in the cleanup hydroexcavated the soil and repaired the header. On May 30, 2014, KNC personnel discovered that the hydroexcavated materials had been deposited in a 600 ft^2 unlined staging area located north of TW-68. The hydroexcavated materials consisted of soil impacted by recovered groundwater from the header release on May 27, 2014 and raw water used in the hydroexcavation process. Upon discovery, KNC moved the materials to a concrete-lined area for staging before appropriate disposal. While removing the materials, KNC also removed soil from the unlined staging area down to a depth of approximately 6 inches.

Projected work for the next quarter (Part II Permit Section C.13.d): In the next quarter (Third Quarter 2014); KNC expects to conduct the following work under Part II of the permit:

- Although not a part of the Part II permit requirements, KNC intends to complete the Third Quarter 2014 Groundwater Sampling.

- KNC continues to monitor the leak detection system of the Recovery RO Equalization Basin. During the third quarter, KNC intends to recommend system modifications to replace the basin with an above ground tank and expects to submit a permit modification request.

- KNC will continue evaluating the analytical results of the Phase II Tier II sampling program completed in June 2013.

Any instances of noncompliance with Part II of this permit not otherwise required to be reported pursuant to Part II Permit Conditions B.18 (Part II Permit Section C.13.e):

To the extent that the Part II Permit includes requirements to continue implementation of the existing groundwater monitoring, recovery, and treatment system, supplemental information regarding potential instances of noncompliance is described in the attached document.

SUPPLEMENTAL INFORMATION
SUBMITTED WITH THE
SECOND QUARTER REPORT 2014
Koch Nitrogen Company, LLC
Dodge City, Kansas
EPA ID No. KSD044625010
July 30, 2014

Pursuant to Section I.E. 14 of the Hazardous Waste Management Facility Permit, Part I (Part I Permit), Koch Nitrogen Company, LLC (KNC) is required to "report all other instances of noncompliance not otherwise required to be reported above in Sections Permit Conditions I.E.10 through I.E.13, at the time monitoring reports are submitted."

The following items have previously been discussed with the Agencies, who have indicated that they do not consider these to be deviations. However, because there are inconsistencies between certain permit documents, or between the language in these documents and best practices (e. g., use of most recent and accurate analytical methods), KNC is listing these items to meet the intent of Section I.E. 14 of the Part I permit.

KDHE and KNC have previously discussed and revised a request for modifications to the Part I Permit to ensure consistency of wording and to clarify the acceptable use of alternate methods. KDHE and EPA have recently suggested in informal discussions that there may be more effective approaches to managing the permit; for example, EPA indicates that they prefer to consolidate the two parts of the Permit. KNC looks forward to further discussions of these approaches to management of the Permit at the anticipated meeting with the Agencies. Based on the Agencies' input, KNC will then prepare the appropriate documents and submit them for approval.

1. **Private Wells**. Attachment D of the Part I Permit and the September 7, 2001 RCRA Groundwater Sampling and Analysis Plan (SAP) (page 4) identify ten private wells that are to be sampled quarterly.
    - Plumbing at the Coker well was disconnected in 2005, and the well has not been sampled since that time. The Cokers have been connected to the City of Dodge City water system since the fall of 2004.
    - The Bogners have been connected to the City of Dodge City water system since the fall of 2005. KNC continues to sample their well, where the analyte of concern is nitrogen species above the MCL.
    - It has not been possible to sample the Chaffin well since 2007, as previously noticed to KDHE. The current owner still had electrical power to the site turned off during this quarterly sampling event. KNC will continue to monitor the Chaffin Well status, and, if conditions permit, the well will be sampled.
    - It has not been possible to sample the Dodge City Services well since 4th Quarter 2010. The current owner has closed the facility and KNC was unable to obtain access to the facility to collect a sample from this well. KNC will continue to

monitor the Dodge City Services status, and, if conditions permit, the well will be sampled.

2. **Nitrogen Laboratory Method**. Section I.E.9.a of the Part I Permit specifies that chemical analyses must be those specified in the U.S. Environmental Protection Agency (EPA) Publication SW-846. The SAP indicates that the method to be used for nitrate plus nitrite analysis will be EPA Method 353.2. Based on direction from the Agencies, KNC is using the latest approved method. In addition, at the direction of EPA, KNC began nitrate-nitrite speciation on these compounds. KNC anticipates that the small inconsistency among the permit conditions, the SAP requirement, and the Agencies' preference for most recent methods, and perhaps expanded methods, will be resolved by the selection of the agreed-upon permit management option.

3. **Nitrogen Species Measured**. Section I.E.9.a, and Attachment D of the Part I Permit state that the Permittee shall determine the concentrations of "nitrate" throughout the compliance period and any extension due to corrective action implementation according to the schedule set out in the SAP. There is no reference to testing for "nitrite" in the Part I Permit. However, Attachment C of the Part I Permit specifies that the Ground Water Protection Standard (GWPS) will be nitrate plus nitrite as N (See Part I Permit Attachment C). Table 2.3 of the SAP specifies that the groundwater sampling parameters should include nitrate plus nitrite. KNC has analyzed for nitrate plus nitrite as N since 2004. As noted above, KNC is currently speciating nitrate and nitrite at the direction of EPA in addition to the analysis previously agreed on.

4. **Field/Laboratory Forms**. Section IV.C.3.b of the Part I Permit provides that the Permittee will comply with the Ground Water Monitoring Plan set out in the Part B Permit Application. The Ground Water Monitoring Plan in the Part B Permit Application states that the data will be reported on Field Sampling and Laboratory Results Data Sheets (see Section E, p. E-2). KDHE has clarified that any format that includes all required data is acceptable. KNC anticipates that this issue will be resolved by the selection of the permit management option referenced above.

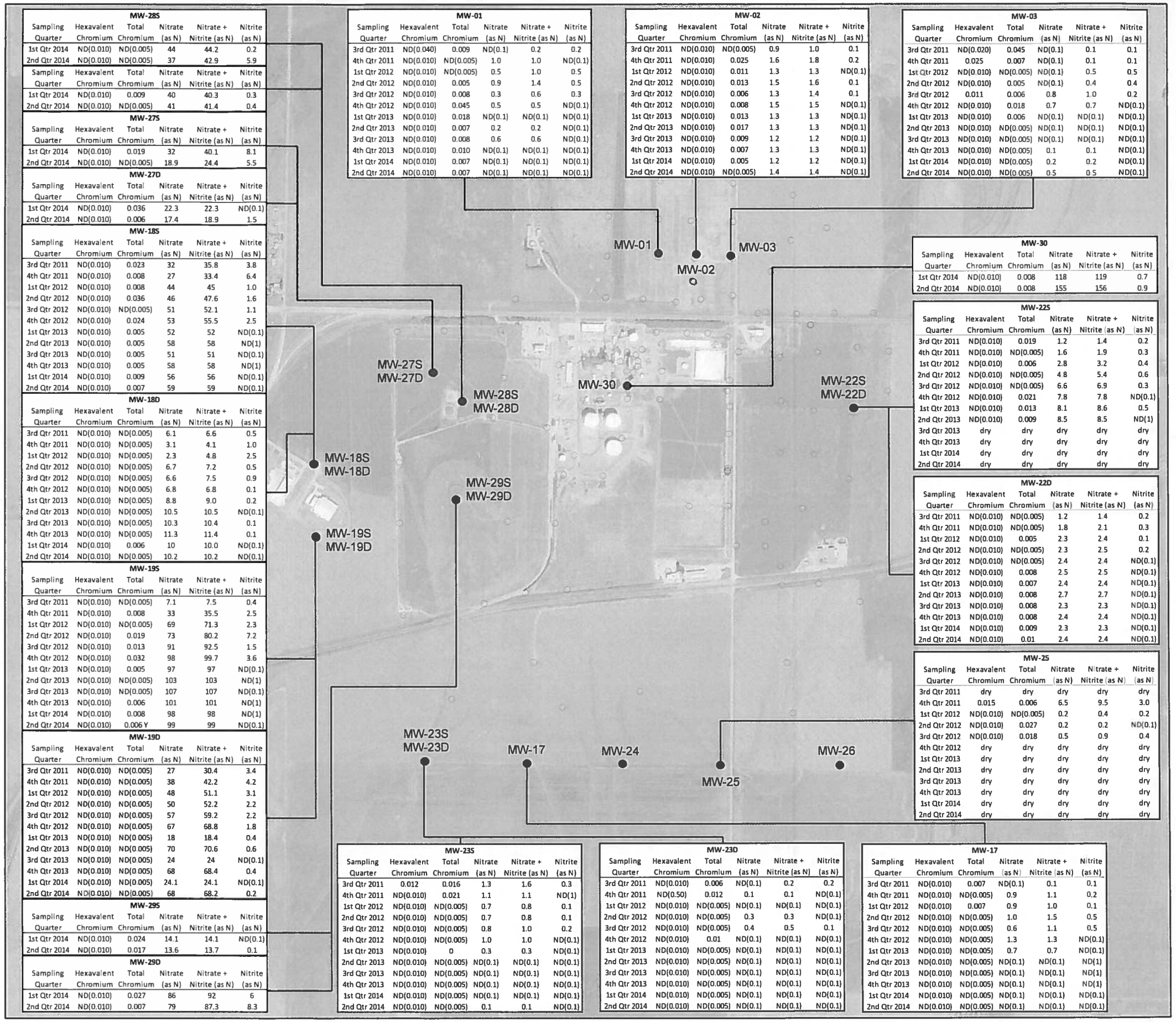
5. **Recovery Well Operation**. Wells TW-2, 4 and 8, and TW-79 have been identified in the Part I Permit as recovery wells (Part I Table 1 IV.C.1.a and Attachment D). KNC has noted previously, and KDHE and EPA have acknowledged, that TW-2 and TW-79 are not used for recovery, due to insufficient water level and the original well design, respectively. As previously noted, the regional drop in water level has caused the level in several of the monitoring/recovery wells to fall below the well pump, making it impossible to continue to utilize these wells for recovery and sampling. KNC has noted previously that the regional drop had impacted wells TW-4, TW-8, TW-36, and the "CP" wells. KNC will continue to document any wells that are affected by the regional water table changes.

6. **Alternate Field Meters**. The SAP in Section E, Appendix F of the Part B Permit Application provides that a multi-parameter water quality meter (MP20 Flow Cell) will be used during low-flow groundwater purging (See page 15 of SAP). The Agencies have previously acknowledged that nonfunctional equipment should be replaced with newer

equipment that offers a higher degree of accuracy and reliability.

KDHE provided an O&M Inspection Report to KNC, dated September 3, 2009, which contained some items described as deficiencies and identified by KDHE relating to the groundwater monitoring system. It is not clear whether those items are required to be disclosed in this report, but in the interest of completeness, KNC includes below the one remaining item on which work is continuing.

#3. **Recommendation to propose static water level monitoring network separate from the existing recovery well network.** – KNC believes that the design and operation of the monitoring and recovery systems could be improved and upgraded, and proposed changes to the monitoring or recovery well network in the Permit renewal application submitted in October 2012 and the supplement to the application, dated February 28, 2013



MW-28S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	ND(0.005)	44	44.2	0.2
2nd Qtr 2014	ND(0.010)	ND(0.005)	37	42.9	5.9

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	0.009	40	40.3	0.3
2nd Qtr 2014	ND(0.010)	ND(0.005)	41	41.4	0.4

MW-27S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	0.019	32	40.1	8.1
2nd Qtr 2014	ND(0.010)	ND(0.005)	18.9	24.4	5.5

MW-27D

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	0.036	22.3	22.3	ND(0.1)
2nd Qtr 2014	ND(0.010)	0.006	17.4	18.9	1.5

MW-18S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	0.023	32	35.8	3.8
4th Qtr 2011	ND(0.010)	0.008	27	33.4	6.4
1st Qtr 2012	ND(0.010)	0.008	44	45	1.0
2nd Qtr 2012	ND(0.010)	0.036	46	47.6	1.6
3rd Qtr 2012	ND(0.010)	ND(0.005)	51	52.1	1.1
4th Qtr 2012	ND(0.010)	0.024	53	55.5	2.5
1st Qtr 2013	ND(0.010)	0.005	52	52	ND(0.1)
2nd Qtr 2013	ND(0.010)	0.005	58	58	ND(1)
3rd Qtr 2013	ND(0.010)	0.005	51	51	ND(0.1)
4th Qtr 2013	ND(0.010)	0.005	58	58	ND(1)
1st Qtr 2014	ND(0.010)	0.009	56	56	ND(0.1)
2nd Qtr 2014	ND(0.010)	0.007	59	59	ND(0.1)

MW-18D

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	ND(0.005)	6.1	6.6	0.5
4th Qtr 2011	ND(0.010)	ND(0.005)	3.1	4.1	1.0
1st Qtr 2012	ND(0.010)	ND(0.005)	2.3	4.8	2.5
2nd Qtr 2012	ND(0.010)	ND(0.005)	6.7	7.2	0.5
3rd Qtr 2012	ND(0.010)	ND(0.005)	6.6	7.5	0.9
4th Qtr 2012	ND(0.010)	ND(0.005)	6.8	6.8	0.1
1st Qtr 2013	ND(0.010)	ND(0.005)	8.8	9.0	0.2
2nd Qtr 2013	ND(0.010)	ND(0.005)	10.5	10.5	ND(0.1)
3rd Qtr 2013	ND(0.010)	ND(0.005)	10.3	10.4	0.1
4th Qtr 2013	ND(0.010)	ND(0.005)	11.3	11.4	0.1
1st Qtr 2014	ND(0.010)	0.006	10	10.0	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	10.2	10.2	ND(0.1)

MW-19S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	ND(0.005)	7.1	7.5	0.4
4th Qtr 2011	ND(0.010)	0.008	33	35.5	2.5
1st Qtr 2012	ND(0.010)	ND(0.005)	69	71.3	2.3
2nd Qtr 2012	ND(0.010)	0.019	73	80.2	7.2
3rd Qtr 2012	ND(0.010)	0.013	91	92.5	1.5
4th Qtr 2012	ND(0.010)	0.032	98	99.7	3.6
1st Qtr 2013	ND(0.010)	0.005	97	97	ND(0.1)
2nd Qtr 2013	ND(0.010)	ND(0.005)	103	103	ND(1)
3rd Qtr 2013	ND(0.010)	ND(0.005)	107	107	ND(0.1)
4th Qtr 2013	ND(0.010)	0.006	101	101	ND(1)
1st Qtr 2014	ND(0.010)	0.008	98	98	ND(1)
2nd Qtr 2014	ND(0.010)	0.006 Y	99	99	ND(0.1)

MW-19D

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	ND(0.005)	27	30.4	3.4
4th Qtr 2011	ND(0.010)	ND(0.005)	38	42.2	4.2
1st Qtr 2012	ND(0.010)	ND(0.005)	48	51.1	3.1
2nd Qtr 2012	ND(0.010)	ND(0.005)	50	52.2	2.2
3rd Qtr 2012	ND(0.010)	ND(0.005)	57	59.2	2.2
4th Qtr 2012	ND(0.010)	ND(0.005)	67	68.8	1.8
1st Qtr 2013	ND(0.010)	ND(0.005)	18	18.4	0.4
2nd Qtr 2013	ND(0.010)	ND(0.005)	70	70.6	0.6
3rd Qtr 2013	ND(0.010)	ND(0.005)	24	24	ND(0.1)
4th Qtr 2013	ND(0.010)	ND(0.005)	68	68.4	0.4
1st Qtr 2014	ND(0.010)	ND(0.005)	24.1	24.1	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	68	68.2	0.2

MW-29S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	0.024	14.1	14.1	ND(0.1)
2nd Qtr 2014	ND(0.010)	0.017	13.6	13.7	0.1

MW-29D

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	0.027	86	92	6
2nd Qtr 2014	ND(0.010)	0.007	79	87.3	8.3

MW-01

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.040)	0.009	ND(0.1)	0.2	0.2
4th Qtr 2011	ND(0.010)	ND(0.005)	1.0	1.0	ND(0.1)
1st Qtr 2012	ND(0.010)	ND(0.005)	0.5	1.0	0.5
2nd Qtr 2012	ND(0.010)	0.005	0.9	1.4	0.5
3rd Qtr 2012	ND(0.010)	0.008	0.3	0.6	0.3
4th Qtr 2012	ND(0.010)	0.045	0.5	0.5	ND(0.1)
1st Qtr 2013	ND(0.010)	0.018	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2013	ND(0.010)	0.007	0.2	0.2	ND(0.1)
3rd Qtr 2013	ND(0.010)	0.008	0.6	0.6	ND(0.1)
4th Qtr 2013	ND(0.010)	0.010	ND(0.1)	ND(0.1)	ND(0.1)
1st Qtr 2014	ND(0.010)	0.007	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2014	ND(0.010)	0.007	ND(0.1)	ND(0.1)	ND(0.1)

MW-02

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	ND(0.005)	0.9	1.0	0.1
4th Qtr 2011	ND(0.010)	0.025	1.6	1.8	0.2
1st Qtr 2012	ND(0.010)	0.011	1.3	1.3	ND(0.1)
2nd Qtr 2012	ND(0.010)	0.013	1.5	1.6	0.1
3rd Qtr 2012	ND(0.010)	0.006	1.3	1.4	0.1
4th Qtr 2012	ND(0.010)	0.008	1.5	1.5	ND(0.1)
1st Qtr 2013	ND(0.010)	0.013	1.3	1.3	ND(0.1)
2nd Qtr 2013	ND(0.010)	0.017	1.3	1.3	ND(0.1)
3rd Qtr 2013	ND(0.010)	0.009	1.2	1.2	ND(0.1)
4th Qtr 2013	ND(0.010)	0.007	1.3	1.3	ND(0.1)
1st Qtr 2014	ND(0.010)	0.005	1.2	1.2	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	1.4	1.4	ND(0.1)

MW-03

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.020)	0.045	ND(0.1)	0.1	0.1
4th Qtr 2011	0.025	0.007	ND(0.1)	0.1	0.1
1st Qtr 2012	ND(0.010)	ND(0.005)	ND(0.1)	0.5	0.5
2nd Qtr 2012	ND(0.010)	0.005	ND(0.1)	0.4	0.4
3rd Qtr 2012	0.011	0.006	0.8	1.0	0.2
4th Qtr 2012	ND(0.010)	0.018	0.7	0.7	ND(0.1)
1st Qtr 2013	ND(0.010)	0.006	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
3rd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
4th Qtr 2013	ND(0.010)	ND(0.005)	0.1	0.1	ND(0.1)
1st Qtr 2014	ND(0.010)	ND(0.005)	0.2	0.2	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	0.5	0.5	ND(0.1)

MW-30

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
1st Qtr 2014	ND(0.010)	0.008	118	119	0.7
2nd Qtr 2014	ND(0.010)	0.008	155	156	0.9

MW-22S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	0.019	1.2	1.4	0.2
4th Qtr 2011	ND(0.010)	ND(0.005)	1.6	1.9	0.3
1st Qtr 2012	ND(0.010)	0.006	2.8	3.2	0.4
2nd Qtr 2012	ND(0.010)	ND(0.005)	4.8	5.4	0.6
3rd Qtr 2012	ND(0.010)	ND(0.005)	6.6	6.9	0.3
4th Qtr 2012	ND(0.010)	0.021	7.8	7.8	ND(0.1)
1st Qtr 2013	ND(0.010)	0.013	8.1	8.6	0.5
2nd Qtr 2013	ND(0.010)	0.009	8.5	8.5	ND(1)
3rd Qtr 2013	dry	dry	dry	dry	dry
4th Qtr 2013	dry	dry	dry	dry	dry
1st Qtr 2014	dry	dry	dry	dry	dry
2nd Qtr 2014	dry	dry	dry	dry	dry

MW-22D

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	ND(0.005)	1.2	1.4	0.2
4th Qtr 2011	ND(0.010)	ND(0.005)	1.8	2.1	0.3
1st Qtr 2012	ND(0.010)	0.005	2.3	2.4	0.1
2nd Qtr 2012	ND(0.010)	ND(0.005)	2.3	2.5	0.2
3rd Qtr 2012	ND(0.010)	ND(0.005)	2.4	2.4	ND(0.1)
4th Qtr 2012	ND(0.010)	0.008	2.5	2.5	ND(0.1)
1st Qtr 2013	ND(0.010)	0.007	2.4	2.4	ND(0.1)
2nd Qtr 2013	ND(0.010)	0.008	2.7	2.7	ND(0.1)
3rd Qtr 2013	ND(0.010)	0.008	2.3	2.3	ND(0.1)
4th Qtr 2013	ND(0.010)	0.008	2.4	2.4	ND(0.1)
1st Qtr 2014	ND(0.010)	0.009	2.3	2.3	ND(0.1)
2nd Qtr 2014	ND(0.010)	0.01	2.4	2.4	ND(0.1)

MW-25

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	dry	dry	dry	dry	dry
4th Qtr 2011	0.015	0.006	6.5	9.5	3.0
1st Qtr 2012	ND(0.010)	ND(0.005)	0.2	0.4	0.2
2nd Qtr 2012	ND(0.010)	0.027	0.2	0.2	ND(0.1)
3rd Qtr 2012	ND(0.010)	0.018	0.5	0.9	0.4
4th Qtr 2012	dry	dry	dry	dry	dry
1st Qtr 2013	dry	dry	dry	dry	dry
2nd Qtr 2013	dry	dry	dry	dry	dry
3rd Qtr 2013	dry	dry	dry	dry	dry
4th Qtr 2013	dry	dry	dry	dry	dry
1st Qtr 2014	dry	dry	dry	dry	dry
2nd Qtr 2014	dry	dry	dry	dry	dry

MW-23S

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	0.012	0.016	1.3	1.6	0.3
4th Qtr 2011	ND(0.010)	0.021	1.1	1.1	ND(1)
1st Qtr 2012	ND(0.010)	ND(0.005)	0.7	0.8	0.1
2nd Qtr 2012	ND(0.010)	ND(0.005)	0.7	0.8	0.1
3rd Qtr 2012	ND(0.010)	ND(0.005)	0.8	1.0	0.2
4th Qtr 2012	ND(0.010)	ND(0.005)	1.0	1.0	ND(0.1)
1st Qtr 2013	ND(0.010)	0	0.3	0.3	ND(0.1)
2nd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
3rd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
4th Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
1st Qtr 2014	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	0.1	0.1	ND(0.1)

MW-23D

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	0.006	ND(0.1)	0.2	0.2
4th Qtr 2011	ND(0.50)	0.012	0.1	0.1	ND(0.1)
1st Qtr 2012	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2012	ND(0.010)	ND(0.005)	0.3	0.3	ND(0.1)
3rd Qtr 2012	ND(0.010)	ND(0.005)	0.4	0.5	0.1
4th Qtr 2012	ND(0.010)	0.01	ND(0.1)	ND(0.1)	ND(0.1)
1st Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
3rd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
4th Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
1st Qtr 2014	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)

MW-17

Sampling Quarter	Hexavalent Chromium	Total Chromium	Nitrate (as N)	Nitrate + Nitrite (as N)	Nitrite (as N)
3rd Qtr 2011	ND(0.010)	0.007	ND(0.1)	0.1	0.1
4th Qtr 2011	ND(0.010)	ND(0.005)	0.9	1.1	0.2
1st Qtr 2012	ND(0.010)	0.007	0.9	1.0	0.1
2nd Qtr 2012	ND(0.010)	ND(0.005)	1.0	1.5	0.5
3rd Qtr 2012	ND(0.010)	ND(0.005)	0.6	1.1	0.5
4th Qtr 2012	ND(0.010)	ND(0.005)	1.3	1.3	ND(0.1)
1st Qtr 2013	ND(0.010)	ND(0.005)	0.7	0.7	ND(0.1)
2nd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(1)
3rd Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(1)
4th Qtr 2013	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(1)
1st Qtr 2014	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)
2nd Qtr 2014	ND(0.010)	ND(0.005)	ND(0.1)	ND(0.1)	ND(0.1)

LEGEND

- NEW MONITORING WELL INSTALLED SINCE 2011
- OTHER WELL WITHIN STUDY AREA

NOTES:

1. ALL RESULTS ARE mg/L.
2. WELL MW-25 HAS BEEN DRY SINCE THIRD QUARTER 2012.
3. WELL MW-22S HAS BEEN DRY SINCE THIRD QUARTER 2013.
4. WELLS MW-24 AND MW-26 WERE DRY IN ALL TWELVE QUARTERS.
5. WELLS MW-27 S/D, MW-28 S/D, MW-29S/D, AND MW-30 WERE INSTALLED IN 2013 AND THEIR INITIAL SAMPLING EVENT WAS FIRST QUARTER 2014.
6. ND = NOT DETECTED AT RESPECTIVE DETECTION LIMIT.

-N-

1,000 0 1,000

Feet

GROUNDWATER ANALYTICAL RESULTS FOR NEW MONITORING WELLS

PREPARED BY:

KOCH™

KOCH NITROGEN COMPANY, LLC

PROJECT.	FIGURE NO.
DATE. JULY 2014	FILE NO.