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KOCH NITROGEN COMPANY LLC

October 28, 2010

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Director, RCRA Corrective Action & Permits Branch
Air, RCRA and Toxics Division
U.S. Environmental Protection Agency Region VII
901 North Fifth Street
Kansas City, Kansas 66101

REC'D

OCT 29 2010

APCO

**RE: Koch Nitrogen Company, LLC – Dodge City, Kansas
EPA ID No. KSD044625010
Quarterly Progress Report for Third Quarter 2010**

Ladies/Gentlemen:

In accordance with Section C.13 of the above referenced Permit, Koch Nitrogen Company, LLC (KNC) hereby submits the enclosed original and duplicate of the Quarterly Progress Report for the Third Quarter of 2010.

If you have any questions about the attachments, please contact Elise Stucky-Gregg at (620) 227-8631, ext. 350.

Sincerely,

Gary J. LeRock
Plant Manager

cc w/ encl:

UPS Tracking #:

1Z 693 661 03 9781 8542

Andrea Stone, U.S. Environmental Protection Agency
Region VII, Kansas City, KS

UPS Tracking #:

1Z 693 661 03 9533 0956

Kansas Department of Health and Environment,
Bureau of Waste Management, Topeka, KS

Tom Siegrist, Koch Fertilizer, Wichita, KS (electronic copy)
Elise Stucky-Gregg, KNC Dodge City, KS

620.227.8631 Tel
620.227.6016 Fax

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

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RCRA

**QUARTERLY PROGRESS REPORT
3rd QUARTER 2010**

**DODGE CITY NITROGEN PLANT
KOCH NITROGEN COMPANY, LLC**

EPA ID NO. KSD044625010

October 28, 2010

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: 
Gary J. LeRock
Plant Manager

A description of the work completed (Part II Permit Section C.13.a): This Quarterly Report covers activities in the 3rd quarter of 2010, during which KNC accomplished the following work:

- Although not a part of the Part II permit requirements, the first quarter groundwater sampling event was completed on August 18, 2010. 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).
- KNC continued work on Sanitary Lagoon stormwater project. This is the last of several projects near various AOCs, SWMUs and monitoring/recovery system structures. This project includes lining the north cell of the lagoon and maintaining the south cell for backup.
- During the week of August 30, 2010, KNC removed the Recovery RO Equalization Basin from service and performed an inspection. During the inspection, KNC continued to operate the recovery well system. The recovered groundwater was directed to the wastewater system and, ultimately, to the disposal wells. Several repairs were made to the liner, and the basin was put back in service. KNC continues to monitor the leak detection system of the Recovery RO Equalization Basin to ensure that the basin liner repairs are functioning to their designed specifications. Upon determination that the repairs are complete, KNC will submit a report presenting the details of the construction, the sampling and analytical results, and the completion of the requirements in the KDHE authorization letter of November 5, 2008.
- On July 27, 2010 KNC completed the soil sampling associated with the Phase II RFI Work Plan.

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

- KNC continued the evaluation of Phase II soil sampling results as reported last quarter. The results appear consistent with the probable historical source of chromium releases and with current understanding of the behavior of chromium and nitrates in the environment, as described in the 1st Quarter 2009 Progress Report. KNC is evaluating the results as three-dimensional data presentations through Rockware and ArcView to develop further recommendations to be presented upon completion of the Phase II (Tier I) soil sampling.
- Laboratory results from the second quarter 2010 groundwater sampling event were also evaluated during the quarter. The results were consistent with those of the previous quarter. Only small changes in chromium and nitrate concentrations were observed.

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): No significant problems were encountered during this reporting period.

Projected work for the next quarter (Part II Permit Section C.13.d): In the next quarter (Fourth Quarter 2010), KNC expects to conduct the following work under Part II of the permit:

- KNC intends to submit the Phase II RFI Work Plan results and any additional proposed Phase II (Tier II) soil sampling locations as described in the approved Phase II Work Plan.
- KNC intends to submit Phase II RFI Work Plan Addendum No. 3 results from the Sanitary Lagoon. This work was required before KNC could proceed with the Sanitary Lagoon Stormwater Project.
- Although not a part of the Part II permit requirements, KNC anticipates that the Fourth Quarter 2010 Groundwater Sampling will be completed by the end of November.
- Although not a part of the Part II permit requirements, KNC will submit a detailed evaluation of the effectiveness of the Groundwater Corrective Action Program as required by section I.B.3. of the Part I permit.
- KNC continues to monitor the leak detection system of the Recovery RO Equalization Basin to ensure that the basin liner repairs are functioning to their designed specifications. Upon determination that the repairs are complete, KNC will submit a report presenting the details of the construction, the sampling and analytical results, and the completion of the requirements in the KDHE authorization letter of November 5, 2008.
- KNC received approval of the Phase II RFI Work Plan Addendum: Groundwater Characterization by letter dated October 18, 2010. KNC will begin implementation of this work in the fourth quarter by finalizing access agreements and scheduling a drilling contractor. Field work is anticipated to begin in the Spring of 2011, as weather conditions and contractor availability allow.

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
THIRD QUARTER REPORT 2010
Koch Nitrogen Company, LLC
Dodge City, Kansas
EPA ID No. KSD044625010
October 29, 2010**

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.”

- Section IV.E.3 of the Part I Permit requires that KNC annually perform an evaluation of the effectiveness of the Groundwater Corrective Action Program as part of the Annual Groundwater Corrective Action report. Section I.B.3. of the Part I Permit requires that a detailed evaluation of the effectiveness of the Groundwater Corrective Action Program be submitted 54 months after the issuance or reissuance date of the permit. KDHE informed KNC by phone that the requirement from section I.B.3. of the Part I Permit had not been fulfilled. During the Fourth Quarter 2010 KNC will submit the detailed evaluation of the effectiveness of the Groundwater Corrective Action Program.

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 the third quarter 2010 sampling. KNC will continue to monitor the Chaffin Well 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.** – In progress. To be proposed after evaluation of the work to be completed from the approved RFI Phase II Work Plan Addendum: Groundwater Characterization.