



KOCH NITROGEN COMPANY

July 23, 2008

*Via Certified Mail Return Receipt Requested*

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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 (2 copies)

**RE: Koch Nitrogen Company – Dodge City, Kansas  
EPA ID No. KSD044625010  
Quarterly Progress Report for Second Quarter 2008**

Ladies/Gentlemen:

In accordance with Section C.13 of the above referenced Permit, Koch Nitrogen Company (KNC) hereby submits the enclosed original and duplicate of the Quarterly Progress Report for the second quarter of 2008.

If you have any questions about the attachments, please do not hesitate to contact AnnieLaurie Burke at (620) 227-8631, ext. 350.

Sincerely,

Gary J. LeRock  
Plant Manager

**cc via certified mail:**  
Andrea Stone, U.S. Environmental Protection Agency  
Region VII, Kansas City, KS

7007 0710 0003 4183 2256

**via certified mail:**  
Kansas Department of Health and Environment,  
Bureau of Waste Management, Topeka, KS

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Tom Siegrist, KMS Wichita, KS (electronic copy)  
AnnieLaurie Burke, KNC Dodge City, KS

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JUL 30 2008



QUARTERLY PROGRESS REPORT  
2<sup>nd</sup> QUARTER 2008

DODGE CITY NITROGEN PLANT  
KOCH NITROGEN COMPANY

EPA ID NO. KSD044625010

July 23, 2008

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 second quarter of 2008, during which KNC accomplished the following work:

- KNC continued review of the cross sections, lithologic logs, and field data in preparation for a meeting with EPA and KDHE as noted in the letter to KNC received from EPA on June 13, 2008. This meeting would provide an opportunity to review these data as they relate to the comments in the letter and allow for finalizing the Phase II Work Plan and optimization recommendations.
- The second quarter sampling event was completed April 8, 2008.

As previously reported, KNC discovered leakage from cracks in the settling basin of the former Andco unit during the fourth quarter of 2007. KNC had an internal and external inspection of the basin performed by a professional structural engineer during the fourth quarter 2007 and modified its use of the basin to reduce the likelihood of further leakage until basin repairs can be completed. KNC worked with the structural engineer to finalize the recommendations for repair of the basin, and will briefly summarize recommendations at the meeting scheduled for July 25, 2008 with EPA and KDHE. KNC will provide written recommendations to the Agencies on the schedule agreed upon in that meeting, and anticipates that all repairs could be completed within 180 days of approval of the recommended program.

- KNC continued work on the Ground Water Recovery Optimization Report during the second quarter 2008. This report provides a summary of work completed to investigate the benefits of optimizing the current ground water recovery system. KNC understands the EPA's concerns on the need for additional data to support its recommendations, as noted in the comments sent to KNC by EPA on June 13, 2008. During discussion of these comments at the meeting of July 25, it is anticipated that the role of this report and its schedule for submittal in relation to the other project elements will be resolved.
- KNC submitted the 2007 Annual Ground Water Corrective Action Report on April 30, 2008.

**Summaries of all findings, including summaries of laboratory data (Part II Permit Section C.13.b):** The following findings were determined during the second quarter:

Laboratory results from the second quarter 2008 ground water sampling event were received during May. 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):** As noticed to the

Agencies in May, KNC discovered four animal burrows that heavy rains had deepened, creating a potential safety hazard for vehicles at SWMU 17. These holes have been filled in.

Also as noticed, recovery well TW-18 has failed. As described in the Supplemental Information attached, a permit modification request is being prepared to address this equipment.

**Projected work for the next quarter (Part II Permit Section C.13.d):** In the next quarter (third quarter 2008), KNC expects to conduct the following work under Part II of the permit:

- Meet with EPA and KDHE on July 25, 2008 to discuss the Phase II Work Plan and the recommendations provided in the Interim Status Report and additional options being evaluated for groundwater extraction water system, including:
  - Developing the best approach to achieving the remaining goals in the RFI Work Plan consistent with the findings to date;
  - Setting the schedule for implementation of this work and resuming field operations to complete this work; and
  - Evaluating the best mechanism (e. g., Interim Measures Plan) for expediting the implementation of upgrades and the optimization of the ground-water extraction system.
- Once approval by the Agencies is given, KNC will begin the sampling included in the Phase II Work Plan addendum.
- Although not a part of the Part II permit requirements, KNC completed the 2008 third quarter ground water sampling event the week of July 14.
- KNC will continue work on the Andco basin repairs plan, as noted above.

**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 are described in the attached document.

**SUPPLEMENTAL INFORMATION  
SUBMITTED WITH THE  
SECOND QUARTER REPORT 2008  
Koch Nitrogen Company  
Dodge City, Kansas  
EPA ID No. KSD044625010  
July 30, 2008**

Pursuant to Section I.E. 14 of the Hazardous Waste Management Facility Permit, Part I (Part I Permit), Koch Nitrogen Company (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 been previously 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 has been disconnected and it was not sampled during 2008. 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 this well. KNC will arrange for plugging and abandonment of the well after arrangements are made with the owner. Mr. Bogner has indicated he will allow disconnection, plugging and abandonment of his well once he receives a letter of request from KDHE and EPA. KNC requests that the agencies contact Mr. Bogner to facilitate this well closure. It was not possible to sample the Chaffin well during 2007 or 2008, as previously noticed to KDHE. The Chaffin property has been leased to a new tenant, who has cut off electrical power to the well.
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. This Method was used until 2006. Because the current preferred method is Standard Methods 4500-NO3 F (most recent edition), KNC began the use of this method in 2007. EPA, in the comments on the Interim Status Report, indicated a desire to change the approach to analysis of nitrogen-bearing compounds (nitrate, nitrate, and nitrate/nitrite as N). 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 under Item 2 above, it is likely that the approach to analysis of nitrogen-bearing compounds will change substantially in the near future based on Agency input.
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, TW-18, 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, Wells TW-4 and TW-8, currently have insufficient water levels for recovery. Well TW-36 was found during the first quarter of 2007 to have a water level that has dropped below the well pump, as have the "CP" wells. The drop in water level in certain Plant wells correlates with a regional drop in water levels. The optimization of the recovered water system will resolve the conflict between the permit conditions and the current condition of these wells. In addition, Well TW-18 is damaged beyond repair, and KNC is in the process of submitting a permit modification request to address this well.
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.