



KOCH NITROGEN COMPANY

October 30, 2007

Via Certified Mail Return Receipt Requested

7007 0710 0003 4181 0513

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 Third Quarter 2007**

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 third quarter of 2007.

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

465049



RCRA RECORDS

cc via certified mail:

7007 0710 0003 4182 5273

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

via certified mail:

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

Hannah Valmont, KMS Wichita. KS (electronic copy)
AnnieLaurie Burke, KNC Dodge City, KS

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QUARTERLY PROGRESS REPORT
3rd QUARTER 2007

DODGE CITY NITROGEN PLANT
KOCH NITROGEN COMPANY

EPA ID NO. KSD044625010

October 30, 2007

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*
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 third quarter of 2007, during which KNC accomplished the following work:

During the April 2007 ground water sampling event, KNC discovered a leak at TW-28 caused by malfunction of the surface valve and the associated fitting. KNC notified the Kansas Department of Health and Environment (KDHE) and the U.S. Environmental Protection Agency Region VII (EPA), and prepared a sampling and analysis addendum to the Sampling and Analysis Plan (SAP) that had been previously approved by EPA (August 8, 2006). The addendum was approved with comments by EPA on June 28, 2007. KNC collected shallow below ground surface (bgs) soil samples from the TW-28 spill site on August 13 and 14, 2007. Contrary to the results found in previous investigations of leakage from the recovered water piping system, the results at TW-28 indicated chromium (119 mg/kg at 1.0 feet bgs and 127 mg/kg at 2.0 feet bgs) at one of the three sampling locations (TW-28-03). These levels are not consistent with the composition of the water from TW-28. Therefore, KNC will attempt to resolve this finding with additional confirmatory sampling in the vicinity of the TW-28-03 sampling location. This sampling has been scheduled for early November, and KNC will contact EPA and KDHE to discuss the data from this sampling once it is obtained.

Two additional pipe leaks were discovered during the third quarter. The first was discovered at a pipe intersection east of the UAN cooling tower, in the vicinity of (but not connected to) well TW-31. Although it was not possible to estimate the duration or volume of this leak, the recovered water was sampled. The samples were analyzed by Pace Analytical Services of Lenexa, KS, for total chromium, and Servi-Tech Laboratories of Dodge City, KS for nitrate plus nitrite as N. Both Pace and Servi-Tech are State-certified laboratories. The samples showed that the chromium level was below the MCL at 0.026 mg/l, while the level of nitrate plus nitrite as N was 115 mg/l. The second leak was discovered at a pipeline tee adjacent to TW-71. The well had stopped pumping and the leak was quickly discovered during troubleshooting of the well. Based on the appearance of the soil when the tee was excavated, it is estimated that this leak released a small volume of recovered groundwater over a very short duration (approximately 50 gallons). Recent Cr levels in the wells on the associated bank have ranged from 0.12 to 0.44 mg/l, while nitrate plus nitrite as N concentrations ranged from 20 to 89 mg/l.

In both cases, the leaking lines were locked out and repaired within 48 hours of discovery. Both leaks were associated with the aging groundwater extraction (recovery well) system. General recommendations for addressing the reliability of this system were presented to the agencies in the Interim Status Report described below. KNC anticipates meeting with the agencies in the near future to discuss expediting the implementation of these recommendations. KNC has also scheduled evaluation of more effective pumps and controllers for this system during the fourth quarter.

On July 24 through 26, 2007, KNC conducted the third quarter groundwater sampling event. No issues or concerns were noted during the sampling event. However, it was noted that the CP

wells (CP-1 through 5) in the vicinity of the cooling towers have gone dry. While CP-3 is part of the recovery system, none of these wells are used for groundwater monitoring.

KNC completed characterization and closure of the mud pit associated with installation of the Dakota formation well at SWMU 4, in accordance with the procedures for managing investigation-derived waste (IDW) in the approved SAP. Samples collected in June 2007 showed non-detects for all analytes. The mud pit was closed on July 5 and 6, 2007.

KNC also completed and submitted the Interim Status Report on August 9, 2007. KNC anticipates meeting with EPA and KDHE representatives during the fourth quarter to discuss expediting the implementation of the recommendations provided in the Interim Status Report, including KNC's specific findings on improving the reliability of the recovered water system and increasing the effectiveness of pumping and recovery equipment for the system.

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

Laboratory results from the July 2007 ground water sampling event were received during the third quarter. The results were consistent with the previous quarter. Only small changes in chromium and nitrate concentrations were observed. The results will be discussed in detail in the 2007 Annual Groundwater Report, which is scheduled for submittal during the first quarter of 2008.

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 related to the project were encountered during this period. As noted above, two piping leaks were detected and repaired in the vicinity of TW-71 and east of the UAN cooling tower

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

Meet with EPA and KDHE to discuss recommendations provided in the Interim Status Report and additional options being evaluated for groundwater extraction water system, including:

- Developing the best approach to the remaining goals in the RFI Work Plan consistent with the findings to date;
- Setting the schedule for implementation of this work and resume 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.

Complete additional investigation of the affected area at TW-28, based on the approved addendum and results from the first soil sampling event. This work is scheduled for the first

week in November. Once the analytical results are obtained, KNC will finalize the report covering this area and the other leakage areas previously investigated

Although not a part of the Part II permit requirements, KNC will also complete the fourth quarter ground water sampling event.

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
THRID QUARTER REPORT 2007
Koch Nitrogen Company
Dodge City, Kansas
EPA ID No. KSD044625010
October 30, 2007**

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, and KNC looks forward to discussing these further at the anticipated meeting with the Agencies. Based on the Agencies' input, KNC will 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) identifies ten private wells that are to be sampled quarterly. Plumbing at the Coker well has been disconnected and it was not sampled during 2007. 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 when he receives a letter of request from KDHE and EPA and KNC requests that the agencies contact Mr. Bogner to facilitate this well closure. It was not possible to sample the Chaffin well during the first quarter, 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. The conflict among the permit condition, the SAP requirement, and the preference for most recent methods is being resolved by the above-referenced permit modification.

3. **Nitrogen Species Measured.** Section I.E.9.a and Attachment D of the Part I Permit states 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 since 2004 analyzed for nitrate plus nitrite as N.
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. The requested permit modifications allow for format flexibility.
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, 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.
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 a have previously acknowledged that nonfunctional equipment should be replaced with newer equipment that offer a higher degree of accuracy and reliability.