KOCH

KOCH NITROGEN COMPANY

January 29, 2007

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Director, RCRA Corrective Action & Permits Branch (2 copies)
Air, RCRA and Toxics Division
U.S. Environmental Protection Agency Region VII
901 North Fifth Street
Kansas City, Kansas 66101

RE: Koch Nitrogen Company – Dodge City, Kansas
EPA ID No. KSD044625010
Quarterly Progress Report for 4th Quarter 2006

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 fourth quarter of 2006.

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

Gary J. LeRock
Plant Manager

473410

RCRA RECORDS

16

cc via certified mail:
Andrea Stone, U.S. Environmental Protection Agency – Region VII, Kansas City, KS
Kansas Department of Health and Environment, Bureau of Waste Management, Topeka, KS

cc:
Stephen B. Ellingson, KMS Wichita. KS (electronic copy)
AnnieLaurie Burke, KNC Dodge City, KS
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QUARTERLY PROGRESS REPORT
4th QUARTER 2006

DODGE CITY NITROGEN PLANT
KOCH NITROGEN COMPANY

EPA ID NO. KSD044625010

JANUARY 29, 2007

A description of the work completed (Part II Permit Section C.13.a): This Quarterly Report covers activities in the fourth quarter of 2006, during which KNC accomplished the following work:

In accordance with the RCRA SAP, KNC conducted additional sampling and analysis during the fourth quarter groundwater monitoring event in early October. This additional work streamlines the groundwater sampling and supplements the other data gathered during the RFI field program.

Soil sampling was completed during November as part of the RCRA SAP hand augering program. As discussed in detail in previous quarterly reports, it has been necessary to modify the original SAP to accommodate field conditions and to ensure that adequate delineation could be accomplished.

KNC continued the test program for optimization of the existing recovery well and treatment system. KDHE issued a temporary authorization under the Part I Permit for this work by letter dated July 14, 2006. The well configurations and test dates for each configuration are summarized below.

Configuration No.	Description	Wells Shutdown	2006 Schedule
1	Shutdown of select wells located upgradient and/or outside the suspected source areas	TW-16, TW-17, TW-19, TW-23, TW-36, TW-37, TW-38, TW-52, TW-55, TW-56, TW-76, and TW-78	Start: August 3 Finish: September 13 Duration: 6 weeks
2	Shutdown of select upgradient and cross gradient wells	Wells shutdown under configuration 1 plus TW-18, TW-39, TW-40, TW-48, TW-49, TW-51, TW-53, TW-54, TW-57, TW-58, TW-67, TW-73, TW-74, TW-75, TW-77, TW-86, TW-94	Start: September 14 Finish: October 26 Duration: 6 weeks
Shutdown Evaluation	Shut down of all wells	All	Start: October 27 Finish: October 31 Duration: 4 days
3	Minor modifications to Configuration 2	Wells shutdown under configuration 2 with TW-87 shutdown and TW-94, and TW-77 restarted.	Start: November 1 Finish: January 26 Duration: 12 weeks

Configuration 2 was started on September 13, 2006 and completed on October 26, 2006. On October 26, the non-pumping test was initiated and continued until October 31, 2006. The potentiometric surface at the end of the shutdown period is shown on Figure 1-1. Non pumping flow at the KNC facility was to the southeast.

The third and final pumping well configuration was started on October 31, 2006 and continued through the fourth quarter. Configuration 3 is scheduled for completion on January 26, 2007 within the 180-day timeframe from the start of the optimization workplan.

In association with the optimization test program, KNC performed bi-weekly groundwater quality and water level monitoring during the fourth quarter.

To date, no adverse groundwater impacts have been observed as a result of the optimization program. Total chromium, dissolved chromium, and nitrate plus nitrite concentrations have shown small fluctuations (upward and downward) during the optimization activities. The fluctuations observed to date are consistent with the error bars of the laboratory analyses. The groundwater concentrations will continue to be monitored closely during the remainder of the optimization program and a technical report will be submitted at the conclusion of the study.

Although not a part of the corrective action program, KNC received approval from EPA to begin preparations for the soil sampling associated with the Andco Clarifier Basin Overflow, Pipe Fracture, and Pipe Union Failure releases. Sampling was completed on January 19, 2007, and will be described in the next quarterly report

Field work completed at specific AOCs and SWMUs this quarter included:

- SWMU 5 (Land Farm) – A total of six locations were sampled with 2 samples collected from each location (6 inches and 2 feet below land surface)

- SWMU 6 (Former Washout Area) - A total of three locations were sampled with 2 samples collected from each location (6 inches and 2 feet below land surface)

Each sample was analyzed for SVOCs, Appendix 9 metals, nitrate/nitrite, sulfate, pH, VOCs, OA1, and OA2.

Due to the reduction in field activities in the fourth quarter, KNC discontinued the practice of weekly status reports. The weekly status reports were initiated in May of 2006 at the request of EPA and KDHE.

Summaries of all findings, including summaries of laboratory data (Part II Permit Section C.13.b): Figure 1-2 shows soil results collected to date.

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 period. As discussed with the Agency representatives throughout the completion of the field activities as described above, procedures described in the SAP have required revision due to field conditions and other factors in order to implement the RFI program, consistent with the project objectives. A specific list of these revisions will be submitted during the first quarter of 2007. KNC plans to include this list as part of the Interim Measures Work Plan.

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:

KNC has contracted with Layne Western for the completion of the Dakota boring at SWMU 4, and work is anticipated to resume at this AWMU in late January, depending on weather conditions and equipment availability.

Construction will accommodate the findings from the earlier phase of the investigation. The well will have a terminal depth of 500 feet bls as originally planned. During the installation of the Dakota well, the field team will attempt to obtain water samples within the intervals that the abandonment report indicates as obstruction locations (possible loss of casing integrity). At a minimum, KNC will attempt to obtain ground water samples at the two depths where obstructions were observed during abandonment of Disposal Well #1. Layne will also assist in converting the existing partially completed boring (originally started by Pratt Drilling) into an Ogallala monitoring or recovery well.

Although not a part of the corrective action investigation requirements, KNC will finalize the Interim RCRA report during the first quarter of 2007. This report will include the Interim Measures Work Plan to be submitted in accordance with Section C.5.e of Part II of the Permit. It will also incorporate KNC's recommendations for a revised pumping well configuration based on the results of the well optimization test program and other project findings.

KNC also plans to complete the first quarter 2007 groundwater sampling in February, if weather conditions allow.

As noted above, sampling associated with the Andco Clarifier Basin Overflow, Pipe Fracture, and Pipe Union Failure groundwater releases was completed in January. Results will be summarized and reported during the first quarter of 2007. The results will be compared to threshold levels developed from a background dataset. The background and threshold datasets were developed as part of the RCRA Investigation Facility Sampling and Analyses Plan reference earlier in this document. Using this approach, if the measured concentrations are less than the applicable thresholds, no additional vertical or lateral delineation or remediation will be required. Conversely, if concentrations are above threshold levels, additional Phase 2 delineation may be required to determine future actions. The report will include an analysis and interpretation of the laboratory results, recommendations for further action, if needed, and all analytical laboratory results.

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
FOURTH QUARTER REPORT 2006
Koch Nitrogen Company
Dodge City, Kansas
EPA ID No. KSD044625010
January 26, 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 reported in the supplemental section of the quarterly report as deviations. We have discussed each of these items with the Agencies, and understand that while the items do reflect inconsistencies with permit language they are not being treated as deviations and instead will be addressed as described below. KNC is continuing to list these items in its quarterly report to meet the intent of Section I.E. 14 of the Part I permit.

KNC submitted to KDHE a request for modifications to the Permit to ensure consistency of wording and to clarify the acceptable use of alternate methods. KNC appreciates the input and comments from KDHE concerning this submittal. Based on that input, KNC will finalize this request and submit it 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 2006. KNC will arrange for plugging and abandonment of the well after arrangements are made with the owner. The Cokers have been connected to the City of Dodge City water system since the fall of 2004.

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 latter 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 2006. The conflict among the permit condition, the SAP requirement, and the preference for most recent methods is being resolved by the 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 fourth quarter of 2006 to have a water level that has dropped below the well pump. The drop in water level in certain Plant wells correlates with a regional drop in water levels. The optimization of the recovered water system and the action plan from that study 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 have previously acknowledged that nonfunctional equipment should be replaced with newer equipment that offer a higher degree of accuracy and reliability. KNC has substituted newer equipment that provides a higher degree of accuracy and reliability.

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