



# K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

September 16, 2005

Andrea Stone  
U.S. EPA – Region VII  
901 North 5<sup>th</sup> Street  
Kansas City, Kansas 66101

**RE: RFI Field Sampling Plan Comments  
Koch Nitrogen Company, Dodge City  
EPA ID #KSD044625010**

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RCRA RECORDS

Dear Ms. Stone:

The Kansas Department of Health and Environment (KDHE) reviewed the document titled "Sampling and Analysis Plan RCRA Facility Investigation – Volume I: Field Sampling Plan" submitted by Koch Nitrogen Company (KNC) in June 2005. KNC also submitted a document titled "Sampling and Analysis Plan RCRA Facility Investigation – Volume II: Quality Assurance Project Plan" which was not reviewed by KDHE. The Field Sampling Plan describes KNC's proposed sampling procedures for the RCRA Facility Investigation at the Dodge City facility. The Field Sampling Plan was submitted in accordance with requirements in Part II of the facility's RCRA Post-Closure Permit. Comments on this document are provided below.

1. **Section I-3.2.3, Vertical Profiling of Groundwater, Page I-19:** The text states field-based test kits may be used to analyze groundwater samples in the field. This is acceptable as a field-screening tool to aid the contaminant plume delineation process. Data from standard analytical procedures will be required to verify the lateral extent of the plume. The text also states that KNC will acquire confirmation data from a certified laboratory for about twenty percent of the field-based test analysis. Include the criteria KNC will use to determine when a sample will be submitted to a certified laboratory.
2. **Section I-3.3.1, General Requirements, Page I-21:** Wells to be installed in the Dakota Formation are proposed to terminate at 450 feet below ground surface. Please explain KNC's rationale for selecting this depth.
3. **Section I-3.6.1, Variable Head (Slug) Permeability Test Procedures, Page I-29, and Figure I-3-5:** The test locations KNC proposed are on the perimeter of the groundwater

DIVISION OF ENVIRONMENT  
Bureau of Waste Management  
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 320, TOPEKA, KS 66612-1366  
Voice 785-296-1600 Fax 785-296-8909 <http://www.kdhe.state.ks.us/waste>

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contaminant plume. Instead of conducting a variable head (slug) test at well TW-25, conduct a test at a location near the center of the facility property, perhaps at well TW-31 or a nearby well. Also, state that slug tests will be conducted, upon EPA and KDHE approval, at several locations south of the facility.

4. **Section I-3.6.2, Specific Capacity Tests, Page I-30, and Figure I-3-6:** Include an explanation of KNC's rationale for selecting well TW-93 for the specific capacity test. Also, extrapolation of data to off-site locations is inappropriate and will not be accepted.
5. **Section I-3.7, Multiple Well Hydraulic Tests, Page I-31, and Figure I-3-6:** Include an explanation of KNC's rationale for selecting wells TW-14 and TW-52 for the constant-rate pumping test. Considering the southward migration of contaminated groundwater, KNC may wish to relocate the test proposed for well TW-52 to a location in the southern portion of the facility. Also, state that testing will be conducted, upon EPA and KDHE approval, at several locations south of the facility.
6. **Table I-2-2, Background Wells:** Wells TW-11, TW-19, TW-22 and TW-63 are identified as background wells. These wells have been impacted by contaminants from facility operations and therefore cannot be used as background wells. KNC must select a new set of upgradient wells to assess background conditions. Wells acceptable to KDHE as background wells include TW-24, TW-25, TW-56, TW-59, TW-60, TW-61, and TW-62.
7. **Section I-4.4.1.2, Groundwater Sampling, Page I-44, and FS 2200, Section 1.1:** The text states that groundwater samples will be collected in accordance with the September 7, 2001 RCRA Groundwater Sampling and Analysis Plan (SAP). The SAP states stabilized readings for dissolved oxygen is +/- 10 percent. However, in correspondence concerning the outstanding Class 1a permit modification to Part I of the Permit, KDHE and KNC agreed to consider +/- 10 percent or 0.1 mg/L, whichever is greater, as the stabilization criteria. Therefore, modify the RFI work plan to incorporate these criteria.
8. **Section I-3.3, Monitoring Well Installation, Page I-20, Figure I-3-1, and Table I-2-1, AOC #6:** The text describes the installation of a single monitoring well to delineate groundwater contamination in the Dakota Aquifer. One monitoring well may not be sufficient to adequately delineate the vertical and horizontal extent of contamination. Include additional information to explain how KNC will delineate the Dakota Aquifer.
9. **Table I-2-1, SWMU #21 - UIC Well 2 Cuttings, and SWMU #22 - UIC Well 3 Cuttings:** The text in Table I-2-1 states that a single sample will be collected from these SWMUs. Considering the drill cuttings were separated according to chloride content into one of two pits, which were 150 feet long, KDHE questions whether a single sample will be representative of this waste. Include additional sampling locations to properly characterize these SWMUs. Also, the pits are 15 feet deep, but stated sampling depth is only 10 feet. Revise the text in this table to state samples will be collected at depths below the bottom of the mud pit. Finally, the text in the table indicates direct push technology will be used to advance a soil boring through the liner of the mud pits.

KDHE will not allow KNC to puncture the mud pit liner. Therefore, samples should be collected from locations outside the footprint of the pits.

10. **Table I-2-1 SWMU #7, Landfill for General Plant Trash:** Any waste may have been disposed in the landfill for general plant trash. Therefore, include pesticides and herbicides in the list of constituents to be analyzed in soil samples from this SWMU. Modify Table I-2-1 accordingly. Also, conduct total chromium analysis on the samples collected from SWMU #7.
11. **Table I-2-1, SWMU #19, West Lime Sludge Industrial Landfill:** The entry for Trench 3 indicates soil samples will be analyzed for VOC, SVOC, TPH, Appendix IX metals, Hexavalent Chromium, Total Chromium, Nitrate-Nitrite, Sulfate, and pH. However, the entry for SWMU #19 SS08 / SB08 in Table I-2-3 does not identify these analyses will be run for this sample. Rectify this discrepancy by adding applicable entries in Table I-2-3.
12. **Table I-2-1, SWMU #4, Former Disposal Well #1:** Field activities proposed for disposal wells UIC #2 and UIC #3 focus on the drill cuttings that were deposited into mud pits. Disposal practices for these two wells, which were installed in the 1990's, included the use of lined mud pits for drill cuttings that contained elevated concentrations of chloride. In contrast, drill cuttings from disposal well UIC #1, which was installed in 1968 as the facility was being constructed, were likely deposited into an unlined mud pit. Because the boring for UIC #1 penetrated the same geologic formations as those penetrated while installing UIC #2 and UIC #3, the drill cuttings likely contain similar chloride concentrations. Therefore, the Field Sampling Plan should be revised to include an investigation of the mud pit for UIC #1. In addition, chloride should be added to the list of analytes for soil and water samples collected from locations downgradient of UIC #1.

Please incorporate these comments into EPA's correspondence with KNC as you deem necessary. Should you have any questions, please contact me at (785) 296-1616 or [espellma@kdhe.state.ks.us](mailto:espellma@kdhe.state.ks.us).

Sincerely,



Everett Spellman  
Environmental Geologist  
Hazardous Waste Permitting Section

c Allen Guernsey/KDHE/SWDO --> Waste Programs  
Bill Bider - KDHE/BWM