



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

12 DEC 2005

CERTIFIED MAILRETURN RECEIPT REQUESTED

Article No. 7004 2510 0006 9723 8961

Mr. Gary J. LeRock  
Plant Manager  
Koch Nitrogen Company  
P.O. Box 1337  
Dodge City, KS 67801-1337

Dear Mr. LeRock:

RE: Koch Nitrogen Company's (KNC's) November 23, 2005 submittal via e-mail of the revised Background Assessment Work Plan, and KNC's revised draft of the Proposed Responses to Comments on the Field Sampling Plan and followup to phone conversation with KNC's consultant Geosyntec.

Dear Mr. LeRock:

The U.S. Environmental Protection Agency Region 7 (EPA) is in receipt of KNC's November 23, 2005, e-mail submittal of the revised Background Assessment Work Plan and KNC's revised draft Proposed Responses to Comments on the Field Sampling Plan (FSP). As discussed with Ms. Burke, of your staff, on December 1, 2005, KNC has not submitted responses to all comments contained in EPA's comment letter of September 30, 2005. A complete response to all of EPA's comments and a revised FSP and Quality Assurance Project Plan (QAPP), along with the revised Background Assessment Work Plan, is due to EPA no later than December 21, 2005. The above-referenced documents have been reviewed by EPA and KDHE technical staff, and EPA's Quality Assurance Manager. As further discussed with Ms. Burke on December 5, 2005, it was decided that EPA should work directly with Geosyntec to get these issues resolved in Ms. Burke's absence. These issues were e-mailed to Ms. Burke and Geosyntec on December 6, 2005. EPA reached agreement with Geosyntec on December 7 & 8, 2005 via conference calls on these issues which will be elaborated further in this letter.

The EPA offers the following comments on the above-referenced documents:

**Revised Proposed Responses dated 11/23/05 to Comments on the Field Sampling Plan:**

1. Page 1, General Comment #8, Proposed KNC Response: EPA expressed concerns regarding the data collected from SWMU #26 because the samples were received by the laboratory at incorrect holding temperatures.

KNC's revised proposed response states, "Comment noted. No revisions to the document are necessary." EPA would like to re-emphasize its concern regarding overall handling practices for samples. Attention must be given to proper handling techniques and holding times and temperatures. KNC personnel and/or contractors should be properly instructed so that this does not occur in the future. Holding times and temperatures are very important for certain constituents and if they are not received at the proper holding time and temperatures, these samples will not be considered valid.

KNC should add information to the text on how it plans to address proper sample handling practices and how it plans to closely monitor the samples to ensure proper sample handling practices are performed (i.e., holding times and temperatures) etc.

**Agreement was reached with Geosyntec that additional language will be added to the FSP regarding personnel training on proper sample handling practices.**

2. Page 2 & 3, Specific Comment #2, Proposed KNC Response: EPA conveyed its concerns on the October 17, 2005 conference call and in our letter of November 18, 2005 with regards to the sampling in the lime sludge landfills. EPA provided documentation found in Farmland's Current Conditions Report for our concerns with the lime sludge landfills and therefore, were requiring a broad parametric coverage, as described for Trench #3 for all Trenches (1, 2, 3, 4, 5, & 6) which are SWMUs 10, 11, 17 & 19.

KNC stated on the October 17, 2005 conference call that Appendix N provided logs for what was disposed in the Trenches. EPA has reviewed the data in Appendix N of the RFI Work Plan dated August 2005. In addition, to EPA's previous concern, EPA noted that some materials disposed of in the lime areas were only sampled for TCLP metals, when other constituents were present. These materials were deemed non-hazardous based on incomplete sampling results. Also, based on EPA's observations of the previous owners sloppy disposal practices and incomplete documentation, along with information found in the Current Conditions Report warrants a broader scan of constituents to be sampled for in all of the lime areas (i.e., Trenches 1, 2, 3, 4, 5, and 6 (SWMUs 10, 11, 17 & 19)). KNC is relying on the accuracy of the information contained in Appendix N. Since KNC's ownership of the facility did not start until May 20, 2004, KNC was not privy to the disposal practices of the previous owner and can not verify the accuracy of the documentation provided by the previous owners. EPA, however, did observe on several occasions sloppy disposal practices, and upon questioning of previous facility personnel, uncertainty on what had been disposed, and where it had been disposed. EPA stands behind our convictions that these lime disposal areas warrants a broader scan of constituents as proposed for Trench 3. Please revise accordingly.

Also, in KNC's October 20, 2005, proposed response to this comment, it stated, "The following text has been added to the first paragraph of Section I-2-4 (RFI Strategy), Soil and groundwater samples will be analyzed for "total" concentrations. These samples will be used to determine the detection (presence or absence) of constituents in the soil and groundwater. Nitrate-Nitrite and chromium detected in these samples will be compared to background levels determined for the site and approved by the Agencies." This language is acceptable to EPA.

**Agreement was reached with Geosyntec that one sample per boring at each of SWMUs #10, 11, 17 would be analyzed for Appendix IX at the midpoint of the settleable matter.**

**Specifically:**

**SWMU # 10- 4 borings, several samples per boring, with one sample per boring analyzed for Appendix IX at the midpoint of the settleable matter.**

**SWMU # 11 – 6 borings, several samples per boring, with one sample per boring analyzed for Appendix IX at the midpoint of the settleable matter.**

**SWMU # 17 – 2 borings, several samples per boring, with one sample per boring analyzed for Appendix IX at the midpoint of the settleable matter.**

**SWMU # 19 – Trench 3: 4 borings total, all samples per boring analyzed for Appendix IX.**

**SWMU # 19 - Trenches 1 & 2: 8 borings total, several samples per boring, with one sample per boring analyzed for Appendix IX at the midpoint of the settleable matter.**

3. Page 5, Specific Comment #38, Proposed KNC Response: See EPA's response above number 2. Please revise the text accordingly.

In addition, the basic premise of EPA's comment was to ensure that a broad parametric coverage for sampling at SWMUs 10, 11, 17 & 19 was completed and to ensure consistency in the text and in Tables I-2-1 and I-2-3. We also wanted to make sure that SPLP was replaced with "totals." Please revise accordingly.

**See Agreement reached above for # 2. This same applies for this comment. In addition, agreement was reached that SPLP was taken out and replaced with totals.**

**Background Assessment Work Plan:**

1. Page 5, Section 2.3.1 Chromium Preliminary Evaluation, last sentence: EPA conveyed in its November 18, 2005, letter, that we objected to KNC's use of 0.024 milligrams per liter (mg/L) for the background concentration of chromium in the groundwater, and instead would use 0.010 mg/L.

KNC's revised proposed response, has information added to it in Sections 2.3.1 and 4, regarding PQLs that EPA and KNC did not discuss and therefore did not agree to. EPA stated that it had reviewed the data in KNC's 2005 Semi-Annual Ground Water Corrective Action Report. The private wells that are sampled quarterly show Chromium less than 0.010 mg/L. EPA stated that based on this data, 0.010 mg/L will be used as the background concentration for Chromium in groundwater. EPA felt this was more representative of background since these private wells are located off Facility property and are farther North and East of the wells that KNC had chosen to be representative of background. Agreement was reached with KNC on that background level. However, in the revised response, KNC has added, "...or the PQL as the background value for the delineating groundwater chromium in the unconsolidated deposits." EPA does not agree with that statement.

A PQL is the lowest concentration of an analyte that can be reported with a specific certainty as to its quantitative accuracy; a PQL is typically 5 to 10 times higher than the MDL. Therefore, if a laboratory reports data at the PQL and you are using the MDL as your action level, you could actually have concentrations above the MDL (in this case your background) but below the PQL and you would not know it because the laboratory is only reporting data to the PQL. For this case, it needs to be verified how the laboratory will report the data; it needs to be reported to the MDL (e.g., 0.010 mg/L ND which would mean a non-detect at the MDL rather than at the PQL. Please delete reference, in the appropriate sections, to, "...or the PQL as the background value for the delineating groundwater chromium in the unconsolidated deposits."

**Agreement was reached with Geosyntec that the following language would be deleted from the FSP in the appropriate section (Section 2.3.1 & Section 4), "...or the PQL as the background value for the delineating groundwater chromium in the unconsolidated deposits."**

2. Page 8, Section 3.3 Data Evaluation, fourth sentence: EPA stated in its November 18, 2005, letter, that outliers should not be eliminated from consideration because they can provide important information. EPA further stated that outliers need to be investigated to determine if there is a problem with the data or if it is an indicator of contamination or lack of contamination. Outliers can be investigated by additional sampling.

In Koch's revised proposed response it stated, "...The text in Section 3.3 will be revised to read; "As applicable, outliers will be evaluated to determine if QA/QC problems exist or if there are reasons for the variation in concentration. If the data is of sufficient quality for use and no reason can be identified for the variable concentration, the outlier will be eliminated from consideration as representative of background.""

EPA does not agree with KNC's statement, "If the data is of sufficient quality for use and no reason can be identified for the variable concentration, the outlier will be eliminated from consideration as representative of background." KNC has in essence said that the outlier is a valid data point within the data set if there are no QC-related issues or reasons

for explaining it, which means that the data should not be discarded. Section 4.4 of EPA's G-9 Data Quality Assessment guidance (<http://www.epa.gov/quality/qs-docs/g9-final.pdf>), gives additional information about outliers. Specifically, on page 4-26 it states, *"If a data point is found to be an outlier, the analyst may either: 1) correct the data point; 2) discard the data point from analysis; or 3) use the data point in all analyses. This decision should be based on scientific reasoning in addition to the results of the statistical test. For instance, data points containing transcription errors should be corrected, whereas data points collected while an instrument was malfunctioning may be discarded. One should never discard an outlier based solely on a statistical test. Instead, the decision to discard an outlier should be based on some scientific or quality assurance basis. Discarding an outlier from a data set should be done with extreme caution, particularly for environmental data sets, which often contain legitimate extreme values. If an outlier is discarded from the data set, all statistical analysis of the data should be applied to both the full and truncated data set so that the effect of discarding observations may be assessed. If scientific reasoning does not explain the outlier, it should not be discarded from the data set"*

Particular attention needs to be given to the last sentence, "If scientific reasoning does not explain the outlier, it should not be discarded from the data set." As EPA stated previously, "Outliers can be investigated by additional sampling." Please modify the text to read, "If the data is of sufficient quality for use and no reason can be identified for the variable concentration, the outlier will be investigated by additional sampling to determine the cause for the outlier and/or a more representative area may be selected." The outlier may not be representative of background because the area selected may have been impacted by facility operations (results higher than other background samples), or the outlier may be clean (results lower than other background samples) and the other background sampling locations may have been impacted by facility operations.

**Agreement was reached with Geosyntec that the language EPA had specified above would be added to the FSP. Specifically please add, "If the data is of sufficient quality for use and no reason can be identified for the variable concentration, the outlier will be investigated by additional sampling to determine the cause for the outlier and/or a more representative area may be selected."**

3. Geosyntec also mentioned a minor QA comment that referenced B9. Non-direct Measurements. EPA's QA comment stated, "The previous version of the QAPP correctly addressed the use of previous data in section B9. However, the revised QAPP has deleted the original language and instead focuses on basic statistics. This section of a QAPP needs to address the type of data needed from non-measurement sources, their use, and any limitations of such data. The reason for the change in the revised QAPP for the content of section B9 is not clear." Geosyntec mentioned that KNC had taken out the two sentences in reference to B9. in the 2004 version of the QAPP., but could put those sentences back in. I spoke with our QA manager and it was agreed that if the language was put back in the document, that would satisfy the comment. Please add the language back into the current version of the QAPP.

As stated above, a complete response to all of EPA's comments and a revised FSP and Quality Assurance Project Plan (QAPP), along with the revised Background Assessment Work Plan, is due to EPA no later than December 21, 2005.

If you have any questions regarding this letter, please contact me at (913) 551-7662.

Sincerely,



Andrea R. Stone  
Environmental Scientist  
Air, RCRA & Toxics Division  
RCRA Corrective Action & Permits Branch

cc: Kathy Dunn  
KDHE  
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