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KOCH NITROGEN COMPANY LLC

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

REC'D

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APCO

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Chief of the Hazardous Waste Permits Section
Bureau of Waste Management
Kansas Department of Health and Environment
1000 SW Jackson, Suite 320
Topeka, Kansas 66612-1366

Re: Responses to Comments on Initial Interim Measures Work Plan - Groundwater Recovery System Optimization
Koch Nitrogen Company – Dodge City, Kansas Nitrogen Plant
EPA I.D. No. KSD044625010

Ladies/Gentlemen:

Koch Nitrogen Company (KNC) appreciated the opportunity of meeting with EPA and KDHE to discuss approaches on the field investigations and the current recovery system on May 15, and the further clarifications in EPA's letter of May 26, 2009. As requested in that letter, KNC has prepared the attached responses to the comments of EPA's original letter of April 2, 2009.

Sincerely,

KOCH NITROGEN COMPANY

Gary J. LeRock

Gary J. LeRock
Plant Manager

cc w/enc.: Cory Zellers, KNC, Dodge City, Kansas
AnnieLaurie Burke, KNC, Dodge City, Kansas
Tom Siegrist, KMS, Wichita, Kansas (electronic copy)

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RCRA

KNC Response to EPA Comments of 4/2/2009 on Optimization Plan

General Comments:

EPA General Comment 1. This document does not have any page numbers. Please include page numbers on any and all documents that are submitted.

KNC General Response 1. KNC will add page numbers.

EPA General Comment 2. KNC needs to take a step back and visualize a blank slate with respect to the remediation (pump & treat) system, and then consider where the remediation wells should be located to maximize capture of the plume. For example: If there were no wells installed at the facility, what steps would KNC need to conduct before it can determine where to strategically place the wells to effectively and expeditiously capture the plume?

KNC General Response 2 KNC had envisioned this IM Plan as a short-term project to improve the functionality and reliability of the existing groundwater recovery system to meet the current permit requirements more effectively, not as the final configuration for addressing impacts to groundwater. KNC will postpone changes to the existing groundwater recovery system, and revisit the approach after additional investigation has been completed.

EPA General Comment 3. Further delineation southeast of the Bogner property is needed in order to protect any down gradient wells. The Bogner's well has already been impacted with Nitrates/Nitrites over the maximum contaminant level (MCL). There are potential receptors located southeast of the Bogner property. Based on the work described in the Geologist's Comment #2, and the information obtained from the further delineation site-wide, additional well(s) may also have to be installed southeast of the Bogner property in order to protect any downgradient wells. See also Geologist's Comment 2.f.

KNC General Response 3. As discussed in the meeting of May 15, 2009, KNC will address sampling to establish the source of the contamination in its groundwater investigation plan for Phase II, which will be submitted separately.

Specific Comments:

EPA Specific Comment 1. Executive Summary, second page, number 10): Reference is made to TW-80 and may require additional remedial effort. EPA is in agreement that this area is not well defined and will require additional investigation and remediation. Previously EPA discussed with KNC about installing additional wells in the area south of the property boundary. KNC made a good start by installing three (3) wells south of the property boundary; however, EPA feels further delineation in this area is warranted. The EPA has concerns that the property owner south of KNC's facility could be potentially impacted by contamination that is located around TW-80 and south of the well. Please see Geologist's comment # 2.c., regarding this area.

KNC Specific Response 1. KNC will address installation of additional wells at this location in its groundwater investigation plan for Phase II, which will be submitted separately.

EPA Specific Comment 2. Executive Summary, third page, fourth bullet: This discusses "Operational

flexibility" with regards to the new pumping configuration. What does KNC mean? Please explain.

KNC Specific Response 2. Operational flexibility refers to being able to modify or incrementally adjust the pumping system based upon actual aquifer conditions observed (i.e., water levels, cones of depression, contaminant concentrations, etc.). Some examples of such modifications include turning select recovery wells on or off, and increasing or reducing pumping rates to make pumping more effective. Both activities would necessitate a change to permit conditions, which currently require that all recovery wells must be pumped continuously.

EPA Specific Comment 3. Executive Summary, last page, last bullet item: Reference is made to concrete encapsulation at AOC 1. Please explain. Please note that it is premature to state what the remedy will be at AOC 1 since this facility is in the investigation stage.

KNC Specific Response 3. Due to subsurface obstructions and other hazards associated with the plant, further delineation of AOC 1 is unlikely. As discussed in the meeting of May 15, KNC proposes to attempt to reproduce direct push boring locations and speciate the Hex/Tri Cr and also Nitrate/Nitrite. KNC will get the analytical results to APA and KDHE as soon as they are received. Following your review, KNC would appreciate comments on appropriate approaches to addressing concerns at this AOC.

EPA Specific Comment 4. Section 1.3 Regulatory Drivers: Reference is made to a July 14, 2006 letter where EPA and KDHE gave approval for the optimization study. It should be noted that the letter and approval was from KDHE. Please correct.

KNC Specific Response 4. KNC concurs. The sentence will be revised to indicate that KDHE approved the optimization study by letter dated July 14, 2006. At KNC's request, EPA indicated in a separate transmittal that they concurred with KDHE's decision.

EPA Specific Comment 5. Section 2.0 Optimization Approach, last paragraph: This paragraph discusses "sensitivity" with respect to the configurations tested and "sensitivity analysis." What does this mean? Please explain.

KNC Specific Response 5. As discussed in the meeting of May 15, sensitivity analysis refers to the procedure of monitoring relative changes that result from specifically imposed conditions. More specifically, KNC looked at the effect of varying the inputs (number of pumping wells) on the output (plume containment).

EPA Specific Comment 6. Section 2.1 Development and Application, first paragraph: This paragraph references optimizing the effectiveness of the groundwater recovery and treatment system using the initial optimization study with additional field optimization procedures. What does KNC mean by "with additional field optimization procedures?" Please explain.

KNC Specific Response 6. As discussed in the meeting of May 15, KNC was referring to field optimization procedures such as modifying the pumping rates, sampling and speciation of chromium or other analytes, increased frequency of water level measurement or sampling events, which may be needed to maintain the optimized recovery system.

EPA Specific Comment 7. Section 3.0 Optimization Study Results, first paragraph: This paragraph gives very little information on how capture zones were determined. Please provide additional information in this paragraph. Include information on how capture zones were analyzed and discuss the methodologies used for determining capture zones in the groundwater. See also Geologist's Comment # 3.

KNC Specific Response 7. As discussed in the meeting of May 15, groundwater potentiometric surface measurements are predominantly made at the site while pumping is occurring. Consequently, numerous cones of depression are present on the water table surface. During the meeting, KNC elaborated on the specific modeling approach to capture zone analysis (i. e., the model assumes that small water table divides exist between cones of depression, much like watershed divides on the ground surface). ESRI Spatial Analyst software includes a subprogram that automates the drawing of watershed divides on a ground surface elevation input grid. Essentially this subprogram finds the high points on the elevation grid that occur between various low points and then "connects the dots". Discussion at the meeting addressed the problems with using groundwater elevation data from pumping wells. KNC concurs that this can impact the analysis of capture zones and well efficiency. One of KNC's optimization goals was to separate the recovery function from the monitoring function.

EPA Specific Comment 8. Section 3.0 Optimization Study Results, Optimization Configurations 1, 2, and 3, Item 3): This paragraph talks about Chromium and Nitrate/Nitrite being influenced by the changes in the pumping configuration. It goes on to give specific drops in concentrations for Chromium and Nitrate/Nitrite in offsite well TW -74, but fails to identify which well configuration (i.e., 1,2, or 3) the drops in concentration occurred in. In addition, that same paragraph states that TW-56 increased in concentration, but fails to tell what constituent(s) increased (i.e., Cr, N, or both), and does not identify which configuration the increase occurred in. Please correct.

KNC Specific Response 8. KNC will expand this discussion when the optimization approach is revisited after the installation of additional wells.

EPA Specific Comment 9. Section 3.0 Optimization Study Results, Optimization Configurations 1, 2, and 3, Item 7): This paragraph states, "... without the need for additional wells installations. " EPA does not agree with this statement. Please see Geologist's comment #2 for further direction.

KNC Specific Response 9. As discussed in the meeting of May 15, KNC intends to install additional monitoring wells to complete the groundwater delineation. The statement in the Optimization report referred to the indications that the current recovery function could be accomplished with fewer recovery wells than are included in the existing network.

EPA Specific Comment 10. Section 3.1 Observations and Recommendations, Bullet #3: What is meant by "Operational flexibility?" Please explain.

KNC Specific Response 10. See response to Comment 2 above.

EPA Specific Comment 11. Section 3.1 Observations and Recommends, second and third pages of that section: There are several references to "extended purging" and "enhanced pumping/purging" at TW-80. Please explain.

KNC Specific Response 11. As discussed in the meeting of May 15, KNC samples monitoring well TW-80 using low flow sampling techniques, in accordance with Permit and SAP requirements,. As noted,

KNC recently redeveloped the well by purging approximately 1,000 gallons of groundwater over a 5 hour period. Immediately following the redevelopment, the well was sampled. The sample data indicated that the analyte concentrations were lower than the previous quarterly sampling event by approximately one order of magnitude. KNC will address additional investigation at TW-80 in its groundwater investigation plan for Phase II, which will be submitted separately.

EPA Specific Comment 12. Observations and Recommends, third page of that section. last bulleted item: Reference is again made regarding "concrete encapsulation at AOC "1. See comment above.

KNC Specific Response 12. See response to Specific Comment 3 above.

EPA Specific Comment 13. It is difficult to determine which well configuration phase (i.e., 1, 2, or 3) changes took place in wells TW-74 and TW-80 depicted in this Figure. Please add shading and label the phases to coincide with the dates the phases occurred in. It is also unclear why KNC chose to try and make a comparison between wells TW-74 and TW-80 for Nitrate/Nitrite using difference division (i.e., dividing by 10 for TW-74 and by 1000 for TW-80. Please explain.

KNC Specific Response 13. KNC will revise this figure when the optimization approach is revisited after the installation of additional wells. The intent of the figures was to depict the representative analyte concentrate changes observed during the optimization pumping periods, and to keep those trend lines in the same portion of the graph. Since the analyte concentrations differed by more than one order of magnitude, the concentrations were divided by multiples of 10 so that the data could be presented on the same graph. This could also be accomplished by using a separate ordinate for each analyte, but KNC believed the presentation it used would be less confusing.

EPA Specific Comment 14. Appendix A gives a description of each geologic cross section, then references a corresponding figure. In comparison of the text and figures, some discrepancies were noted as follows:

a. XS29E-The text states that TW -82 encountered the Graneros Shale bedrock surface. At what elevation (i.e., amsl) did TW-82 encounter the Graneros Shale?

b. XS37E-The text states that the Graneros Shale bedrock surface was encountered in six of the borings in this cross section. Please list the borings and its respective elevations.

c. XS40S-What is meant in the next to last sentence that states, "...as occurs (and occurred?)..." Please explain. List in the text, the elevations for TW-94 and TW-80 where the Graneros Shale was encountered.

d. XS64NE-The test states that four of the five borings encountered the shale bedrock surface. Please list the borings and its respective elevations.

e. XS74S-The text states in the first paragraph, "The deepest boring, TW-81A, was advanced to a depth of approximately 180 feet to an elevation of approximately 2,348 ft amsl." In the second paragraph, next to last sentence, the text states, "Bedrock surface elevations range from ...to below 2,350 ft amsl at TW81A ..." These sentences contradict each other. One says deepest boring was 2,348, and the other sentence says below 2,350 ft. Please explain.

f. *XS94E-Please list all borings and its respective elevations.*

g. *XSRG02E-Please list all borings and its respective elevations.*

h. *XSRG03E-Please include SIT-RG04 elevation in the text.*

KNC Specific Response 14. KNC will revise this discussion when the optimization approach is revisited after the installation of additional wells. The following information is provided to clarify the cross sections:

a. The Graneros Shale was encountered in TW-82 at an elevation of approximately 2,392 ft ams

b. The Graneros Shale was encountered in TW-37 (2,387 ft amsl), TW-87 (2,396 ft amsl), TW-05 (2,373 ft amsl), TW-01A (2,379 ft amsl), TW-83 (2,393 ft amsl), and TW-86 (2,382 ft amsl). A thin layer of sandstone was encountered above the shale at TW-86. All elevations are approximate.

c. The phrase "as occurs" should indeed read "and occurred". The Graneros Shale was encountered in TW-94 at approximately 2,378 ft amsl and in TW-80 at approximately 2,382 ft amsl.

d. The text mistakenly states that the shale bedrock surface was encountered in four of the five borings. Shale bedrock was actually only encountered in two of the borings, TW-01a at approximately 2,379 ft amsl and TW-49 at approximately 2,381 ft amsl.

e. TW-81A was advanced to a depth of approximately 176 ft or to the elevation of approximately 2,354 ft amsl.

f. Shale bedrock was encountered in TW-94 at 2,378 ft amsl, TW-92 at 2,388 ft amsl, TW-93 at 2,388 ft amsl, TW-77 at 2,382 ft amsl, and SIT-RG06 at 2,372 ft amsl (elevations are approximate). The borelog for the Feedmill boring does not report encountering bedrock.

g. Shale bedrock was encountered in SIT-RG06 at 2,366 ft amsl, TW-94 at 2,378 ft amsl, at TW-92 at 2,388 ft amsl, and TW-93 at 2,388 ft amsl (elevations are approximate). Bedrock was not encountered in TW-20.

h. Shale bedrock was encountered in SIT-RG04 at approximately 2,397 ft amsl.

EPA Specific Comment 15. Figure B-2: This figure shows the Nitrate/Nitrite concentration in groundwater. There are large areas of uncertainty on this figure. Please explain how KNC plans to resolve the uncertainty. Has KNC considered installing additional wells/geoprobe locations to better define the area of contamination? See Geologist Comment #2.

KNC Specific Response 15. As discussed in the meeting of May 15, KNC will submit a separate Plan to install additional monitoring wells to complete the delineation in areas where there is currently insufficient data.

EPA Specific Comment 16. Figure C-l: This figure is confusing. Some of the values have been divided by 100, while others have been divided by 1000. Please explain.

KNC Specific Response 16. See response to Specific Comment 13.

EPA Specific Comment 17. Appendix C: The charts should have each optimization configuration shaded and differentiated (labeled) between 1, 2, and 3 and correspond to the dates that each configuration was done.

KNC Specific Response 17. KNC will revise this discussion when the optimization approach is revisited after the installation of additional monitoring wells. The charts will be modified to reflect the pumping optimization periods.

Geologist Comments:

EPA Geologist Comment 1. It is not clear from reading the work plan whether the intention is to temporarily optimize in its present form through alternative pumping configurations before an assessment of the extent of groundwater contamination has been completed, or whether this work plan represents the totality of effort to improve the recovery system for a final remedy selection. Please clarify the intention and goals of this work plan as it relates to the long-term groundwater remedy at the facility.

KNC Response to Geologist Comment 1. As discussed by telephone and in the meeting of May 15. KNC's intent was to optimize the existing system while the assessment of the extent of contamination is being finalized. The Part 1 permit requires that the system continue to be operated. As noted, the intent of the optimization plan was to improve the functionality and reliability of a system that we are obligated to continuously operate.

EPA Geologist Comment 2. The efforts to evaluate the groundwater contamination recovery system to date, including this work plan, have been focused almost entirely on horizontal groundwater flow. In order to truly optimize the effectiveness of the groundwater recovery system, Koch must evaluate groundwater flow patterns and contaminant distribution in three-dimensions. For instance, if it was found that the highest concentrations of contamination were located in a relatively thin preferential flow zone, a more effective and efficient remediation system could result from locating the recovery well intake in such a zone. Numerous cross sections were included in Appendix A of the work plan, but the distribution of groundwater contamination was not shown on any of them. Additionally, the vertical component of groundwater flow cannot be evaluated because this requires the measurement of water levels in wells completed to different depths at the same location.

In reviewing the cross sections in Appendix A, the EPA notes that most of the wells utilized in the construction of the cross sections have excessively long screens relative to the saturated zone, which is approximately fifty (50) feet in thickness. Two problems with wells having screens of this length are that they (1) are unable to provide information on the vertical distribution of groundwater contamination, and (2) they are also unable to provide potentiometric data from within the aquifer at different depths so the vertical hydraulic gradient may be measured. The EPA believes that in order to determine both the horizontal and vertical distribution of groundwater contamination, and also to characterize the vertical as well as horizontal groundwater flow patterns, a number of monitoring well clusters need to be installed. Each cluster should consist of two (2) monitoring wells utilizing well screens preferably two (2) feet but no greater than five (5) feet in length. At each cluster location, one well screen should be placed in the upper part of the unconsolidated aquifer, with the top of the screen approximately five (5) feet

below the groundwater surface, and the deeper well screen should be placed in the lower part of the unconsolidated aquifer with the bottom of the well screen approximately five (5) feet from the top of the shale bedrock. Because there are several distinct source areas for groundwater contamination, and several areas of concern regarding the off-site migration of contamination, the EPA will present recommendations for each area separately. The EPA would like to emphasize that the suggested locations for additional monitoring wells are approximate and dependent upon drilling and installation considerations such as off-site property access and the presence of overhead and underground utilities and pipelines.

a. Area of Impact of the Original Spills of Chromium Corrosion Inhibitors

In order to help assess the three-dimensional extent of contamination as well as the horizontal and vertical capture zones of the recovery system relative to the original Nalco 374 spills, the EPA recommends installation of at least nine (9) two-well clusters. One well cluster should be located within 100 feet of existing well TW-54, one within 100 feet of TW-53, one within 100 feet of existing well TW-50, one within 100 feet of TW-29, one within 100 feet of one within 100 feet of TW-28, one within 100 feet of TW-9, one within 100 feet of TW 10, and one 500 feet east of TW-31 ±100 feet).

As an added measure of protectiveness for the Conrardy water supply well, a monitoring well cluster needs to be installed near TW-51.

b. Area Surrounding TW-65

In order to help assess the three-dimensional extent of groundwater contamination in the area of TW-65, one well cluster should be installed near TW-6S, one between TW -70 and T\V -66, and one between TW - 68 and TW-69.

c. Area Surrounding TW-80

In order to help assess the three-dimensional extent of groundwater contamination in the area of TW-80, one well cluster should be installed very near TW-80. Because they already provide water level and sampling data for the deep portion of the unconsolidated aquifer, one shallow aquifer monitoring well should be installed near each existing monitoring well SIT-RG-03, SIT-RG-04, and SITRG-O5. These three well clusters will provide valuable information regarding contaminant concentrations and distribution, and also horizontal and vertical groundwater flow patterns in the area around TW-80, leading to the design of more effective capture of contaminants. In order to provide an added measure of protectiveness for the Maxwell private water supply well directly south of the TW-80 area, the EPA believes that a well cluster needs to be installed at some point between TW-80 and the Maxwell well in order to monitor groundwater quality and ensure that water containing contamination exceeding MCLs does not reach the Maxwell well.

d. West Property Boundary

In order to monitor the off-site groundwater contamination west of the facility, at least two (2) clusters should be installed to assess the three-dimensional extent of groundwater contamination leaving the western boundary of the facility. One cluster should be installed at a location approximately 500 feet

south of, and 700-900 feet west of TW-37. Another cluster should be installed at a location approximately 700-900 feet west of SIT-RG-01.

e. East Property Boundary

In order to monitor the off-site groundwater contamination east of the facility, one monitoring well cluster should be installed TW and one well cluster should be installed between TW-84 and TW-70, and one cluster should be installed near TW-86.

f. Area Downgradient from Bogner Residence

Although not depicted on Figure B-4, we know that nitrate exceeded MCLs in the Bogner domestic water supply well, resulting in connecting the Bogner residence to the local municipal water supply system. The EPA is concerned with the potential for further migration of this plume downgradient from the Bogner residence. The EPA believes a monitoring well cluster should be installed at a point down gradient of the Bogner residence in order to assess groundwater quality in this area. The exact location would be dependent upon configuration of the property boundaries and discussions with property owners. At this point the EPA would like to bring up this concern for future discussions with Koch.

KNC Response to Geologist Comment 2. KNC will address installation of additional monitoring wells at these locations in its groundwater investigation plan for Phase II, which will be submitted separately. As discussed in the meeting of May 15, KNC will address item (f) by first determining the source of the contamination on the Bogner property.

EPA Geologist Comment 3. The EPA recommends that Koch consider using the recently released EPA guidance manual "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems" (EPA 600/R-08/003), dated January 2008. This guidance may provide some useful approaches for assessing the performance of the groundwater recovery system.

KNC Response to Geologist Comment 3. KNC obtained the guidance document prior to conducting the optimization analysis. Information from the guidance was incorporated into the planning and evaluation of the optimization activities. KNC will add the guidance document to the reference section of the report when the optimization is revisited following the delineation activities.

EPA Geologist Comment 4. The EPA recommends that Koch consider utilizing a groundwater flow model as an additional way to evaluate optimization of the groundwater recovery system.

KNC Response to Geologist Comment 4. KNC does not believe a predictive groundwater model would add significant value at this stage of the project due to the complexity of the lithology and the saturated zones. KNC has and will continue to use modeling, such as capture zone analysis, to evaluate field data. At the meeting in July 2008, KNC had also suggested at the meeting of July 26, 2008 the modeling of specific areas where further delineation is needed in order to optimize the placement of soil sample locations. However, at that time EPA advised that this was not necessary.

EPA Geologist Comment 5. A number of private water supply wells are located near the facility. These wells include those owned by Lix, Coker, Kansas Byproducts, Feed Mill, Bogner, Maxwell, Chaffin,

Tawzer, Buehne, and Conrardy. Koch needs to consider these wells in the groundwater optimization work plan because they could potentially impact the operation of the groundwater recovery system. Additionally, optimization of the groundwater recovery system must strive to ensure that contamination is contained so that it does not impact any of these private production wells. Koch needs to obtain information on these wells that may be relevant with regard to optimization of the groundwater recovery system. Such information should include details such as the depth interval of the well screen(s), the diameter of the weJ1, and the type and capacity of the pump. An accurate location of the well is also important; this may be determined by surveyor use of a sufficiently precise global positioning system (GPS). Finally, information regarding the use(s) of the water and the rate of usage should be obtained from the well owner.

KNC Response to Geologist Comment 5. Based on discussions at the meeting of May 15, KNC has begun gathering private well information. KNC will use this information in its groundwater investigation plan for Phase II.

EPA Geologist Comment 6. The EPA believes one of the most important goals of the recovery system is to prevent groundwater contamination from impacting neighboring off-site water production wells. Protection of these supply wells should be a primary goal during the process of optimizing performance of the groundwater recovery system. To this end, the EPA believes Koch needs to prepare a map for inclusion in the optimization work plan which shows all the property boundaries of all properties adjacent to the facility property. Each individually-owned parcel needs to be labeled with the owner's last name and all water production wells need to be located.

KNC Response to Geologist Comment 6. A figure identifying the offsite properties was provided to the EPA at their request in May 2006 during discussions between the Agencies and KNC on access agreements. This figure will updated to include well locations and will be incorporated into KNC's groundwater investigation plan for Phase II, which will be submitted separately.

EPA Geologist Comment 7. In Figure 3-2 there is a potentiometric surface map of the facility that was produced based on water level elevations collected on October 30, 2006 during the period when all of the site recovery wells were shut down. This is a very useful map, and should be reproduced in a larger size for the work plan, as it was for the Revised Phase II RFI Work Plan dated November 11, 2008.

KNC Response to Geologist Comment 7. A larger scale figure with more contour intervals will be prepared and provided to the EPA

EPA Geologist Comment 8. The work plan presents no discussion regarding properties of the aquifer that need to be considered when evaluating a groundwater recovery system. The work plan needs to include a discussion of the hydraulic conductivity of the aquifer, citing hydraulic conductivity values and how they were determined, discuss any preferential flow zones that have been identified, and relate this information to the design of the recovery system.

KNC Response to Geologist Comment 8. Calculated hydraulic conductivity data for 30 wells were previously provided to the EPA in the RFI Work Plan, Rev. 0, August 1, 2005, Table 3-3 entitled "Summary of Hydraulic Testing Results".

KNC has recently performed slug tests in select wells (May 2009 in conjunction with the biennial pump calibration requirement). The data are being analyzed and compared to the hydraulic conductivities previously reported, and will be referenced in the upcoming groundwater investigation plan.

EPA Geologist Comment 9. In Appendix B, please include additional figures showing the locations of the private water supply wells surrounding the facility that are sampled quarterly, along with the results for chromium and nitrate/nitrite for December 2006 and May 2008 for these wells. This information may be put on the same figure (and scale) as Figure B-4.

KNC Response to Geologist Comment 9. Private wells were not sampled in December 2006 and May 2008. However KNC will modify Figure B-4 by adding the private well locations and presenting the Nitrate plus Nitrite concentrations of the private wells, with the notation that the data on the drawing were acquired in different time frames. Although the optimization project will be postponed until more data are acquired, this figure will be relevant to the upcoming groundwater investigation and will be included in the Plan for this work.

EPA Geologist Comment 10. Please provide a detailed description of the procedure used to collect groundwater quality samples from the TW-series recovery wells.

KNC Response to Geologist Comment 10. As discussed in the meeting of May 15, KNC used the TW-series recovery well ground water sample collection procedures that are specified by the permit and more specifically in the sampling and analysis plan for the quarterly and semi-annual sampling specified under the Part I Permit. To maintain consistency and allow for comparison of data from multiple sampling events, KNC has been using this SAP for all sampling of the TW-series wells, even where not required under the Permit.