KOCH

KOCH NITROGEN COMPANY LLC

January 22, 2010

UPS Tracking Number
1Z 693 661 03 9577 1275 *1Z 693 661 03 9536 1486*

Ms. Andrea Stone
U.S. Environmental Protection Agency
Region VII
Air, RCRA, and Toxics Division
901 North 5th Street
Kansas City, KS 66101 (2 copies)

Kansas Department of Health & Environment
Bureau of Waste Management
Hazardous Waste Permits Section
1000 SW Jackson, Suite 320
Topeka, KS 66612-1366
Attn: Mostafa Kamal

Re: Koch Nitrogen Company, LLC Dodge City Nitrogen Plant, Dodge City, Ford County, KS
EPA I.D. NO. KSD044625010
PHASE II RFI WORK PLAN ADDENDUM NO. 2

Dear Ms. Stone and Mr. Kamal:

On behalf of Koch Nitrogen Company, LLC (KNC), I am enclosing for review and approval by the U.S. Environmental Protection Agency (EPA) under Part 2 of the KNC RCRA permit two copies of an addendum (No. 2) to the KNC Phase II RFI Work Plan. We are also providing a copy of the addendum to the Kansas Department of Health and Environment for its information.

The addendum is submitted in response to EPA's request by letter dated January 4, 2010 and KNC's proposal by letter dated July 29, 2009. The addendum addresses the seepage from the Recovery RO Equalization Basin (formerly Andco Effluent Basin) that KNC reported to the agencies by letter dated December 9, 2009 and the leakage from recovery well TW-83 that KNC reported to the agencies by letter dated July 29, 2009.

This addendum is not intended as a modification to sampling or analysis methods approved pursuant to the KNC RCRA permit, but is instead a presentation of the information set forth in the KNC RCRA permit, Part 2, Condition C.4 in response to the previously observed seepage at the Basin and leakage from TW-83.

KNC is also submitting, in response to EPA request, two process flow diagrams to show water usage and flow through the KNC facility. Please be aware that the systems shown on these diagrams go beyond the RCRA-regulated facility.

620.227.8631 Tel
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11559 U.S. Highway 50
P.O. Box 1337
Dodge City, Kansas 67801-1337

If you have any questions or require additional information regarding these matters, please contact Elise Stucky-Gregg (620) 227-8631 ext. 350.

Sincerely,

KOCH NITROGEN COMPANY, LLC

Gary J. LeRock
Plant Manager

cc:

Tom Siegrist, Koch Fertilizer (electronic)
Elise Stucky-Gregg, KNC Dodge City

Addendum No. 2 to
Phase II RFI Work Plan

January 22, 2010

In accordance with Section B.2.b of the Permit and 40 CFR 270.11, 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.

KOCH NITROGEN COMPANY, LLC

By: Gary J. LeRock

Gary LeRock
Facility Manager

1.0 Introduction

Koch Nitrogen Company, LLC (KNC) reported to the U.S. Environmental Protection Agency (EPA) by letter of December 9, 2007 that leakage of recovery and production well water had occurred at its Dodge City, Kansas facility (the Facility) from the former Andco effluent clarifier basin now known as the Recovery RO Equalization Basin. This basin now acts as an equalization basin for the recovered water reverse-osmosis (RO) system (figure 1) as part of the treatment system used to treat recovered groundwater under the KNC RCRA Permit, EPA I.D. No. KSD044625010.

In response to the 2007 event, KNC hired an engineering firm to design a liner system and reinforcement for the basin, and by letter of November 5, 2008, the Kansas Department of Health and Environment (KDHE) approved a proposal from KNC to perform repair and upgrades to the basin, including draining, cleaning, surface preparation of the basin, installation of a liner system, stabilization of the basin through the installation of a steel reinforcing band, and replacement of the basin roof. KNC completed this work in November 2009.

On November 30, 2009, KNC noted seepage from a crack in an outer wall of the Recovery RO Equalization Basin (Basin). Further evaluation on December 1, 2009 indicated that there was also water accumulated in the interstitial areas between the liner and the Basin wall. KNC began draining the Basin that evening and by the morning of December 2, 2009 the seepage had stopped. KNC finished draining the Basin and the liner was inspected. Upon inspection, a pinhole in the liner was discovered and repaired. The water was removed from behind the liner and the Basin was put back into service on the evening of December 3, 2009. The seepage was reported to EPA and KDHE by letter dated December 9, 2009.

In response to the KNC December 9 report, EPA requested that KNC prepare and submit an addendum to the approved Phase II RFI Work Plan, addressing information listed in Condition C.4 of Part II of the RCRA permit. KNC has therefore prepared this Addendum No. 2 to the Phase II RFI Work Plan (Phase II Work Plan) to provide a description of the work to be completed to characterize the seepage at the Basin.

Separately, on July 9th, 2009, while performing the 3rd quarter well gauging and inspection, KNC personnel discovered that the pump in TW-83, and its associated check valve, had failed. The failure of the pump allowed water from the header to flow through the pump and into the casing. It appeared that the header water had flowed in at a greater rate than the formation/screen could handle. This caused the water to fill the casing and eventually overflow onto the ground. The impacted ground surface covered an area approximately 40 ft x 30 ft west of TW-83. KNC reported the leakage to EPA and KDHE by letter

dated July 29, 2009. To characterize the impact of this leakage, KNC has included a proposal to conduct soil sampling in the area near TW-83 in this Phase II RFI Work Plan – Addendum No 2.

2.0 Phase II RFI Work Plan - Addendum No 2.

KNC will address the investigation associated with the Basin seepage and the leakage from TW-83 as an addendum (No. 2) to the RFI Phase II Work Plan, using a sampling and analysis protocol in accordance with the technical approach and field sampling protocol detailed in the approved Phase II Work Plan.

2.1 Seepage from the Recovery RO Equalization Basin

The surface area impacted by the Basin seepage is estimated at approximately 1 sq. ft. The seepage occurred at a crack on the northeast corner of the Basin. The seepage dripped down the wall where it pooled on a Basin support beam before flowing onto the ground. Soil sample locations will be located in and around the area where wetting of the soil was observed.

Samples will be collected at three (3) locations. Three depth sampling intervals will be tested (0.5 feet, 1.0 feet, and 2.0 feet bgs). Unique alphanumeric identifications will be assigned to each sampling location. Table 1 lists the sampling locations and depth intervals. Figure 2 denotes the sampling locations in relation to site features.

Table 1. Recovery RO Equalization Basin Sampling ID and Location Description

Sample ID	Description (bgs = below ground surface)	Laboratory Analyses
S14-SB01-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
S14-SB01-01	Grab sample at 1.0 ft bgs	
S14-SB01-02	Grab sample at 2.0 ft bgs	
S14-SB02-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
S14-SB02-01	Grab sample at 1.0 ft bgs	
S14-SB02-02	Grab sample at 2.0 ft bgs	
S14-SB03-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
S14-SB03-01	Grab sample at 1.0 ft bgs	
S14-SB03-02	Grab sample at 2.0 ft bgs	

If the results of the sampling indicate chromium or nitrate/nitrite impacts are above background levels, additional sampling will be conducted to delineate the impacted area. Sampling locations and depths associated with additional sampling will be provided as a separate submittal, if needed.

2.1 Leakage from TW-83

The surface area impacted by the leakage at TW-83 is estimated at approximately 1200 sq. ft. (30ft. by 40 ft.). The leakage flowed down gradient to the West. Soil sample locations will be located in and around the area where wetting of the soil was observed.

Samples will be collected at six (6) locations. Three depth sampling intervals will be tested (0.5 feet, 1.0 feet, and 2.0 feet bgs). Unique alphanumeric identifications will be assigned to each sampling location. Table 2 lists the sampling locations and depth intervals. Figure 3 denotes the sampling locations in relation to site features.

Table 2. TW-83 Sampling ID and Location Description

Sample ID	Description (bgs = below ground surface)	Laboratory Analyses
TW83-SB01-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
TW83-SB01-01	Grab sample at 1.0 ft bgs	
TW83-SB01-02	Grab sample at 2.0 ft bgs	
TW83-SB02-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
TW83-SB02-01	Grab sample at 1.0 ft bgs	
TW83-SB02-02	Grab sample at 2.0 ft bgs	
TW83-SB03-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
TW83-SB03-01	Grab sample at 1.0 ft bgs	
TW83-SB03-02	Grab sample at 2.0 ft bgs	
TW83-SB04-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
TW83-SB04-01	Grab sample at 1.0 ft bgs	
TW83-SB04-02	Grab sample at 2.0 ft bgs	
TW83-SB05-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
TW83-SB05-01	Grab sample at 1.0 ft bgs	
TW83-SB05-02	Grab sample at 2.0 ft bgs	
TW83-SB06-0.5	Grab sample at 0.5 ft bgs	As described in Section 3.0
TW83-SB06-01	Grab sample at 1.0 ft bgs	
TW83-SB06-02	Grab sample at 2.0 ft bgs	

If the results of the sampling indicate chromium or nitrate/nitrite impacts are above background levels, additional sampling will be conducted to delineate the impacted area. Sampling locations and depths associated with additional sampling will be provided as a separate submittal, if needed.

3.0 Sample Collection and Analyses

The sample collection procedures for the work to be conducted under this Addendum will be in accordance with the approved RFI SAP and accompanying Quality Assurance Project Plan (QAPP) [1], which have been prepared to support the specific quality assurance/quality control (QA/QC) activities designed to achieve the stated objectives in the RFI SAP.

Each sample location and interval will be analyzed for total chromium by Method 6010 B and hexavalent chromium by Method 7196. Where hexavalent Cr sampling results exceed 25 mg/kg, the soluble component will be evaluated by SPLP (Method 1312), with the extract analyzed for total Cr (Method 6010 B) and hexavalent Cr (Method 7196). Nitrate and nitrite will be evaluated in soils by Method SM 300.0 for nitrate plus nitrite.

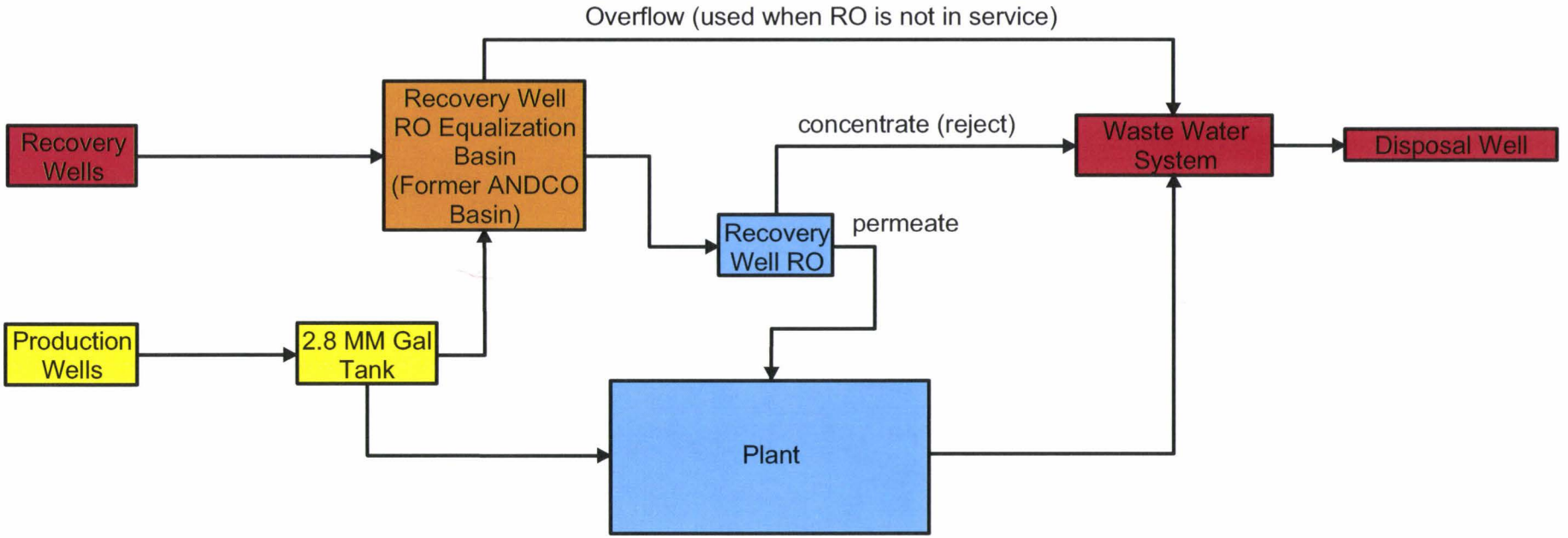
Appropriate containers will be used and procedures for the handling and transport of the samples, including the chain-of-custody procedures, will be in accordance with the RFI SAP. Samples will be kept in a pre-cooled ice chest until samples are logged, placed on ice, and transported to the laboratory.

The sampling results will be compared to threshold levels developed from the RFI background dataset. 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, the results will be discussed with EPA to determine future actions.

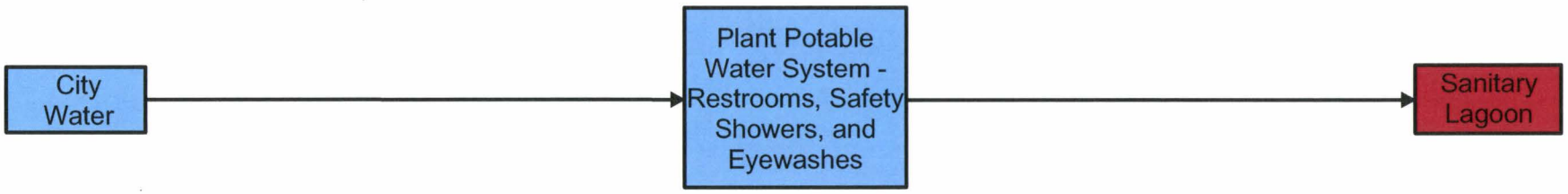
[1] Sampling and Approach Sampling and Analysis Plan RCRA Facility, Dodge City, Kansas, USEPA ID No. KSDO44625010. GeoSyntec Consultants, December 2005.

Attachment A
Figures

Groundwater Treatment Flow Diagram



Potable Water Flow Diagram



GROUNDWATER TREATMENT FLOW DIAGRAM

PREPARED BY:

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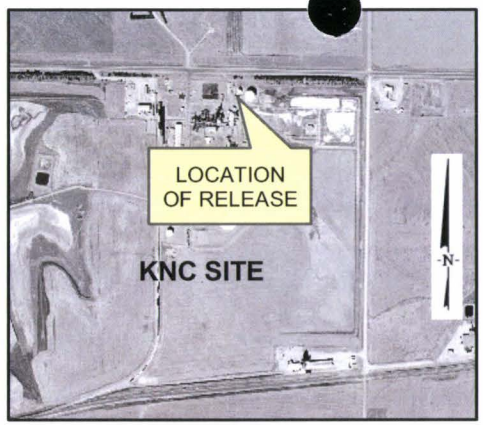
DODGE CITY, KS 67801

PROJECT NO.	FIGURE NO. 1
DATE. 1/18/2010	REVISION NO. 0

LOCATION OF RELEASE AND PROPOSED SAMPLES

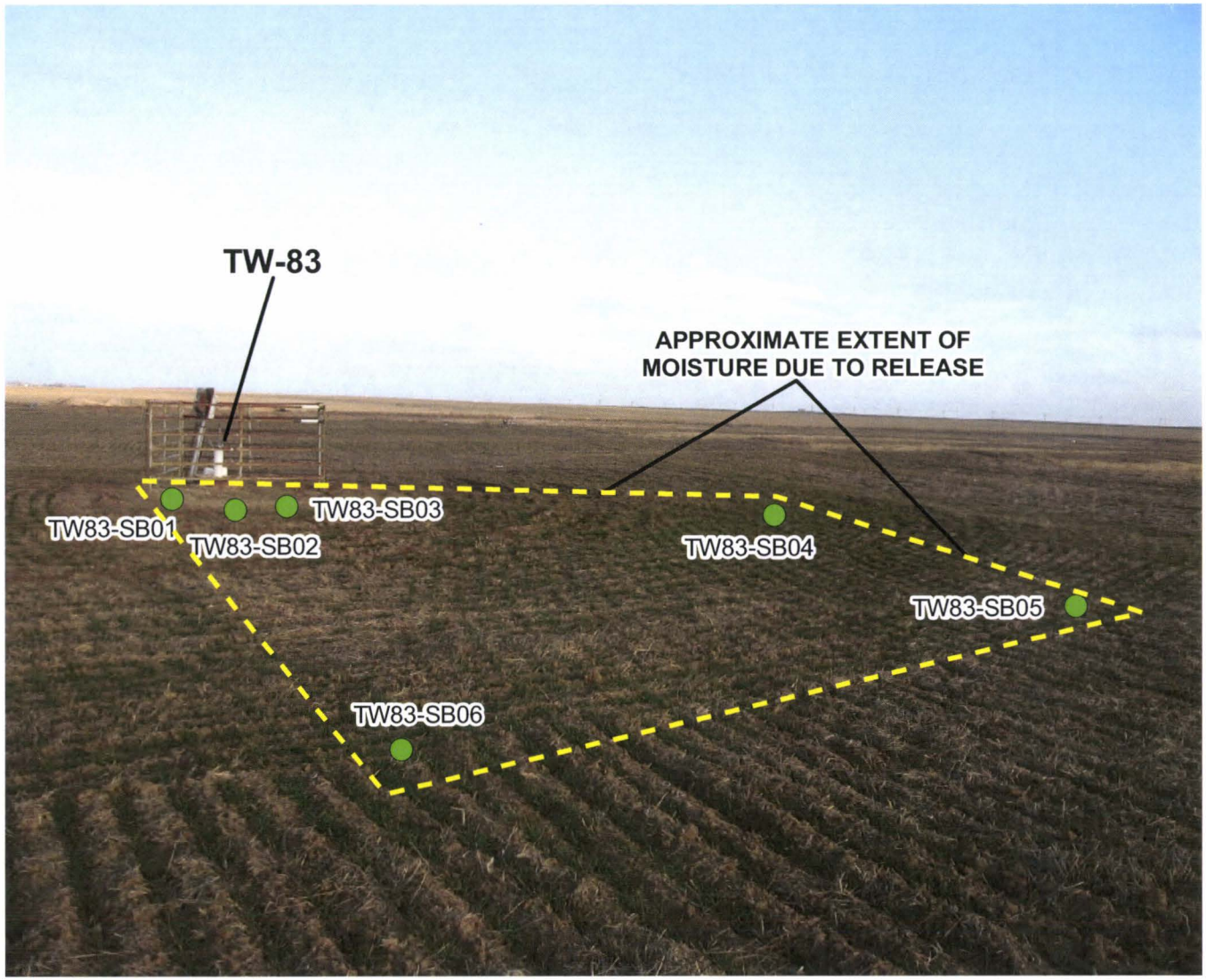


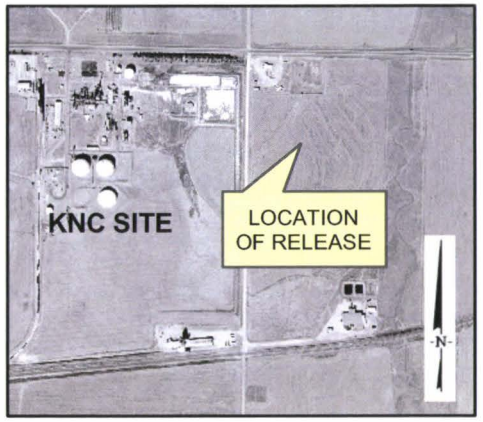
LEGEND

- PROPOSED SAMPLE LOCATION

RO EQUALIZATION SAMPLING LOCATIONS

PREPARED BY: KOCH NITROGEN COMPANY	
PROJECT NO.	FIGURE NO. 2
DATE. 1/18/2010	FILE NO.





LEGEND

PROPOSED SAMPLE LOCATION

**LOCATION OF RELEASE (LOOKING EAST)
AND PROPOSED SAMPLES**

**TW-83 LEAKAGE
SAMPLING LOCATIONS**

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PROJECT NO.	FIGURE NO. 3
DATE. 1/21/2010	FILE NO.