KOCH

KOCH NITROGEN COMPANY

CERTIFIED MAIL: RETURN RECIEPT REQUESTED: 7005 0390 0006 6702 2197

July 13, 2006

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

469370

RCRA RECORDS

RE: Koch Nitrogen Company – Dodge City, Kansas
EPA ID NO. KSD044625010
Soil Sampling – Andco Overflow and Recovery Well Pipeline Fracture Sites

Dear Ms. Stone:

Koch Nitrogen Company (KNC), as the owner and operator of the Dodge City Nitrogen Plant in Dodge City, Kansas, previously notified EPA and KDHE of an overflow at the Andco Clarifier Basin (July 8, 2005) and of leakage from the Recovery Well Pipeline System near Station 3 (November 16, 2005). In those transmittals, KNC noted that it did not consider these to be releases under Section C.4 of its Permit, and that it did not believe that these releases resulted in any residual soil or groundwater impacts.

From subsequent discussions with the Agencies, it is KNC's understanding that these areas do not meet the definition of "routine and systematic releases" that would require their inclusion in the ongoing RCRA Facility Investigation corrective action program, but that potential impacts to these areas would be more appropriately assessed by a separate investigation.

Based on these understandings, KNC has developed the enclosed Sampling and Analysis Plan (Plan) for investigating the soils directly downgradient of the areas where these releases occurred. For consistency, the attached SAP follows the procedures and protocols of KNC's SAP for the RCRA Facility Investigation approved by EPA on January 24, 2006.

KNC plans to conduct the sampling and analysis within 30 days of notification of the acceptance of the attached SAP. If you have any questions about the Plan, please contact AnnieLaurie Burke at (620) 227-8631, ext. 350.

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JUL 17 2006

ARTD/RCAP

11559 U.S. Highway 50 ▪ P.O. Box 1337 ▪ Dodge City, Kansas 67801-1337
620/227-8631 ▪ FAX 620/227-6016

In accordance with Section 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.

Sincerely,

KOCH NITROGEN COMPANY

Gary J. LeRock

Gary J. LeRock
Plant Manager

Encs.: Sampling and Analysis Plan, June 2006 (2 copies)

Cc: Mostafa Kamal, Kansas Department of Health and Environment
Steve Ellingson, KMS Wichita (electronic copy)
AnnieLaurie Burke, KNC Dodge City

Sampling and Analysis Plan

Andco Clarifier Basin Overflow and Pipe Fracture Groundwater Release

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KOCH NITROGEN FACILITY
DODGE CITY, KANSAS

Prepared By:

GeoStat **Environmental, LLC**
115 East Marlin, Suite 107
McPherson, KS 67460

February 2006

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1.0 Introduction

The Koch Nitrogen Plant (KNC) experienced two minor groundwater spills during 2005. This plan addresses these two spills. On June 24, 2005, approximately 1,000 gallons of recovered groundwater was released (overflowed) from the Andco Clarifier Basin (Figure 1 and 2). The release occurred as the result of a shutoff malfunction during installation of the Bogner's potable water line. An area operator noticed the overflow and immediately took action to stop the release by putting the recovery system in manual override to shutdown the pumps.

The second groundwater releases occurred on November 7, 2005 when approximately 200 gallons of recovered groundwater was released from a subsurface pipe fracture in the vicinity of TW-09 (Figure 3). An area operator noticed the pipe fracture and immediately took action to stop the release by turning the supply line off.

Koch Nitrogen Company notified the U.S. Environmental Protection Agency (EPA) of the overflow and pipe leak in accordance with operating permit and Kansas Department of Health and Environment (KDHE) K.A.R. 28-48-2.

2.0 Sampling and Analysis Plan

This Sampling and Analysis Plan (SAP) provides a discussion of the technical approach and field sampling protocol proposed to evaluate the spill areas. The sample collection procedures for the groundwater spills will be in accordance with the RFI Sampling and Analysis Plan and accompanying Quality Assurance Project Plan (QAPP) [1], which has been prepared to support the specific quality assurance/quality control (QA/QC) activities designed to achieve the stated objectives in the RFI Work Plan.

Andco Overflow

At the time of the groundwater release, the Andco clarifier basin contained recovered groundwater that had been treated by the electrochemical reduction unit. KNC believes that the

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

treated groundwater within the Andco clarifier basin contained 0.24 milligram per liter (mg/L) or less of chromium. Prior to treatment, groundwater extracted from recovery wells contains maximum chromium concentrations of 0.560 mg/L and maximum nitrite plus nitrate as (N) concentrations of 122 mg/L.

Pipe Fracture Leak

At the time of the pipe fracture and subsequent groundwater release, the discharge pipe contained recovered water from groundwater recovered in the vicinity of TW-09. KNC believes that the groundwater within the pipe contained 0.30 milligram per liter (mg/L) or less of chromium and a maximum nitrite plus nitrate as (N) concentration of 100 mg/L. A water sample was collected during the release event from the overland flow downgradient of the fractured pipe. The chromium concentrations were well below the levels estimated above from TW-09.

The following sections outline procedures to investigate the spill areas, including sampling locations, sample collection methods, and subsequent laboratory analysis.

2.1 Sampling Locations and Nomenclature

KNC personnel discovered the groundwater spills, observed the overflow locations, and noted the extent of the surface flow. Photographs taken after the spills depict the overflow locations and the surface flow directions in which the groundwater spill traveled. Soil sampling locations will be focused directly downgradient of the overflow and within the primary surface flow channels as determined through the visual inspections and photographs. Table 2-1 lists the sampling locations and depth intervals.

Unique alphanumeric identifications will be assigned to each sampling location. Sample designation, sampling time and date, sampling personnel, and analyses will also be recorded on the field records, sample labels, and chain-of-custody.

Table 2.1 Sample Locations

Sampling ID		Description
Andco Overflow	Pipe Fracture	
AO-01	PF-01	Depth composite sample (0 to 6 inches)
AO-02	PF-02	Depth composite sample (0 to 6 inches)
AO-03	PF-03	Depth composite sample (0 to 6 inches)
AO-04	PF-04	Depth composite sample (0 to 6 inches)

2.2 Sample Collection

Prior to commencement of field activities, field personnel will be trained on the requirements for data collection outlined in the FSP and QAPP to ensure the collection of representative data.

Four composite samples will be collected in the upper soil horizon (0 to 6 inches) at each sampling location (Figure 2 and Figure 3). Composite samples will be thoroughly mixed and placed into appropriate sample containers prior to shipment to the laboratory for analysis. All applicable health and safety procedures associated with the Koch Nitrogen Plant will be strictly followed during all sampling activities.

2.3 Sample Handling and Custody

Samples will be collected per the procedures discussed in the preceding sections. Sample collection containers will consist of one 4-ounce glass jar per sample. Procedures for the handling and transport of the samples will be in accordance with the recently developed RCRA Investigation Facility Sampling and Analyses Plan including the chain-of-custody procedures. Samples will be kept in a pre-cooled ice chest until samples are logged, placed on ice, transported to the laboratory.

2.4 Laboratory Sample Analyses

Soil samples obtained during the investigation will be analyzed for nitrate plus nitrite as N (USEPA Method 353.2), total chromium (USEPA Method 6010B). Analyses for chromium

using the Synthetic Precipitation Leaching Procedure (SPLP) (USEPA Methods 1312 and 6010B)[2] may be completed pending the results of the total chromium analyses. All analyses will be completed by a Kansas State Certified laboratory.

3.0 DATA MANAGEMENT

Data management provides a process for tracing the path of the data from their generation in the field or laboratory to their final use or storage. The following elements are included in this process: recording, validation, transformation, transmittal, reduction, analysis, tracking, storage and retrieval.

4.0 ANALYSIS AND REPORTING

The data from the analytical procedures will indicate the total chromium, nitrate plus nitrite concentrations, and leachable chromium concentrations in the soil. The Andco and pipe fracture sampling data will be compared to threshold levels developed from a background dataset. The background and threshold datasets are being 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 delineation may be required to determine future actions.

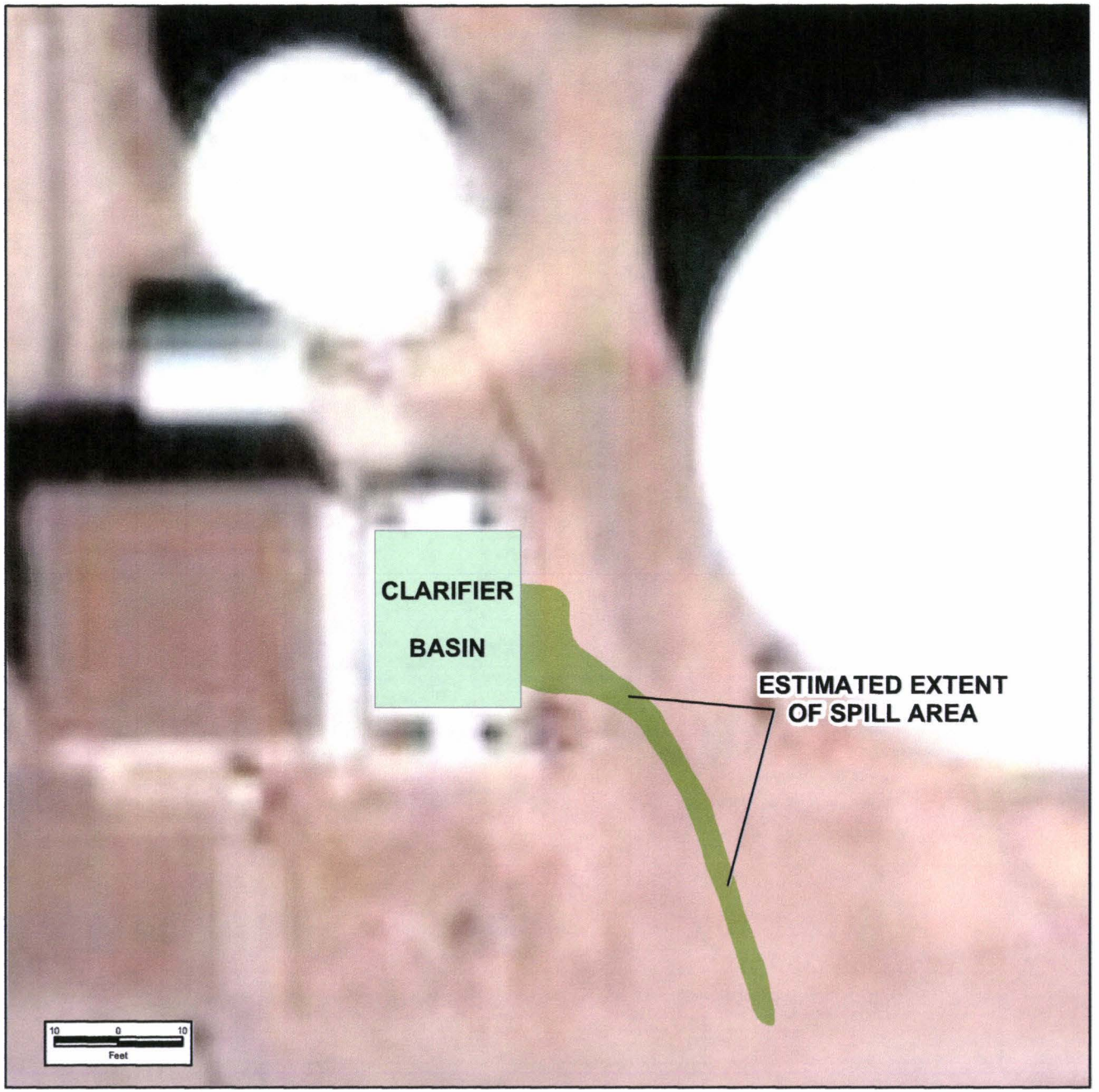
The results of the sampling and analysis will be summarized in a letter report. The report will include an analysis and interpretation of the laboratory results and recommendations for further action, if needed.

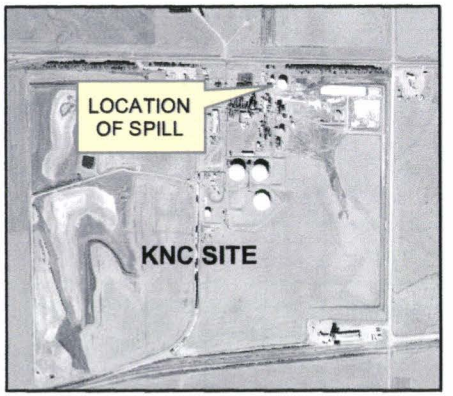
Copies of any field notes and the applicable KNC sampling documentation forms will be included in the report. The report will be submitted in draft form for review and comment to the KNC project manager. Any comments will incorporated into a final report.

[2] Approach described in the January 2004 CDU Closure Plan to evaluate direct contact and potential leaching to groundwater.

Appendix A

Figures

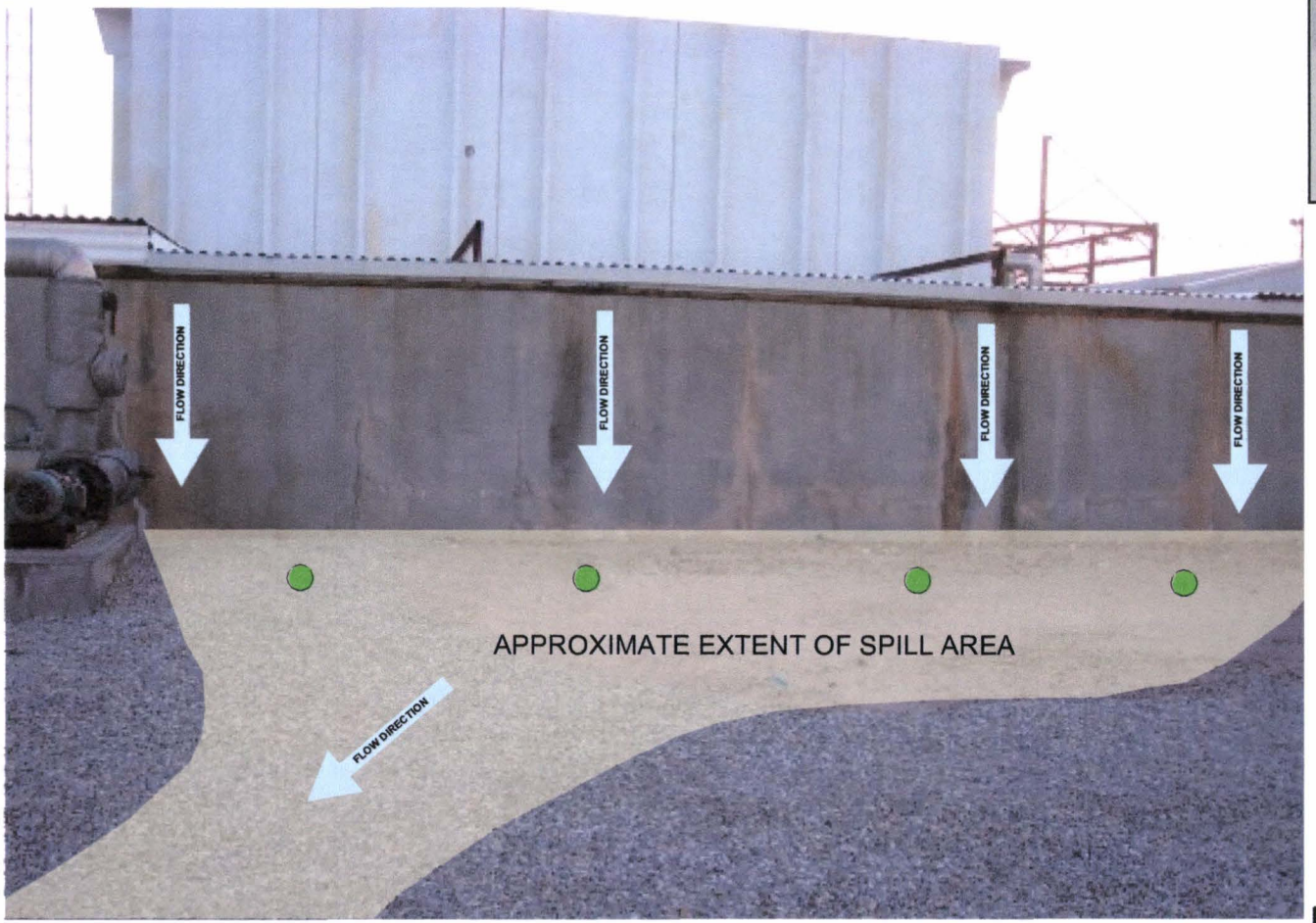




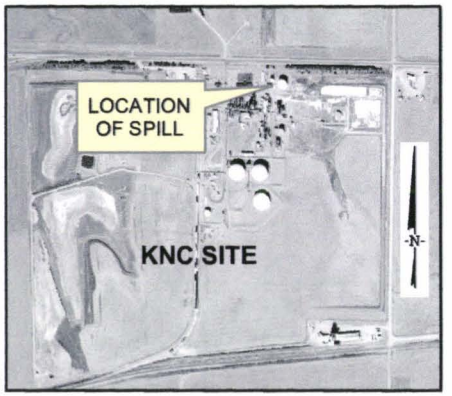
-N-

LOCATION AND ESTIMATED EXTENT OF SPILL

PREPARED FOR:	KOCH NITROGEN COMPANY 11550 US HIGHWAY 50 - P.O. BOX 1337 DODGE CITY, KS 67801
PREPARED BY:	GeoStat
PROJECT NO.	FIGURE NO. 1
DATE. JULY 2005	FILE NO.



VIEW OF EAST SIDE OF CLARIFIER BASIN AND SPILL AREA

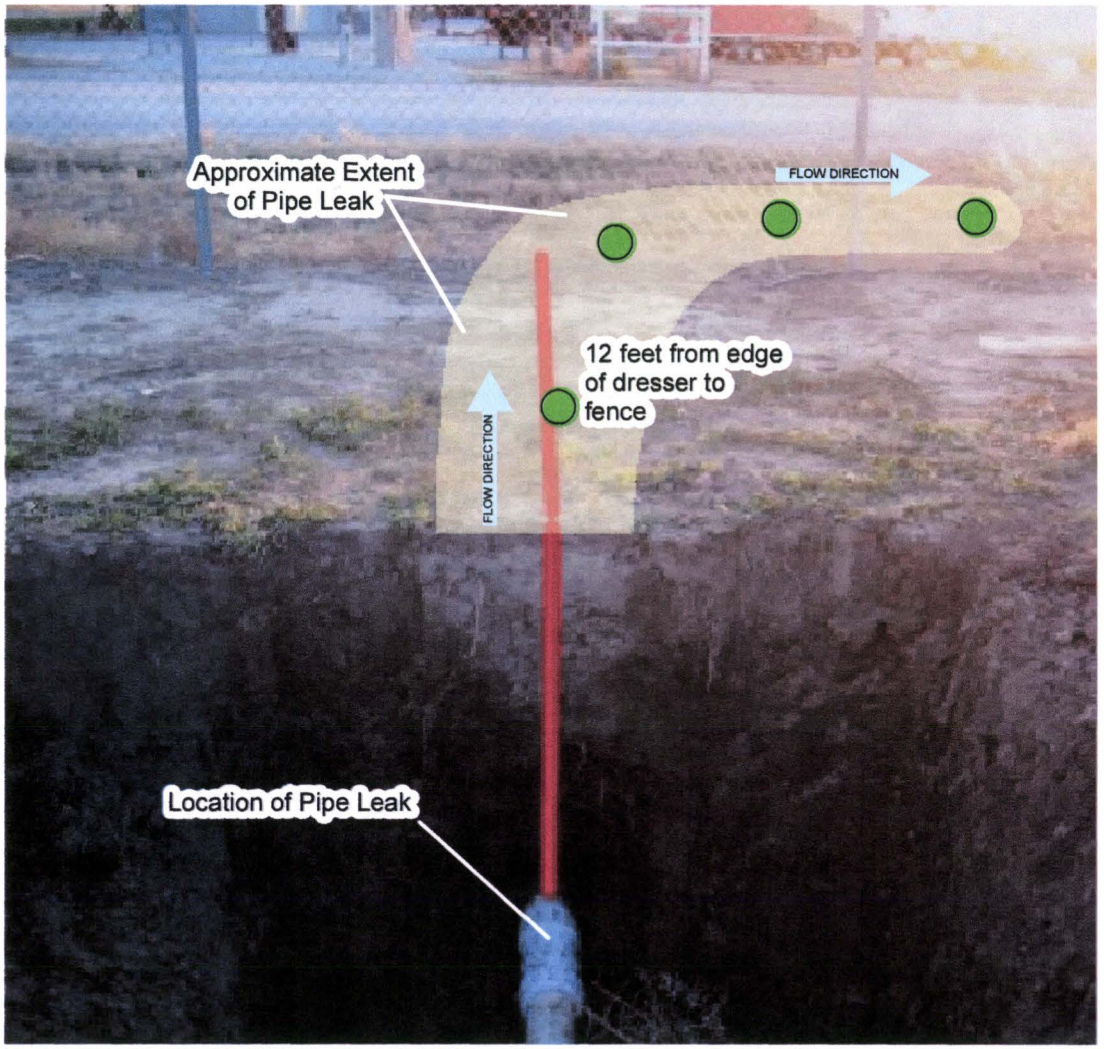


LEGEND

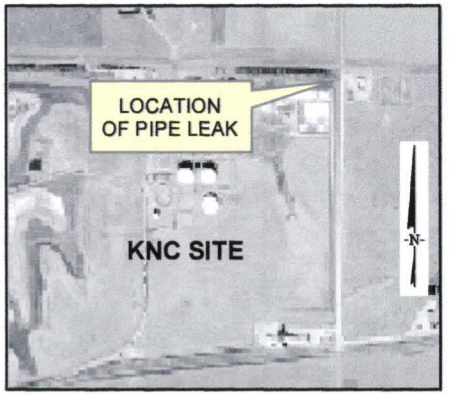
- PROPOSED SAMPLING LOCATION

OVERFLOW AREAS, FLOW DIRECTIONS, AND SAMPLING LOCATIONS

PREPARED FOR:	KOCH NITROGEN COMPANY 11555 US HIGHWAY 50 - P.O. BOX 1337 DODGE CITY, KS 67801
PREPARED BY:	GeoStat
PROJECT NO.	FIGURE NO. 2
DATE. JULY 2005	FILE NO.



LOCATION OF PIPE LEAK AND PROPOSED SAMPLING LOCATIONS - LOOKING EAST



LEGEND

PROPOSED SAMPLING LOCATION

PIPE LEAK AREA AND SAMPLING LOCATIONS

PREPARED FOR: KOCH NITROGEN COMPANY, 11595 US HIGHWAY 50 - P.O. BOX 1337, DODGE CITY, KS 67801	
PREPARED BY: GeoStat	
PROJECT NO.	FIGURE NO. 3
DATE. JANUARY 2006	FILE NO.