KOCH

KOCH NITROGEN COMPANY LLC

CERTIFIED MAIL: RETURN RECEIPT REQUESTED:

April 24, 2009

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Environmental Scientist
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

Director 7007 0710 0003 4183 1112
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

RE: Koch Nitrogen Company – Dodge City, Kansas
EPA ID NO. KSD044625010
Replacement Pages: Summary of Results for Miscellaneous Spills

Dear Ms. Stone:

Enclosed are two hard copies of the replacement pages for the referenced report, which were sent previously in electronic form.

If you have any, please contact me at (620) 227-8631, ext. 350.

Sincerely,

KOCH NITROGEN COMPANY

AnnieLaurie Burke
Environmental Excellence Leader

RCAP RECEIVED
APR 27 2009

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1.0 Introduction

On September 6, 2006, Koch Nitrogen Company (KNC) submitted a revised investigation plan to EPA and KDHE for three sites where small releases of recovered water had occurred (*Sampling and Analysis Plan (SAP) for the Andco Clarifier Basin Overflow, Pipe Fracture, and Pipe Union Failure Groundwater Release)*. On November 7, 2006, KNC received approval (with comments) to implement this SAP. Field work for this SAP was completed during the first quarter of 2007.

On April 7, 2007, during the preparations for quarterly sampling, KNC discovered that a leaking valve at groundwater extraction well TW-28 had released a small amount of groundwater. The spill was reported to EPA and KDHE upon discovery, with specific details associated with the spill and the response. Because of the similarity of this release to those covered in the SAP, EPA suggested that the referenced SAP be supplemented to include the investigation at TW-28, using sampling and analysis protocol in accordance with the technical approach and field sampling protocol detailed in that SAP. The amendment was prepared and submitted to EPA on May 31, 2007. Sampling was completed in December, 2007.

A second leak at TW-28 and two additional releases of recovered water occurred during 2008 at TW-89 and at the pipeline between well TW-85 and TW-67. An investigation to determine the extent of soil impacts, if any, from these three new releases has not been completed.

KNC has prepared this Addendum to the Phase II RFI Sampling and Analysis Plan (Phase II SAP) to present the results for the Andco Clarifier Basin Overflow, Pipe Fracture, Pipe Union Failure, and first TW-28 Valve Malfunction and to provide recommendations for the investigations at TW-89, the pipeline between TW-85 and TW-67, and the second release at TW-28.

2.0 Sampling Results (Andco Clarifier Basin Overflow, Pipe Fracture, Pipe Union Failure, First TW-28 Valve Malfunction)

Soil sampling results for the Andco clarifier basin overflow, pipe fracture, pipe union failure, and the TW-28 valve malfunction events are provided on Figures 2-1, 2-2, 2-3, and 2-4. Laboratory reports are provided in Attachment B. Table 2-1 provides a summary of findings and recommendations for each release site.

Table 2-1. Summary of Findings and Recommendations by Area

Site	Analyte	Summary Of Findings	Conclusions/ Recommendations
Pipe Fracture	Cr	Maximum Cr concentration detected at 18.0 mg/kg. Soil concentrations are below the site background levels (20.1 mg/kg).	No further action (NFA)
	N	Maximum N concentration detected at 32.0 mg/kg. Value is above site background levels, but below KDHE action levels for soils (85 mg/kg for the upper 8 inches in depth and 40 mg/kg for below 8 inches in depth).	No further action (NFA)
Pipe Union Failure	Cr	Maximum Cr concentration detected at 18.4 mg/kg. Soil concentrations are below the site background levels (20.1 mg/kg).	No further action (NFA)
	N	Maximum N concentration detected at 65.0 mg/kg at 2.0 feet bgs. Value is above site background levels and above KDHE action levels for soils (40 mg/kg for below 8 inches in depth). The soil volume impacted at 65.0 mg/kg is estimated to be less than 2 cu. yds. The impacted area appears limited in extent. Other soil samples in the vicinity are below the KDHE action level.	No further sampling is recommended; possible soil removal as part of overall site cleanup activities.
TW-28 Valve Malfunction	Cr	Maximum Cr concentration detected at 18.0 mg/kg. Soil concentrations are below the site background levels (20.1 mg/kg).	No further action (NFA)
	N	Maximum N concentration detected at 45.0 mg/kg at 2.0 feet bgs. Value is above site background levels and slightly above KDHE action levels for soils (40 mg/kg for below 8 inches in depth). The soil volume impacted at 45.0 mg/kg is estimated to be less than 5 cu. yds. The impacted area appears limited in extent. Other soil samples in the vicinity are below the KDHE action level.	Possible soil removal as part of overall site cleanup activities. *Upgradient sampling may be conducted as part of the Andco Basin sampling program as discussed in the RFI Phase II Work Plan.
Andco Basin Overflow	Cr	Cr concentrations above the background levels were detected in one borehole at two sample intervals (20.8 mg/kg at 0.5 ft and 24.9 mg/kg at 1.0 feet bgs). All other Cr	No further sampling is recommended; possible soil removal as part of overall site cleanup activities.

		concentrations were below site background levels (20.1 mg/kg).	
	N	Several samples with concentrations detected at above background levels and above KDHE action levels (40 mg/kg) for soils below 8 inches in depth. However, all samples were below the KDHE 85 mg/kg level for soils in the upper 8 inches.	No further sampling is recommended; possible soil removal as part of overall site cleanup activities.

*Upgradient impacts at TW-28 may be the result of historical spills from the Clarifier Basin and may not be associated with the water release at TW-28.

3.0 Phase II RFI Work Plan - Addendum No 1.

KNC experienced three groundwater releases from its groundwater recovery system in 2008. The specifics of each release are provided below, along with recommendations for soil sampling. This information is being submitted as an addendum (Addendum No. 1) to the approved RFI Phase II Work Plan.

3.1 Recovered Water Release at Well TW-89

On November 6, 2008, KNC was conducting the scheduled routine sampling event, and found that debris borne by the high winds impacted the above-ground valve appurtenance at TW-89, causing about 50 gallons of recovered groundwater to be released onto the ground. The most recent groundwater analytical data (May 2008) for TW-89 show the water from this well has a total Cr concentration of 0.012 mg/l of total chromium, and a nitrate-nitrite concentration of 74.6 mg/l. Thus, the water released would likely have had a maximum Cr content of 0.002 grams (5.0 E-6 lbs).

KNC will address the investigation associated with the release as an addendum to the RFI Phase II Work Plan with sampling and analysis protocol in accordance with the technical approach and field sampling protocol detailed in Phase II SAP.

<u>Soil Sampling Plan</u>

The surface area impacted by the release at TW-89 is estimated at approximately 250 sq. ft. as depicted in Figure 3-1. The leak occurred at the well head and flowed a short distance to the access road and then eastward down the road. The width of the downgradient channel was estimated at approximately 3 feet and extended a distance of approximately 75 feet. The depth of the wetting front is estimated at less than 1 foot below ground surface based on the observed soil density, volume of water released, and the observed surface flow area.

Soil samples locations will be focused directly downgradient of the overflow and within the primary surface flow channels as determined through the visual inspections and photographs. These areas received the longest contact time and, therefore, would show the greatest impacts, if any.

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.

Samples will be collected at four (4) locations. Three depth sampling intervals will be tested (0.5 feet, 1.0 feet, and 2.0 feet bgs). Sampling greater than 2 feet below ground surface is not proposed. Table 3-1 lists the sampling locations and depth intervals. Figures 3-1 denotes the sampling locations in relation to site features.

Table 3-1. TW-89 Sampling ID and Location Description

Sample ID	Description (bgs = below ground surface)	Laboratory Analyses
TW-89-01-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
TW-89-01-02	Grab sample at 1.0 ft bgs	
TW-89-01-03	Grab sample at 2.0 ft bgs	
TW-89-02-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
TW-89-02-02	Grab sample at 1.0 ft bgs	
TW-89-02-03	Grab sample at 2.0 ft bgs	
TW-89-03-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
TW-89-03-02	Grab sample at 1.0 ft bgs	
TW-89-03-03	Grab sample at 2.0 ft bgs	
TW-89-04-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
TW-89-04-02	Grab sample at 1.0 ft bgs	
TW-89-04-03	Grab sample at 2.0 ft bgs	

If results of sampling indicate chromium or nitrate/nitrite impacts 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.

3.2 Recovered Water Release at the Pipeline between TW-85 and TW-67

On November 7, 2008, KNC was notified by Servi-Tech Labs, a contractor for the neighboring Dodge City Services facility, that they had struck KNC's groundwater recovery header line approximately 350 feet south of TW-85. Servi-Tech had been performing soil sampling with a direct-push drilling rig in this area, which is part of the Dodge City Services (DCS) facility. This line is part of the system that KNC

operates to extract and treat groundwater impacted by historical operations at the Plant. KNC had not been notified by Kansas One-Call, the rig operator or DCS of any drilling activity prior to the notification of the incident. KNC immediately shut down the wells to stop the release, and contacted KDHE when it was found that the repairs could not be completed the same day. The KNC team documented the damage and water release with photos, and sampled the leak. KNC was able to have the damage repaired on an emergency basis the morning of November 8, and the system was returned to service before noon of that day. The leak was estimated to be 48,000 gallons of recovered groundwater, based on visual observation and data from the recovered water system monitoring equipment. A sample collected from the leaking pipe showed a nitrate-nitrite value of 77.0 mg/l and Cr value 0.071 mg/l. The potential release of Cr is estimated at 12.9 grams (0.028 lbs).

Soil Sampling Plan

It is difficult to estimate the subsurface area impacted by this event. However, released water from the subsurface piping tends to well up through the preferential pathway created by the borehole, primarily saturating the ground above the damaged pipe. Water migrates upwards due to the relatively low permeability of the undisturbed soil beneath the pipeline versus that of the disturbed soils above the pipeline.

The surface area impacted by the release is estimated at approximately 2500 sq. ft., as depicted in Figure 3-2. The depth of the wetting front is estimated at less than 1 foot below ground surface based on the observed soil density, volume of water released, and the observed surface flow area.

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.

When the release occurred, the water flowed down hill to the south and east (the terrain slopes southeast from the pipeline). Soil borings will be located south and east of the damaged recovery header, where saturated soil was observed. Samples will be collected at ten (10) locations. Three depth sampling intervals will be tested (0.5 feet, 1.0 feet, and 2.0 feet bgs). Sampling greater than 2 feet below ground surface is not proposed. Table 3-2 lists the sampling locations and depth intervals. Figure 3-2 denotes the sampling locations in relation to site features.

Table 3-2. Pipeline between TW-85 and TW-67 Sampling ID and Location Description

Sample ID	Description (bgs = below ground surface)	Laboratory Analyses
DCS-PL -01-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-01-02	Grab sample at 1.0 ft bgs	
DCS-PL-01-03	Grab sample at 2.0 ft bgs	
DCS-PL-02-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-02-02	Grab sample at 1.0 ft bgs	
DCS-PL-02-03	Grab sample at 2.0 ft bgs	
DCS-PL-03-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-03-02	Grab sample at 1.0 ft bgs	
DCS-PL-03-03	Grab sample at 2.0 ft bgs	
DCS-PL-04-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-04-02	Grab sample at 1.0 ft bgs	
DCS-PL-04-03	Grab sample at 2.0 ft bgs	
DCS-PL-05-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-05-02	Grab sample at 1.0 ft bgs	
DCS-PL-05-03	Grab sample at 2.0 ft bgs	
DCS-PL-06-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-06-02	Grab sample at 1.0 ft bgs	
DCS-PL-06-03	Grab sample at 2.0 ft bgs	
DCS-PL-07-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-07-02	Grab sample at 1.0 ft bgs	
DCS-PL-07-03	Grab sample at 2.0 ft bgs	
DCS-PL-08-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-08-02	Grab sample at 1.0 ft bgs	
DCS-PL-06-03	Grab sample at 2.0 ft bgs	
DCS-PL -09-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-09-02	Grab sample at 1.0 ft bgs	
DCS-PL-09-03	Grab sample at 2.0 ft bgs	
DCS-PL -10-01	Grab sample at 0.5 ft bgs	As described in Section 3.4
DCS-PL-10-02	Grab sample at 1.0 ft bgs	
DCS-PL-10-03	Grab sample at 2.0 ft bgs	

If results of sampling indicate chromium or nitrate/nitrite impacts 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.

3.3 Release at TW-28

KNC management staff were in the vicinity of TW-28 on January 4, 2008, and no leakage was observed from the valve. High north winds during the weekend of January 5 - 6, 2008 blew vegetative debris ("tumbleweeds") into the area around the well. A mass of this debris became hung up on the valve stem and handle, and it appears that this caused the valve to open. The valve was closed immediately upon discovery on January 7. Assuming a conservative worst-case leakage duration (i.e., that the valve opened immediately after management staff left the area on Friday, January 4 and continued in the open position until discovery at about 2 p.m. on January 7), and based on the measured flowrate from the valve following the incident, approximately 12,400 gallons of water could have flowed from TW-28. The most recent groundwater analytical data from TW-28 indicated a concentration of 0.212 mg/l of total chromium. Thus, the water released over the 69-hour period would have a maximum Cr content of 10 grams (0.02 lb).

Soil Sampling Plan

The surface area impacted by the release at TW-28 is similar in nature and extent to a prior release at TW-28 in 2007, as depicted in Figure 2-4. As such, soil samples will be focused in seven (7) of the locations previously sampled during the first TW-28 release; directly downgradient of the overflow and within the primary surface flow channels as determined through the visual inspections and photographs.

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.

The seven (7) new sample locations will be placed near previous sampling locations, as described in Table 3-3. Three depth sampling intervals will be tested (0.5 feet, 1.0 feet, and 2.0 feet bgs). Sampling greater than 2 feet below ground surface is not proposed.

Table 3-3. TW-28 Sampling ID and Location Description

Sample ID/ Approximate Location	Description (bgs = below ground surface)	Laboratory Analyses

TW-28-19-01 (near TW-28-01-01) TW-28-19-02 (near TW-28-01-02) TW-28-19-03 (near TW-28-01-03)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4
TW-28-20-01 (near TW-28-02-01) TW-28-20-02 (near TW-28-02-02) TW-28-20-03 (near TW-28-02-03)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4
TW-28-21-01 (near TW-28-03-01) TW-28-21-02 (near TW-28-03-02) TW-28-21-03 (near TW-28-03-02)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4
TW-28-22-01 (near TW-28-04-01) TW-28-22-02 (near TW-28-04-02) TW-28-22-03(near TW-28-04-03)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4
TW-28-23-01 (near TW-28-05-01) TW-28-23-02 (near TW-28-05-02) TW-28-23-03 (near TW-28-05-03)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4
TW-28-24-01 (near TW-28-06-01) TW-28-24-02 (near TW-28-06-02) TW-28-24-03 (near TW-28-06-02)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4
TW-28-25-01 (near TW-28-07-01) TW-28-25-02 (near TW-28-07-02) TW-28-25-03 (near TW-28-07-02)	Grab sample at 0.5 ft bgs Grab sample at 1.0 ft bgs Grab sample at 2.0 ft bgs	As described in Section 3.4

If results of sampling indicate chromium or nitrate/nitrite impacts 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.

3.4 Sample Collection and Analyses

The sample collection procedures for this SWMU will be in accordance with the RFI SAP and accompanying Quality Assurance Project Plan (QAPP) [1], which has been prepared to support the specific

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

quality assurance/quality control (QA/QC) activities designed to achieve the stated objectives in the RFI SAP.

At each sample location and interval, a small volume of soil will be homogenized and split for analyses of 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).

NCOI will be evaluated in soils by Method SM 300.0 for nitrate plus nitrite. Although, nitrite speciation to date has yielded only non-detects, KNC proposes to analyze all Phase II soil samples for nitrite.

Sample collection containers will consist of one 8-ounce glass jar per sample. Procedures for the handling and transport of the samples, including the chain-of-custody procedures, will be in accordance with the recently developed RFI SAP. Samples will be kept in a pre-cooled ice chest until samples are logged, placed on ice, 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, additional delineation may be required to determine future actions.

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	119 mg/kg
Total Chromium	0.5 Ft.	33.7 mg/kg
Total Chromium	1.0 Ft.	127 mg/kg
Total Chromium	1.0 Ft.	14.9 mg/kg
Total Chromium	2.0 Ft.	17.8 mg/kg
Total Chromium	2.0 Ft.	16.0 mg/kg
Nitrate/Nitrite	0.5 Ft.	24 mg/kg
Nitrate/Nitrite	1.0 Ft.	18 mg/kg
Nitrate/Nitrite	2.0 Ft.	25 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	140 mg/kg
Total Chromium	1.0 Ft.	31.6 mg/kg
Total Chromium	2.0 Ft.	31.7 mg/kg
Nitrate/Nitrite	0.5 Ft.	35.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	34.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	26.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	22.8 mg/kg
Total Chromium	1.0 Ft.	23.2 mg/kg
Total Chromium	2.0 Ft.	20.1 mg/kg
Nitrate/Nitrite	0.5 Ft.	26.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	8.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	7.0 mg/kg

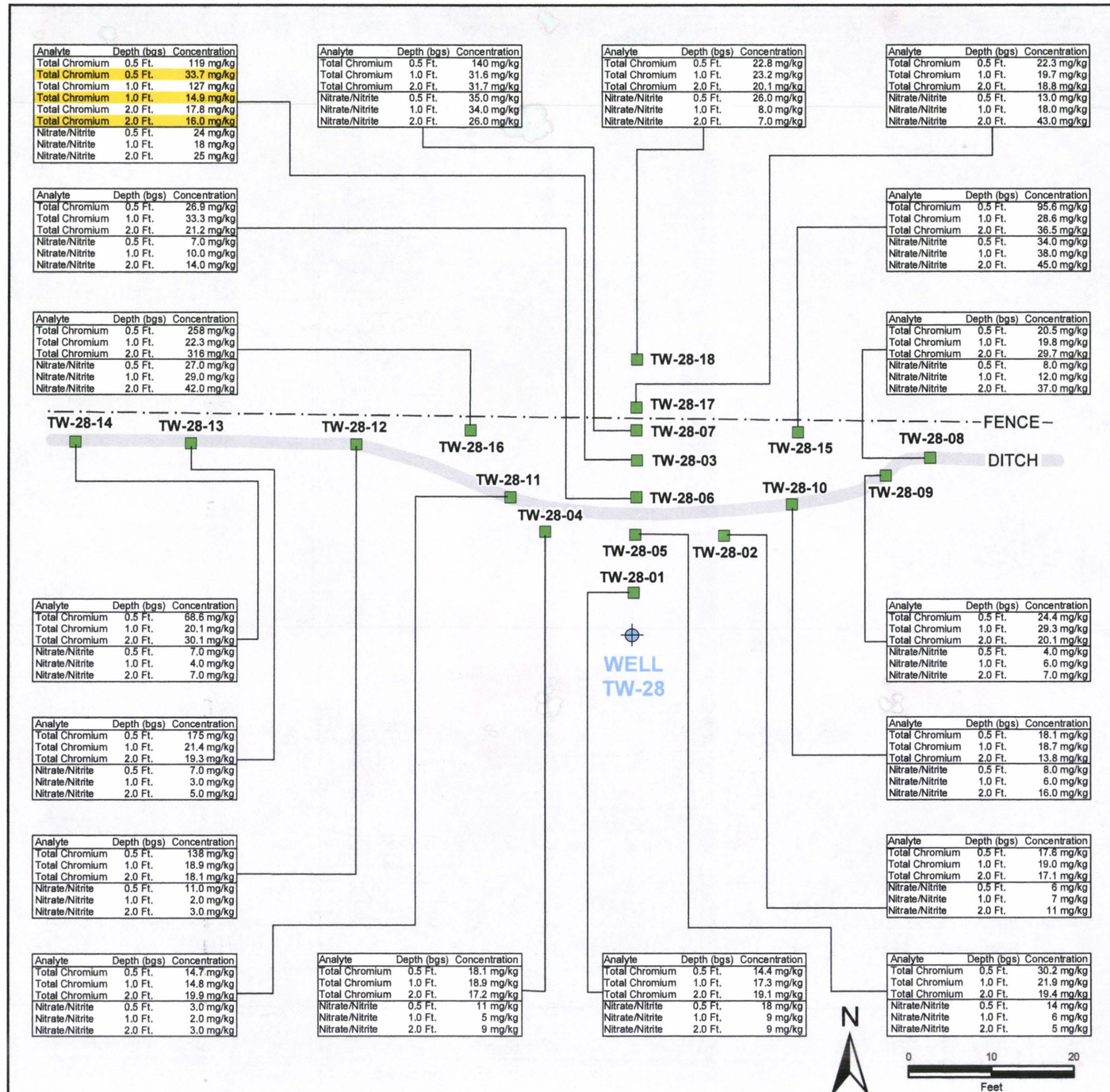
Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	22.3 mg/kg
Total Chromium	1.0 Ft.	19.7 mg/kg
Total Chromium	2.0 Ft.	18.8 mg/kg
Nitrate/Nitrite	0.5 Ft.	13.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	18.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	43.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	26.9 mg/kg
Total Chromium	1.0 Ft.	33.3 mg/kg
Total Chromium	2.0 Ft.	21.2 mg/kg
Nitrate/Nitrite	0.5 Ft.	7.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	10.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	14.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	95.6 mg/kg
Total Chromium	1.0 Ft.	28.6 mg/kg
Total Chromium	2.0 Ft.	36.5 mg/kg
Nitrate/Nitrite	0.5 Ft.	34.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	38.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	45.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	258 mg/kg
Total Chromium	1.0 Ft.	22.3 mg/kg
Total Chromium	2.0 Ft.	316 mg/kg
Nitrate/Nitrite	0.5 Ft.	27.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	29.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	42.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	20.5 mg/kg
Total Chromium	1.0 Ft.	19.8 mg/kg
Total Chromium	2.0 Ft.	29.7 mg/kg
Nitrate/Nitrite	0.5 Ft.	8.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	12.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	37.0 mg/kg



Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	68.6 mg/kg
Total Chromium	1.0 Ft.	20.1 mg/kg
Total Chromium	2.0 Ft.	30.1 mg/kg
Nitrate/Nitrite	0.5 Ft.	7.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	4.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	7.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	24.4 mg/kg
Total Chromium	1.0 Ft.	29.3 mg/kg
Total Chromium	2.0 Ft.	20.1 mg/kg
Nitrate/Nitrite	0.5 Ft.	4.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	6.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	7.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	175 mg/kg
Total Chromium	1.0 Ft.	21.4 mg/kg
Total Chromium	2.0 Ft.	19.3 mg/kg
Nitrate/Nitrite	0.5 Ft.	7.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	3.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	5.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	18.1 mg/kg
Total Chromium	1.0 Ft.	18.7 mg/kg
Total Chromium	2.0 Ft.	13.8 mg/kg
Nitrate/Nitrite	0.5 Ft.	8.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	6.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	16.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	138 mg/kg
Total Chromium	1.0 Ft.	18.9 mg/kg
Total Chromium	2.0 Ft.	18.1 mg/kg
Nitrate/Nitrite	0.5 Ft.	11.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	2.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	3.0 mg/kg

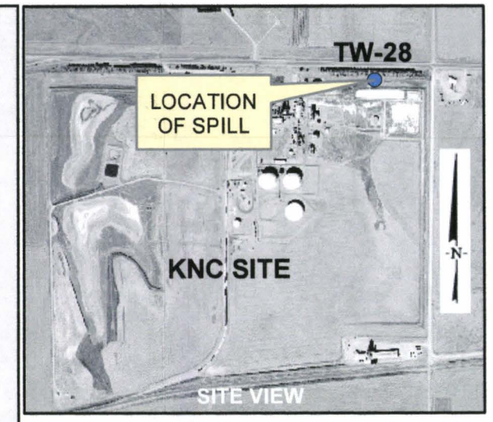
Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	17.6 mg/kg
Total Chromium	1.0 Ft.	19.0 mg/kg
Total Chromium	2.0 Ft.	17.1 mg/kg
Nitrate/Nitrite	0.5 Ft.	6 mg/kg
Nitrate/Nitrite	1.0 Ft.	7 mg/kg
Nitrate/Nitrite	2.0 Ft.	11 mg/kg

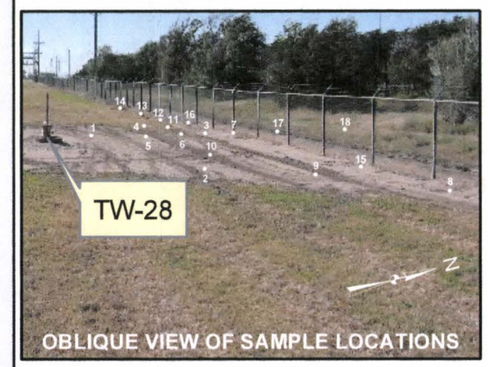
Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	14.7 mg/kg
Total Chromium	1.0 Ft.	14.8 mg/kg
Total Chromium	2.0 Ft.	19.9 mg/kg
Nitrate/Nitrite	0.5 Ft.	3.0 mg/kg
Nitrate/Nitrite	1.0 Ft.	2.0 mg/kg
Nitrate/Nitrite	2.0 Ft.	3.0 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	18.1 mg/kg
Total Chromium	1.0 Ft.	18.9 mg/kg
Total Chromium	2.0 Ft.	17.2 mg/kg
Nitrate/Nitrite	0.5 Ft.	11 mg/kg
Nitrate/Nitrite	1.0 Ft.	5 mg/kg
Nitrate/Nitrite	2.0 Ft.	9 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	14.4 mg/kg
Total Chromium	1.0 Ft.	17.3 mg/kg
Total Chromium	2.0 Ft.	19.1 mg/kg
Nitrate/Nitrite	0.5 Ft.	18 mg/kg
Nitrate/Nitrite	1.0 Ft.	9 mg/kg
Nitrate/Nitrite	2.0 Ft.	9 mg/kg

Analyte	Depth (bgs)	Concentration
Total Chromium	0.5 Ft.	30.2 mg/kg
Total Chromium	1.0 Ft.	21.9 mg/kg
Total Chromium	2.0 Ft.	19.4 mg/kg
Nitrate/Nitrite	0.5 Ft.	14 mg/kg
Nitrate/Nitrite	1.0 Ft.	6 mg/kg
Nitrate/Nitrite	2.0 Ft.	5 mg/kg





LEGEND

■ SOIL SAMPLE LOCATION

NOTE:
YELLOW HIGHLIGHTED DATA INDICATE RESULTS FROM RESAMPLING.

SOIL SAMPLE RESULTS FOR INVESTIGATION OF WATER LEAK AT WELL TW-28

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