



April 15, 2013
 File No.: 132881.1-ALB13WP001

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 APR 17 2013
NMOCD ARTESIA

Mr. Mike Bratcher
 New Mexico Oil Conservation Division District 2
 811 S First Street
 Artesia, NM 88210

**Subject: Work Plan for Phase II Investigation
 Beeson Federal Injection Line Project
 Loco Hills, New Mexico**

Dear Mr. Bratcher:

Kleinfelder West, Inc. (Kleinfelder), on behalf of Halcón Resources (Halcón) is pleased to submit the following work plan for a Phase II Subsurface Assessment (Phase II) to delineate chlorides and hydrocarbons in the soil at the above referenced site. The scope of work for this project is based on analytical data collected to date (submitted to you on March 7, 2013) and Kleinfelder's discussion with you on March 14, 2012. A copy of this work plan is being submitted to the landowner, the Bureau of Land Management (BLM).

Estimate of Work to Be Completed for Site Closure

Phase II – Subsurface Assessment

The vertical extent of the TPH and chloride concentrations at the site is not known. The table below summarizes areas of concern and proposed action for drilling activities during Phase II.

Proposed Boring Location (proposed depth in feet)	Location (in vicinity of)	Historical Data (concentrations in mg/kg)	Proposed Action
B-1	At bottom of current excavation	Sample collected at approximate depth of 8-12 feet below natural grade: chloride (7,520). TPH not analyzed.	Install boring up to 75 feet deep to document TPH and chloride concentrations.
B-2	Between release location and western wall of excavation	Samples collected from KA-20130201-1 (0.5 feet below ground surface): TPH (16,500) and chloride (2,800); and KA-20130201-2 (3.5 feet bgs): TPH (<49) and chloride (110,000); west wall: chloride (5,600).	Install boring up to 85 feet deep to document TPH and chloride concentrations, as close as possible to site of release.

Proposed Boring Location (proposed depth in feet)	Location (in vicinity of)	Historical Data (concentrations in mg/kg)	Proposed Action
B-3	Northeast of north wall of current excavation	Samples North Wall, #3 and #4, collected from the northern wall of the excavation: chloride concentrations ranged from 576 (#3) to 5,600 (North Wall). TPH not analyzed.	Install boring up to 30 feet deep to document TPH and chloride concentrations, northeast of the current excavation.
B-4	Southeast of east wall of current excavation	Samples East Wall, #1 and #2, collected from the eastern wall of the excavation: chloride concentrations ranged from 80 (#2) to 5,920 (East Wall). TPH not analyzed.	Install boring up to 30 feet deep to document TPH and chloride concentrations, southeast of the current excavation.
B-5	Southwest of south wall of current excavation	Samples South Wall, collected from the southern wall of the excavation had a chloride concentration of 2,480. TPH not analyzed.	Install boring up to 30 feet deep to document TPH and chloride concentrations, southwest of the current excavation.

Excavation of Hydrocarbon and Chloride Impacted Soil; Placement of a Liner, Backfill and Reseeding.

Once the vertical and lateral extent of total petroleum hydrocarbons and chloride data has been obtained from the Phase II borings, if additional excavation is needed, costs will be obtained for removal of impacted soil. If need be, the soil will be disposed of at an OCD-approved landfarm. Kleinfelder will then propose that a 40-mil thick polyethylene liner will be placed in the bottom of the excavated areas, and soil will be backfilled into the excavated areas. The site will be reseeded with native grasses.

PROPOSED SCOPE OF WORK

Kleinfelder proposes that Phase II be conducted at the site prior to excavation/site closure. Kleinfelder recommends advancing five borings at the site to assess the potential vertical and lateral extent of total petroleum hydrocarbons and chloride in the area injection line release. The proposed boring locations are included in Figure 1. Kleinfelder requested costs from four drillers (Precision Sampling, Inc., White Drilling Company, Inc. Enviro-Drill, Inc., and Eads Drilling) for costs to install borings up to a total depth of 250 feet.

Task 1 – Field Work

This task includes project preparation activities that occur after work plan approval, but before field work mobilization. After receiving authorization to proceed, Kleinfelder will:

- Develop work orders and contracts for subcontractors;
- Notify New Mexico One-Call to facilitate location of underground utilities and pipelines; and

- Notify the Client, NMOCD, and the BLM a minimum of 24 hours prior to the commencement of field activities.

A Kleinfelder geologist will supervise the advancement of the soil borings at the site. Soil samples will be collected via split-spoon sampler approximately every ten feet, depending on boring depth and desired sampling location. Soil will be field screened for TPH using a PetroFLAG kit, and for chloride using chloride titration with HACH Quantabs[®]. Drilling will be halted once field screening measurements indicate TPH and chloride levels are below Remediation Action Levels (RALs) of 1,000 mg/kg chloride and 5,000 mg/kg. Up to two soil sample will be collected from each boring, with one being collected from the bottom of the boring. Some borings may be deeper or shallower than proposed, based on field screening. Drill cuttings will be stockpiled on site. Boreholes will be completed with hydrated bentonite chips or a cement/bentonite grout.

Soil samples will be submitted under chain-of-custody to Hall Environmental Analytical Laboratory and analyzed for TPH-GRO, -DRO, -MRO) by EPA method 8015B modified and chlorides by method 300.0.

Personal protective clothing including steel-toed work boots, gloves, safety glasses and hard hats will be required (basic Level D requirements) during all field tasks. Kleinfelder will provide a HASP that will be reviewed and signed by on-site Kleinfelder personnel, subcontractors, and authorized visitors.

Task 2 – Reporting

A letter report summarizing our Phase II field activities and findings will be submitted to the NMOCD. The letter report will include a site description, description of data collection procedures, a discussion of results, and recommendations. The report will additionally include:

- A scaled site plan showing the locations of borings in relationship to the pit and other site features;
- Soil boring logs;
- Tabulation of field screening and laboratory analytical test results; and
- Conclusion and work plan for remaining closure activities.

SCHEDULE

Kleinfelder will begin preparing project documents and scheduling of field upon receipt of NMOCD's and BLM's approval of the work plan, and written authorization from Halcón to proceed with the Phase II. Field work will be scheduled as soon as possible, with the intent of completing the Phase II drilling in mid-April.

CLOSING

Our work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions, and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

Acceptance of this work plan will indicate that the Client has reviewed the document and determined that it does not need or want a greater level of service than provided. During the course of the performance of Kleinfelder's services, hazardous materials may be discovered. Kleinfelder will assume no responsibility or liability whatsoever for any expense, claim, loss of property value, damage, or injury that results from or in any way connected with pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Notwithstanding anything contained in this work plan to the contrary, Kleinfelder shall not assume the status of an owner, operator, generator, or person who arranges for disposal, transport, storage, or treatment of hazardous materials within the meaning of any governmental statute, regulation, or order. The Client will be solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment, or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. The Client will be responsible for all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

This work plan is valid for a period of 45 days from the date of this work plan, unless a longer period is specifically required in which case that time frame will apply. This work plan was prepared specifically for the client and its designated representatives and may not be provided to others without Kleinfelder's express permission.

Should you have any questions regarding this work plan, please contact us at 505.344.7373.

Respectfully submitted,
KLEINFELDER WEST, INC.

Reviewed by:



Eileen Shannon, PG
Project Professional



Barbara J. Everett, PG
Program Manager

Attachment:

Figure: Figure 1 – Proposed Boring Location Map

cc: Jim Amos, Bureau of Land Management, 620 E. Greene St., Carlsbad, NM 88220
Drew Hall, 475 17th Street, Suite 1500, Denver, CO 80202
Steve Milinichik, Meridian Tower, 5100 East Skelly Drive, Suite 650, Tulsa, OK 74135-6549



DOCUMENT TRANSMITTAL FORM

TO: Mr. Mike Bratcher NMOCD District 2 811 S First Street Artesia, NM 88210	PAGE	1	OF	1
	TRANSMITTAL DATE:	4/16/2013		
	TRANSMITTAL DCN:	132881.1-ALB13TS003		
RETURN RESPONSES/COMMENTS TO:	Eileen Shannon			
RETURN RESPONSES/COMMENTS BY:	4/30/2013			

PROJECT NO.:	132881	PROJECT NAME:	Halcón - Beeson Remediation
ACTIVITY/DESCRIPTION:	Work Plan		

DOCUMENTS BEING TRANSMITTED				
ITEM	REV.	PAGES	DATE	DESIGNATOR
Work Plan for Phase II Investigation	0	7	4/15/2013	132881.1-ALB13WP001
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INSTRUCTIONS/REMARKS Copies to: Jim Amos, Drew Hall & Steve Milinichik	<input type="checkbox"/> Mark previous issues "obsolete", "superseded", or "uncontrolled" <input type="checkbox"/> Destroy previous affected material <input type="checkbox"/> Return old material with this record <input checked="" type="checkbox"/> New issue (no previous copies received) <input type="checkbox"/> Replace with revised/new material <input type="checkbox"/> Maintain as controlled copy <input type="checkbox"/> Not Applicable
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 Please Sign and Return To:

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 9019 WASHINGTON NE, BUILDING A
 ALBUQUERQUE, NM 87113
 FAX: 505.344.1711 OR KKNIGHTS@KLEINFELDER.COM

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