



DEPARTMENT OF NATURAL RESOURCES

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May 10, 2000

Mr. John Lohner
Cordillerian Compliance Services, Inc.
770 Sims Street, Suite 110
Golden, Colorado 80401

RE: Proposed Scope of Work
CGOCC Site Investigation and Remediation No. 355
#1 Dutch Abandoned Well Site; API 05-013-06235
SEC 15, T2N, R69W

Dear John:

Enclosed is some information on the #1 Dutch site. Please review and give me a call regarding a bid estimate for Cordillerian to conduct this work. I am looking at trying to get work started on this site before the end of May. I estimate that the site work would probably take a full day.

SITE BACKGROUND/PREVIOUS INVESTIGATIONS

The site is the former #1 Dutch well, which was completed 1986 and subsequently plugged & abandoned in 1993. According to the Colorado Oil & Gas Conservation Commission's records for this well, the well site was inspected in 1993 (after abandonment) and it was noted that site was inadequately restored.

In May 1999, A.G. Wassenaar, Inc. (Wassenaar) conducted a Phase I environmental assessment for Boulder Parks & Open Space of the Winter Property where the former well site is located. The Phase I identified the #1 Dutch well site; however, no surface evidence of the well site was noted. Wassenaar suggested in their recommendations to the Phase I assessment that follow-up work under a Phase II be conducted at the #1 Dutch site. It is unclear if an actual Phase II was conducted at the site. In July 1999, a Limited Site Investigation was conducted by Wassenaar, which included limited subsurface soil and ground water sampling. Nine soil borings advanced at the site (BH-1 through BH-9). Ground water was encountered in all the borings at approximately 10 feet below ground surface (bgs). One representative soil sample was collected from each borehole based on visual/odor indication of possible petroleum hydrocarbons (Wassenaar's PID



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DEPARTMENT OF NATURAL RESOURCES: Greg E. Walcher, Executive Director
COGCC COMMISSION: Brian Cree - Bruce Johnson - Michael Klish - Abe Phillips - Claudia Rebne - Daniel Skrabacz - Stephen Sonnenberg
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Patricia C. Beaver, Hearings Manager - Thomas J. Kerr, Information Manager

malfunctioned during this work). The following are the soil sample results with detectable TRPH (see enclosed map).

- BH-2 had TRPH 960 mg/kg at 13.4 feet bgs
- BH-3 had TRPH at 1,800 mg/kg at 13.5 feet bgs, and
- BH-6 had TRPH at 120 mg/kg at 10.5 bgs.

In addition, Wassenaar collected ground water samples from each borehole. The following are the ground water samples with detectable benzene (see enclosed map).

- BH-1 had benzene at 16 ug/l,
- BH-2 benzene at 1.8 ug/l, and
- BH-10 at 1.3 ug/l.

Although there is some minor petroleum soils contamination slightly above the threshold 1,000 milligrams per kilogram (mg/kg) established by the COGCC for clean up in sensitive areas, the contamination at 13.5 feet bgs in BH-3 does not appear to be an area that requires further investigation. The COGCC; however, does need to further investigate the down gradient extent of benzene in ground water observed in BH-1 and the possibility of a contaminant source related to a suspected old pit. The proposed scope of work would be as follows.

DIRECT PUSH SOIL AND GROUND WATER INVESTIGATION, OLD PIT

Advance and sample three (3) soil borings to ground water near location (?) of abandoned pit. It is anticipated that the borings will be advanced to approximately 10 feet bgs. Collect one (1) soil sample for TRPH analysis (via EPA SW846 method 418.1) by highest head-space reading via PID/OVA and/or visual/odor evidence of possible petroleum hydrocarbon contamination from each borehole. In addition, one ground water sample will be collected from one of the boreholes at this location. Boreholes must be logged. Please see attached map for proposed sample locations.

DIRECT PUSH GROUND WATER INVESTIGATION, ABANDONED WELL SITE

Advance and sample seven (7) ground water sampling boreholes down gradient of abandoned well site. It is anticipated that the borings will be advanced to approximately 10 feet bgs. Collect

one (1) ground water sample per borehole for BTEX analysis via EPA SW846 method 8020.
Boreholes must be logged. Please see attached map for proposed sample locations.

SAMPLE ANALYSIS

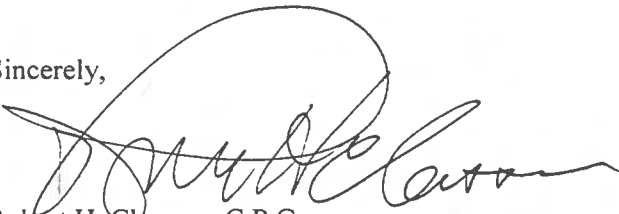
- It is anticipated that three (3) soil samples will be collected for TRPH determination via EPA SW846 method 418.1.
- It is anticipated that eight (8) total ground water samples will be collected for BTEX determination via EPA SW846 method 8020.

REPORTING

Prepare a letter report with a brief summary of field activities and observations, including a submittal of field notes, water table map, sample location map, borehole logs, and analytical documentation including analytical laboratory reports.

Please give me a call at (303) 894-2100 ext. 112 to further discuss this scope of work.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robert H. Chesson', with a large, looping flourish at the end.

Robert H. Chesson, C.P.G.
Environmental Protection Specialist

Enclosures

Cc: Rich Griebing – COGCC w/o enclosures
Debbie Baldwin – COGCC w/o enclosures
Ed Dimatteo - COGCC w/o enclosures