



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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December 4, 2018

Scott McKnight  
Conway Feed  
18700 Main Street  
Conway, WA 98238

COPY

**Re: Further Action at the following Site:**

- **Site Name:** Conway Feed
- **Site Address:** 2110 Jones Road, Conway, WA 98284
- **Facility/Site No.:** 5135
- **Cleanup Site ID No.:** 2524
- **VCP Project No.:** NW2185

Dear Scott McKnight:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Conway Feed facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

**Issue Presented and Opinion**

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Is further remedial action necessary to clean up contamination at the Site?

**YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.**

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

**Description of the Site**

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This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:



- Gasoline-range petroleum hydrocarbons (TPH-G), diesel-range petroleum hydrocarbons (TPH-D), benzene, toluene, ethylbenzene, and xylenes (BTEX), and lead into the Soil and Ground Water.

**Enclosure A** includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

### **Basis for the Opinion**

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This opinion is based on the information contained in the following documents:

1. Northwest HydroGeo Consultants, Followup Investigation Soils and Groundwater Conway Feed Property, May 1, 2018.
2. Ecology, Opinion Letter, August 23, 2017.
3. Northwest HydroGeo Consultants, Site Remediation Report Conway Feed Site, August 25, 2011.
4. Ecology, Further Action Opinion Letter, March 5, 2010.
5. Northwest HydroGeo Consultants, Hydrogeologic Investigation Report Conway Feed Site, October 20, 2008.
6. Materials Testing & Consulting Inc., Site Assessment Conway Feed, February 1992.

Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by completing a Request for Public Records form (<https://www.ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>) and emailing it to [PublicRecordsOfficer@ecy.wa.gov](mailto:PublicRecordsOfficer@ecy.wa.gov), or contacting the Public Records Officer at (360) 407-6040. Some of these documents are accessible in electronic form from the Site web page, which can be accessed at (<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=2524>).

This opinion is void if any of the information contained in those documents is materially false or misleading.

### **Analysis of the Cleanup**

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Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:



1. **Characterization of the Site.**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site consists of soil and ground water contaminated by the releases of petroleum hydrocarbons from two underground storage tanks (USTs). The nature and extent of contamination in soil was characterized during remedial excavations that removed the contaminated soil. The nature and extent of contamination in ground water, however, has not been completely determined. The Site is described above and in **Enclosure A**.

Characterization of the Soil:

The two USTs were removed during December 1991 and January 1992, and included a 2,000 gallon tank used for diesel fuel storage and a 1,000 gallon-tank used for gasoline storage. Both USTs were collocated in a single excavation and buried beneath concrete and asphalt paving. The USTs were reportedly installed in the mid-1960s and both showed corrosion and holes when removed.

Following the UST removals, soil contamination in the excavation was observed and verified by subsequent soil sampling. Sheen was observed on ground water in the UST excavation at approximately 5 feet below ground surface (bgs). Efforts were made to over-excavate the contaminated soil to the extent defined by Method A cleanup levels for TPH-G, TPH-D, and BTEX applicable in 1991. As determined by field observations and confirmation soil samples, this extent was achieved on the east, south, and north sides, and bottom (approximately 6 feet bgs) of the excavation (Figure 3).

The excavation was not extended to the west because of concrete paving and risk to the structural support of a large steel canopy. Confirmation samples from the west wall of the excavation showed that elevated levels of TPH-G and BTEX (up to 1,646 milligrams per kilogram (mg/kg) TPH-G and 16 mg/kg benzene), in excess of both the 1991 and current Method A cleanup levels, remained in the soil.

There were also detections of TPH-D slightly in excess of the 1991 Method A cleanup level (200 mg/kg), but not in excess of the current cleanup level for TPH-D (2,000 mg/kg). Fifteen cubic yards (cyds) of contaminated soil were removed from the excavation to another area on the Property for remediation by land farming (aeration). The excavation was filled with gravel (approximately 30 cyds) and the surface repaved.

During November 2010 the soil was characterized to the west of the 1991 gravel-filled excavation. The concrete slab beneath the steel canopy was removed and six test pits were completed in the area. Odors and an oily sludge material were encountered.

Eight soil samples were acquired from the test pits at depths of 5 to 7 feet bgs and analyzed for TPH-G, TPH-D, TPH-O, BTEX and lead. The sample results indicated an

area of contaminated soil extending west of the former USTs location with maximum levels of TPH-G (2,650 mg/kg) and benzene (1 mg/kg), exceeding the Method A soil cleanup levels for TPH-G with benzene present and benzene (30 mg/kg and 0.03 mg/kg, respectively).

During June 2011 a remedial excavation was performed to remove the remaining contaminated soil. The limits of the contaminated soil were determined by field observation (visual and olfactory evidence) and confirmation soil samples referenced to the Method A soil cleanup levels for TPHs, BTEX, and lead. The remedial excavation encompassed the locations of two of the exploratory test pits (Figure 4).

Three confirmation samples were acquired at 6 to 7 feet bgs - two along the east wall of the remedial excavation (adjacent to the previous 1991 excavation) and one on the north side of the excavation. Sample results were non-detectable concentrations except for three low detections of lead, and one of toluene. A confirmation soil sample was not acquired at that time to indicate that the western extent of the contaminated soil was reached. However, a soil sample later acquired during March 2018 immediately west of the former excavation and inside the warehouse, demonstrated that the extent of the contamination had been reached.

The excavation was then filled with gravel. The soil reportedly from both the initial test pits and the remedial excavation (total of 119 cyds) was transported to a nearby area of the Property for treatment by land farming (aeration). The soil was spread out 2 feet in thickness on top of a plastic liner and tilled on warm sunny days from June 15, 2011 until August 2011. On August 1, 2011 three randomly-selected soil samples were acquired from the treated soil and analyzed for TPH-G, a suite of 78 volatile organic compounds (VOCs which included BTEX), and lead. Sample results were all non-detectable except lead, which was detected at concentrations less than 20 mg/kg.

#### Characterization of the Ground Water

A ground water monitoring well (now removed) was installed at the western edge of the 1992 remedial excavation associated with removal of the USTs. The construction details of the well are unknown. The well was sampled in February 1992 and September 2008.

During the soil remedial actions undertaken during 2010 and 2011, ground water seep samples were acquired from initial test pits and the final open remedial excavation. Except for toluene and lead in one sample, the sample results for TPHs, BTEX and lead were non-detectable. The sampling described above provided preliminary information, but was not appropriate to evaluate contamination in the ground water.

In March 2018, four borings (BH-1 through BH-4) were placed inside the warehouse to the west of and adjacent to the remedial excavation completed in June 2011 (Figure 5). The purpose of the borings was primarily to evaluate ground water conditions down-gradient of the excavated areas. The ground water flow direction was reasonably



considered to be to the west-southwest, because there is surface water (wetland) located 130 feet from the Site in that direction, and the South Fork of the Skagit River lies 1,600 feet away in that direction. Furthermore, soil contamination extends in that direction from the location of the former USTs.

The borings were completed through the 4 inch-thick concrete floor. One soil sample was acquired beneath the floor from each boring at the top of the saturated zone by utilizing a hand auger. Each borehole was then augered down an additional 2 to 3 feet into the saturated zone, and a ground water sample was acquired utilizing a peristaltic pump. All of the samples were analyzed for BTEX, TPH-G, TPH-D, TPH-O, and lead. The soil and ground water samples from BH-2 also included analyses for methyl tert-butyl ether (MTBE).

The soil sample results were non-detectable for all compounds except lead, which was detected at concentrations well below its Method A soil cleanup level (250 mg/kg) in all borings. The ground water samples were non-detectable for all compounds except lead, TPH-D and TPH-O. Lead was detected at concentrations well below its Method A ground water cleanup level (15  $\mu\text{g/L}$ ) in three borings, but exceeded its Method A ground water cleanup level in boring BH-1.

The sum of TPH-D and TPH-O exceeded the Method A ground water cleanup level of 500  $\mu\text{g/L}$  in all borings except BH-2. The highest concentrations of lead (44  $\mu\text{g/L}$ ) and TPH-D+O concentrations (2,420  $\mu\text{g/L}$ ) in ground water were found in BH-1, along with an odor of hydrogen sulfide.

The characterization of the soil within the Property associated with the releases from the USTs appears to be complete via the remedial excavation work described above. The cause of the elevated lead and TPH contamination remaining in ground water has yet to be determined, however, and additional characterization is required.

## **2. Establishment of cleanup standards.**

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

Method A cleanup levels for unrestricted land use are appropriate for this Site, with the standard point of compliance throughout the Site to a depth of 15 feet bgs. Given the lack of significant wildlife habitat in the vicinity of the Site, and also the nature and concentrations of the contamination in the soil (TPH-G, TPH-D, TPH-O, soil cleanup levels are not expected to be influenced by terrestrial ecological evaluation (TEE) considerations. This must be confirmed by completion and submittal of the appropriate TEE form, as discussed below in Section 4.

Method A ground water cleanup levels are appropriate for the Site, with the standard point of compliance throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected.

**3. Selection of cleanup action.**

Ecology has determined the cleanup action you selected for the Site does not meet the substantive requirements of MTCA.

The cleanup action selected to remediate the contaminated soil associated with releases from the USTs was a remedial excavation (as described above). The selection of this cleanup action for the soil was permanent and appropriate for the Site. However, the contaminated soil was known to be in contact with the shallow ground water, and the cleanup and ground water sampling completed to date is insufficient to support selection of a Site cleanup action. As has been previously related, the nature and extent of contamination in the ground water has not completely been determined at this time.

**4. Cleanup.**

Ecology has determined the cleanup you performed does not meet the cleanup standards at the Site.

All of the cleanup actions completed at the Site are described in detail in Section 1 of this letter (Characterization of the Site). In order to pursue a "no-further-action" (NFA) determination for cleanup at the Site, the following further actions are needed:

- The contaminant levels in ground water found inside the warehouse should be determined by analyzing representative samples acquired over time from properly constructed and developed monitoring wells installed by a licensed well driller. The current ground water samples are one-time "grab" samples acquired from hand-auger borings, which unavoidably can contain some sediment particles that may cause sample results to be biased on the high side. Grab ground water samples are appropriate for reconnaissance sampling, but not for determining compliance with cleanup levels. More accurate samples from monitoring wells could demonstrate that the ground water is actually in compliance. The lack of consistency borehole to borehole may suggest this.
- Perhaps a reasonable initial course of action would be to install one monitoring well near BH-1 and monitor quarterly for a year, using low-flow ground water sampling procedures, and passing the portion of the sample destined for lead analysis through a 0.45 micron filter in the field prior to filling the sample bottle that contains acid as a preservative. This will provide a dissolved lead result that is representative of ground water quality.



- If the concentrations of lead and TPH persist above their respective Method A cleanup levels for ground water, then either the prior removal of the contaminated soil was not complete, or there may be contamination from the railroad tracks directly west of the Site as has been suggested in the Site reports.
- Even if it is demonstrated that ground water cleanup standards at the Site have been achieved, Ecology cannot issue an NFA determination for the Site unless the soil and ground water data acquired at the Site are entered into Ecology's environmental information management (EIM) system. (See *Toxics Cleanup Program Policy 840: Data Submittal Requirements, Publication #16-04-050, April 2016*). These data would not include the data acquired during the 1990s, soil samples from land-farmed soil, or seep water samples from excavation pits.
- A terrestrial ecological evaluation (TEE) must be conducted for the Site as per Chapter 173-340-7490 WAC. The evaluation is straight forward, as the Site qualifies for an exclusion from further evaluation because of the lack of undeveloped land in the vicinity of the Site. A TEE Form must be submitted, however, to document this circumstance.

### **Limitations of the Opinion**

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#### **1. Opinion does not settle liability with the state.**

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

#### **2. Opinion does not constitute a determination of substantial equivalence.**

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70.105D.080 and WAC 173-340-545.

#### **3. State is immune from liability.**

Scott McKnight  
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The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

#### Contact Information

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Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm). If you have any questions about this opinion, please contact me by phone at (425) 649-7251 or e-mail at [roger.nye@ecy.wa.gov](mailto:roger.nye@ecy.wa.gov).

Sincerely,

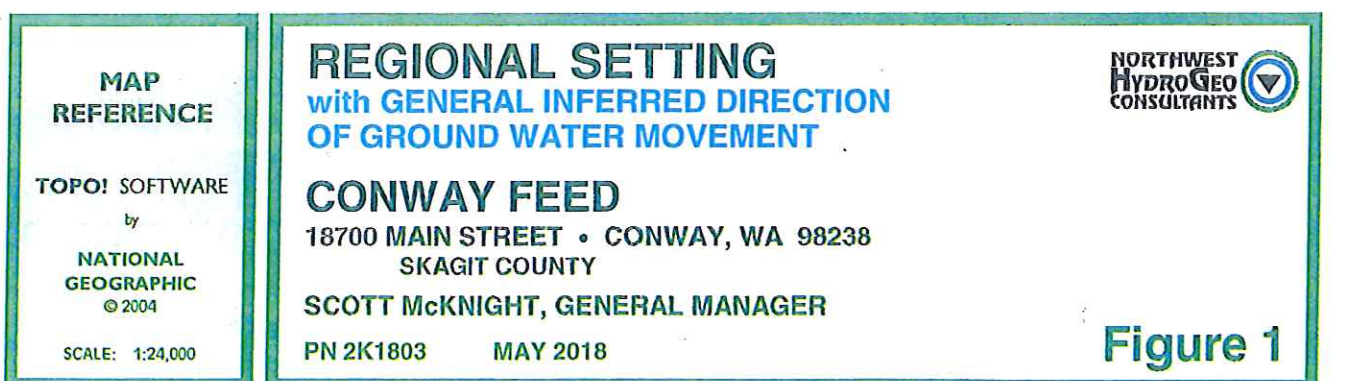
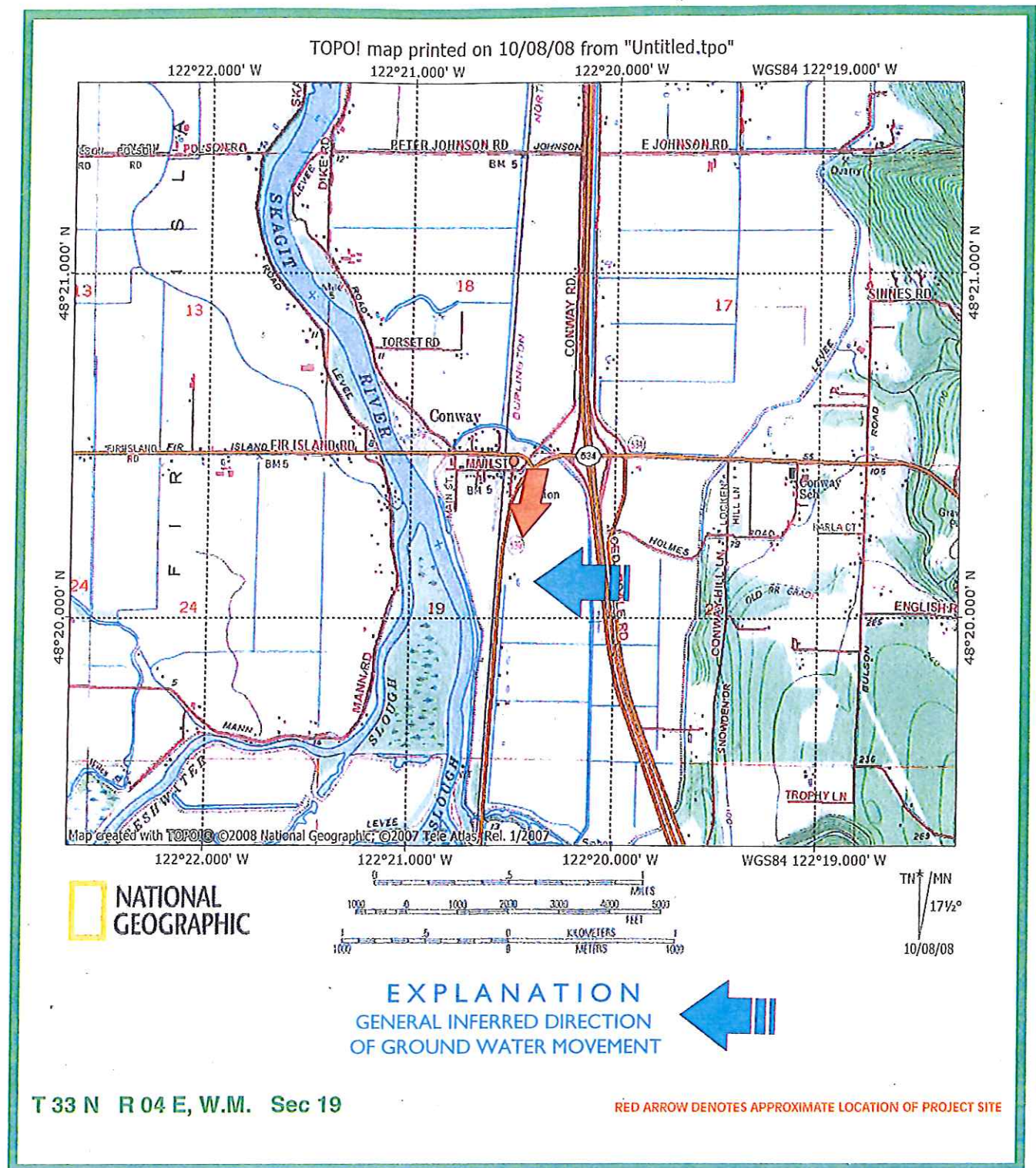


Roger K. Nye  
NWRO, Toxics Cleanup Program

Enclosures (1): A – Description and Diagrams of the Site

cc: Douglas S. Dillenberger, Northwest HydroGeo Consultants  
Sonia Fernandez, VCP Coordinator, NWRO









T 33 N R 04 E, W.M. Sec 19

## SATELLITE IMAGE FOLLOWUP INVESTIGATION OF SOILS AND GROUNDWATER ONSITE

CONWAY FEED SITE  
18700 MAIN STREET  
CONWAY, WA 98238

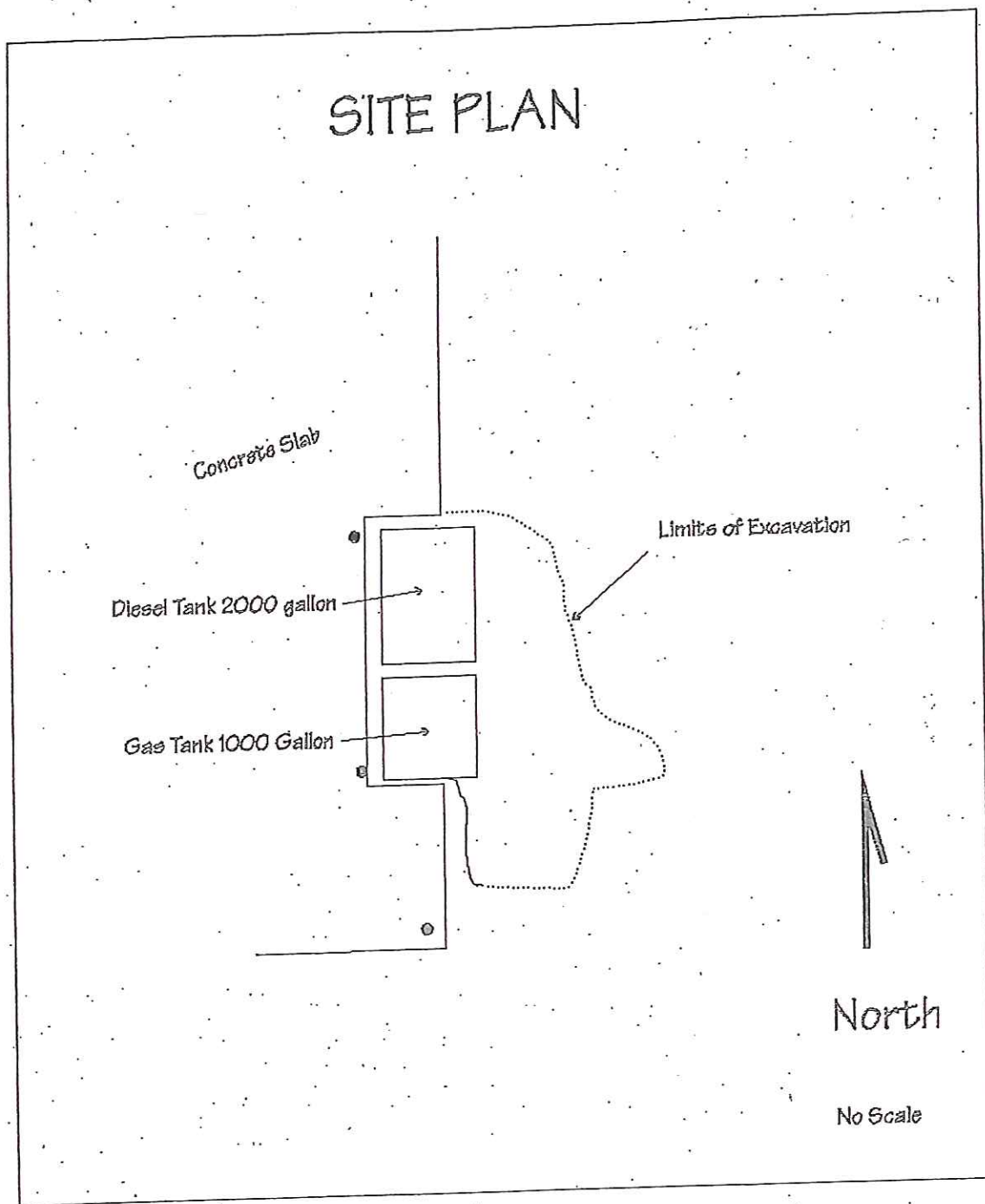
PN 2K1803 MAY 2018

NORTHWEST  
HYDROGEO  
CONSULTANTS



Figure 2



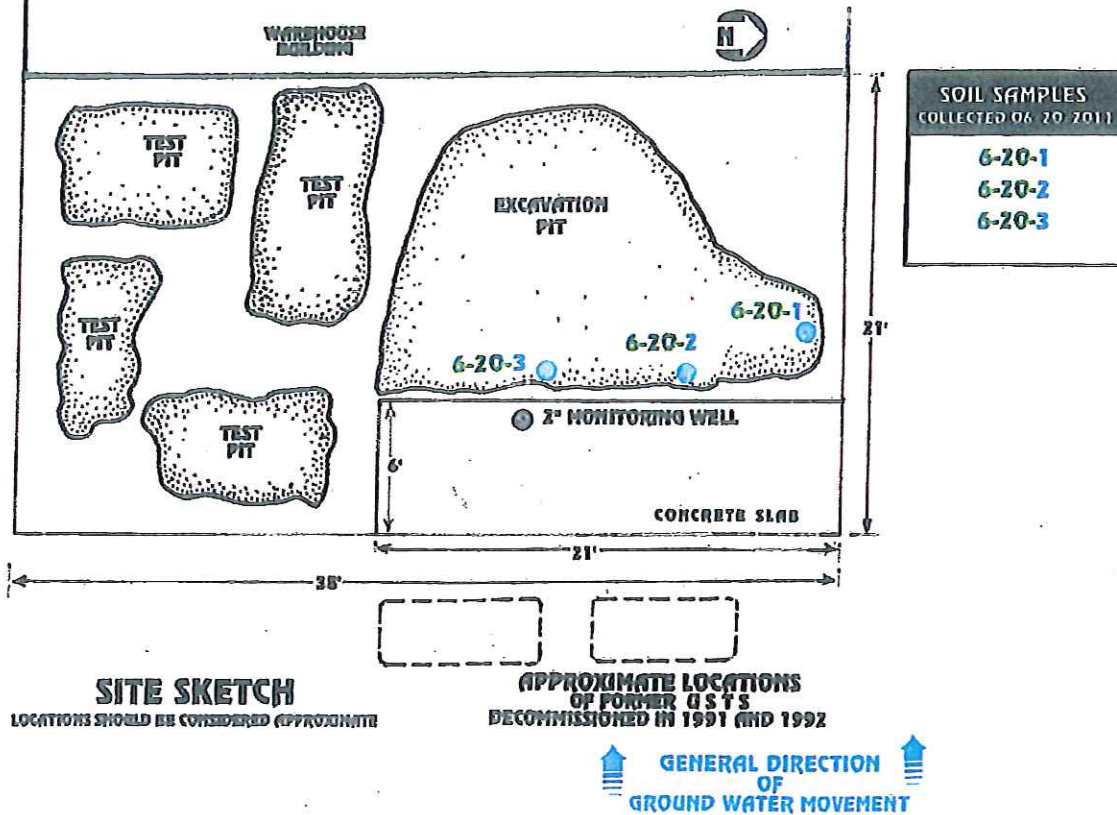


Conway Feed  
2110 Jones St  
Conway, WA 98238

Excavation 1992

Figure 3

**CONWAY FEED NW 2185**  
 18700 MAIN STREET • CONWAY, WA 98238  
 T 33 N R 04 E, W.M. NE 1/4 NE 1/4 Sec 19  
 PARCEL P16852



**SITE SKETCH DEPICTS AREA IN FRONT OF WAREHOUSE BUILDING THAT WAS NEAREST THE FORMER USTs AND WHICH WAS EXCAVATED FOR THE INVESTIGATION**

**T 33 N R 04 E, W.M. Sec 19 NW 2185 PARCEL P16852**

## SOIL SAMPLING LOCATIONS

**JUNE 2010**

### CONWAY FEED

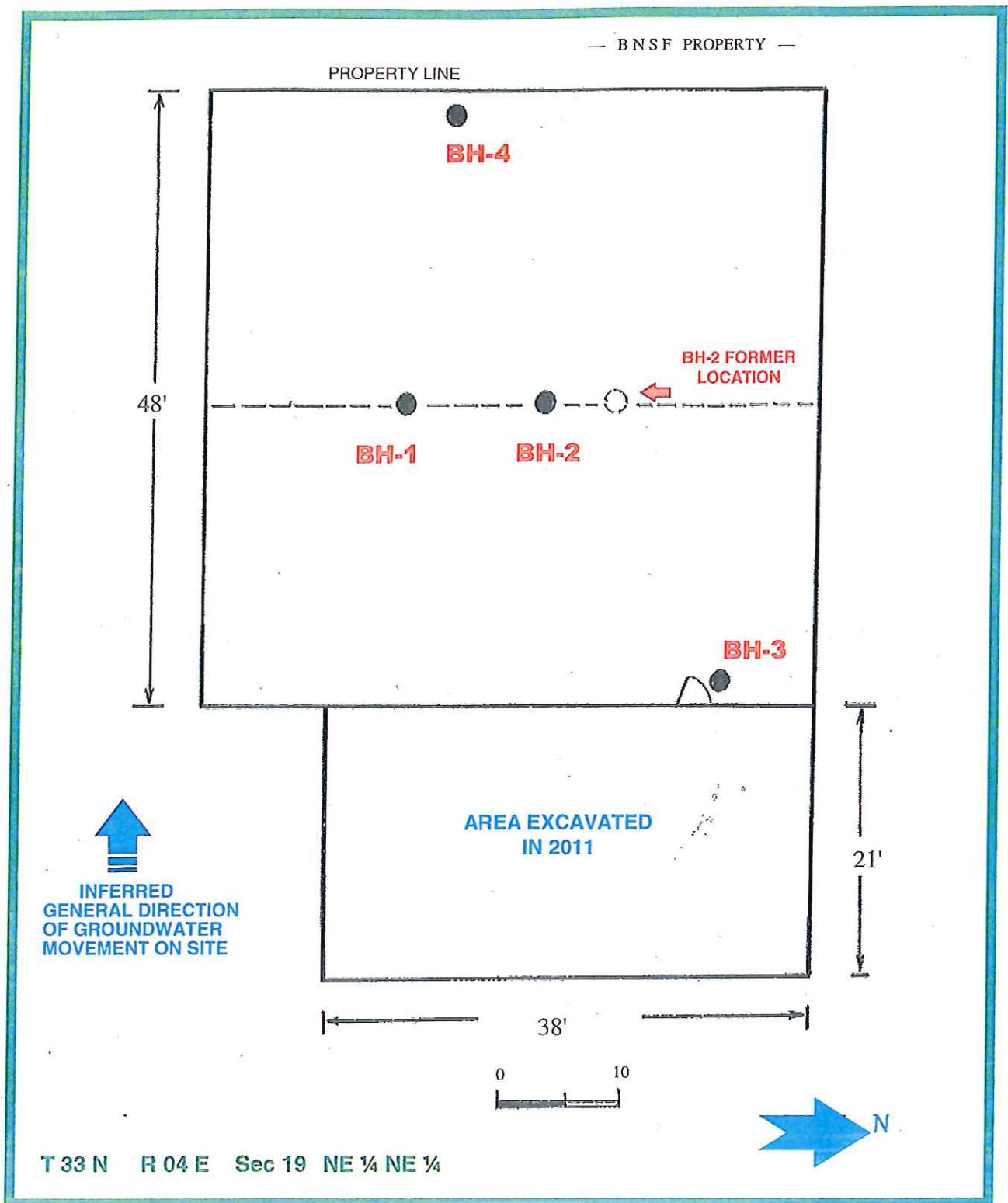
18700 MAIN STREET • CONWAY, WA 98238  
 SKAGIT COUNTY

SCOTT McKNIGHT, GENERAL MANAGER  
 PN 2K1104-1 AUGUST 2011

**NORTHWEST  
 HydroGeo  
 CONSULTANTS**

**Figure 4**





## SITE DRAWING FOLLOWUP INVESTIGATION OF SOILS AND GROUNDWATER ONSITE



CONWAY FEED SITE  
P O BOX 576  
CONWAY, WA 98238

PN 2K1803 MAY 2018

**Figure 5**