



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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Electronic Copy

November 28, 2017

Mr. Vinson Latimore
4200 Guide Meridian, Suite 101A
Bellingham, WA 98226

Re: Further Action at the following Site:

- **Site Name:** Gibraltar Senior Living
- **Site Address:** 10816 18th Ave E, Tacoma, Pierce County, WA 98445
- **Facility/Site No.:** 6607
- **Cleanup Site No.:** 12686
- **VCP Project No.:** SW1472

Dear Mr. Latimore:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Gibraltar Senior Living 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

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

- This memorandum limits discussion of Site contamination to the off-Property diesel and heavy oil concentrations in groundwater collected from boring EB-16 (Figure 1).

Basis for the Opinion

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

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1. Email correspondence from L. Rachman, formerly of ZipperGeo Associates (ZGA) and T. Mullin, Ecology, dated August 23, 2017.
2. ZGA, *Submittal of Supplemental Site Characterization Report*, dated January 9, 2017.
3. Email correspondence from J. Cook, Ecology, to L. Rachman, Terracon, dated May 2, 2016.
4. Terracon, *Technical Memorandum, RE: Gibraltar Senior Living (VCP SW1472)*, Responses to Ecology Further Action letter dated January 27, 2016 (Terracon Project No. B2157004), dated April 12, 2016.
5. Terracon, *Supplemental Limited Site Investigation*, dated November 6, 2015.
6. Terracon, *Limited Site Investigation*, dated July 7, 2015.
7. Aerotech Environmental Consulting, Inc. (Aerotech), Phase I Environmental Site Assessment, dated December 9, 2014.
8. Seattle Tank Services, *UST Removals – 10816 18th Avenue E, Tacoma, Washington*, dated October 12, 2011.

The above documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

Copies of email correspondence referenced above are included as **Enclosure A**.

Analysis of the Cleanup

In 2016, the combined diesel and heavy oil concentrations in a grab groundwater sample at boring EB-16 exceeded the MTCA Method A cleanup level of 500 µg/L. Both diesel and heavy oil concentrations in groundwater also individually exceeded the MTCA Method A cleanup level. In response to the EB-16 data, Terracon stated the following in a memorandum dated April 12, 2016:

“Terracon performed a file review of the two reported releases on the adjoining properties, both owned by Franklin Pierce School District. One of the facilities, the Franklin Pierce School District Transportation site, is the location of a release associated with a former waste oil UST that was located approximately 400 feet

northwest of EB-16. Based on the distance and discontinuous nature of the perched groundwater in the vicinity, this off-site release is not anticipated to be the source of the oil-range TPH detection at EB-16.

The second off-site facility, the Franklin High School site, is the location of a release associated with two former heating oil USTs, located approximately 475 feet southwest of EB-16. Based on the distance and discontinuous nature of the perched groundwater in the vicinity, this off-site release is also not anticipated to be the source of the oil-range TPH detection at EB-16.”

On the next page of the memorandum, Terracon stated:

“Terracon cannot identify a potential source of the oil detected in the groundwater grab sample collected at EB-16. However, as stated previously, the product does not appear to be related to the heating oil release at the Site.”

- 1) In response to Terracon’s memorandum, Jason Cook, former Ecology VCP Site manager, responded via email (see pdf included in Enclosure A) on May 2, 2016: *“In addition, upon review of the chromatograms – comparing the on-Site and off-Site releases, it does not appear the off-Site groundwater release is associated with the release from Gibraltar. However, Ecology (the new Site manager) may require additional data and analysis.”*
- 2) The laboratory’s comment on the chromatogram for EB-16 included in Terracon’s *Supplemental Limited Site Investigation* states *“unidentified diesel range product (biased high due to motor oil range produce overlap).”*
- 3) The ALS chromatogram for EB-16 appears to show both diesel and heavy oil ranges. A line is provided on the chromatogram which seems to separate the diesel and heavy oil petroleum hydrocarbon ranges.
- 4) Based on the chromatograms for EB-8 and EB-14 provided by Friedman & Bruya, these results appear to elute in the same petroleum hydrocarbon range. In comparison to the standard used, EB-8 and EB-14 groundwater analytical results are likely a diesel range petroleum hydrocarbon, which is consistent with heating oil.
- 5) The diesel and heavy oil standards used by ALS have not been presented to Ecology for comparison to the EB-16 chromatogram.
- 6) The standards and chromatograms presented by Friedman & Bruya and ALS cannot be directly compared as response times for individual components of the analyses are different.
- 7) The type of heavy oil has not been determined.
- 8) No additional analyses have been completed in groundwater (e.g., cPAHs or PCBs) which would inform at EB-16 whether or not the petroleum hydrocarbons in groundwater are diesel range, heavy oil range, or both.

Naphthalenes detected in groundwater sampled from EB-16 may be associated with either diesel or heavy oil range petroleum hydrocarbons.

- 9) Groundwater flow direction has been inferred, but not calculated for the Site.
 - a. Terracon inferred groundwater flow direction to the north-northeast.
 - b. Upgradient and downgradient relationships of groundwater sampled cannot be known without permanent surveyed groundwater monitoring wells, a sufficient history of depth to water measurements, and calculated gradients and flow directions. One time grab groundwater sampling events from various temporary monitoring well locations on different dates are insufficient to establish groundwater flow direction and gradient.
- 10) Based on proximity as the nearest identified petroleum release, former heating oil UST #3 is potentially the source of the TPH observed in groundwater. Ecology concurs with Terracon's assessment that the nearby facilities are not likely the source of contamination in groundwater present at EB-16.
- 11) **In order to determine if the concentrations of diesel and heavy oil exceeding the MTCA Method A cleanup levels at EB-16 are attributable to the release at the Site or the result of a contaminant plume encroaching upon the Site from another release, Ecology recommends the following:**
 - a. Specific to this Site, Gibraltar Senior Living may start by installing one monitoring well at the former soil boring location EB-16. If groundwater sampling analytical results indicate that no concentrations exceed the applicable MTCA cleanup level, then no additional well installation would be necessary.
 - b. Sampling would need to be consistent with section 10.3 of Ecology Publication no. 10-09-057, *Guidance for Remediation of Petroleum Contaminated Sites*. Specific to this Site, the results of the first sampling event from the installed monitoring well (and not the grab groundwater sampling results) would be used to determine the appropriate stage of monitoring required.
 - c. Sample the well consistent with WAC 173-340-900, Table 830-1. Consider sampling using the waste oil/unknown oil contaminants to determine if diesel range or heavy oil range contamination is present.
 - d. Though qualitative, Ecology suggests analyzing groundwater samples using TPH-HCID, which would identify which specific petroleum hydrocarbon range(s) is/are present.
 - e. Ecology recommends following all access agreements and utility clearance requirements prior to well installation.
- 12) **If concentrations in the well installed at EB-16 exceed the MTCA Method A cleanup levels, then Ecology recommends the following:**
 - a. Install a second monitoring well to the south of former soil sample location "V", but still within or at the Property boundary, if possible. However, Ecology acknowledges that utility conflicts may result in the well being installed slightly off-Property.

Guidance for Remediation of Petroleum Contaminated Sites.

- 16) Survey any monitoring well installed. For elevations, use a United States Geological Survey datum, as required by WAC 173-340-840(4)(e).

Limitations of the Opinion

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.

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

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.

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For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at 360-407-6265 or e-mail at tmul461@ecy.wa.gov.

Sincerely,



Tim Mullin, LG
SWRO, Toxics Cleanup Program

TCM: kb

By Certified Mail: [91 7199 9991 7037 7462 2200]

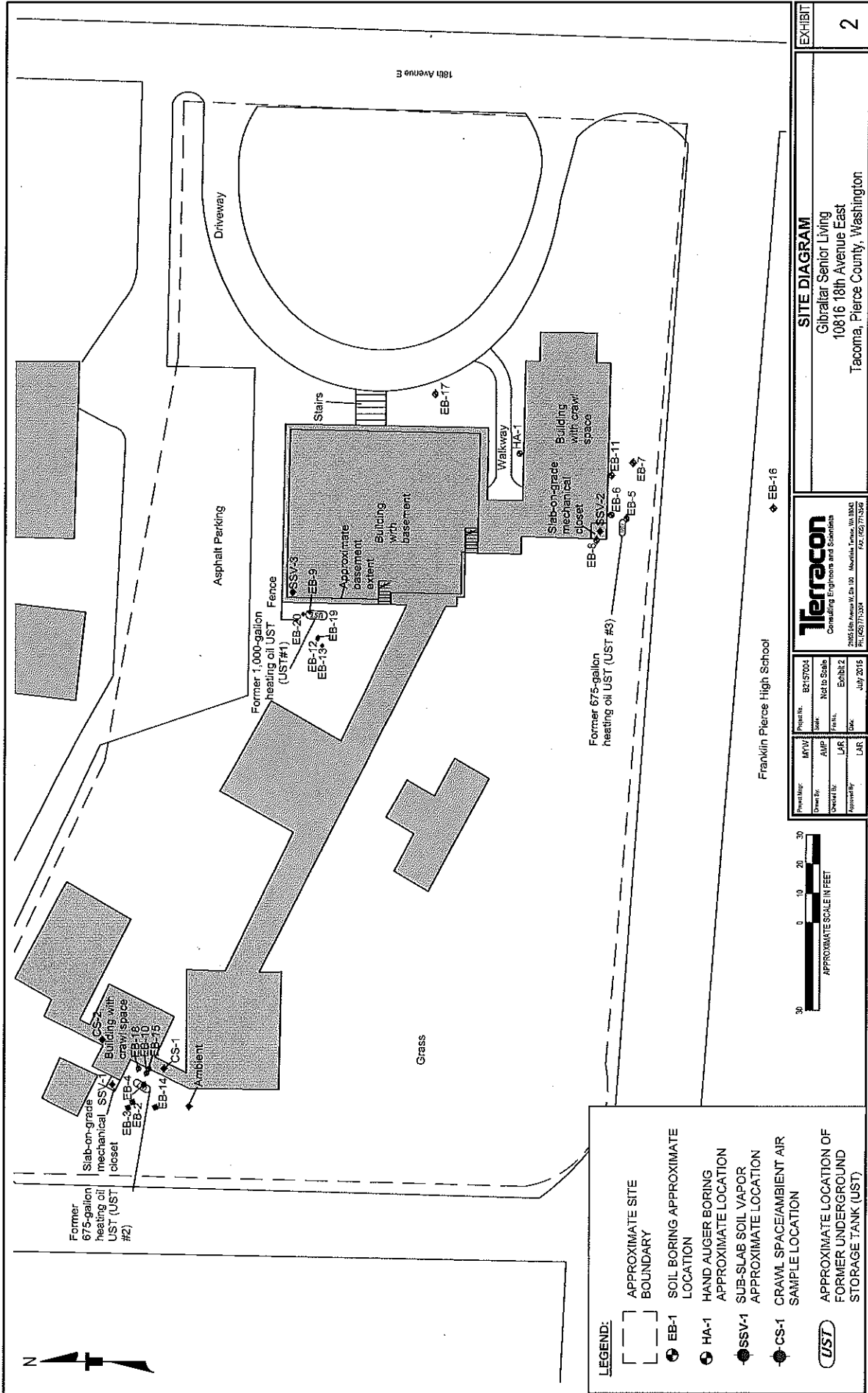
Enclosures (A): A – Figure and Email Correspondence

cc: Elizabeth Rachman, Atlas Geosciences Northwest
Rob Olsen, TPCHD
Nick Acklam, Ecology
Stephanie Bussell, Ecology

Enclosure A

Figure and Email Correspondence

Figure 1



SITE DIAGRAM
Gibraltar Senior Living
10816 18th Avenue East
Tacoma, Pierce County, Washington

EXHIBIT 2

Acklam, Nicholas (ECY)

From: Cook, Jason (ECY)
Sent: Monday, May 02, 2016 9:16 AM
To: Rachman, Liz A
Cc: Acklam, Nicholas (ECY); vbl@gibraltarseniorliving.com
Subject: RE: Gibraltar Senior Living

Liz:

You are welcome.

I will gladly clarify question one.

No need to address the chloroform vapor as part of the UST assessment. It was called out in the Opinion Letter I generated out of concern for the residents and potential exposure. Ecology recommends the source of the chloroform vapor is identified and addressed.

In addition, upon review of the chromatograms -- comparing the on-Site and off-Site releases, It does not *appear* the off-Site groundwater release is associated with the release from Gibraltar. However, Ecology (the new Site manager) may require additional data and analysis.

Question two.

I cannot allude to the issuance of an NFA determination via email. Again, please characterize, delineate all CoCs, and illustrate in diagrams and cross-sections, and assure all pathways are closed/incomplete. At that point, an NFA consideration can be made.

Its been a pleasure working with you. Please be in contact with Nick Acklam in my absence.

Sincerely:

Jason G. Cook, LG
Hydrogeologist 3
Washington Department of Ecology
SWRO/TCP/VCP
360.407.6528

From: Rachman, Liz A [mailto:Liz.Rachman@terracon.com]
Sent: Tuesday, April 26, 2016 3:01 PM
To: Cook, Jason (ECY) <ASCO461@ECY.WA.GOV>; Acklam, Nicholas (ECY) <nack461@ECY.WA.GOV>
Cc: Vinson Latimore <>; Erica A. Doctor - Phillips Burgess PLLC (edocto@phillipsburgesslaw.com) <edocto@phillipsburgesslaw.com>
Subject: RE: Gibraltar Senior Living

Hi Jason,

Thank you for your quick review and response! Could you please provide clarification as to whether 1) Ecology concurs with omitting further chloroform vapor and off-site groundwater assessment, and 2) whether a successful soil delineation and lack of naphthalene in the air sample would result in a Property-Specific NFA?

Thanks!
Liz

Elizabeth Rachman, L.G., L.Hg.
Senior Project Manager | Environmental

Terracon

3006 South 96th Street | Lakewood, WA 98499
D (253) 382 3820 | F (253) 573 9959 | M (206) 715 2136
liz.rachman@terracon.com | terracon.com

From: Cook, Jason (ECY) [<mailto:ASCO461@ECY.WA.GOV>]
Sent: Monday, April 25, 2016 4:19 PM
To: Rachman, Liz A <Liz.Rachman@terracon.com>
Cc: Acklam, Nicholas (ECY) <nack461@ECY.WA.GOV>
Subject: Gibraltar Senior Living

Dear Liz:

Ecology has reviewed the Terracon *Responses to Ecology Further Action Opinion Letter*, dated April 12, 2016.

Ecology concurs with the proposed work plan outlined in the above-referenced document, entailing further vapor assessment and characterization.

Once the work is completed, please supply Ecology with a deliverable for review under the VCP Program. Also, assure that Terracon supplies the Ecology Site Manager with a scaled plume map and associated cross-sections, illustrating the magnitude and extent of subsurface contamination.

Thank you

Jason G. Cook, LG
Hydrogeologist 3
Washington Department of Ecology
SWRO/TCP/VCP
360.407.6528

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