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DEPARTMENT OF ECOLOGY
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October 23, 2019

Matt McGraner
Highland Capital Management
300 Crescent Court, Ste 700
Dallas, TX 75201

Re: Opinion on the Cleanup at the Following Site:

- **Site Name:** Phoenix Inn (aka Double Tree Olympia)
- **Site Address:** 415 Capitol Way North, Olympia, Thurston County, WA 98501
- **Cleanup Site ID:** 5257
- **Facility/Site ID:** 1571525
- **VCP Project ID:** SW1661

Dear Matt McGraner:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Phoenix Inn (aka Double Tree Olympia) facility (Site). Your submittal is currently incomplete, awaiting acceptance of electronic data to Ecology's Environmental Information Management (EIM) database. Ecology has decided to proceed with our review prior to accepting the Site data into EIM. This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA),[1] chapter 70.105D Revised Code of Washington (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, Washington Administrative Code (WAC) chapter 173-340 (collectively "substantive requirements of MTCA"). The analysis is provided below. This opinion is provided under the free reviews provided under Ecology's model remedy program, and is included as part of the first request for review. You have one free review remaining if requesting a model remedy.

[1] https://fortress.wa.gov/ecy/publications/SummaryPages/9406.html

Description of the Site

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:

- Petroleum hydrocarbons (gasoline, diesel, and heavy oil) and related hazardous substances (benzene, toluene, ethylbenzene, total xylenes, and naphthalene) into the soil and groundwater.
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) into groundwater.
- Lead into groundwater.
- Naphthalene into the air.

Former historical Site infrastructure which likely contributed to petroleum contamination at the Site:

- Bulk fuel terminal, which, at one time or another, was comprised of a group of four above ground storage tanks (ASTs), two 20,000-gallon ASTs, one 5,000-gallon AST, a filling station, a truck repair facility, and a warehouse/office.
- 300-gallon underground storage tank (UST) containing gasoline.
- 500-gallon UST containing heating/fuel oil.
- 2,500-gallon UST containing gasoline.

No release appears to have occurred from the former automotive repair operation in the southeastern portion of the Site.[2] A brief Site description is included as **Enclosure A.**

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

This opinion is based on the information contained in the documents listed in **Enclosure B**.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Information on obtaining those records can be found on Ecology's public records requests web page.[3] Some site documents may be available on Ecology's Cleanup Site Search web page.[4]

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

[2] See 1924 Sanborn Fire Insurance Map for location and extent of the former automotive repair operation.
[3] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[4] https://fortress.wa.gov/ecy/gsp/SiteSearchPage.aspx

Analysis of the Cleanup

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, but is not sufficient to select a cleanup action. Ecology recommends collecting additional data to determine current conditions, plume extent, concentration trends, and to support determination of a cleanup action based on a feasibility study (FS) with disproportionate cost analysis (DCA).

Please note that WAC 173-340-430 allows you to implement interim cleanup actions at any time.

a. **Model Remedy Response.**

i. Ecology provided a response to a request to close the Site under Model Remedy #4 in a letter dated February 21, 2019.

ii. Ecology did not concur with the proposed Model Remedy #4 at the time of the request, as certain criteria were not met.[5]

iii. The current extent of historical contamination in soil and/or groundwater in the right-of-way of Thurston Avenue is unknown. Some historical contaminated soil and groundwater (e.g., MW-4 and SP-6) in close proximity to Columbia Street also remains to be evaluated.

iv. The contaminated soil beneath the former bulk fuel facility in southern portion of the parking lot was not removed.

b. Please clarify how historical concentrations of hazardous substances exceeding the MTCA cleanup/screening levels at the locations below are to be addressed by any proposed cleanup action. Data have not been collected at these locations since at least 1994, and there are no recent adjacent sampling locations from which to infer current conditions.

i. **Soil.**

a) MW-2.

b) SP6.

c) SP-2 and Bottom (from the excavation for the former 500-gallon heating fuel UST).

[5] See Ecology, Re: *Response to No Further Action Request by Model Remedy*, February 21, 2019.

ii. **Groundwater.**

a) SP5.

b) SP6.

c) MW-4.

c. Along with cleanup of the Site as a whole, please clarify how any proposed cleanup action will address specific contamination at these locations, which have more recent sampling data.

i. **Soil.**

a) S-11.

b) Within the former ASTs footprint.

c) Along the southern boundary of the parking lot and the southern driveway.

d) Under the existing building at a future time.

e) Within any right-of-way where/if contaminated soils remain.

ii. **Groundwater.**

a) The locations below appear to need additional groundwater monitoring results to achieve at least four consecutive events[6] with concentrations less than the MTCA cleanup levels.

b) Diesel and heavy oil (multiple monitoring wells), including an overall increasing trend at PMW-8 and PMW-10.

c) cPAHs at PMW-2.

d) cPAHs at PMW-3.

e) Benzene at PMW-8.

f) Total lead at PMW-9.

g) Gasoline at PMW-10.

h) PMW-9, MW-12, and PMW-14.

i) Diesel at PMW-15.

j) Gasoline and benzene at MW4.

[6] See the monitoring stages under Section 10.3 in Ecology Publication No. 10-09-057, *Guidance for Remediation of Petroleum Contaminated Sites*, revised June 2016.

d. **Ecology Recommends Continued Groundwater Monitoring at Site Monitoring Wells.**

i. Ecology requests groundwater monitoring follows section 10.3 in the *Guidance for Remediation of Petroleum Contaminated Sites.*[7]

ii. Based on the groundwater data submitted, concentrations of Site hazardous substances continue to exceed the MTCA cleanup/screening levels at some monitoring wells.

iii. Ecology recommends continued groundwater monitoring, including sampling for diesel and heavy oil (NWTPH-Dx) without silica gel cleanup. Historical results using silica gel cleanup with NWTPH-Dx for diesel and heavy oil in groundwater may not be representative of Site groundwater conditions. Data for this Site to support the use of silica gel cleanup of analytical samples has not been provided for the remedial investigation.

iv. Continued groundwater monitoring results would provide additional data to determine concentration trends in groundwater as well as determine if the groundwater plume is expanding, stable, or shrinking. These analytical results, along with groundwater parameters, and monitored natural attenuation (MNA) parameters, would determine if MNA is a potential long term cleanup option for contaminated groundwater at the Site.

v. Based on the size of the monitoring well network, it may not be necessary to sample all analytes at all wells for each monitoring event.

a) For example, cPAHs might only be necessary at selected wells where four consecutive events of compliant groundwater results have not been achieved.

b) It might be sufficient during some sampling events to evaluate only specific hazardous substances (e.g., diesel and heavy oil) in groundwater to monitor the extent and geometry of the current contamination plume in groundwater.

vi. However, gauging of all monitoring wells to determine depth to water and groundwater flow direction is recommended at each monitoring event. Ecology also recommends low flow groundwater sampling methodology for this Site.

e. Provide updated figures and cross-sections showing the maximum historical and current extent of contamination in soil and groundwater.

i. Figures and cross-sections should show the areal and vertical extent of historical and current contamination.

ii. The purpose is to track the dimensions of the contamination plume in soil and groundwater over time and to show the current extent of contamination. These figures and cross-sections should be updated as new data are collected.

[7] Ecology Publication No. 10-09-057, revised June 2016. Available at: https://fortress.wa.gov/ecy/publications/documents/1009057.pdf

iii. Please include in any figures and cross-sections decommissioned monitoring wells MW-1 through MW-7, MW-9 and MW-10.

f. **Air/Vapor Pathway.**

i. Arcadis screened utility vaults at the Site in June 2017. No volatile organic compounds (VOCs) were identified during the survey. All lower explosive level (LEL) readings were less than 10 percent, demonstrating that an explosive atmosphere was not present in any of the utility vaults.

ii. Arcadis completed sub-slab soil vapor and indoor air sampling from June 2017 through February 2018, a total of four consecutive quarterly sampling events.

iii. Concentrations of naphthalene in soil vapor/gas or indoor air, where detected, generally show a declining trend.

iv. In June 2017 and February 2018, outdoor air (background) sampled in the parking lot showed naphthalene exceeding the MTCA Method B cleanup value protective of indoor air.

a) Concentrations of naphthalene in outdoor air at the Site are within preliminary background values for naphthalene.[8]

v. In their *Vapor Intrusion Investigation Report*,[9] Arcadis calculated Site-specific risk based levels for naphthalene for indoor air. Arcadis indicated that analytical concentrations were protective of hotel guests and workers in a commercial scenario, but not for children in a residential scenario.

vi. Based on the analysis of the November 2017 indoor and soil vapor sampling results, it appears that naphthalene concentrations in indoor air and sub-slab soil vapor do not pose a risk to hotel guests or workers, as long as the Property continues to be commercial in use. However, Ecology requests that the risk analysis be repeated using the data from the February 2018 event.

a) To ensure that the workers and guest remain protected, any Site closure will need to incorporate institutional controls memorialized by an environmental covenant with a long term indoor air compliance monitoring plan.

b) An example of long term compliance indoor air monitoring might be to complete periodic monitoring (e.g., once every 18 months) alternating between winter and summer conditions, where one sample is taken from a guest room and one taken from a worker area. Based on historical naphthalene in indoor air concentrations, Room 146 and the hotel laundry might represent minimum sampling locations for any long term compliance indoor air monitoring.

[8] See Table 1 in Ecology Publication No. 17-09-043, *Implementation Memo No. 18, Petroleum Vapor Intrusion (PVI): Updated Screening Levels, Cleanup Levels, and Assessing PVI Threats to Future Buildings*, January 10, 2018.
[9] December 18, 2017.

g. **Surface Water and Sediment Pathways.**

i. Arcadis[10] proposed that both the surface water and sediment pathways are incomplete. Groundwater data at off-Property wells and groundwater data at some on-Property wells near the Property boundary have been in compliance with the MTCA groundwater cleanup/screening levels for at least four consecutive quarterly events. These results indicate that it is more likely than not that surface water has not been impacted by the release at the Site. An incomplete surface water pathway means that cleanup levels based on protection of groundwater will be applicable.

ii. The SW1661 cleanup Site is classified as an upland cleanup. No portion of the Site is inundated for at least six consecutive weeks out of the year, as defined under WAC 173-204-563(22). Sediment is not present anywhere on the Site.

iii. Ecology concurs with Arcadis' analysis that the surface water and sediment pathways are incomplete for the Site.

h. **Ecological Pathway.**

i. Arcadis proposed an exclusion from further terrestrial ecological evaluation (TEE) based on an exclusion that there is less than 1.5 acres of contiguous undeveloped land on the site or within 500 feet of any area of the site.[11] Ecology concurs with the proposed exclusion and no further TEE is necessary.

i. Please elaborate on the existing land use constraints referenced in this statement from p. 8 of Arcadis' *Groundwater Monitoring Report and Request for Ecology Opinion on Applicability of Model Remedy #4 for Sites with Petroleum Impacts to Groundwater*:[12] "Due to existing land use constraints, it is not practicable to further excavate impacted materials."

i. Ecology recognizes some contamination is inaccessible, being beneath the existing building and potentially beneath utility corridors. However, a substantial amount of soil contamination appears to be accessible. Please evaluate spot remediation of contaminated soil and groundwater as part of the cleanup action/remedial alternative selection process.

j. **Silica Gel Cleanup for Analyzing Diesel and Heavy Oil in Groundwater Samples.**

i. For comparison, it appears that silica gel cleanup was used for diesel and heavy oil data for groundwater at many sampling events. Generally, silica gel cleanup should not be used with the NWTPH-Dx method to analyze groundwater samples. See p. 99 (section 7.3) in Ecology Publication No. 10-09-057, *Guidance for Remediation of Petroleum Contaminated Sites*, revised June 2016.[13]

[10] In their *Groundwater Monitoring Report and Request for Ecology Opinion on Applicability of Model Remedy #4 for Sites with Petroleum Impacts to Groundwater*, revised March 21, 2018.
[11] WAC 173-340-7491(c)(i).
[12] March 21, 2018.
[13] Available at: https://fortress.wa.gov/ecy/publications/documents/1009057.pdf

ii. Ecology recognizes that at this cleanup, silica gel might be appropriate when using the NWTPH-Dx method to analyze diesel and heavy oil range petroleum hydrocarbons in groundwater. Any evaluation of background must meet the requirements of WAC 173-340-709.

iii. The following lines of evidence are useful if silica gel cleanup is proposed for future groundwater samples at the Site:

a) Continue analysis of groundwater samples by NWTPH-Dx both with and without silica gel cleanup. Evaluate results from both contaminated areas within the existing well network as well as an area outside of the extent of your Site.[14]

b) Determine soil sample carbon fractions, both in contaminated areas and from an area away from and upgradient of the Site.

c) Total and dissolved organic carbon concentrations analyzed in soil sampled in both contaminated and an area away from and upgradient of the Site should be similar.

d) Report both pre- and post-silica gel treatment groundwater analytical results at all locations. Provide chromatograms, calculations, and numerical estimations of variability or laboratory measurements based on laboratory QA/QC for each sample.

e) Provide supporting evidence and criteria for use of silica gel cleanup on a location-by-location (e.g., well by well) basis.

f) If silica gel cleanup is used, report all sample results for this remedial investigation without the use of silica gel cleanup in plan view and cross section concentration isopleth maps. Continue to report results with and without silica gel treatment in tables. Include evaluation of both contaminated and uncontaminated areas.

iv. Alternatively, you could also evaluate polar breakdown petroleum metabolites in terms of risk to human and ecological receptors. These metabolites would be included as part of a total Site-specific petroleum-related risk, and included when evaluating cumulative risk for all petroleum in groundwater at the Site.[15]

k. Please finalize the upload of Site data to EIM, in accordance with WAC 173-340-840(5) and Ecology Policy 840. Data collected before August 1, 2005, are encouraged to be uploaded to EIM, but this is not required.

[14] Outside of the areal extent of where contamination from the release might have come to be located. See facility definition in WAC 173-340-200.

[15] For example: *Petroleum Metabolites Literature Review and Assessment Framework Technical Resource Document,* San Francisco Bay Regional Water Quality Control Board, June 27, 2016. https://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/SF_WB_Petroleum_Metabolites.pdf

2. Establishment of Cleanup Standards.

Cleanup Standards: Under MTCA, cleanup standards consist of these primary components; (a) standard points of compliance,[16] (b) conditional point(s) of compliance for groundwater, (c) cleanup levels,[17] and (d) applicable state and federal laws.[18]

a. **Standard Points of Compliance:** Points of compliance are the specific locations at the Site where cleanup levels must be attained. For reference, Ecology provides the following table of standard points of compliance which appear to be applicable to your Site.

Media	Points of Compliance
Soil-Direct Contact	Based on human exposure via direct contact, the standard point of compliance is throughout the Site from ground surface to fifteen feet below the ground surface.[19]
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site.[20]
Groundwater	Based on the protection of groundwater quality, the standard point of compliance is throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the site.[21]
Air Quality	Based on the protection of air quality, the point of compliance is indoor and ambient air throughout the Site.[22]

b. **Conditional Point(s) of Compliance for Groundwater:** Arcadis proposed a conditional point of groundwater for the Site[23], using monitoring wells PMW-20 and PMW-21. Ecology did not concur with the proposed conditional point of compliance for groundwater in its response letter dated February 21, 2019.

i. WAC 173-340-720(8)(c) in part requires that any proposed conditional point(s) of compliance can only be used when it is not practicable to meet the cleanup level throughout the Site within a reasonable restoration time frame, and the person responsible for undertaking the cleanup action shall demonstrate that all practicable methods of treatment are to be used in the Site cleanup.

ii. To evaluate whether or not current concentrations of Site hazardous substances in groundwater would meet cleanup levels within a reasonable restoration time frame (e.g., 10-15 years), additional groundwater data, including results of diesel and heavy oil without silica gel cleanup, are recommended to evaluate current concentration trends. The results of the reasonable restoration time frame would provide a determination about whether a standard or conditional point(s) of compliance is/are appropriate for this Site.

[16] WAC 173-340-200 “Point of Compliance.”
[17] WAC 173-340-200 “Cleanup level.”
[18] WAC 173-340-200 “Applicable state and federal laws,” WAC 173-340-700(3)(c).
[19] WAC 173-340-740 (6)(d)
[20] WAC 173-340-747
[21] WAC 173-340-720(8)(b)
[22] WAC 173-340-750(6)
[23] *Groundwater Monitoring Report and Request for Ecology Opinion on Applicability of Model Remedy #4 for Sites with Petroleum Impacts to Groundwater*, March 21, 2018.

a) Collecting groundwater parameters and MNA parameters data are also recommended to evaluate groundwater plume characteristics and stability.

b) Concentration trends for each Site hazardous substance in groundwater should be evaluated both qualitatively and quantitatively (statistically) to determine current groundwater plume characteristics and whether or not the plume is stable or shrinking, and to estimate a restoration time frame. Where all groundwater sampling points have achieved four consecutive events less than the applicable MTCA screening/cleanup level, these hazardous substances could be eliminated from this evaluation. As a starting point, please see Appendix D in Ecology Publication No. 05-09-091, *Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation*, July 2005.

c. **Cleanup Levels:** Cleanup levels are the concentrations of a hazardous substance in Site media which are determined to be protective of human health and the environment. At this Site, MTCA Method A and B unrestricted cleanup/screening levels were used to evaluate hazardous substances detected at the Site. MTCA Method A or B cleanup levels currently used to screen analytical results appear to be appropriate as the final Site cleanup levels.

d. **Applicable Laws and Regulations:** Please identify all applicable local, state, and federal laws for the cleanup action.[24] This requirement may impact cleanup standards applicable to the Site.

3. Selection of Cleanup Action.

In its *Groundwater Monitoring Report and Request for Ecology Opinion*, Arcadis proposed a closure using Model Remedy #4, including implementing institutional controls memorialized by an environmental covenant. Ecology responded why we did not concur with the proposal in a letter dated February 21, 2019.

In support of selecting a cleanup action for the Site, Ecology recommends considering the following:

a. Though a limited number of petroleum cleanups qualify for a closure via Model Remedy, Ecology encourages you to complete a FS with DCA for your Site.

i. The FS[25] with DCA[26] is a useful tool to determine what cleanup action to take at your Site, and is required for non-Model Remedy cleanups. Additionally, the Model Remedy #4 cannot be applied where contamination extends into the right-of-way and soils have not been removed to the extent practicable.[27]

ii. As a FS with DCA is not required for a Model Remedy closure, cleanup actions/alternatives are not evaluated or ranked when using a Model Remedy. At this Site, while certain baseline cleanup actions (no action and complete cleanup and

[24] WAC 173-340-710(2)
[25] WAC 173-340-350
[26] WAC 173-340-360
[27] Ecology Publication No. 10-09-057, *Guidance for Remediation of Petroleum Contaminated Sites*, revised June 2016, page 18.

including removing and replacing the hotel to excavate all contaminated soil) would be used for comparative purposes and will not be selected, other cleanup actions are appropriate. Evaluating focused hotspot removal or cleanup with monitored natural attenuation (MNA)[28] for groundwater could be considered, among other potential options.

iii. Additionally, any appropriate institutional controls memorialized by an environmental covenant not using a Model Remedy would apply out to the centerline of the adjacent roadways, rather than potentially excluding City of Olympia right-of-ways. Though any contamination left in place within the right-of-way will still have to adhere to all requirements in Procedure 440A, which includes attempts to subordinate other easement holders rights to the environmental covenant.

b. Consider collecting new soil data to evaluate historical exceedances of the MTCA cleanup levels, to determine current conditions, and to continue to evaluate degradation trends.

c. Ecology recommends continuing to collect groundwater monitoring data.

d. Ecology recommends continuing to collect indoor air data at locations such as Room 146 and the laundry room on at least a once per 18 month basis to verify that human health is still protected.

e. Report to Ecology on all new data collected, including upload of all new data to EIM.

4. Cleanup.

Several interim actions have been taken as part of the cleanup at the Site:

- Removal of three USTs.
- Removal of former bulk fuel facility ASTs, fuel station, warehouse, above ground piping, and other associated infrastructure.
- Removal and off-Site disposal of 15 tons of petroleum contaminated soil (PCS) during removal of the heating oil UST.
- Removal and off-Site disposal of 150 tons of PCS during removal of the gasoline UST.
- In 1994, limited periodic free-phase hydrocarbons (product) removal from monitoring well MW-1.
- Beginning in March 2006, twenty bi-monthly injections of microbes.
- Beginning in 2006, four oxygen injections.

[28] See Section 3.2 in Ecology Publication No. 05-09-091, *Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation*, July 2005.

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.

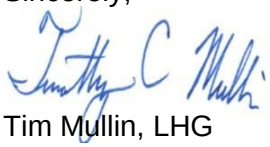
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

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.

For more information about the VCP and the cleanup process, please visit our Voluntary Cleanup Program web site.[29] If you have any questions about this opinion, please contact me at (360) 407-6265 or tmul461@ecy.wa.gov.

Sincerely,



Tim Mullin, LHG
Toxics Cleanup Program
Southwest Regional Office

TCM: tam

Enclosures (2): A – Site Description
B – Document List

cc: Jesse R. Blair, III, NHT Olympia, LLC
Paul T. McCullough, Arcadis
Nicholas Acklam, Ecology (by email)
Ecology Site File

[29] https://www.ecy.wa.gov/vcp

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Enclosure A

Site Description

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Site Description

The Site is located at 415 Capitol Way N, Olympia, Thurston County, Washington. According to the Thurston County Assessor's website, the Site is associated with parcel 78500100300, which totals 1.38 acres in size (Property). A single three story building, totaling 68,604 square feet, and constructed in 1999, occupies the majority of the parcel. An asphalt parking lot and landscaping covers the remaining areas of the Property. The Property is zoned as commercial (Thurston County use code 16: Hotel/Motel).

The Property is occupied by a hotel. Historically, the Property was occupied by a feed company, then a bulk fuel terminal, and then a trio of buildings used for dry goods stores and as an outdoor flea market. Future Property use is anticipated to continue as a hotel.

The Property is in an area of mainly commercial properties with a few residential and industrial properties. The Property vicinity has historically been used for mostly industrial purposes.

Shallow Site soils are largely dredge material from Budd Inlet, which was used to finish this area of Olympia in the early 20th century. Underlying the dredge silts and sands (which also contain clay, gravel, organic matter, and shells), are generally brown unconsolidated gravelly sand. The maximum depth explored at the Site is approximately 16.5 feet bgs.

Ten on-Property and off-Property monitoring wells (MW-1 through MW-10) have been installed at the Site. Twenty-two monitoring wells (PMW-1 through PMW-22), some doubling as remediation points, have also been installed on the Property. Depth to groundwater in Site monitoring wells has ranged from about 3.75 to 10 feet below top of casing. Site groundwater direction has been variable, with the primary flow direction to the northeast, and secondary flow directions to the southwest and east. No active groundwater supply wells are present within 750 feet of the Site.

West Bay (Puget Sound) is located approximately 350 west of the Property and East Bay is located approximately 1,650 feet to the east. The Property building is connected to public water and sewer. Stormwater drains are present at least on the perimeter of the Property. The nearest drinking water well is over 750 feet south of the Site.

Contamination is believed to have been released from former underground and aboveground storage petroleum storage tanks at the Property.

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Enclosure B

Document List

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Document List

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

1. ATEC Environmental Consulting Services, *Phase I Environmental Site Assessment*, June 24, 1993.

2. Enviros, Inc. (Enviros), *Environmental Site Assessment Final Report of the Yard Birds Property*, Olympia, Washington, June 1, 1994.

3. Enviros, *Environmental Site Assessment Final Report of the Yard Birds Property*, Olympia, Washington, November 4, 1994.

4. Environmental Project Management, Inc. (EPMI), Re: *Yard Birds Update*, February 10, 2000.

5. GeoDesign, Inc. (GeoDesign), *Phase I Environmental Site Assessment*, September 21, 2005.

6. Stemen Environmental (Stemen), Re: *Remedial Investigations and Site Characterization Report for the Phoenix Inn Property Located at 415 Capitol Way N., Olympia, Washington*, March 26, 2006.

7. Ecology, Re: Opinion under WAC 173-340-515(5) on *Proposed Cleanup Action for the following Hazardous Waste Site*, May 23, 2006.

8. Stemen, *Environmental Remediation Work Completed to Date on Phoenix Inn Site Located at 415 Capitol Way N., Olympia, Washington*, April 6, 2010.

9. EMG Corp. (EMG), *Phase I Environmental Site Assessment*, August 24, 2011.

10. Stemen, *Groundwater Sampling Event Report*, October 27, 2012.

11. EMG, *Phase I Environmental Site Assessment*, September 6, 2014.

12. Stemen, *Proposed Environmental Investigations for the Former Phoenix Inn Site Property Located at 415 Capitol Way N., Olympia, Washington*, July 1, 2015.

13. Ecology, Re: *Request for Further Site Characterization*, February 10, 2017.

14. Arcadis Inc., (Arcadis), *Work Plan for Additional Site Characterization*, April 10, 2017.

15. Ecology, Re: *Results of Confirmation Indoor Air Sampling*, September 26, 2017.

16. Arcadis, *Work Plan for Additional Vapor Intrusion/Indoor Air Investigation*, October 20, 2017.

17. Arcadis, *Revised Work Plan for Additional Vapor Intrusion/Indoor Air Investigation*, November 7, 2017.

18. Arcadis, *Response to Comments Table*, November 7, 2017.

19. Ecology, Re: *Approval of November 7, 2017, Revised Work Plan for Additional Vapor Intrusion/Indoor Air Investigation for the Following Site*, November 28, 2017.

20. Arcadis, *Vapor Intrusion Investigation Report*, December 18, 2017.

21. Arcadis, *Groundwater Monitoring Report and Request for Ecology Opinion on Applicability of Model Remedy #4 for Sites with Petroleum Impacts to Groundwater*, March 21, 2018.

22. Ecology, Re: *Notification of Indoor Air Sampling Results for the Following Facility*, March 30, 2018.

23. Arcadis, *2018 Vapor Intrusion Investigation Report*, April 10, 2018.

24. Ecology, Re: *Ecology Response to NFA Request by Model Remedy*, February 21, 2019.