



STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**  
PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

November 15, 2022

Thomas L. Markl  
Agent for The Estate of Barbara J. Nelson and WCN GST Non-Exempt Marital Trust No. 2  
Nelson Legacy Group  
16508 NE 79th Street  
Redmond, WA 98052

**Re: Opinion on Proposed Cleanup of the following Site:**

<b>Site Name:</b>	Thompson Field Gunshy Manor
<b>Site Address:</b>	7420 196th Ave NE, Redmond WA 98053
<b>Cleanup Site ID:</b>	15285
<b>Facility/Site ID:</b>	8042
<b>VCP Project ID:</b>	XN0021

Dear Thomas L. Markl:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the Thompson Field Gunshy Manor site (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.

**Issue Presented and Opinion**

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Ecology has determined that upon completion of your proposed cleanup (excavation and offsite disposal of contaminated soil), no further remedial action will likely be necessary to clean up contamination at the Site.

This determination is dependent on yet-to be determined factors such as:

- Submittal to Ecology of a Confirmation Sampling Plan and Ecology's concurrence with that plan.

- Demonstration of sufficiency of cleanup via confirmation soil and pit water sampling results.
- Submittal to Ecology of a Cleanup Action Report documenting the cleanup actions and Ecology acceptance of that document.

Elements of the Confirmation Sampling Plan and Cleanup Action Report are discussed below.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70A.305 RCW, and its implementing regulations, Chapter 173-340 WAC (collectively “substantive requirements of MTCA”). The analysis is provided as follows.

### **Summary of Opinion**

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Releases of carcinogenic polycyclic aromatic hydrocarbons (CPAHs) and naphthalene have occurred at the Site, which is in rural King County, east of Redmond, Washington. The CPAHs and naphthalene contamination in soil is associated with fill materials that originated from the Seattle Mount Baker tunnel project in the early 1980s.

The CPAHs and naphthalene in soil was characterized as presented within the *Remedial Investigation (RI) Report, Thompson Field Site*, dated April 6, 2021, and subsequent RI Addendum dated February 24, 2022. A Cleanup Action Plan, dated October 25, 2022, identified excavation and offsite disposal as the selected remedial alternative for the contaminated soil.

The CPAHs and naphthalene in soil appear to be attributable to the fill materials that were brought on-Site as opposed to a direct contamination release at the Site. The extent of CPAHs and naphthalene in soil appear to be sufficiently defined for the selection of cleanup levels and the identification of appropriate cleanup actions.

The extent of soil contamination was characterized through the collection of 111 soil samples from depths between one (1) and 14 feet below ground surface (ft bgs) between 2019 and 2021. The vertical extent of contamination appears to be limited to a depth of approximately six (6) feet below ground surface (ft bgs), within the fill unit. The fill material was described as silty sand, sandy silt, and silt containing varying amounts of gravel, wood, and brick.

Groundwater was characterized through the installation and sampling of eight (8) monitoring wells and three (3) temporary groundwater sampling locations. With the exception of arsenic, which was determined to be naturally occurring (see further discussion below), no contamination was found at concentrations above cleanup levels in the groundwater samples. The soil contamination is primarily from the CPAHs, which have a relatively low solubility and mobility. Based on the Site data and physical properties of CPAHs, Ecology has concluded that groundwater at the Site has not been impacted by the Site’s soil contamination, and risk to water supply wells in the area is low.

Prior to execution of the cleanup, Ecology requests submittal of a confirmatory sampling plan showing proposed sampling locations and depths. The cleanup of the contaminated soil will be documented in a Cleanup Action Report, which should include the confirmatory soil sampling data demonstrating removal of all soils above the selected MTCA cleanup levels, and waste disposal receipts demonstrating proper disposal of all contaminated media.

### **Description of the Site**

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

- CPAHs and naphthalene into the soil<sup>1</sup>.

1-Arsenic was detected in soil and groundwater at concentrations above cleanup levels; however, as discussed below, Ecology has concluded that these arsenic detections are naturally occurring and not a Site contaminant regulated under MTCA.

**Enclosure A** includes a detailed description and diagrams 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 associated with this Site is 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. Farallon Consulting. *Cleanup Action Plan, Thompson Field Site, Portion of King County Parcel No. 0825069104, Redmond, Washington*. October 25, 2022.
2. Farallon Consulting. *Addendum to Remedial Investigation Report, Thompson Field Site, Portion of King County Parcel No. 0825069104, Redmond, Washington*. February 24, 2022.
3. Farallon Consulting. *Remedial Investigation Report, Thompson Field Site, Portion of King County Parcel No. 0825069104, Redmond, Washington*. April 6, 2021.
4. U.S. EPA. *Preliminary Assessment, Task Order, Subtask:TO-0525-003*. March 2020.
5. Farallon Consulting. *Release Notification, Thompson Field Site, King County Parcel No. 0825069104, Redmond, Washington*. February 17, 2020.

A number of these documents are accessible in electronic form from the Site webpage <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=15285>. The complete records are stored in the Central Files of the Headquarters Office of Ecology, for review by appointment only. Visit our Public Records Request page <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>, to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the

Public Records Officer at [publicrecordsofficer@ecy.wa.gov](mailto:publicrecordsofficer@ecy.wa.gov) or 360-407-6040.

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

### **Analysis of the Proposed Cleanup**

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Ecology has concluded that, upon completion of your proposed cleanup, **no further remedial action** will likely be 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 is described above and in **Enclosure A.**

##### Site Contaminants

CPAHs and naphthalene were found in soil at concentrations above MTCA cleanup levels at the Site. The contaminants are associated with and attributed to the fill materials that were brought on-Site in the early 1980s.

Arsenic was detected at concentrations above cleanup levels in two soil samples and above background in two groundwater samples. The soils and groundwater with these cleanup level exceedances was outside of the area of fill with CPAH exceedances and occurred in saturated soils that consisted of silt with plant fiber materials. These high organic carbon content wetland soils appear to be responsible for reducing conditions that have caused solubilization of naturally occurring arsenic in saturated soils and groundwater. Therefore, the arsenic found in soil and groundwater above cleanup levels has been concluded by Ecology to be naturally occurring and not regulated under MTCA.

##### Soil Characterization

The extent of soil contamination appears to be sufficiently defined for the selection of cleanup levels and cleanup actions at the Site. A total of 111 soil samples were collected from 58 locations between 2019 and 2021. Sampling depths ranged from one (1) to 14 ft bgs.

A total of 26 of 111 soil samples had cleanup levels exceedances for CPAHs and a total of three (3) soil samples had cleanup level exceedances for naphthalenes. All three soil samples with naphthalene exceedances also had CPAH exceedances; hence, Ecology has concluded that CPAHs can serve as a MTCA indicator hazardous substance<sup>1</sup> for cleanup

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<sup>1</sup> See WAC 173-340-703

at the Site. The lateral extent of soil contamination has been defined as shown in Figure 3 in Enclosure A.

The vertical extent of contamination has been defined as shown in Figures 7 and 8 in Enclosure A. The maximum depth of contamination was at six (6) ft bgs except for at location FMW-02 at a depth of 14 ft bgs, where total CPAHs were detected at 0.43 mg/kg. Boring FB-29 was advanced adjacent to boring FMW-02 to a depth of 14 feet bgs to verify the detection of total CPAHs 0.43 mg/kg. No CPAHs were detected in the soil sample from FB-29 at 14 ft bgs, nor in groundwater from FMW-02. Therefore, Ecology has concluded that the anomalously deep CPAHs found in soil at FMW-02 at 14 ft bgs was likely due to some soil materials carried downward during drilling. The soil sample collected from boring FMW-02 at a depth of 14 feet bgs is therefore considered by Ecology to not be representative of Site conditions, and no further actions are warranted regarding this CPAH detection.

#### Groundwater Characterization

Groundwater was characterized through the installation and sampling of eight (8) monitoring wells and three (3) temporary groundwater sampling locations. Groundwater is considered to have relatively low risk from the CPAHs in soil at the Site, due to the relatively low solubility and mobility of the CPAH compounds. Groundwater samples were collected from eight monitoring wells and at three temporary sampling locations. No contaminants other than arsenic were found at concentrations above cleanup levels (see above discussion on arsenic in soils and groundwater) in any of the monitoring wells or temporary sampling locations. No CPAHs were detected in any of the groundwater samples. The highest total naphthalenes detection was 8.4 µg/L at FMW-02, well below the Method A cleanup level of 160 µg/L.

## **2. Establishment of cleanup standards and points of compliance.**

#### Cleanup Standards

Ecology has determined the cleanup levels and points of compliance presented below meet the substantive requirements of MTCA. The following cleanup levels and screening levels have been selected for the Site:

**Table 3 – Selected Cleanup Levels and Screening Levels**

Contaminant	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)	Terrestrial Ecological Evaluation Concentration (mg/kg)
CPAHs	0.1 <sup>1,2</sup>	0.1 <sup>1,2</sup>	12 <sup>2,5</sup>
Naphthalene	5 <sup>1,3</sup>	160 <sup>1,3</sup>	NL
Arsenic	20 <sup>1,4</sup>	5 <sup>1,4</sup>	10 <sup>4,5</sup>

NL = No concentration listed in MTCA Table 749-3.

1 – Method A cleanup level.

2 – CPAH cleanup level based on cleanup level for benzo(a)pyrene.

3 – As total naphthalenes

4 – Ecology has determined that site data indicate that the arsenic above cleanup levels in soil and groundwater at the Site is naturally occurring and not a contaminant under MTCA.

5 – TEE value based on wildlife.

6 – TEE value based on plants.

### Points of Compliance

The points of compliance are throughout the Site. Cleanup levels based on the direct contact pathway apply to soils to a depth of 15 ft bgs. As discussed above, soil contamination was limited to a depth of six (6) ft bgs, except for at location FMW-02 at a depth of 14 ft bgs, which was concluded to not be representative of Site conditions, but rather a byproduct of investigation methods.

### Terrestrial Ecological Evaluation (TEE)

The Site is entirely open space with both wetlands and forested areas onsite and adjacent. Hence, habitat potential is substantial and potential ecological receptors are a concern. The Site does not meet the criteria for simplified TEE under WAC 173-340-7491(2)(a), hence, a site-specific TEE is required. Most restrictive contaminant indicator concentrations from Table 749-3 are provided above. Ecology notes that the TEE-based concentration for CPAHs is significantly higher than the Method A (human health-based) cleanup level and no TEE-based concentration is available for naphthalenes. Therefore, cleanup to Method A will be protective of potential ecological receptors.

Applicable or Relevant and Appropriate Requirements (ARARs).

As stated in WAC 173-340-700(6)(a) *“In addition to establishing minimum requirements for cleanup standards, applicable state and federal laws may also impose certain technical and procedural requirements for performing cleanup actions.”* This includes compliance with state and federal wetlands requirements. Some of the Site soil contamination is found within delineated wetlands area(s). Ecology Toxics Cleanup Program (TCP) notes that all cleanup work must be conducted consistent with local, state, and federal wetlands requirements. This includes compliance with all King County ordinances and permitting requirements. Approvals must be in hand prior to excavation in wetlands areas.

A document titled *“Critical Areas Report, Thompson Field Contamination Remediation and Wetland Enhancement Plan”* dated July 1, 2022 was attached to the Cleanup Action Plan as Appendix A. That document included wetlands assessment information, and remedial construction and wetlands restoration plans.

**3. Selection of cleanup action.**

Ecology has determined the cleanup you proposed for the Site meets the substantive requirements of MTCA.

The Cleanup Action Plan (CAP) proposes excavation and offsite disposal as the selected remedial approach for the Site. Ecology considers excavation and offsite disposal is the most permanent remedial option for the Site therefore under WAC 173-340-360 (3)(d), no disproportionate cost analysis (DCA) is needed.

Excavation will take place in an approximately 85,000 square foot area. According to the CAP:

*The excavation area will include most of Wetland I and a small portion of Wetland H composing an area of approximately 24,985 square feet of Category III wetlands that will be disturbed during the cleanup activities. The restoration activities for the Project include beneficial creation and restoration of approximately 62,638 square feet of Category IV wetlands.*

Wetland restoration plans were included in Appendix A of the CAP.

Ecology requests submittal of a Confirmation Sampling Plan prior to execution of the cleanup. The Confirmation Sampling Plan should show proposed excavation floor and sidewall sampling locations. If ponding is present in the bottom of the excavation, then water grab sample(s) should be collected. To the extent possible, excavation should be conducted in the dry season such that groundwater levels are at their lowest. Following completion of cleanup work, confirmation sampling locations, depths, results, and disposal weight tickets should be provided to Ecology within a Cleanup Action Report.

## **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 70A.305.040(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 proposed will be substantially equivalent. Courts make that determination. See RCW 70A.305.080 and WAC 173-340-545.

**3. Opinion is limited to proposed cleanup.**

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the Voluntary Cleanup Program (VCP).

**4. 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 70A.305.170(6).



## Contact Information

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Thank you for choosing to clean up the Site under the VCP. As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our webpage <sup>2</sup>.

If you have any questions about this opinion, please contact me by phone at (509) 454-7835 or e-mail at [frank.winslow@ecy.wa.gov](mailto:frank.winslow@ecy.wa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Frank P. Winslow". The signature is fluid and cursive, with the first name "Frank" being more prominent.

Frank P. Winslow, LHG  
Toxics Cleanup Program  
Headquarters Section

fpw:anf

Enclosure: Site Description and Diagrams

cc: Amy Webber, Nelson Legacy Group  
Stuart Brown, Farallon Consulting

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<sup>2</sup> <https://www.ecy.wa.gov/vcp>

## **Enclosure A**

### **Site Description and Diagrams**

## Site Description

**Site:** The Site is defined by contamination consisting of CPAHs and naphthalene in soil. The CPAH and naphthalene contamination is associated with fill soils that were placed onsite in the early 1980s. Arsenic was also detected at concentrations above cleanup levels in soils and groundwater; however, Ecology has concluded that the arsenic is naturally occurring and not regulated under MTCA.

**Area and Property Description:** The Site is located fully encompassed within King County Parcel No. 0825069104 (the Property), a 38-acre irregular shaped parcel located approximately two (2) miles east of downtown Redmond, Washington. The parcel is a mixture of pasture, wetlands, and forested lands, although the contaminated area is solely within a pasture that is approximately 12 acres in area, known as Thompson Field. Thompson Field is further divided by a dirt road that runs near the western and southern boundaries of the field. Much of the wetlands are reportedly difficult to distinguish from pasture.

The Thompson field area is surrounded by pasture fields to the east, low density rural residential properties to the north, disturbed open space lands to the west, and forested wetlands to the south. Northwest and adjacent to Thompson field, on the Property, is a 1.2-acre forested island area which is mapped as wetlands.

Roughly ten (10) percent of Thompson field was mapped as wetlands within the 1977 Wetland Inventory Map system. These mapped wetlands are along the western, southern, and eastern boundaries of Thompson Field. Wetlands areas shown on figures presented within the RI Report include three areas in Thompson Field: in the north, east, and west-central parts of the field. The area of soil contamination overlaps with the west-central wetland area (see Figure 2 in Enclosure A).

**Site History:** Historically, Thompson Field was a forested area, which was reportedly cleared of trees sometime after 1975. In late 1982 or early 1983, an unknown volume of fill soil from the Interstate 90 tunnel project in the Mount Baker Ridge area of Seattle was placed on Thompson Field to raise the field to its current elevation and create pastureland.

**Sources of Contamination:** The CPAHs and naphthalene appear to be associated with the fill materials brought to the Site in the early 1980s. CPAHs are commonly found in fill materials that contain asphalt. The source of the naphthalene in soil is not entirely clear, although all naphthalene exceedances were collocated with CPAH exceedances. Naphthalene is a component of petroleum and coal tar. The soil from the Mount Baker Tunnel project was in an area of Seattle currently dominated by residential land uses; however, historical land uses near Lake Washington may have contributed to this soil contamination.

Arsenic was detected at concentrations above cleanup levels in two soil samples and

above background in two groundwater samples. The soil and groundwater with these exceedances were outside of the area of fill with CPAH exceedances and occurred in saturated soils that consisted of silt with plant fiber materials. These high organic carbon content wetland soils appear to be responsible for reducing conditions that have caused solubilization of naturally occurring arsenic in saturated soils and groundwater. Therefore, the arsenic found in soil and groundwater above cleanup levels is concluded to be naturally occurring and not regulated under MTCA.

**Physiographic Setting:** The Site is located east of Redmond, Washington, approximately 15 miles east of Puget Sound. The Site is in an area of undulating glacial terrain within the Puget Lowland Physiographic Province. The Site appears to be located within the flood plain of Evans Creek, which forms a large-scale meander loop east of Redmond. The flood plain is roughly 2,000 feet wide. The Site is at an elevation of approximately 69 feet above mean sea level (ft amsl), whereas Evans creek is at an elevation of about 64 ft amsl. East of the flood plain is a plateau at an elevation of approximately 320 ft amsl, and west of the flood plain, land is at an elevation of roughly 120 ft amsl.

**Surface/Storm Water:** The Site is located about 1.5 miles northeast of Lake Sammamish, a 4,897-acre freshwater lake. Several ditches on the Property have surface water flow, and as discussed above, wetlands are present at the Site. The nearest surface water body other than ditches or the wetlands is perennial Evans Creek, which is located about 700 feet west of the Site. Evans Creek flows to the north and then west, eventually flowing into Lake Sammamish to the southwest.

The Site is in area within extensive mapped wetlands. These includes wetlands on Thompson Field and on adjacent properties to the south and west. A portion of the area of contamination overlaps with an area of Thompson Field that has been mapped as a wetland, although it is currently used as hay pasture.

Thompson Field is bound by ditches on all sides that have intermittent flow that drains into Evans Creek to the west.

**Ecological Setting:** The Site is entirely open space with both wetlands and forested areas adjacent. Hence habitat potential is substantial and ecological receptors are a concern. The Site does not meet the criteria for simplified TEE under WAC 173-340-7491(2)(a), hence, a site-specific TEE is required. Contaminant indicator concentrations from MTCA Table 749-3 are discussed above.

**Geology:** The following text regarding the Site geology is from the RI report:

*The sediments in the Evans Creek Valley consist primarily of alluvium and Vashon recession outwash situated over deposits of glacial till that consist of silty sand to*

*sandy silt with gravel. Shallow alluvium consisting of relatively fine grained sands, silts, clays, and organic matter were deposited by rivers, streams, and post-glacial lakes during glacial advances and recessions.*

*The general stratigraphy at Thompson Field comprises a fill layer of variable thickness to depths ranging from approximately 2 to 6 feet bgs, with the fill thickness increasing from east to west (see boring logs in Appendix B). The fill layer is present across much of Thompson Field, but was not observed during the advancement of borings FB-10 through FB-14 proximate to the eastern boundary of Thompson Field. The fill material observed is comprised of silty sand, sandy silt, and silt containing varying amounts of gravel, wood, and brick. Native soil underlying the fill is an approximately 3- to 8-foot-thick layer of alluvium consisting of silt and organic material which is further underlain by glacial outwash consisting of gravel, sand, and silt extending to the maximum depth explored of 20 feet bgs.*

**Groundwater:** The depth to groundwater at the Site varied from about 1.0 to 6.5 ft bgs, depending on location and season of measurement. Seasonal water levels varied about two (2) feet, with a high in about January and low in about August. Glacial outwash beneath the Site starts at a depth of between six and ten ft bgs. Both the silty fill material and native silt unit that overly the glacial outwash can be considered aquitards. The glacial outwash material at location FMW-02 at a depth of 14 ft bgs consisted of 70% gravel with 20% sand and 10% silt. This material would be expected to have a moderate hydraulic conductivity.

**Water Supply:** A mapped wellhead protection zone for the City of Redmond water supply extends along the Evans Creek valley including beneath a portion of the Site. The nearest Group A/B wells are located approximately 2,000 feet to the north, 2,600 feet to the northwest, and approximately 3,100 feet to the west-northwest of the Site. Based on the nature of the contamination found at the Site (primarily CPAHs of relatively low mobility in relatively shallow soil) risk to water supplies from the Site appears to be low.

**Extent of Contamination:** The extent of soil contamination has been defined during the RI sufficient for the identification of cleanup levels and for the development of a cleanup action plan. The horizontal extent of contamination appears to be sufficiently defined to select an appropriate cleanup action. The exact extent of contamination is anticipated to be confirmed via confirmation sampling following cleanup.

The vertical extent of contamination appears to be limited to the fill unit, to a depth of approximately six (6) ft bgs. An anomalous CPAH exceedance at location FMW-02 at a depth of 14 ft bgs in glacial outwash was not repeated in an offset sample (location FB-

29). Therefore, it appears that the contamination at FMW-02 at 14 ft bgs was a result of contamination drag down by drilling equipment. Ecology concurs with the conclusion that the results from FMW-02 at 14 ft bgs appear to not be representative of actual Site conditions at that location and depth.







#### LEGEND

- MONITORING WELL (FARALLON, 2020)
- BORING (FARALLON)
- BORING (ECOLOGY & ENVIRONMENT, INC., 2019)
- EXCAVATION CONTOUR (DEPTH IN FEET BGS)
- ESTIMATED SITE BOUNDARY
- SOIL WITH cPAH TECs ABOVE MTCAMETHOD A CLEANUP LEVEL
- WETLAND
- THOMPSON FIELD BOUNDARY
- PROPERTY BOUNDARY
- CROSS-SECTION

#### NOTES:

1. ALL LOCATIONS ARE APPROXIMATE.
2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



Drawn By: Imurock

Checked By: SB

Date: 10/4/2022

Disc Reference:

#### FIGURE 3

SITE FIGURE  
THOMPSON FIELD  
PORTION OF KING COUNTY  
PARCEL NUMBER 0825069104  
REDMOND, WASHINGTON

FARALLON PN: 650-031

Path: G:\Projects\650 Nelson Properties\050031 Gussly Farm\Mapfiles\005\Figure-03\_SiteFigure.mxd













