



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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January 10, 2019

Marc B. Connally
Remedial Project Manager
92 CES/CEIE
100 West Ent, Suite 155
Fairchild Air Force Base, Washington 99011

RE: No Further Action at the following Site:

- **Site Name:** Fairchild Air Force Base (FAFB) OW056 – Building 2045
- **Site Address:** FAFB US Highway 2, Spokane, 99001
- **Cleanup Site No.:** 12813
- **Facility/Site No.:** 16243
- **VCP Project No.:** EA0301

Dear Mr. Connally:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the FAFB OW056 – Building 2045 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 no 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 opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release(s):

- Total Petroleum Hydrocarbons Heavy Oil-Range (TPH-HO), Total Petroleum

Hydrocarbons Diesel-Range (TPH-Dx), Total Petroleum Hydrocarbons Gasoline-Range (TPH-Gx), Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs), & metals into Soil & Groundwater.

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(s) associated with this Site are affected by other sites.

Basis for the Opinion

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

- Bay West, LLC (BW), *FINAL Initial Investigation / Site Hazard Assessment and No Further Action at OW056*. August 2018.

This opinion is based on the information contained in the documents listed above. These documents are kept at the Headquarters Office of Ecology (HQ) for review by appointment only. You can make an appointment by calling the HQ resource contact at 360.407.7224 or sending an email to CESG461@ecy.wa.gov

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

Analysis of the Cleanup

Ecology has concluded that **no 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 is described below and in detail in **Enclosure A**.

The following characterization and cleanup activities have commenced on the Site to date. These activities are described in further detail in Enclosure A – Source of Contamination & Contamination Extent:

- In August 1995, FAFB removed the on-Site oil-water separator (OW-056), which received waste generated from a wash rack in an adjoining hangar (Building 2045). FAFB reportedly removed approximately 95-tons of petroleum-contaminated soil (PCS) during OW-056 removal (BW, August 2018). FAFB collected seven discrete soil samples and submitted a single composite soil sample for analysis.

Analytical results did not detect contaminants of concern (CoCs) above the respective MTCA Cleanup Levels (CULs) or above the respective laboratory method detection limits (MDLs). Groundwater was reportedly not encountered in the oil-water separator excavation, (BW, August 2018).

- Also in August 1995, FAFB installed a new, replacement oil-water separator (OW-C559). Upon installation, FAFB identified additional PCS in the oil-water separator vicinity. FAFB removed approximately 249-tons of PCS. FAFB collected a seven-pint composite sample and submitted for analysis. CoCs were not detected above the respective CULs or MDLs. Groundwater reportedly did not enter the excavation, (BW, August 2018).
- In November 2015, FAFB advanced three soil borings in the immediate vicinity of the former oil-water separator (Figure 2). FAFB advanced each of the soil borings to 8-, 16-, & 24-feet below ground surface (bgs). Performance soil samples indicated on-Site soil is in compliance with MTCA Cleanup Standards. FAFB sampled groundwater during soil probe advancement. Analytical results indicated CoCs were below the respective CULs or MDLs, (BW, August 2018).

Figure 1 depicts the location of the Site in relation to FAFB. Figure 2 illustrates the 2015 BW sampling locations and the former location of OW-056, as well as the current location of OWC559 with respect to Building 1039.

On-Site soil and groundwater is determined to be in compliance with MTCA Cleanup Standards.

Below is an evaluation of potential exposure pathways.

Conceptual Site Model / Exposure Pathways:

Soil-Direct Contact:

This pathway is *incomplete*. Analytical results indicated CoCs were below the applicable CULs (BW, August 2018).

Soil-Leaching:

This pathway is *incomplete*. Any residual PCS is not in contact nor is impacting groundwater (BW, August 2018).

Soil-Vapor:

This pathway is *incomplete*. CoCs were determined to be non-volatile and below the respective screening levels (BW, August 2018).

Groundwater:

This pathway is *incomplete*. Groundwater was not impacted (BW, August 2018).

Surface Water:

This pathway is *incomplete*. No surface water features are located within the immediate vicinity of the Site (BW, August 2018).

Ecological:

This pathway is *incomplete*. BW completed a terrestrial ecological evaluation (TEE) for the Site, concluding the Site qualifies for an exclusion from further evaluation (BW, August 2018).

2. Establishment of cleanup standards.

Ecology has determined the CULs and points of compliance (POCs) you established for the Site meet the substantive requirements of MTCA.

3. Selection of cleanup action.

Ecology has determined the cleanup action conducted at the Site meets the substantive requirements of MTCA.

4. Cleanup.

Ecology determined the cleanup performed meets the Cleanup Standards established for the Site.

FAFB collected sufficient soil & groundwater samples, demonstrating compliance with Cleanup Standards in accordance with MTCA (BW, August 2018), as such, no further action is warranted at this time.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List (CSCSL).

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.

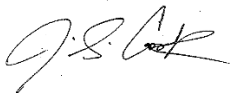
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (EA0301).

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 or the termination of the Agreement, please contact me by phone at 360.407.6834 or e-mail at jason.cook@ecy.wa.gov.

Sincerely,



J.G. Cook, LG
Toxics Cleanup Program - Headquarters

JC: AF

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

cc: Kurt Lee – USAF
Johnathan Burgoon – USAF
Nate Ellison – Hurricane Industries
Josh Miller – BW
Sean Bayer – URS
Beth McKee - Ecology
Sandra Caldwell - Ecology

Enclosure A

Description and Diagrams of the Site

Site Description

Site & Site Vicinity:

The Site is located at Fairchild Air Force Base (FAFB), approximately 12-miles to the west of Spokane, Washington. The total area of FAFB is approximately 4,300-acres.

Site OW-056 (VCP EA0301), is located in the north-central portion of FAFB, north of the flight line. No residences are located on or adjoining to the Site (Figure 1).

Figure 2 illustrates the approximate location of the approximate 1995 excavation limits, soil boring locations, and the former & current oil-water separator in relation to Building 2045 (BW, August 2018).

Initially, OW-056 was investigated under the purview of the United States Environmental Protection Agency (USEPA) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Upon further investigation, it was determined the Site qualified for a CERCLA Petroleum Exemption since the Site is not considered a Hazardous Waste Site, containing CERCLA-regulated contaminants of concern. As such, the Site is regulated under the Washington State MTCA Regulation.

Property Historical and Current Use:

Currently, the Site contains a portion of Building 2045, which is used as an airplane hangar by the US Air Force. OW-056 received chemical waste generated in the hangar wash rack and conveyed via a subsurface interior trench drain system to OW-056. FAFB removed the oil-water separator, and installed a replacement oil-water separator in August 1995 (BW, August 2018).

Surface/Storm Water System:

No surface water features are located on the Site.

Soils and Geology:

The Site is reportedly underlain primarily by consolidated alluvium, comprised of silty-sands to approximately 9- to 10-feet bgs. Overlying the silty-sand unit is a gravelly-sand to approximately 24-feet bgs. The Basalt-A unit was not encountered during the 2015 investigation (BW, August 2018).

Groundwater:

Groundwater was not encountered at the Site during the 1995 excavations. During the 2015 subsurface investigation, FAFB reportedly encountered groundwater at approximately 21-feet bgs (BW, August 2018). Potentiometric maps generated from data collected in the Site vicinity, indicate the groundwater flow direction is predominantly towards the northeast.

Source of Contamination & Contamination Extent:

The primary source of contamination reportedly originates from releases associated with the former oil-water separator and associated ancillary equipment (BW, August 2018).

FAFB conducted a Site investigations and remedial actions in August 1995 and November 2015, which include the following.

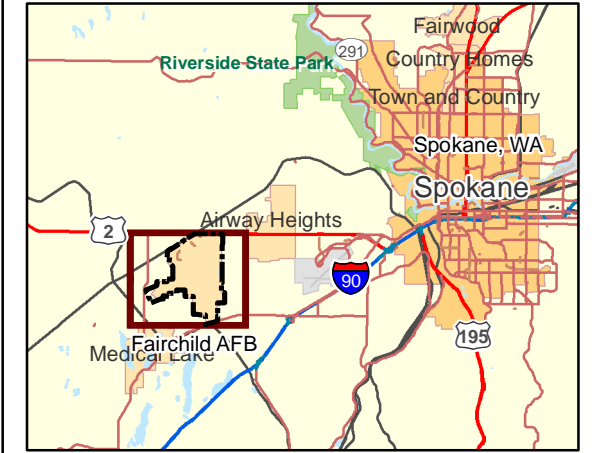
In August 1995, FAFB removed the former oil-water separator (OW056), and excavated approximately 95-tons of PCS. FAFB collected a composite soil sample from seven discrete locations and analyzed for TPH, dissolved metals volatile & semi-volatile organic compounds (VOCs & sVOCs, respectively). Analytical results exhibited detections well below the respective MTCA Cleanup Levels (CULs). Groundwater was reportedly not encountered in the excavation (BW, August 2018).

Also in August 1995, FAFB installed a replacement/new oil-water separator (OW-C559). At the time of installation, FAFB encountered additional PCS. FAFB subsequently excavated an additional 249-tons of PCS. A seven-point composite sample was collected and analyzed for the aforementioned contaminants. All CoCs analyzed did not exhibit concentrations above their respective MTCA CULs or laboratory MDLs (BW, August 2018)


In July 2015, FAFB advanced three direct-push soil borings (DP-503 to -505). FAFB reportedly did not encounter (BW, August 2018). FAFB analyzed soil samples for TPH, polychlorinated bi-phenols (PCBs), metals, & PAHs. All soil samples exhibited CoC concentrations below their respective CULs or below the laboratory MDLs (BW, August 2018).

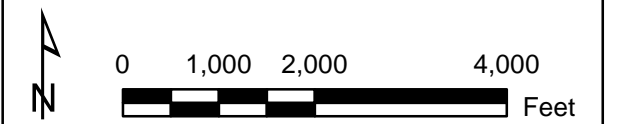
In summary, soil and groundwater CoC concentrations are in compliance with MTCA.

Site Diagrams



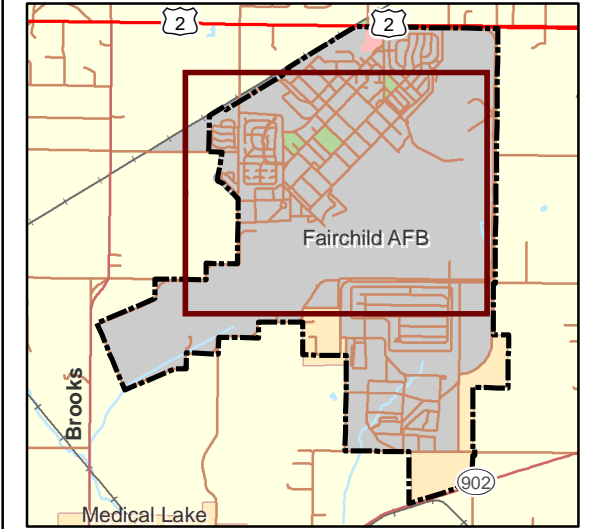
Legend

 Installation Boundary





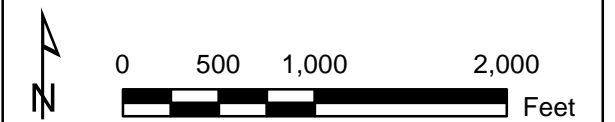
Installation Location Map
Fairchild AFB, WA

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|-------------------|--------------------|-------------------------|------------|
| Drawn By: LLS | Date: 3/23/2017 | Project No: 16170886 | Figure 1-1 |
| Checked By: DS | Revision: 0 | | |



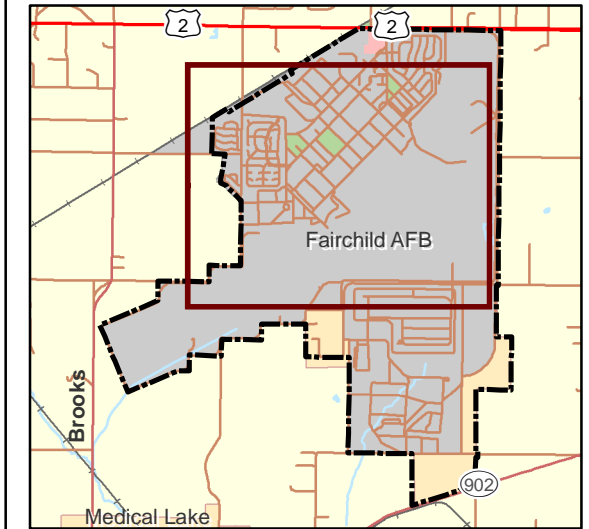
Legend

-  OW056
-  Installation Boundary



OW056 Site Map
Fairchild AFB, WA

| | | | |
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| Drawn By: LLS | Date: 3/27/2017 | Project No: 16170886 | Figure 1-2 |
| Checked By: DS | Revision: 0 | | |

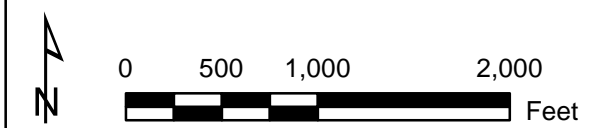


Legend

- OW056
- ◆ Shallow Alluvial Well with Slug Test Data
- ◆ Shallow Alluvial Well
- Groundwater Elevation Contour (feet above msl)
- ← Groundwater Flow Direction
- Installation Boundary

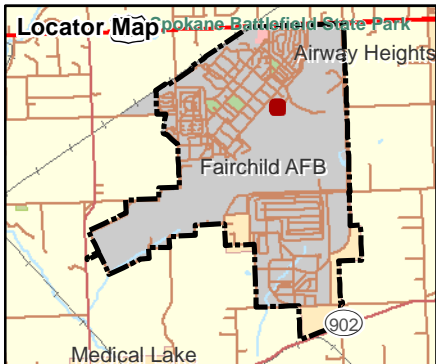
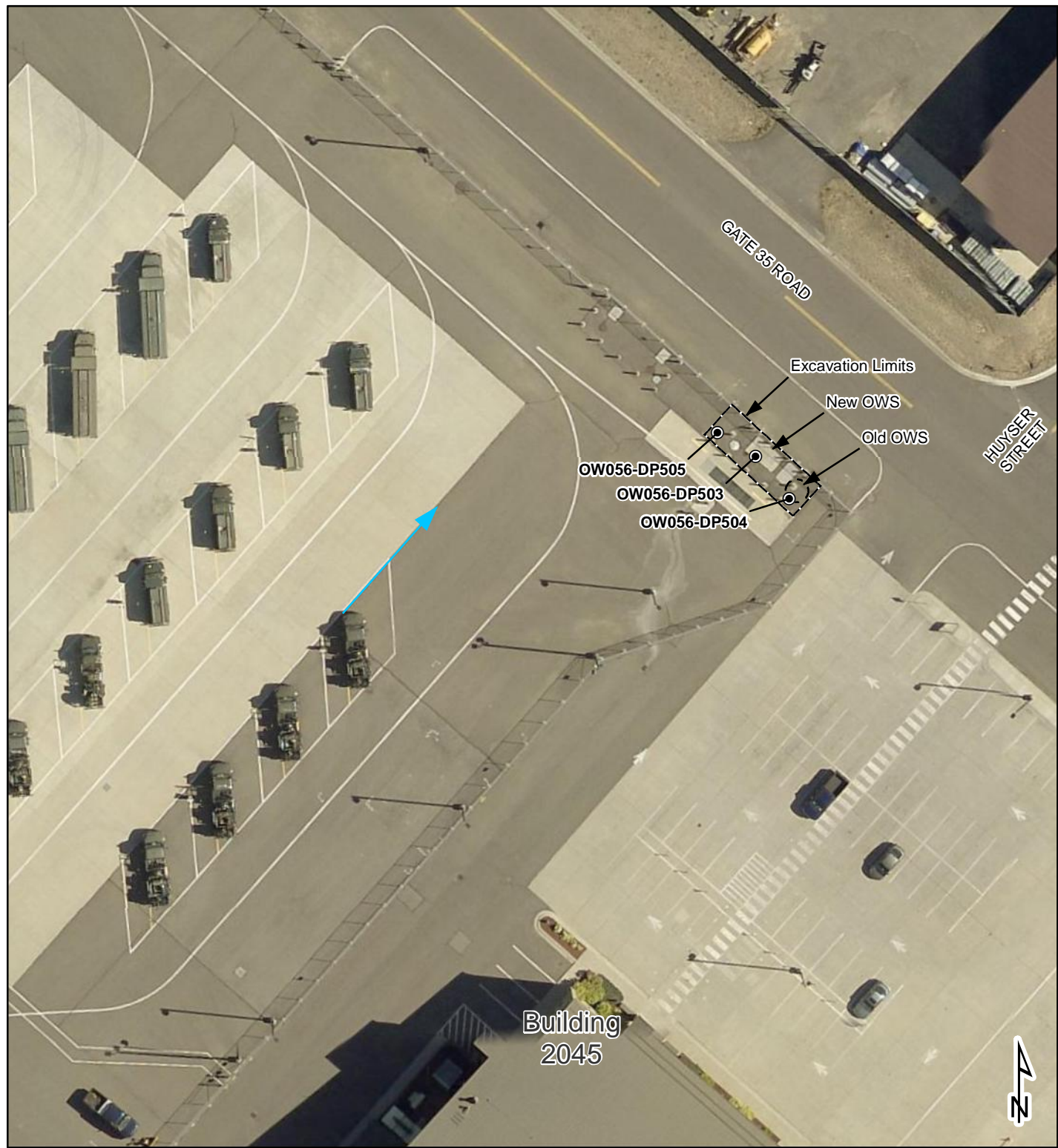
Notes:

1. Water level was not measured at shallow alluvial monitoring wells with a gray label.
2. msl = mean sea level



**December 2015 Shallow Alluvium
Groundwater Elevations and Contours
Fairchild AFB, WA**

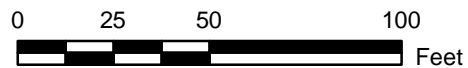
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| Drawn By: LLS | Date: 7/20/2017 | Project No: 16170886 | Figure 3-1 |
| Checked By: DS | Revision: 0 | | |



Legend

- Installation
- Approximate Location of Removed Oil Water Separator
- Approximate Direct Push Location
- Site Location
- Groundwater Flow Direction

Note: Groundwater Was Not Encountered Prior to Refusal



**OW056 II/SHA Sample Locations
Fairchild AFB, WA**

| | | | |
|-------------------|--------------------|-------------------------|------------|
| Drawn By: LLS | Date: 11/3/2017 | Project No. 16170886 | Figure 4-1 |
| Checked By: DS | Revision: 0 | | |