



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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December 8, 2014

Mr. Sam Farrazaino  
Equinox Studios LLC  
6555 5th Avenue South  
Seattle, WA 98108

**Re: No Further Action at a Property Associated with a Site:**

- **Property Address:** 6545 6555 5th Avenue South, Seattle, WA
- **Facility/Site No.:** 18068
- **VCP Project No.:** NW2489
- **Cleanup Site ID No.:** 11666

Dear Mr. Farrazaino:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of a Property associated with the Mastermark Equinox 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.

**Issues Presented and Opinion**

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1. Is further remedial action necessary at the Property to clean up contamination associated with the Site?

**NO. Ecology has determined that no further remedial action is necessary at the Property to clean up contamination associated with the Site.**

2. Is further remedial action still necessary elsewhere at the Site?

**YES. Ecology has determined that further remedial action is still necessary elsewhere 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 Property and the Site**

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This opinion applies only to the Property and the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below.

### **1. Description of the Property.**

The Property includes the following tax parcel in King County, which was affected by the Site and addressed by your cleanup:

- 536720-1985

**Enclosure A** includes a legal description of the Property. **Enclosure B** includes a diagram of the Site that illustrates the location of the Property within the Site.

### **2. Description of the Site.**

The Site is defined by the nature and extent of contamination associated with the following releases:

- Total petroleum hydrocarbons in the diesel range (TPH-d) into the Soil.
- Vinyl chloride into the Ground Water.

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

### **3. Identification of Other Sites that may affect the Property.**

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the Property 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. Sound Earth Strategies, Inc., *Cleanup Action Report – Former Mastermark Printing*, dated July 28, 2014.
2. Sound Earth Strategies, Inc., *Summary of Injection Pilot Study – Mastermark Printing Property*, dated June 21, 2013.
3. Sound Earth Strategies, Inc., *Summary of Subsurface Investigation Activities – Former Mastermark Printing Property – Vinyl Chloride Investigation*, dated May 23, 2013.

4. Sound Earth Strategies, Inc., *Groundwater Monitoring Report – Third Quarter 2011*, dated August 9, 2011.
5. Sound Earth Strategies, Inc., *Summary of Findings – Subsurface Investigation – Former Mastermark Printing*, dated September 14, 2010.

Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235 or sending an e-mail to [nwro\\_public\\_request@ecy.wa.gov](mailto:nwro_public_request@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**

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#### **1. Cleanup of the Property located within the Site.**

Ecology has concluded that **no further remedial action** is necessary at the Property to clean up contamination associated with the Site. That conclusion is based on the following analysis:

##### **a. Characterization of the Site.**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards for the Site and select a cleanup action for the Property. The Site is described above and in **Enclosure B**.

##### **b. Establishment of cleanup standards for the Site.**

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

The Site is located in a mixed industrial and commercial area. Soil cleanup levels suitable for unrestricted land use are therefore applicable to this Site. MTCA Method A clean up levels for unrestricted land use were selected for this Site which are protective for direct contact and leaching pathways. This is an appropriate cleanup standard for this Site.

This Site qualified for a Terrestrial Ecological Evaluation (TEE) exclusion based on the absence of more than 1.5 contiguous acres of undeveloped land on or within 500 feet of any area on the Site in accordance with WAC 173-340-7491(1)(c). Land use at the Site and surrounding area makes substantial wildlife exposure unlikely.

The MTCA Method A ground water cleanup levels were deemed applicable and appropriate for this Site. The cleanup levels were established for ground water based on its use as a potential drinking water source.

The standard points of compliance for soil were set based on the protection of ground water. The point of compliance is therefore in soil throughout the Site.

The standard point of compliance for ground water is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected.

**c. Selection of cleanup for the Property.**

Ecology has determined the cleanup you selected for the Property meets the substantive requirements of MTCA. The cleanup meets the minimum cleanup requirements and does not exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Site.

In-situ chemical oxidation and accelerated bioremediation were the selected cleanup actions for the Property. Injections of an oxidizer (mixture of sodium persulfate, hydrogen peroxide and water) and edible oil (soybean) were conducted in areas of soil and ground water contamination.

**d. Cleanup of the Property.**

Ecology has determined the cleanup you performed meets the applicable Site cleanup standards within the Property.

Fifty-five pounds of sodium persulfate and 12 gallons hydrogen peroxide were mixed with 150 gallons of water and injected into ground water monitoring well MW-3 during the first injection event in April 2012. In January 2013, a mixture of 24.4 gallons of soybean oil and 125 gallons of water were injected into MW-3, followed by a rinse batch injection of approximately 50 gallons of water to aid the transport of the injectate mixture into the subsurface. By February 2013, vinyl chloride had decreased to below the MTCA Method A cleanup level of 0.2 micrograms per liter ( $\mu\text{g/l}$ ). However, in May 2013, vinyl chloride rebounded to 0.22  $\mu\text{g/l}$ , which exceeds the MTCA Method A cleanup level. Subsequently, in August 2013 vinyl chloride had fallen below the cleanup level.

Laboratory analytical results from the four consecutive quarters of sampling beginning August 2013 of ground water monitoring wells MW-1 through MW-3 confirmed vinyl chloride concentrations on the Site are in compliance with MTCA Method A cleanup levels.

## 2. Cleanup of the Site as a whole.

The cleanup action only addressed the contamination within the Property. Soil samples collected from location P05 and P10 at a depth of 7 feet below ground surface (bgs) contained TPH-d concentrations of 2,900 and 3,000 milligrams per kilogram (mg/kg) respectively, which exceeds the MTCA Method A cleanup level of 2,000 mg/kg. The TPH-d contamination may be associated with the former oil and gas storage room. Petroleum-contaminated soil will remain beneath the adjacent 5<sup>th</sup> Avenue South right-of-way. Therefore, Ecology has concluded that **further remedial action** under MTCA is still necessary elsewhere at the Site. In other words, while your cleanup constitutes the final action for the Property, it constitutes only an “**interim action**” for the Site as a whole.

### Listing of the Site

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Based on this opinion, Ecology will update the status of remedial action at the Site on our database of hazardous waste sites. However, because further remedial action is still necessary elsewhere at the Site, we will not remove the Site from our lists of hazardous waste sites. Furthermore, the Property will remain listed as part of the Site because the cleanup of the Property does not change the boundaries of the Site.

### 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**:

- Change the boundaries of the Site.
- 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.

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**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**

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Thank you for cleaning up your Property under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#NW2489). If you should decide to clean up the remainder of the Site, please do not hesitate to reapply and request additional services under the VCP.

For more information about the VCP and the cleanup process, please visit our web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm). If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (425) 649-7097 or by e-mail at [desc461@ecy.wa.gov](mailto:desc461@ecy.wa.gov).

Sincerely,



Diane Escobedo  
Toxics Cleanup Program

Enclosures (2):   A – Legal Description of the Property  
                          B – Description and Diagram of the Site (including the Property)

cc:   Pete Kingston, Sound Earth Strategies  
      Sonia Fernandez, VCP coordinator  
      Dolores Mitchell, VCP Financial Manager

## **Enclosure A**

### **Legal Description of the Property**

MCLAUGHLIN WATER FRONT ADD S 1/2 LOT 21 & ALL LOTS 17 THRU 20

**Enclosure B**

**Description and Diagram of the Site  
(Including the Property)**

# Site Description

*This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.*

**Site:** The Site is defined by the release of total petroleum hydrocarbons in the diesel range (TPH-d) into the soil and vinyl chloride into the ground water, related to the former operation of a printing and machine shop that was located at 6555 5th Avenue South in Seattle, WA (Property).

**Area and Property Description:** The Property consists of a rectangular-shaped tax parcel (King County parcel number 536720-1985) that covers approximately 18,000 square feet (0.41 acres) of land. The Property is located in the Greater Duwamish Manufacturing and Industrial Center, south of downtown Seattle. Surrounding parcels are used for both industrial and commercial purposes. Adjacent properties are occupied by a truck repair and service shop to the north, a deli to the west, a transmission repair facility to the south and a fish and seafood wholesale facility and cabinet making facility to the east.

**Property History and Current Use:** The Property was first developed in 1941 with a 28,700-square foot concrete single-story warehouse. The warehouse was first used by Sulak Manufacturing Company, a machine shop that made tools. Additions to the warehouse building were constructed in 1945 and 1952. An oil and gas storage room was located in the northeast corner of the present warehouse building. Former boilers were likely located in the northwest corner and southeast portion of the present warehouse. The oil burners and associated underground storage tanks were reportedly removed in 20 years ago. However, no documentation of the removal exists. By 1967, Walt's Machine Works and Hilti Fastening Systems were tenants, followed by Northwest Machine shop in 1970. Mastermark Printing began operating at the Property in 1970, manufacturing rubber stamps and seals, nameplates, badges, signs, plaques and awards. Mastermark Printing ceased operation at the Property in 2000. Currently, the warehouse building includes a basement and mezzanine, which are occupied by Equinox Studios, a collection of artist's studios and shops. The ground floor of the warehouse is currently occupied by a woodshop, several blacksmithing and metal fabrication spaces and sculpture and painting studios.

**Sources of Contamination:** The source of the TPH-d contamination could potentially be associated with the "oil and gas storage room" or a previous surface spill may have occurred in the 5th Avenue South right-of-way. The source of vinyl chloride in the ground water is most likely related to spills associated with historic use of the building as a machine shop from 1941 to 1970.

**Physiographic Setting:** The Site lies within the Puget Sound Lowland physiographic province. The Property is located at an approximate elevation of 15 feet above mean sea level and is relatively flat, with a slight slope to the southwest.

**Surface/Storm Water System:** The nearest surface water body is the Duwamish Waterway, which is located approximately 500 feet west/southwest of the Property.

**Ecological Setting:** The Site is located in an urban area primarily covered with asphalt and gravel surfaces, buildings and small landscaped areas which are unlikely to attract wildlife.

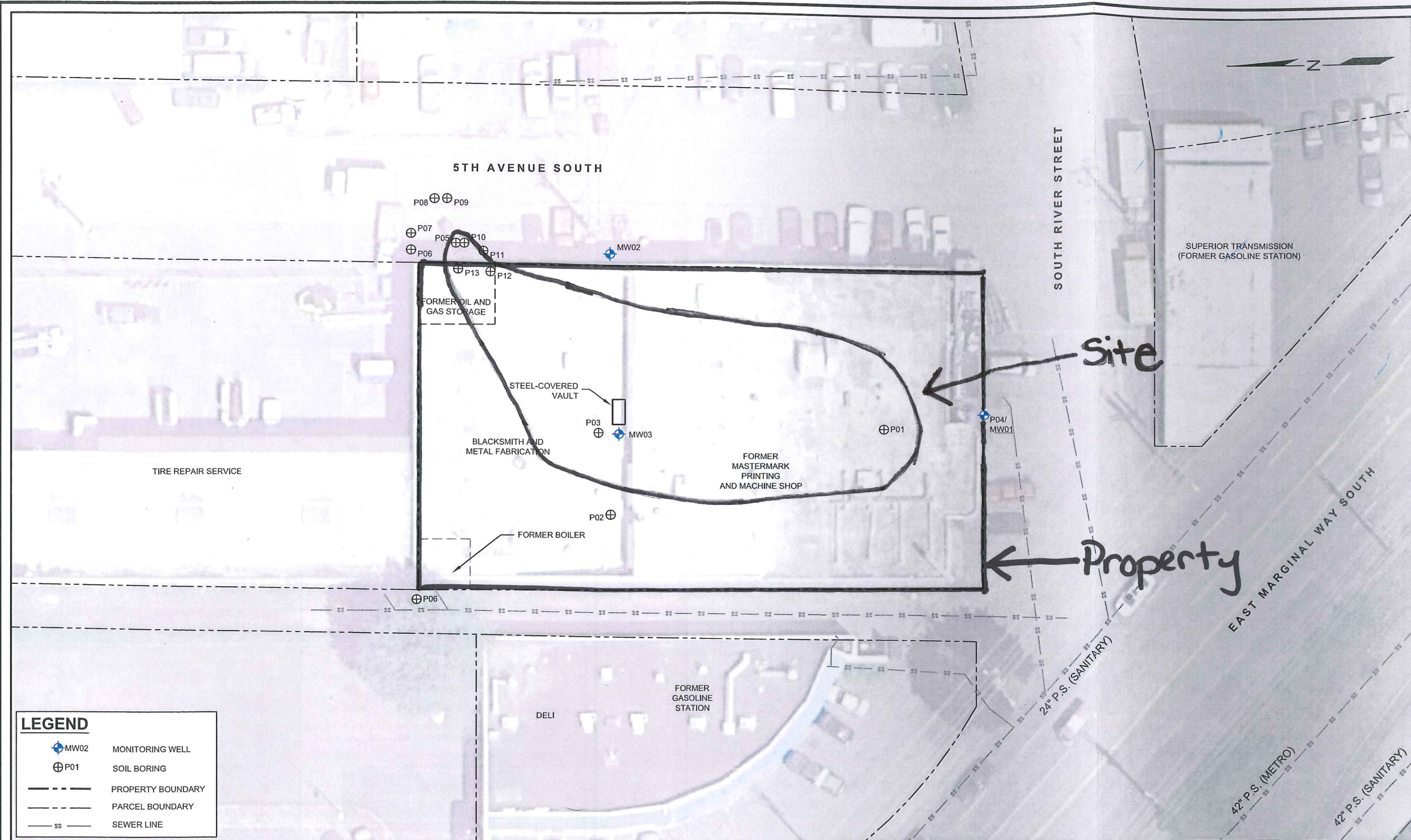
**Geology:** The Property is underlain by 6 to 7 feet of fill material consisting of sand and silt. Native material below the fill is mapped as alluvial deposits consisting of sand, silt, gravel and cobbles. Silty sand was encountered beneath the fill to the maximum explored depth of 16.5 feet below the ground surface (bgs).

**Ground Water:** Ground water was encountered at the Property at approximately 3 to 9 feet bgs and occurs in the native silty sand underlying the fill material. The ground water flow direction is to the west-southwest.

**Water Supply:** The City of Seattle sources its drinking water from the Cedar River and South Fork Tolt River watersheds. According to Ecology's well log database, no drinking water wells are located within ¼-mile of the Site.

**Release and Extent of Soil and Ground Water Contamination:** The maximum level of TPH-d contamination was detected in soil at 7 feet bgs at a concentration of 3,000 milligrams per kilogram (mg/kg) at boring location P-10, exceeding the MTCA Method A cleanup level of 2,000 mg/kg. The extent of TPH-d contamination has been adequately delineated both vertically and laterally and does not extend onto the Property. A grab ground water sample was collected from a temporary well within the release area and no TPH-d was detected. Soil and ground water samples were collected from five additional locations throughout the Site and analyzed for TPH-d. TPH-d was not detected above laboratory detection limits in any of the samples with the exception of a soil sample collected at 7 feet bgs from sampling location P-5 (2,900 mg/kg), which is adjacent to P-10 and at 6 feet bgs from sampling location P-13 (1,600 mg/kg), directly south of the northern Property line.

No chlorinated solvents were detected above laboratory detection limits in soil samples collected from locations P-01 through P-06. Vinyl chloride concentrations detected in ground water samples collected from monitoring well MW-3 ranged from below laboratory detection limits (0.2 micrograms per liter (µg/l)) to 2.9 µg/l, which exceeds the MTCA Method A cleanup level of 0.2 µg/l. A grab water sample from temporary well location P-02, which is located approximately downgradient of location P-03, suggests that the vinyl chloride plume was limited in extent to the central portion of the Property. In April 2012 and January 2013, oxidizer and edible oil injections were used to enhance microbial degradation of vinyl chloride. During the April 2012 injection event, a pre-fabricated injection skid equipped with a mechanical pump was used to inject a mixture of sodium persulfate, hydrogen peroxide and water into MW-3, followed by a water rinse bath to aid transport of injectate. During the January 2013 injection event, the same method was used to inject a mixture of soybean oil and water into monitoring well MW-3 followed by a water rinse bath. Vinyl chloride concentrations were below laboratory detection limits in ground water samples collected during the last four consecutive quarters (August 2013, November 2013, February 2014 and May 2014) of sampling in monitoring wells MW-1 through MW-3.



**LEGEND**

- MW02 MONITORING WELL
- P01 SOIL BORING
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SS SEWER LINE

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DATE: 06/23/14  
 DRAWN BY: BLR  
 CHECKED BY: PJK  
 CAD FILE: 0761-001\_2014CAR\_EL

PROJECT NAME: FORMER MASTERMARK PRINTING  
 PROJECT NUMBER: 0761-001  
 STREET ADDRESS: 6555 5TH AVENUE SOUTH  
 CITY, STATE: SEATTLE, WASHINGTON

REGION:

APPROXIMATE SCALE IN FEET

**FIGURE 2**  
 EXPLORATION LOCATION PLAN