

# Staff Closure Memorandum

## Edgewater at the Cove (ECSI #5138)

Date: March 26, 2026



## Document information

This document was prepared by Oregon Department of Environmental Quality

Northwest Region Cleanup Program

700 NE Multnomah Street, Suite 600

Portland Oregon, 97232

Contact: Kevin Dana

Phone: 503-229-5369

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## **Executive summary**

This document presents the basis for the Oregon Department of Environmental Quality's (DEQ's) recommended Conditional No Further Action (CNFA) determination for the Edgewater at the Cove property/site in Oregon City. As discussed in this report, contaminant concentrations in soil gas exceed applicable risk levels for applicable exposure pathways. Consequently, the No Further Action determination will be conditioned upon adherence to restrictions recorded in an Easement and Equitable Servitudes attached to the property deed.

The proposed CNFA determination meets the requirements of Oregon Administrative Rules (OAR) Chapter 340, Division 122, Sections 010 to 0140; and Oregon Revised Statutes (ORS) 465.200 through 465.455.

The proposal is based on information documented in the administrative record for this site. A copy of the administrative record index is presented at the end of this report.

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# Background

## Site location

The site's location can be described as follows:

- Address: 1937 Main Street, Oregon City, Clackamas County, Oregon.
- Latitude 45.3693° North; Longitude 122.5970° West.
- Tax Lot 2900, Township 2 South, Range 2 East, Section 29, Willamette Baseline and Meridian.

## Site setting

Edgewater at the Cove is an apartment complex at the north end of Oregon City, bounded by Clackamette Cove to the north, Interstate 205 to the south, Main Street to the east, and the Oregon City Shopping Center to the west. See Attachment 1 for a topographic map of the area, Attachment 2 for a satellite photo of the site, and Attachment 3 for an aerial/drone view of the site. Eleven apartment buildings with 220 apartment units are present on the 10.79-acre site, along with a clubhouse, a maintenance building, and seven enclosed garage buildings. The site's original address was 16421 Main Street. The Old Rossman Landfill extends northeast of the site between Clackamette Cove and Interstate 205.

## Hydrogeologic setting

Soils at the site were generally described as a mixture of silty sands and clayey silts to a depth of 30 feet below ground surface (bgs), underlain by sandy gravels to a maximum explored depth of 50 feet bgs. About half of the on-site borings encountered a layer of gravelly sands in the upper 5-10 feet. The depth to groundwater was reported to vary seasonally from about 14 feet to 35 feet bgs. The groundwater flow direction was to the west-northwest, towards the confluence of the Clackamas and Willamette Rivers.

## Site history

The site and surrounding area was a floodplain near the confluence of the Clackamas and Willamette Rivers and was used as farmland as of the early 1950s. (See Attachment 4 for an aerial photo from 1952). Pit Rock Products converted the area to industrial use in the mid-1950s, with sand and gravel mining operations and concrete and asphalt production. The sand and gravel excavation pit filled with water and became known as Clackamette Lake. (See Attachment 5 for an aerial photo from 1960).

From 1960 to 1969, Art Rossman operated a solid waste landfill on vacant land to the east of the industrial area, digging trenches for the wastes and using the excavated soils to cover the wastes. Clackamette Lake continued to expand through the 1960s, and the Oregon City Shopping Center was constructed southwest of the lake. In 1969, Rossman's Landfill moved its operations to the east of the new Interstate 205 corridor. (See Attachment 6 for an aerial photo from 1970). Clackamette Lake became Clackamette Cove when continued excavations/

dredging connected it to the Clackamas River. (See Attachment 7 for an aerial photo from 1980).

After the cove was opened, sand and gravel were barged to the cove, and quarrying ended. Western Pacific Construction Materials acquired the area (including the Old Rossman Landfill) and the sand and gravel and concrete and asphalt operations in 1972. Western Pacific declared bankruptcy in 1986, and was followed by Lone Star Industries (1987-88) and Glacier Northwest (1988 to 2007), which operated a Ready Mix Concrete Plant at the current Edgewater at the Cove site. Attachment 8 shows the site layout in its latter years of operation. (Note that north is to the right on the figure). As of January 2008 all structures at the Edgewater at the Cove site had been demolished and all equipment had been removed.

## **Beneficial land and water use determinations**

### **Land use**

Edgewater at the Cove and all surrounding properties are currently zoned Mixed Use Downtown (MUD) by the City of Oregon City, as shown on Attachment 9. The zoning encourages a mix of high-density residential, office, and retail uses, generally with retail and service uses on the ground floor and office and residential uses on the upper floors.

### **Groundwater use**

A search of well logs on file with the Oregon Water Resources Department identified one community well, six domestic wells, and one irrigation well in the same township/range/section as the site. The community well, for the Clairmont Water District (now the Clackamas River Water District) was installed in 1973 and extended 560 feet bgs. The depth to water in the well was measured at 315 feet bgs. None of the eight wells are known or suspected to be downgradient of the site.

Oregon City is served by a municipal water supply system. The water is obtained from three intakes on the Clackamas River, and is treated at the South Fork Water Board Treatment Plant prior to distribution.

### **Surface water use**

The nearest surface water body is Clackamette Cove, which borders the site to the north. Other nearby surface water bodies include Abernathy Creek (about 0.2 miles to the south), the Clackamas River (0.3 miles north), and the Willamette River (0.3 miles west). The rivers are used for boating, fishing, and recreation, and provide freshwater aquatic habitat for fish and other species. Clackamette Cove (formerly Clackamette Lake) was originally used for sand and gravel mining/dredging, but is currently used for boating and fishing, including for Smallmouth and Largemouth bass.

Stormwater runoff from the site flows to catch basins that discharge through two outfalls to Clackamette Cove.

# Investigation and cleanup work

Nine borings (labelled B-1 through B-9) were advanced around the site in December 2008 as part of an Environmental Site Assessment, as shown on Attachment 10. (Note that north is to the right on the figure). A total of 20 soil samples were collected from the nine borings and analyzed for contaminants including diesel, heavy oils, metals, polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs).

Only very low concentrations of contaminants were detected, including acetone (at concentrations up to 0.14 parts per million), benzene (0.0035 ppm), and 1,1-dichloroethene (0.0030 ppm). Concentrations of metals were generally consistent with naturally-occurring background levels, including barium (270 ppm), cadmium (0.42 ppm), chromium (28 ppm), lead (14 ppm), mercury (0.040 ppm), and selenium (8.6 ppm).

A groundwater sample was collected from boring B-6, near the center of the former industrial operations, and analyzed for diesel and oil, metals, PAHs, and VOCs. Only metals were detected, including barium at a concentration of 110 parts per billion, along with chromium (12 ppb) and lead (6.9 ppb).

Finally, soil gas samples were collected at depths of five feet bgs from three of the borings (B-1, B-3, and B-5) and analyzed for VOCs and methane. A number of VOCs were detected, including acetone at concentrations up to 420 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), benzene ( $8.9 \mu\text{g}/\text{m}^3$ ), 2-butanone ( $620 \mu\text{g}/\text{m}^3$ ), chloroform ( $9.8 \mu\text{g}/\text{m}^3$ ), ethylbenzene ( $13 \mu\text{g}/\text{m}^3$ ), propene ( $1,000 \mu\text{g}/\text{m}^3$ ), tetrahydrofuran ( $3,200 \mu\text{g}/\text{m}^3$ ), toluene ( $26 \mu\text{g}/\text{m}^3$ ), and xylenes ( $41.9 \mu\text{g}/\text{m}^3$ ). Methane was measured in boring B-1 at a concentration of 9.3 percent by volume (pbv), above methane's lower explosive limit of 5.0 pbv. Given the apparent lack of soil and groundwater contamination at the site, the environmental consultant suggested that methane and VOCs were migrating onto the site from the nearby Old Rossman Landfill.

In April 2009, methane measurements were made at 23 locations on and around the site using post-run tubing (PRT, a temporary soil gas collection point installation method), and field methane measurements were made at 18 boring locations. The 41 sampling locations are shown on Attachment 11. (Note that north is to the right on the figure). Methane was measured at 10 of the locations at concentrations greater than 1.0% by volume, with the concentrations ranging from 1.7 pbv up to 53.6 pbv. The highest methane concentrations were within the Old Rossman Landfill and extended to the south along the site boundary.

Soil gas samples were concurrently collected from six of the boring locations and analyzed for VOCs. Tetrachloroethene and trichloroethene were detected in soil gas from four of the six borings at concentrations of concern, with up to  $297 \mu\text{g}/\text{m}^3$  tetrachloroethene and  $81.9 \mu\text{g}/\text{m}^3$  trichloroethene. The high concentrations were centered around the intersection of Main Street and Agnes Street and along the south site boundary.

Four groundwater monitoring wells (labelled PP-1 through PP-4) were installed on the site in late July and early August 2009, as shown on Attachment 12. (Note that north is to the right on the figure). Groundwater samples were collected from the four wells in August 2009 and analyzed for gasoline, diesel, heavy oils, metals, PAHs, and VOCs. Diesel and heavy oils were

detected in all four wells, at concentrations up to 220 ppb and 190 ppb, respectively. Gasoline (39.1 ppb) was also detected, along with barium (236 ppb), cadmium (0.089 ppb), chromium (30.2 ppb), lead (8.66 ppb), mercury (0.071 ppb), and silver (2.06 ppb). Individual PAHs were generally detected at concentrations less than 0.01 ppb.

A soil gas probe in the center of the former concrete facility (labelled NP-39s on Attachments 11 and 12) was also sampled in August 2009. Numerous VOCs were detected in the soil gas, including benzene (12.2  $\mu\text{g}/\text{m}^3$ ), chloroform (125  $\mu\text{g}/\text{m}^3$ ), ethylbenzene (63.6  $\mu\text{g}/\text{m}^3$ ), naphthalene (19.7  $\mu\text{g}/\text{m}^3$ ), styrene (14.5  $\mu\text{g}/\text{m}^3$ ), tetrachloroethene (93.1  $\mu\text{g}/\text{m}^3$ ), toluene (6,130  $\mu\text{g}/\text{m}^3$ ), 1,1,1-trichloroethane (21.9  $\mu\text{g}/\text{m}^3$ ), trichloroethene (3.33  $\mu\text{g}/\text{m}^3$ ), 1,2,4-trimethylbenzene (35.3  $\mu\text{g}/\text{m}^3$ ), 1,3,5-trimethylbenzene (9.65  $\mu\text{g}/\text{m}^3$ ), and xylenes (249.6  $\mu\text{g}/\text{m}^3$ ).

The groundwater monitoring wells were resampled in November 2009. Five contaminants were detected in all four wells: gasoline (at concentrations up to 53.5 ppb), barium (up to 68.9 ppb), diesel (up to 208 ppb), heavy oils (up to 239 ppb), and naphthalene (up to 0.0278 ppb). Virtually no other contaminants were detected.

DEQ prepared a Staff Report for Proposed Remedial Action at the site in July 2010. Due to the lack of volatile contaminants in soil and groundwater at the site, DEQ concluded that the soil gas contamination was likely migrating onto the site from the Old Rossman Landfill. DEQ proposed that passive venting systems be installed beneath future buildings at the site, consisting of perforated gas collection pipes beneath an impermeable membrane that would capture subsurface methane and VOCs and vent the gases above the building's rooflines.

After a 30-day public notice and comment period in August 2010, DEQ selected the proposed remedy in a Record of Decision in September 2010.

In December 2014, at the request of a prospective purchaser of the site, DEQ issued a Partial No Further Action letter for soil and groundwater contamination at the site.

Construction of the Edgewater at the Cove apartment complex began in August 2016. A passive sub-slab ventilation system was installed beneath each building, consisting of 4-inch diameter perforated pipes surrounded by drain rock, with sand layers above and below and an impermeable vapor membrane on top. The perforated pipes tie into a vent pipe that vents the soil gas above each building's roofline. Seventeen (17) sub-membrane sampling ports were installed at the site, one for each building. No vapor sampling ports were installed beneath Apartment Building #1 or Garage Buildings #14 and #16. Construction of the apartments wrapped up in early 2019.

In March 2019, soil gas samples were collected from six of the sampling ports and analyzed for methane. Methane was only detected in two of the samples, at concentrations well below DEQ's action level of 1.25% by volume.

In September 2019, all 17 ports were monitored for methane and VOCs. See Attachment 13 for a map of the vapor sampling port locations. Methane was measured at 10% by volume beneath Garage Building #15 using a hand-held methane gas detector. Total VOCs were measured in all 17 sample ports using a photoionization detector, at concentrations ranging from 0.5 ppm up to 4,411 ppm. Soil gas samples from seven sampling ports were subsequently collected with summa canisters and analyzed for individual VOCs. VOC concentrations were below DEQ's

risk-based concentrations (RBCs) for residential vapor intrusion. However, concentrations of seven contaminants (for which RBCs had not been established) exceeded EPA Region 9 Regional Screening Levels (RSLs) for residential ambient air: acetone (up to 1,700,000  $\mu\text{g}/\text{m}^3$ ), 2-butanone (5,280,000  $\mu\text{g}/\text{m}^3$ ), carbon disulfide (26,900  $\mu\text{g}/\text{m}^3$ ), hexane (1,200,000  $\mu\text{g}/\text{m}^3$ ), methylene chloride (6,340  $\mu\text{g}/\text{m}^3$ ), methyl methacrylate (3,300  $\mu\text{g}/\text{m}^3$ ), and tetrahydrofuran (2,440,000  $\mu\text{g}/\text{m}^3$ ). The highest concentrations, by an order of magnitude, were beneath Garage Buildings #13 and #15. Wind turbines were installed on the vent pipes for the two buildings to actively extract the VOCs.

The 17 sampling ports were again monitored for methane and VOCs in February 2020. No methane was identified, and total VOC concentrations ranged up to 1,196 ppm. Soil gas from the six sample ports with the highest VOC readings were collected in summa canisters and analyzed for individual VOCs. VOC concentrations were again below DEQ's RBCs for residential vapor intrusion, but concentrations of five contaminants exceeded EPA Region 9 RSLs: acetone (up to 406,000  $\mu\text{g}/\text{m}^3$ ), 2-butanone (1,840,000  $\mu\text{g}/\text{m}^3$ ), hexane (6,980  $\mu\text{g}/\text{m}^3$ ), 2-propanol (33,700  $\mu\text{g}/\text{m}^3$ ), and tetrahydrofuran (846,000  $\mu\text{g}/\text{m}^3$ ).

The environmental consultant conducting the sampling attributed the majority of the VOCs to "the rubber membrane used as a vapor barrier beneath the site, plus solvents to clean and glues to bond and seal the membrane and PVC piping." The VOCs were again concentrated beneath Garage Buildings #13 and #15, but concentrations of 2-butanone (also known as methyl ethyl ketone or MEK) and tetrahydrofuran (THF) exceeded RSLs beneath Apartment Buildings #7 through #10. Wind turbines were installed on the vent pipes for the four apartment buildings to actively extract the VOCs.

The most recent round of soil gas sampling was conducted in January 2024, when soil gas samples were collected from the same six sampling ports as in March 2019 and analyzed for methane. Methane concentrations were again well below DEQ's action level of 1.25% by volume.

## **Nature and extent of contamination**

Low concentrations of petroleum are present in shallow groundwater at the site, and methane and VOCs are present in soil gas beneath the buildings at the site.

## **Risk evaluation**

### **Conceptual site model**

A conceptual site model identifies the sources of contamination at a site, the human or ecological receptors that could be exposed to the contamination, and the pathways by which the exposures could occur.

To evaluate human exposure to residual chemical contamination requires an assessment of the type and extent of that exposure. This is based on current and reasonably likely future site use. DEQ publishes RBCs for contaminants commonly encountered, for different types of exposure scenarios. These RBCs are conservative estimates of protective levels of contaminants in soil,

groundwater and air. Table 1 shows potential exposure pathways and receptors for this site. Based on this, applicable RBCs are identified and used for risk screening.

**Table 1. Identification of applicable groundwater RBCs, based on pertinent pathways and receptors.**

<b>Pathway</b>	<b>Receptor</b>	<b>Applicable RBC?</b>	<b>Basis for exclusion</b>
Ingestion, inhalation from tapwater	Residential	No	See Note 1
Ingestion, inhalation from tapwater	Occupational	No	See Note 1
Volatilization to outdoor air	Residential	Yes	n/a
Volatilization to outdoor air	Occupational	Yes	n/a
Vapor intrusion into buildings	Residential	Yes	n/a
Vapor intrusion into buildings	Commercial	Yes	n/a
Groundwater in excavation	Construction and excavation worker	Yes	n/a

Notes:

1. A municipal water supply is available to the area, and no domestic water wells have been identified downgradient of the site. This exposure pathway is not likely to be complete.

**Table 2. Identification of applicable soil gas RBCs, based on pertinent pathways and receptors.**

<b>Pathway</b>	<b>Receptor</b>	<b>Applicable RBC?</b>	<b>Basis for exclusion</b>
Vapor intrusion into buildings	Residential	Yes	n/a
Vapor intrusion into buildings	Commercial	Yes	n/a

## Contaminant concentrations

Contaminants of Potential Concern (COPCs) are contaminants that are present at a site at concentrations exceeding an RBC for a complete exposure pathway.

Contaminants in groundwater may volatilize to outdoor air and be inhaled by residents and occupants of the site. Table 3 shows the maximum concentrations of contaminants detected in groundwater at the site, and compares those concentrations with DEQ's volatilization to outdoor air RBCs to determine if there are any COPCs.

**Table 3. Screening for residential and occupational COPCs for the volatilization to outdoor air exposure pathway.**

<b>Contaminant of interest</b>	<b>Maximum GW concentration</b>	<b>Residential RBC</b>	<b>Occupational RBC</b>	<b>COPC?</b>
Diesel	220 ppb	>S	>S	No
Gasoline	53.5 ppb	>S	>S	No
Heavy oils	239 ppb	NE	NE	No
Naphthalene	0.0278 ppb	3,600 ppb	16,000 ppb	No

Notes:

- The symbol ">S" signifies that the RBC for this pathway exceeds the solubility limit of the contaminant in water.
- NE = Not Established. DEQ has not established RBCs for heavy oils. However, as the RBCs for both diesel and gasoline exceed the solubility limits of those petroleum products, heavy oils are unlikely to be a contaminant of concern for the volatilization to outdoor air exposure pathway.

Contaminants in groundwater may volatilize into indoor air and be inhaled by residents and occupants of the site. Table 4 shows the maximum concentration of contaminants detected in groundwater at the site, and compares those concentrations with DEQ's vapor intrusion into buildings RBCs to determine if there are any COPCs.

**Table 4. Screening for residential and commercial COPCs for the vapor intrusion into buildings exposure pathway for groundwater contaminants.**

<b>Contaminant of interest</b>	<b>Maximum GW concentration</b>	<b>Residential RBC</b>	<b>Commercial RBC</b>	<b>COPC?</b>
Diesel	220 ppb	400 ppb	1,700 ppb	No
Gasoline	53.5 ppb	120 ppb	520 ppb	No
Heavy oils	239 ppb	NE	NE	No
Naphthalene	0.0278 ppb	11 ppb	50 ppb	No

Notes:

- DEQ has not established RBCs for heavy oils. However, as the RBCs for diesel are not exceeded, similar concentrations of heavy oils are unlikely to be a contaminant of concern for the vapor intrusion into buildings exposure pathway.

Construction and excavation workers may come into contact with contaminated groundwater while working at the site. Table 5 shows the maximum concentrations of contaminants detected in groundwater at the site, and compares those concentrations with DEQ's groundwater in excavation RBCs to determine if there are any COPCs.

**Table 5. Screening for construction and excavation worker COPCs for the groundwater in excavation exposure pathway.**

<b>Contaminant of interest</b>	<b>Maximum GW concentration</b>	<b>Construct/Excavate Workers RBC</b>	<b>COPC?</b>
Diesel	220 ppb	>S	No
Gasoline	53.5 ppb	14,000 ppb	No

<b>Contaminant of interest</b>	<b>Maximum GW concentration</b>	<b>Construct/Excavate Workers RBC</b>	<b>COPC?</b>
Heavy oils	239 ppb	NE	No
Naphthalene	0.0278 ppb	500 ppb	No
Barium	236 ppb	>S	No
Cadmium	0.089 ppb	130,000 ppb	No
Chromium	30.2 ppb	>S	No
Lead	8.66 ppb	>S	No
Mercury	0.071 ppb	>S	No
Silver	2.06 ppb	1,100,000 ppb	No

Notes:

- DEQ has not established RBCs for heavy oils. However, as the RBC for diesel is not exceeded, a similar concentration of heavy oils is unlikely to be a contaminant of concern for the direct contact exposure pathway.

Finally, contaminants in soil gas may intrude into indoor air and be inhaled by residents and occupants of the site. Table 6 shows the maximum concentrations of contaminants detected in soil gas at the site for which DEQ currently has RBCs, and compares those concentrations with DEQ's vapor intrusion into buildings RBCs to determine if there are any COPCs.

**Table 6. Screening for residential and commercial COPCs for the vapor intrusion into buildings exposure pathway for soil gas contaminants.**

<b>Contaminant of interest</b>	<b>Maximum soil gas concentration</b>	<b>Residential RBC</b>	<b>Commercial RBC</b>	<b>COPC?</b>
Benzene	12.2 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	52 µg/m <sup>3</sup>	Yes
Carbon disulfide	26,900 µg/m <sup>3</sup>	24,000 µg/m <sup>3</sup>	100,000 µg/m <sup>3</sup>	Yes
Chloroform	125 µg/m <sup>3</sup>	4.1 µg/m <sup>3</sup>	18 µg/m <sup>3</sup>	Yes
Ethylbenzene	63.6 µg/m <sup>3</sup>	37 µg/m <sup>3</sup>	160 µg/m <sup>3</sup>	Yes
Hexane	1,200,000 µg/m <sup>3</sup>	24,000 µg/m <sup>3</sup>	100,000 µg/m <sup>3</sup>	Yes
Methyl ethyl ketone	5,280,000 µg/m <sup>3</sup>	170,000 µg/m <sup>3</sup>	730,000 µg/m <sup>3</sup>	Yes
Naphthalene	19.7 µg/m <sup>3</sup>	2.8 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Yes
Styrene	27.3 µg/m <sup>3</sup>	35,000 µg/m <sup>3</sup>	150,000 µg/m <sup>3</sup>	No
Tetrachloroethene	93.1 µg/m <sup>3</sup>	360 µg/m <sup>3</sup>	1,600 µg/m <sup>3</sup>	No
Tetrahydrofuran	2,440,000 µg/m <sup>3</sup>	70,000 µg/m <sup>3</sup>	290,000 µg/m <sup>3</sup>	Yes
Toluene	9,080 µg/m <sup>3</sup>	170,000 µg/m <sup>3</sup>	730,000 µg/m <sup>3</sup>	No
1,1,1-Trichloroethane	21.9 µg/m <sup>3</sup>	170,000 µg/m <sup>3</sup>	730,000 µg/m <sup>3</sup>	No
Trichloroethene	3.33 µg/m <sup>3</sup>	16 µg/m <sup>3</sup>	100 µg/m <sup>3</sup>	No
1,2,4-TMB	5,800 µg/m <sup>3</sup>	2,100 µg/m <sup>3</sup>	8,800 µg/m <sup>3</sup>	Yes

Contaminant of interest	Maximum soil gas concentration	Residential RBC	Commercial RBC	COPC?
1,3,5-TMB	9.63 µg/m <sup>3</sup>	2,100 µg/m <sup>3</sup>	8,800 µg/m <sup>3</sup>	N
Xylenes	249.6 µg/m <sup>3</sup>	3,500 µg/m <sup>3</sup>	15,000 µg/m <sup>3</sup>	N

Notes:

6. TMB = Trimethylbenzene

In summary, the Contaminants of Potential Concern at the site are VOCs in the soil gas.

## Human health risk

Contaminants of Concern (COCs) are those chemicals at a site that present an unacceptable risk to human health or the environment.

VOCs have been detected in soil gas at the site during periodic sampling events from 2008 to 2020. Methane was also initially detected in soil gas at the site. To address the vapor concerns, the buildings at Edgewater at the Cove were constructed with sub-slab impermeable vapor membranes and passive soil vapor extraction systems to vent the soil gas to outdoor air. With the soil vapor extraction systems in place, the vapor intrusion into buildings exposure pathway is incomplete, and no further action is necessary to address the soil gas contamination at the site.

## Ecological risk

A Level 1 Scoping Ecological Risk Assessment was conducted for the site in 2009. The risk assessment determined that concentrations of metals in on-site groundwater exceeded screening level values for aquatic receptors in nearby surface waters, specifically Clackamette Cove. However, because concentrations of metals in on-site groundwater were generally lower than concentrations in upgradient monitoring wells at the new and old Rossman Landfills, DEQ concluded in 2010 that the groundwater contamination was attributable to upgradient sources.

## Recommendation

VOCs and methane in soil gas present an ongoing risk to residents of the Edgewater at the Cove apartments. Because the soil vapor extraction systems beneath each building are necessary to mitigate that risk, an Easement and Equitable Servitudes (EES) should be recorded on the property requiring inspections at least every five years to ensure that the vapor extraction systems are continuing to function as designed.

Following redevelopment of the site and based on sample results for soil, groundwater and soil gas, a No Further Action determination is recommended for Edgewater at the Cove, conditioned upon adherence to the restrictions in an EES recorded with the property deed. The Conditional No Further Action determination will be recorded in Your DEQ Online (YDO) under Environmental Cleanup Site Information (ECSI) file #5138.

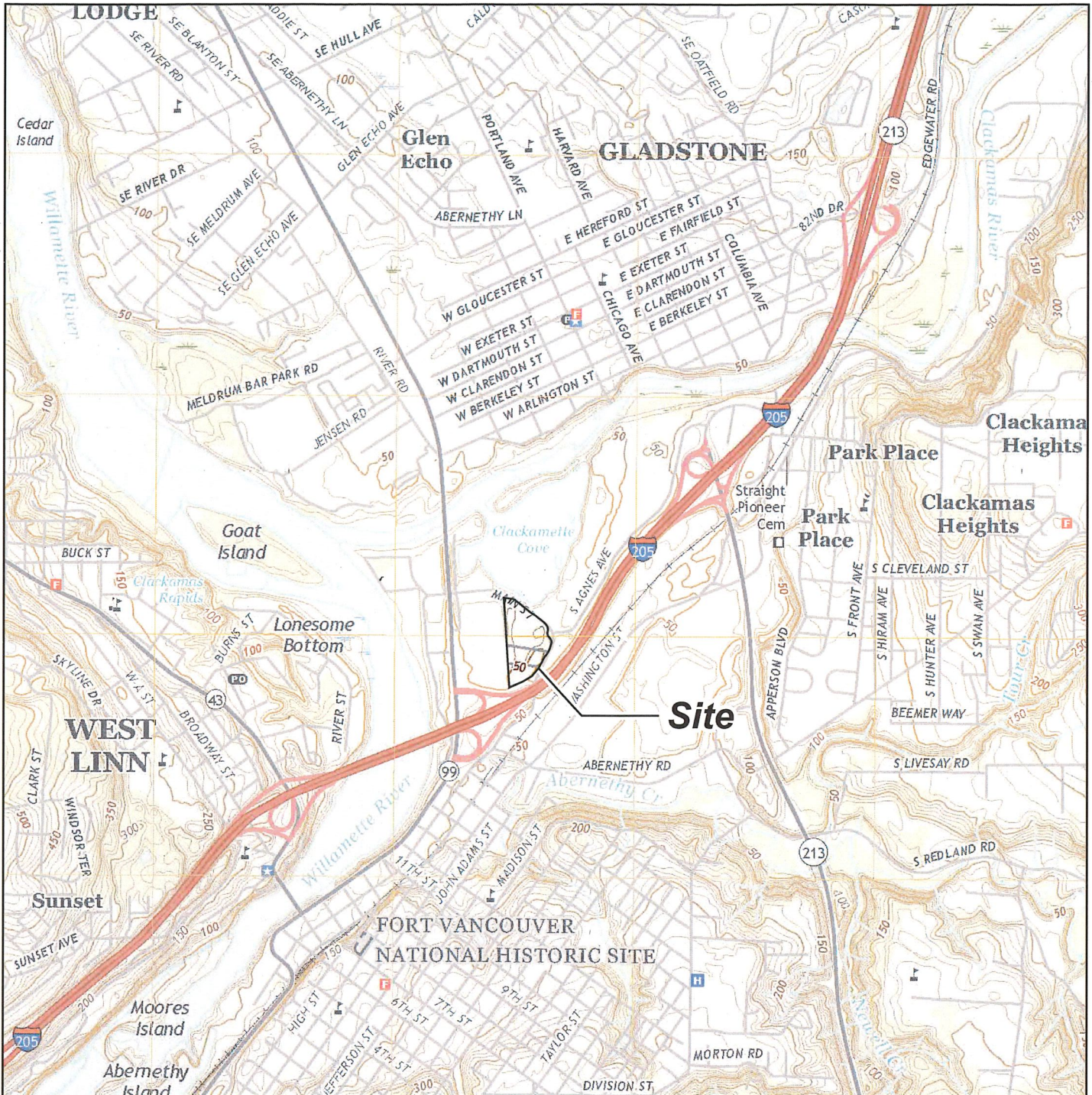
## Administrative record

1. Stantec "Phase 1 Environmental Site Assessment" (November 24, 2008).

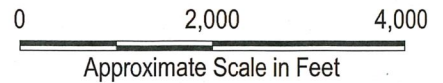
2. Stantec "Additional File Review and Phase 2 Environmental Site Assessment Report" (January 21, 2009).
3. CH2M Hill "Soil Gas Investigation Results" (July 13, 2009).
4. CH2M Hill "Groundwater Investigation Results and Supplemental Soil Gas Data" (September 16, 2009).
5. CH2M Hill "November 2009 Groundwater Sampling Results" (December 22, 2009).
6. DEQ "Staff Report for Proposed Remedial Action" (July 7, 2010).
7. DEQ "Record of Decision" (September 26, 2010).
8. DEQ "Partial No Further Action Letter" (December 19, 2014).
9. Apex "Methane Vapor Sampling Summary Report" (April 2, 2019).
10. BB&A "Assessment of Vapor Mitigation System" (March 13, 2020).

## **Attachments**

1. Topographic Map
2. Satellite Photo
3. Current Aerial Photo
4. Aerial Photo (1952)
5. Aerial Photo (1960)
6. Aerial Photo (1970)
7. Aerial Photo (1980)
8. Concrete Plant Site Layout
9. Zoning Map
10. Sampling Locations Map (Dec. 2008)
11. Sampling Locations Map (April 2009)
12. Sampling Locations Map (Aug. 2009)
13. Sampling Locations Map (2019-2020)




Note: Base map prepared from USGS 7.5-minute quadrangles of Gladstone and Oregon City, OR, dated 2017 as provided by USGS.gov.



## Site Location Map

Methane Vapor Sampling Summary Report  
 Edgewater at the Cove Apartments  
 Oregon City, Oregon

 Apex Companies, LLC  
 3015 SW First Avenue  
 Portland, Oregon 97201

Project Number 2477-00

April 2019

Figure  
 1



Attachment 2





INQUIRY #: 2339502.5

YEAR: 1952

| = 750'



EDA Environmental Data Systems, Inc.



INQUIRY #: 2339502.5

YEAR: 1960

| = 750'





INQUIRY #: 2339502.5

YEAR: 1970

— = 750'



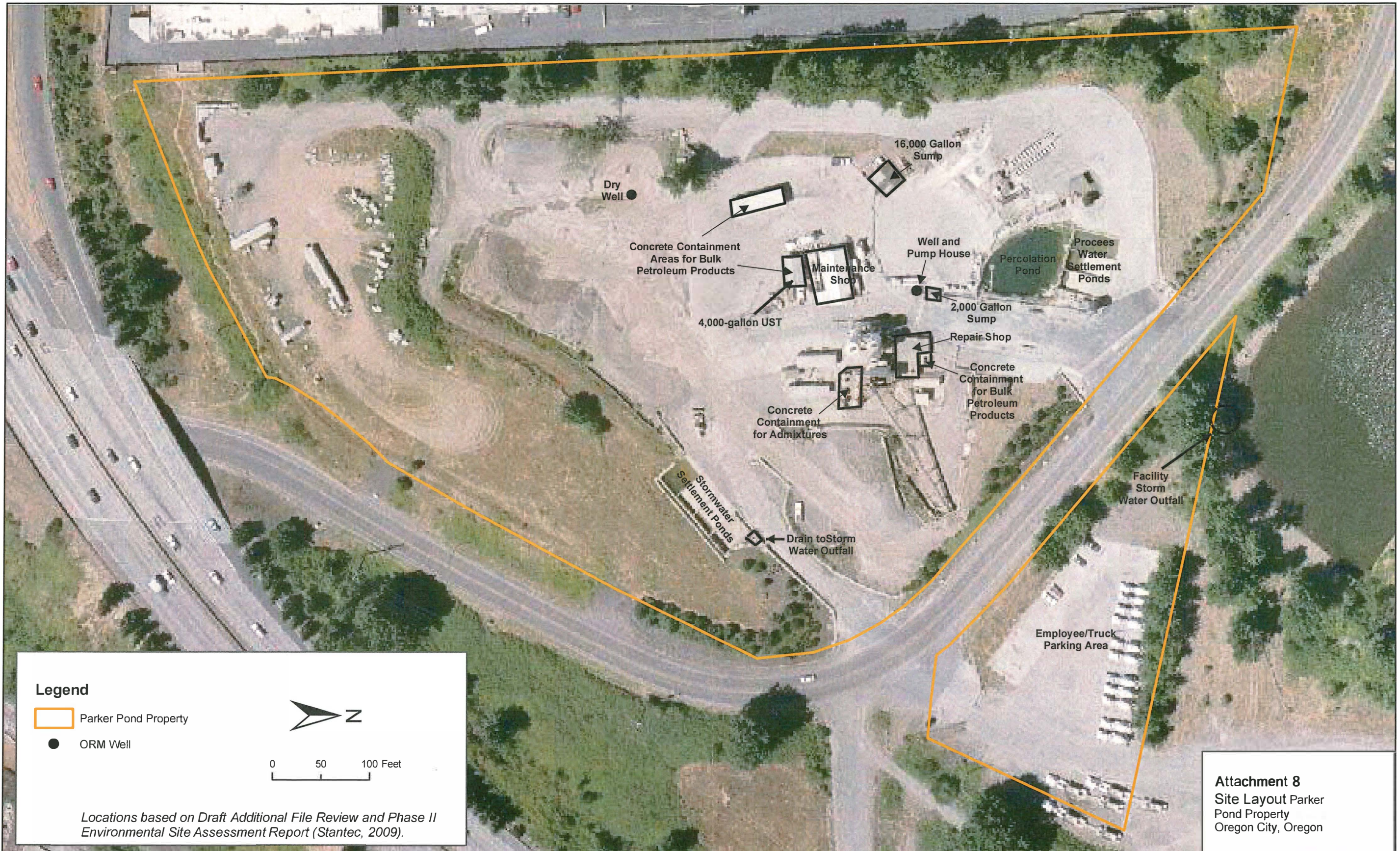


**INQUIRY #:** 2339502.5

**YEAR:** 1980

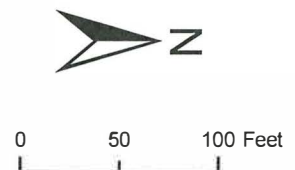
**Scale:** | = 750'





**Legend**

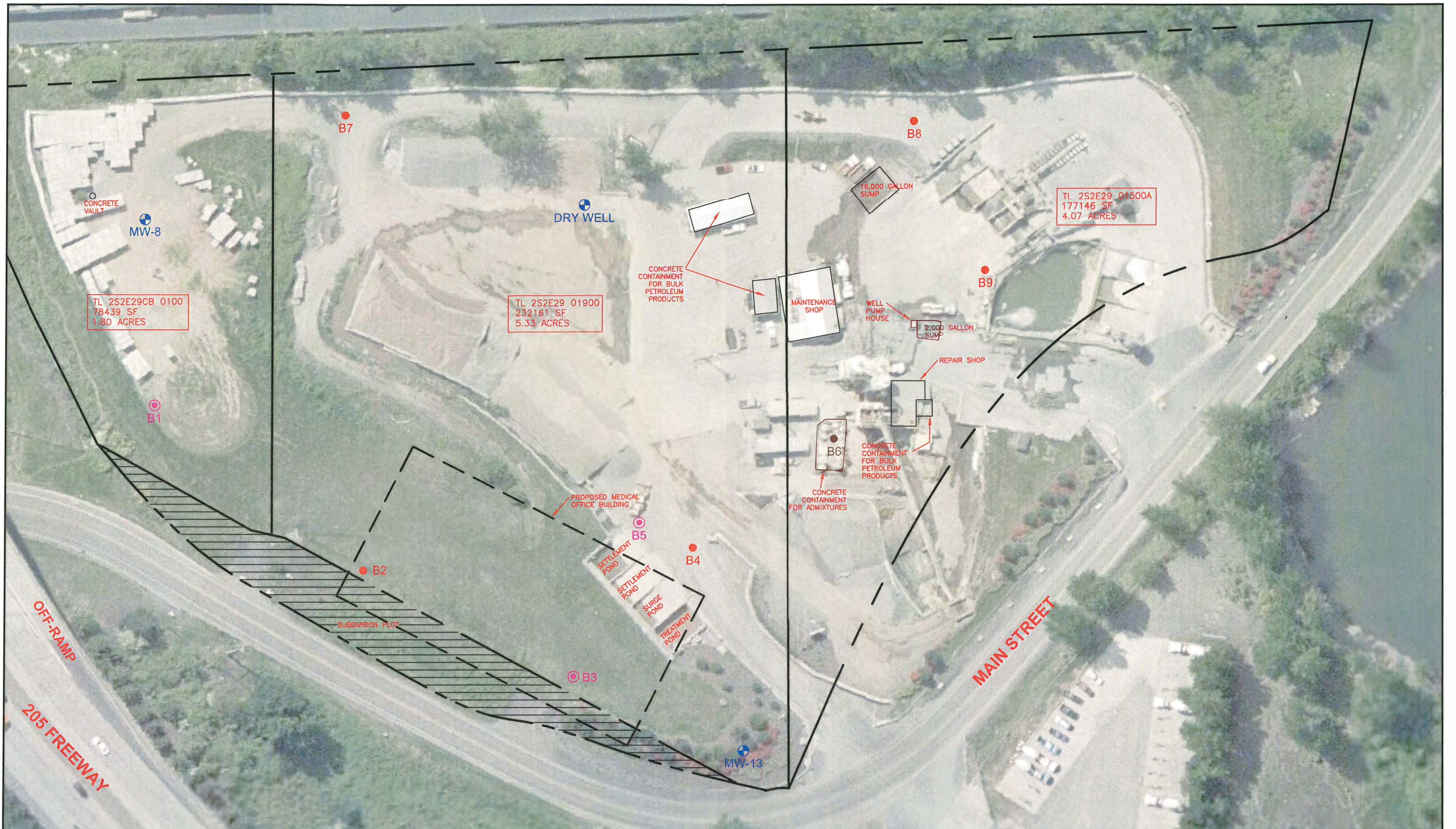
- Parker Pond Property
- ORM Well



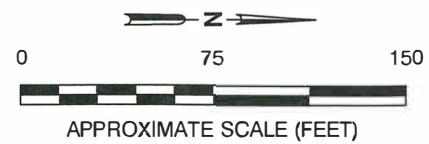
*Locations based on Draft Additional File Review and Phase II Environmental Site Assessment Report (Stantec, 2009).*

**Attachment 8**  
 Site Layout Parker Pond Property  
 Oregon City, Oregon





LEGEND	
	PROPERTY LINE
	GROUNDWATER MONITORING WELL
	SOIL VAPOR SAMPLING POINT
	SOIL BORING

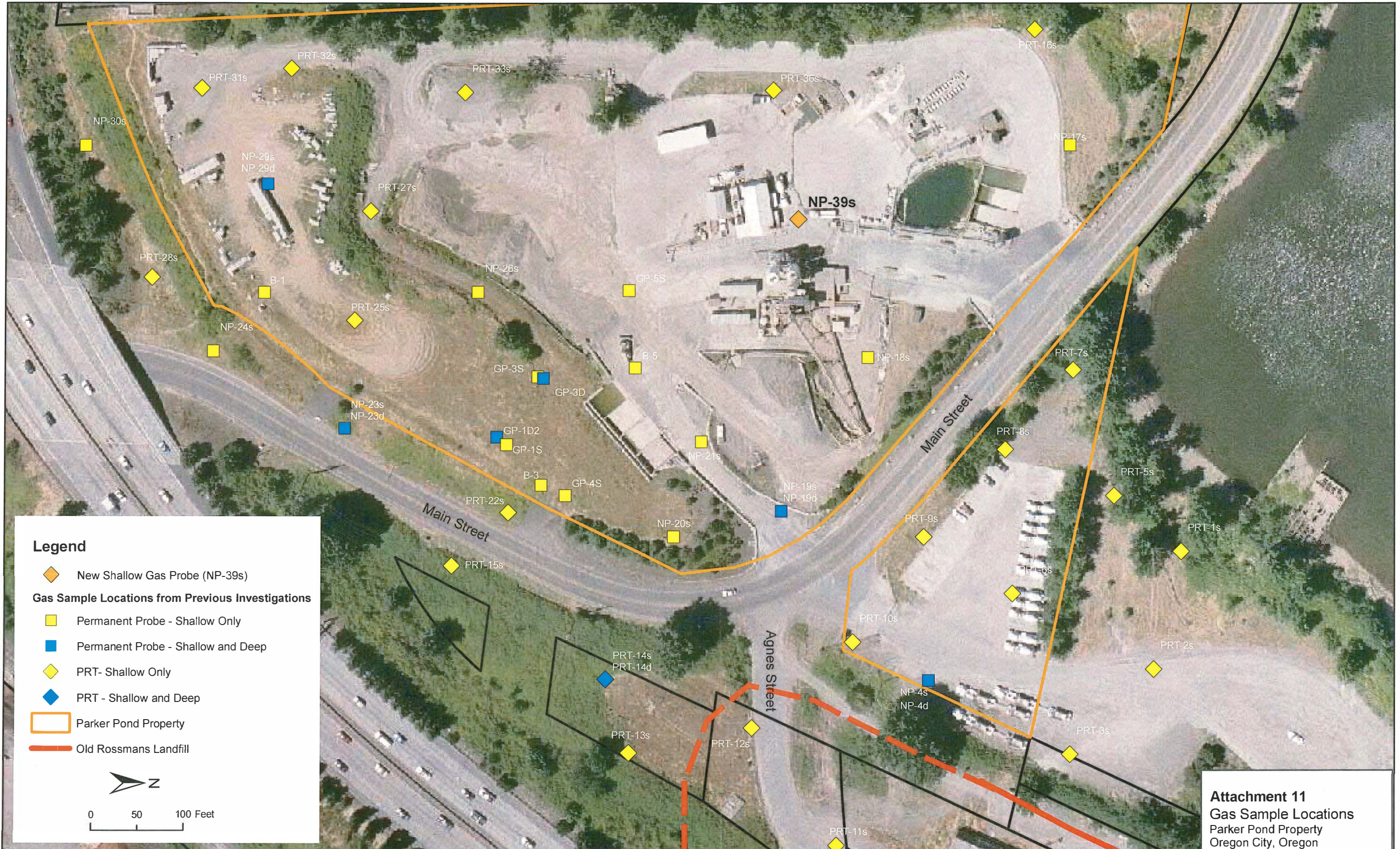


FOR:  
**KAISER FOUNDATION HEALTH PLAN  
 PHASE II ESA**  
 16381 & 16421 Main Street  
 Oregon City, Oregon

**SITE PLAN WITH  
 SAMPLING LOCATIONS**

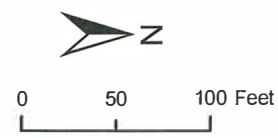
FIGURE:  
**10**

JOB NUMBER: 37OT.20991.01.0004	DRAWN BY: R. Roman	CHECKED BY: C. Confar	APPROVED BY: S. C. Brady	DATE: 01/13/09
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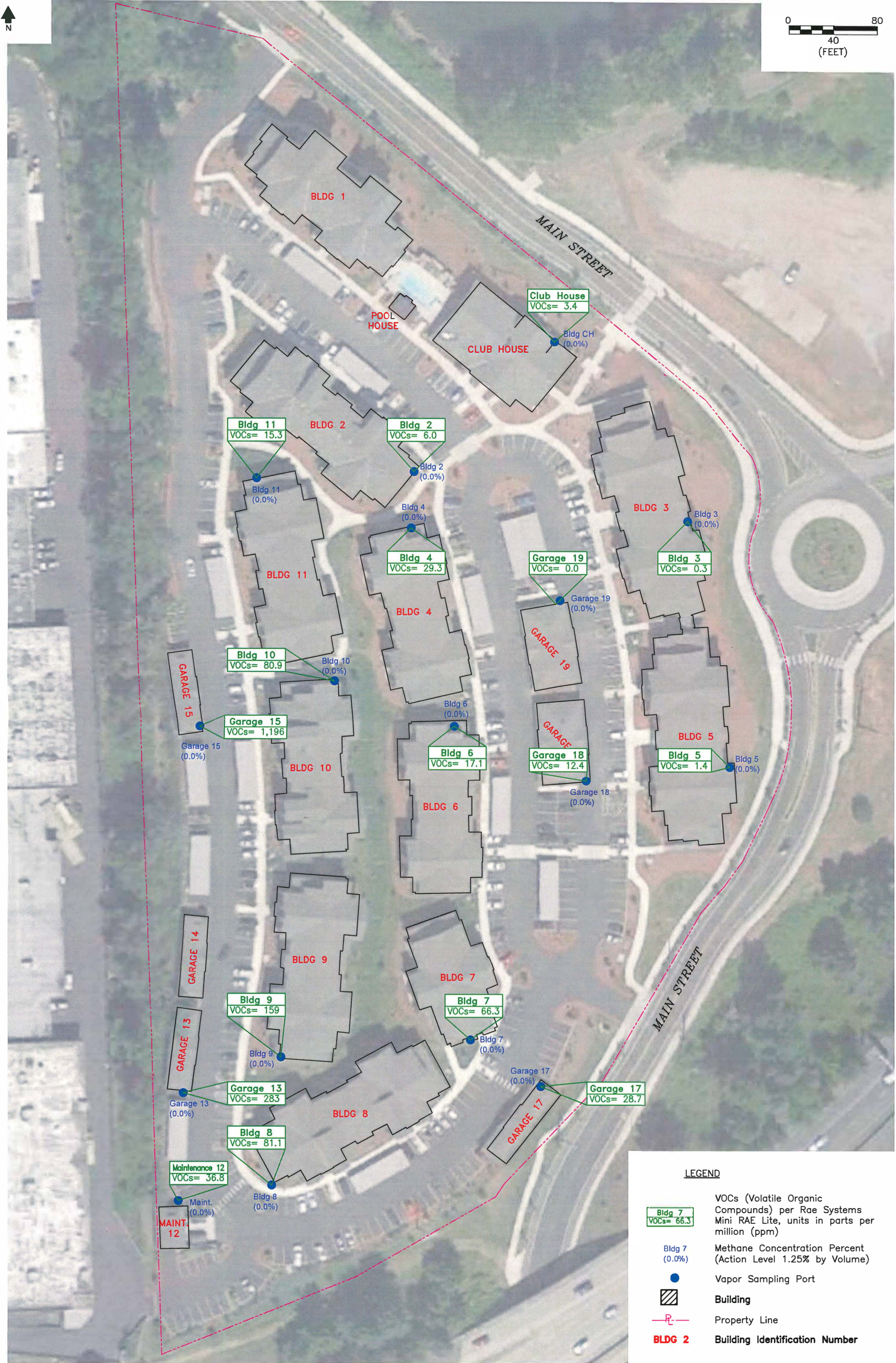
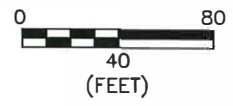
**Legend**

- ◆ New Shallow Gas Probe (NP-39s)
- Gas Sample Locations from Previous Investigations**
- Permanent Probe - Shallow Only
- Permanent Probe - Shallow and Deep
- ◆ PRT - Shallow Only
- ◆ PRT - Shallow and Deep
- Parker Pond Property
- Old Rossmans Landfill



**Attachment 11**  
 Gas Sample Locations  
 Parker Pond Property  
 Oregon City, Oregon





**LEGEND**

- Bldg 7  
VOCs= 66.3 VOCs (Volatile Organic Compounds) per Rae Systems Mini RAE Lite, units in parts per million (ppm)
- Bldg 7 (0.0%) Methane Concentration Percent (Action Level 1.25% by Volume)
- Vapor Sampling Port
- Building
- - - Property Line
- BLDG 2** Building Identification Number



EUGENE OFFICE  
32986 Roberts Ct.  
Coburg, OR  
ph: 541.484.9484

PORTLAND OFFICE  
25195 SW Parkway Ave., #207  
Wilsonville, OR  
ph: 503.570.9484

www.BBAENV.COM

**SITE PLAN SHOWING ANALYTICAL DATA  
EDGEWATER AT THE COVE APARTMENTS  
1937 MAIN STREET, OREGON CITY, OREGON**

PROJECT CODE: LC01PH2.19E	DATE: 03/13/20	SCALE: 1"=80'	DRAWN: K.D.DESIGNS	CHECKED: STEVE OMO
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FIGURE #:  
**13**