STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

August 31, 2017

Mr. Jimmy Blais
Merlino Properties
5050 First Avenue South, Suite 102
Seattle, WA 98134

Re: Opinion on Proposed Cleanup of the following Site:

- **Site Name:** Stoneway Concrete Renton
- **Site Address:** 1915 Maple Valley Hwy, Renton, WA 98055
- **Facility/Site No.:** 62244377
- **VCP Project No.:** NW1702

Dear Mr. Blair:

The Washington State Department of Ecology (Ecology) received your cleanup status letter dated April 13, 2017, regarding your proposed independent cleanup of the Stoneway Concrete Renton facility (Site). This letter provides our opinion. We are providing this response under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Upon completion of the proposed cleanup, will further remedial action likely be necessary to clean up contamination at the Site?

YES. Ecology has determined that, upon completion of your proposed cleanup, further remedial action will likely be 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 releases:

- Gasoline-range petroleum hydrocarbons (TPHg), diesel-range petroleum hydrocarbons (TPHd), oil-range petroleum hydrocarbons (TPHo), and formaldehyde in Soil.
- Formaldehyde and arsenic in Ground Water.
- Highly alkaline pH in Ground Water.
- Formaldehyde in Soil Vapor.

Enclosure A includes a detailed description and diagram 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:

1. April 13, 2017. Cleanup Status and Permanent Cleanup Action, Old Stoneway Renton Property, 1915 Southeast Maple Valley Highway, Renton, WA.

2. December 29, 2011. Further Action Opinion Letter, Stoneway Concrete, 1915 SE Maple Valley Highway, Renton, WA. Washington State Department of Ecology.

3. October 12, 2011. Interim Action Report Volume 1, Former Stoneway Batch Plant, 1915 SE Maple Valley Highway, Renton Washington, WA. Environmental Partners, Inc.

4. May 9, 2011. Further Action Opinion Letter on Interim Action Report, Stoneway Concrete, 1915 SE Maple Valley Highway, Renton, WA. Washington State Department of Ecology.

5. February 7, 2011. Interim Action Report, Volumes 1 and 2, Former Stoneway Batch plant, 1915 SE Maple Valley Highway, Renton Washington, WA. Environmental Partners, Inc.

6. April 30, 2009. Opinion on Proposed Cleanup of the following Site: Former Stoneway Batch Plant, 1915 SE Maple Valley Highway, Renton Washington, WA. Washington State Department of Ecology.

7. March 9, 2009. Cleanup Action Plan, Stoneway Concrete, 1915 SE Maple Valley Highway, Renton, WA, Environmental Partners, Inc.

8. October 30, 2007. Ex Situ Soil Bioremediation Treatability Study, Stoneway Concrete, 1915 SE Maple Valley Highway, Renton, WA, Environmental Partners, Inc.

9. September 17, 2007. Interim Remedial Action Letter Report, Stoneway Concrete, 1915 SE Maple Valley Highway, Renton, WA, Environmental Partners, Inc.

10. May 5, 2006. Remedial Investigation Report, Stoneway Concrete, 1915 SE Maple Valley Highway, Renton, WA, Environmental Partners, Inc.

11. April 17, 2001. Department of Ecology Memorandum from Joanne Polayes to file. Discontinuation of groundwater monitoring for tetrachloroethene at Stoneway Concrete, Renton.

12. September 20, 1998. Final Report, Stoneway Tetrachloroethene (PCE) Assessment Renton, Washington, Pacific Groundwater Group.

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) 649-7024.

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, upon completion of your proposed cleanup, **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; however, additional information is required to address data gaps and to support selection of a cleanup action. The Site is described above and in **Enclosure A.** Ecology provides the following comments on the Site characterization and cleanup completed to date, including information included in your April 2017 cleanup status letter and discussed during our meeting with your project team at Ecology NWRO on August 3, 2017:

- Formaldehyde data from ground water samples collected in Site monitoring wells MW-1, MW-7, MW-10, and EPI-MW-7 are not acceptable to assess compliance with the applicable cleanup level over four consecutive quarterly monitoring events. This is due to detections above the cleanup level or because detection limits were above than the cleanup level. Per discussions at the August 2017

project meeting, Farallon agreed to check with the laboratory regarding this situation. Per the May and December opinion letters from Ecology, the Site ground water cleanup level for formaldehyde is the 5 µg/L, the practical quantitation limit (PQL). The detection limits for Site ground water samples collected since October 2015 ranged from 100 to 2,000 µg/L.

- Prior to collection of additional ground water samples at the Site, confirm that the selected analytical laboratory is certified by Ecology for testing of formaldehyde in water, and is capable of attaining a formaldehyde detection limit equal to or less than the Site cleanup level of 5 µg/L.
- Arsenic data from ground water samples collected in Site monitoring wells MW-10 and EPI-MW-7 are not acceptable to assess compliance with the applicable cleanup level over four consecutive quarterly monitoring events. This is the case due to detections above the cleanup level.
- The pH of ground water in the immediate vicinity of the large settling ponds along the Cedar River (as represented by monitoring well MW-10) has ranged from 11.02 to 12.54 in samples collected from 2013 through 2016. This impact, which has been attributed to residual high-pH soils beneath and adjacent to the ponds, is of concern for the following reasons:
    - Materials with a pH of 12.5 are considered characteristic dangerous wastes due to corrosivity, per WAC 173-303-090(6).
    - The World Health Organization has identified impacts from high-pH water on humans:
        - pH>10: swelling of hair fibers
        - pH>11: irritation of eyes, skin, and mucous membranes
    - The secondary maximum contaminant level (MCL) for pH in drinking water is 6.5 – 8.5, which is considered an aesthetic standard. High pH water typically exhibits a slippery feel and soda taste, in addition to causing deposition of minerals on piping and fixtures.
    - Arsenic, which occurs naturally in soils, becomes significantly more soluble in water at pH values above 8.5 and can thus be mobilized by highly alkaline conditions. This phenomenon has been observed in ground water at the Site.
    - The Site is situated in Aquifer Protection Zone 1 of the City of Renton, which represents the 1-year travel time zone to the City water supply wellfield, located approximately 1,000 feet northwest of MW-10. The Cedar Valley Aquifer, from which Renton obtains drinking water, is a Sole Source Aquifer as designated by the USEPA. Therefore, protection of this resource is a high priority.
- The horizontal and vertical extent of residual soils with elevated pH needs to be illustrated in maps and cross sections, to support the evaluation of cleanup alternatives in the feasibility study (FS) and disproportionate cost analysis (DCA). This data is necessary to support the conclusion in the FS that it is impracticable

to remove residual high-pH soils due to their depth and proximity to the Cedar River.

- The April 2017 Cleanup Status report describes soil gas samples collected in January 2016 and analyzed for formaldehyde, or comparison with vapor intrusion screening levels. The vapor intrusion evaluation must be completed in accordance with the tiered system described in the Ecology vapor intrusion guidance; see the following Ecology web page: (http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/vig.html). Documentation of the vapor intrusion analysis must be submitted to Ecology.
- Preparation of at least one hydrogeologic cross section, (along a ground water flow line from the Cedar River through the settling ponds to the western property boundary) is necessary to illustrate Site conditions and support the cleanup alternatives described in the FS report. Cross sections should include the following information:
    - Vertical scale to sea level datum, NAVD 1988
    - Monitoring wells and borings that show residual concentrations of COCs in soil and ground water
    - Stratigraphic units from monitoring wells and borings
    - Settling pond sides and bottoms
    - Extent of prior remedial excavations
    - Ground water elevations and dates
    - Cedar River stage elevations and dates
    - Soil and ground water COC concentrations and dates
- The October 2011 Interim Action Report states that the Site qualifies for an exclusion from a Terrestrial Ecological Evaluation (TEE) per WAC 173-340-7491. A completed TEE exclusion form must be submitted as documentation.
- Electronic submittal of all sampling data into Ecology's electronic Environmental Information Management (EIM) database is a requirement in order to receive a final Ecology opinion for this Site. EIM guidance can be found on the following Ecology web page: http://www.ecy.wa.gov/eim/ . Erica Fot (email Efot461@ecy.wa.gov, telephone 360-407-6692) is Ecology's contact and resource on entering data into EIM.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels established for the Site meet the substantive requirements of MTCA. The following Site cleanup levels were specified in the May and December 2011 opinion letters from Ecology:

Contaminant of Concern	Soil Cleanup Level (mg/kg)	Ground Water Cleanup Level (µg/L)	Basis for Cleanup Level
TPHg	100	Not Applicable	MTCA Method A, Unrestricted Land Use
TPHd	2,000	Not Applicable	MTCA Method A, Unrestricted Land Use
TPHo	2,000	Not Applicable	MTCA Method A, Unrestricted Land Use
Formaldehyde	0.04	5	PQL (WAC 173-340-707, -720, -740)
Arsenic	20	5	MTCA Method A

Using the PQL as the cleanup level for formaldehyde in soil and ground water triggers a 5-year periodic review in accordance with WAC 173-340-707 and WAC 173-340-420. The review will evaluate whether human health and the environment are being protected and if improved analytical techniques are available.

Site data indicates the presence of formaldehyde in soil vapor at concentrations that may pose risk of vapor intrusion into future occupied structures. The Ecology vapor intrusion guidance must be used to evaluate this risk and support evaluation of cleanup/mitigation alternatives in the feasibility study (FS) and disproportionate cost analysis (DCA).

Although the ground water quality standard for pH is a secondary MCL, the continued presence of ground water with pH greater than 11 presents a potential direct contact risk if ground water is encountered in excavations or pumped to ground surface for any reason. This potential risk must also be considered in the FS and DCA.

Ecology has determined the point of compliance for soils at the Site meet the substantive requirements of MTCA. The point of compliance for soils is defined as Site-wide throughout the soil profile and may extend below the water table. This is the appropriate point of compliance for the Site.

Ecology has determined the conditional point of compliance proposed for ground water at the Site (western Property boundary) is appropriate for the Site, given the following:

- Data documenting a consistent ground water flow direction away from the Cedar River to the northwest has been provided to Ecology, and
- It is not practicable to meet the cleanup level throughout the site within a

reasonable restoration time frame, per WAC 173-340(8)(c), due to presence of high pH soils in inaccessible Site areas.

3. Selection of cleanup action.

The soil cleanup actions completed to date at the Site are summarized in **Enclosure A, Site Description**. These are considered interim cleanup actions until a FS and DCA meeting MTCA requirements have been completed. In this regard, supplemental data compiled to address data gaps described in Section 1 of this letter must be incorporated into an update of the FS and DCA. Detailed justification is also needed in the FS and DCA to support the conclusion that it is impracticable to remove or treat in-place any residual high-pH soils due to their depth and proximity to the Cedar River.

The FS and DCA in the October 2011 Interim Action Report, and the April 2017 Cleanup Status report, conclude that an environmental covenant (EC) will likely be required to support a No Further Action determination for the Site. The environmental covenant would include an operation and maintenance (O&M) plan and a confirmational monitoring plan. Conceptual design drawings of any engineered controls incorporated into the cleanup action (such as vapor barrier and soil containment systems) will also be required to document the EC. Links to Ecology guidance regarding environmental covenants can be found on our web site:
http://www.ecy.wa.gov/programs/tcp/vcp/vcp2008/vcpRequirements.html .

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

proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.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 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 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up your Property under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may resubmit your proposal for our review. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (4250649-7257 or e-mail at michael.warfel@ecy.wa.gov.

Sincerely,

Michael R. Warfel

Michael Warfel
Site Manager
NWRO Toxics Cleanup Program

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

cc: J. Riley Conkin, Farallon Consulting, LLC
Katie Nolan, City of Renton Water Utility
Louise Bardy, Ecology NWRO

Enclosure A

Description and Diagrams of the Site

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 this letter.

Site: Stoneway Concrete is located on an irregularly shaped parcel of approximately 13 acres (Property) situated between the Cedar River and SE Maple Valley Highway (**Figure 1**). The Site boundaries generally follow the Property boundaries.

Site History and Current Use: Historical records indicate that the Property was developed in the 1930s as Stoneway Dock Company. The facility name changed to Stoneway Sand and Gravel in the 1950s. During the 1950s and 1960s, the Property was reportedly leased by many businesses, including an asphalt manufacturing company. By 1966, the Property was owned and operated by Stoneway Concrete and in 1985 was purchased by Don Merlino.

The Property was most recently occupied by a concrete batch plant, along with associated support activities (**Figure 2**). Operations on the Property ceased prior to October 2002 in order to conform with the City of Renton aquifer protection ordinance, which precludes industrial activities that use, handle, or store hazardous substances in Aquifer Protection Area Zone 1.

Sources of Contamination: Petroleum hydrocarbons were detected in soil due to historic surface spillage and historic releases from underground storage tanks that have been removed. Formaldehyde in soil and ground water is attributed to spills of a chemical additive associated with the concrete batch process. Arsenic, detected in ground water above the cleanup level, was not found in soil at concentrations exceeding natural background concentrations.

Physiographic Setting: The Site is relatively flat and slopes from an elevation of 50 feet above mean sea level (amsl) adjacent to State Route 169 on the north to 40 feet amsl at the Cedar River on the south. The Cedar River valley is very narrow in the Site vicinity and is bounded on the north and south by steep valley walls that attain elevations of 300 to 400 feet amsl.

Surface/Storm Water System: The majority of the Property is currently paved with concrete that is 4 - 12 inches thick. Unpaved areas are located in the eastern and western portions of the Property. Storm sewer control is in place in the upper portion of the Property and the Property has a storm water permit. Storm water in the lower portion of the Property drains to on-site settlement ponds for infiltration. There are no point source discharges to the Cedar River.

Ecological Setting: Most of the Property's river frontage is protected with erosion control features such as riprap, cast-in-place concrete walls, "Ecology" blocks, and a poured concrete veneer over the native soils. Very little of the original low bank frontage remains and there does not appear to be a riparian habitat on the Property.

Geology: The Site is underlain by coarse sands and gravels deposited in the valley of the Cedar River. The Cedar River valley is very narrow in the Site vicinity and is bounded by steep-sided

valley walls comprised of glacial till overlying bedrock. The surface of the Site has been graded over time and includes varying thicknesses of fill. The sand and gravel alluvium has been observed in borings to a depth of 50 feet below ground surface (bgs), the deepest exploration on the Site.

Ground Water: Ground water occurs under unconfined conditions in the sand and gravel alluvium beneath the Site, in the regional, USEPA-designated Sole Source Cedar Valley Aquifer. The City of Renton obtains the majority of the water supply from well fields in this aquifer, located upstream and downstream from the Site. Local well logs indicate that this aquifer extends to depths up to 72 feet bgs near the Site.

Depths to ground water at the Site range from 10 to 20 feet bgs. Data from detailed studies of the aquifer by the City of Renton, and monitoring wells on the Site, confirm a consistent northwesterly flow direction across the Site, away from the Cedar River. This reach of the Cedar River loses a significant volume of surface water through the riverbed into the aquifer, resulting in the down-valley ground water gradient to the northwest. Aquifer tests conducted in the City of Renton wellfield (located within 700 feet northwest of the western Property boundary) document that this prevailing ground water flow direction is not measurably affected by pumpage in the well field.

Extent of Contamination and Remedial Actions: From 2005 through 2010, numerous remedial actions regarding soil contamination have taken place at the Property (Figure 5), which are summarized as follows:

- Work Area 1- Former Small Settling Pond (southwest corner of Property). High pH soil was present in this area. At total of 200 cubic yards was removed to a depth of 6 feet, with the southwest area excavated to 8 feet. Sixteen performance samples indicated pH at limits of excavation (sidewalls and floor) was 6.0-8.0.

- Work Area 2 - Large Settling Ponds. The settling ponds are concrete lined and approximately 15 feet deep. Approximately 2,200 cubic yards of high pH soil were removed from within the settling ponds. Excavation was completed when the concrete sidewalls and bottom were exposed. Because the Site was excavated to concrete, no performance samples were collected. A small amount of high pH soil may remain below and around the concrete settling ponds. Removing this material would involve excavating in and adjacent to the Cedar River, which may pose a risk to salmon spawning habitat and erosion of the bulkheads.

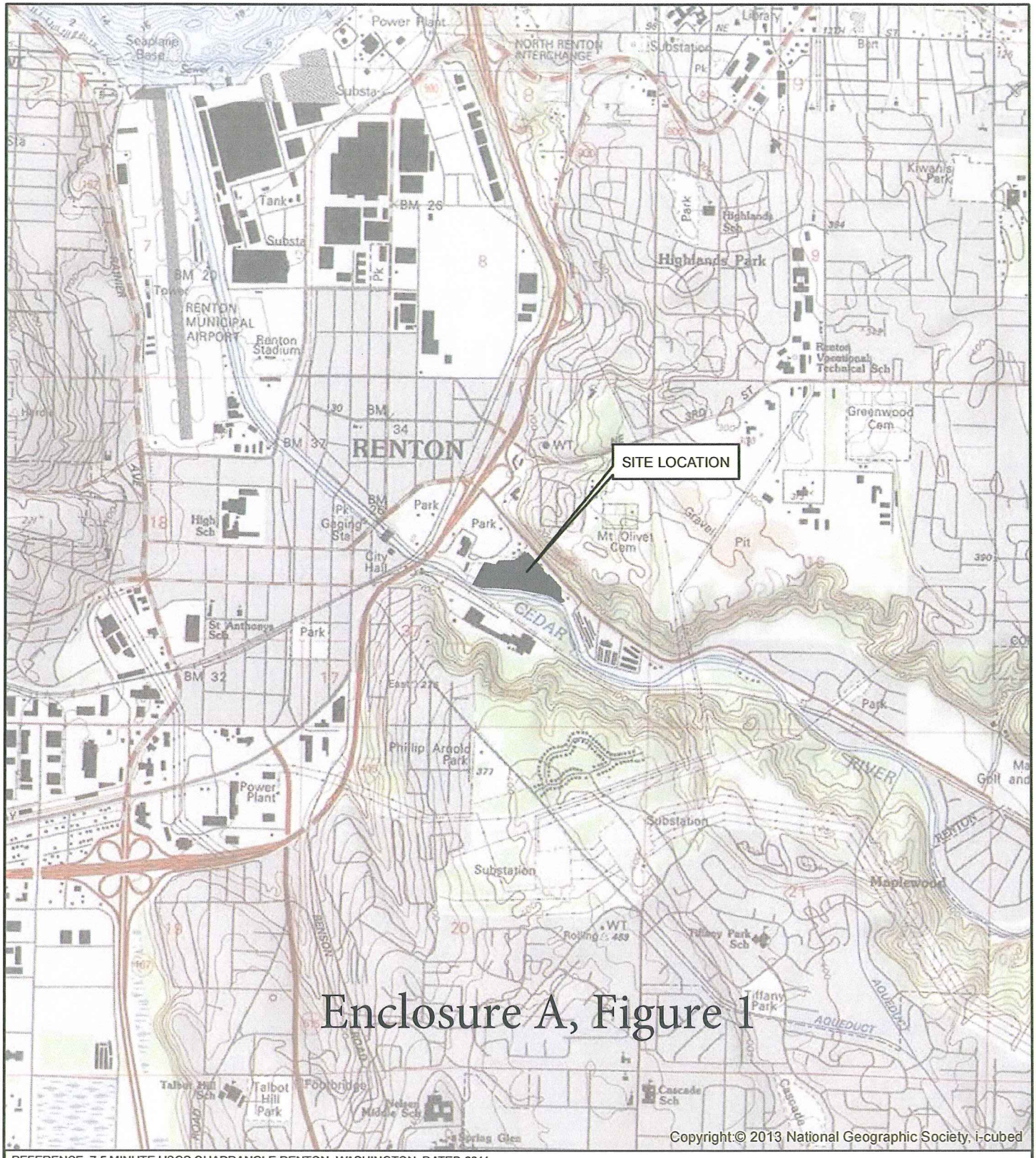
- Work Area 3 - Shallow Petroleum Impacted Area. COCs for this area were TPHo and TPHd. Impacted soil in this area was excavated to a depth of 4 feet. Approximately 190 cubic yards of TPHo contaminated soil were removed. Twelve performance samples indicated TPHo and TPHd were below cleanup levels (ranging from less than detection limits to 410 mg/kg).

- Work Area 4 - Formaldehyde Impacted Area. This area is the largest on the Site and covers a major portion of the central area of the Property. The final size of this area at the completion of soil excavation was 1.4 acres. The depth of excavation was to approximately 11 feet bgs. Approximately 21,000 cubic yards of material were excavated from the area with 13,000 cubic yards of material were bioremediated on site. Performance samples were collected and areas over excavated if a performance sample was above the formaldehyde cleanup level. A total of 447 performance samples were collected and analyzed from this area, with 238 samples representing final performance samples. All final performance samples were below the cleanup level.

- Work Area 5 - Heating oil UST. A 600-gallon UST was removed from this area. 300 cubic yards were removed from this area (24 feet x 24 feet) to a depth of 23 feet bgs. During the remediation effort, approximately 3,000 gallons of water that accumulated in the pit was removed. Eleven performance samples were collected. Only one of the performance samples was above analytical detection levels, but below the cleanup level. TPHd levels in the water that accumulated in the pit were 320 µg/L, below the ground water cleanup level.

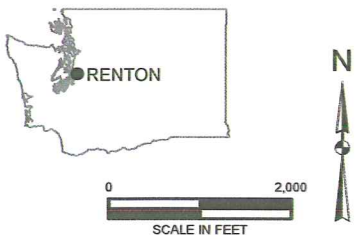
Concentrations of COCs in ground water are shown on **Figure 5**. As mentioned in the text of this opinion letter, the present status of formaldehyde in ground water cannot be assessed, because the laboratory detection limits for the most recent sampling events were greater than the cleanup level of 5 µg/L. Elevated pH has been observed in monitoring well MW-10 since January 2012 (ranging from 11.02 to 12.54).

Site Diagrams



Enclosure A, Figure 1

REFERENCE: 7.5 MINUTE USGS QUADRANGLE RENTON, WASHINGTON, DATED 2011



FARALLON CONSULTING

Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

California
Oakland | Sacramento | Irvine

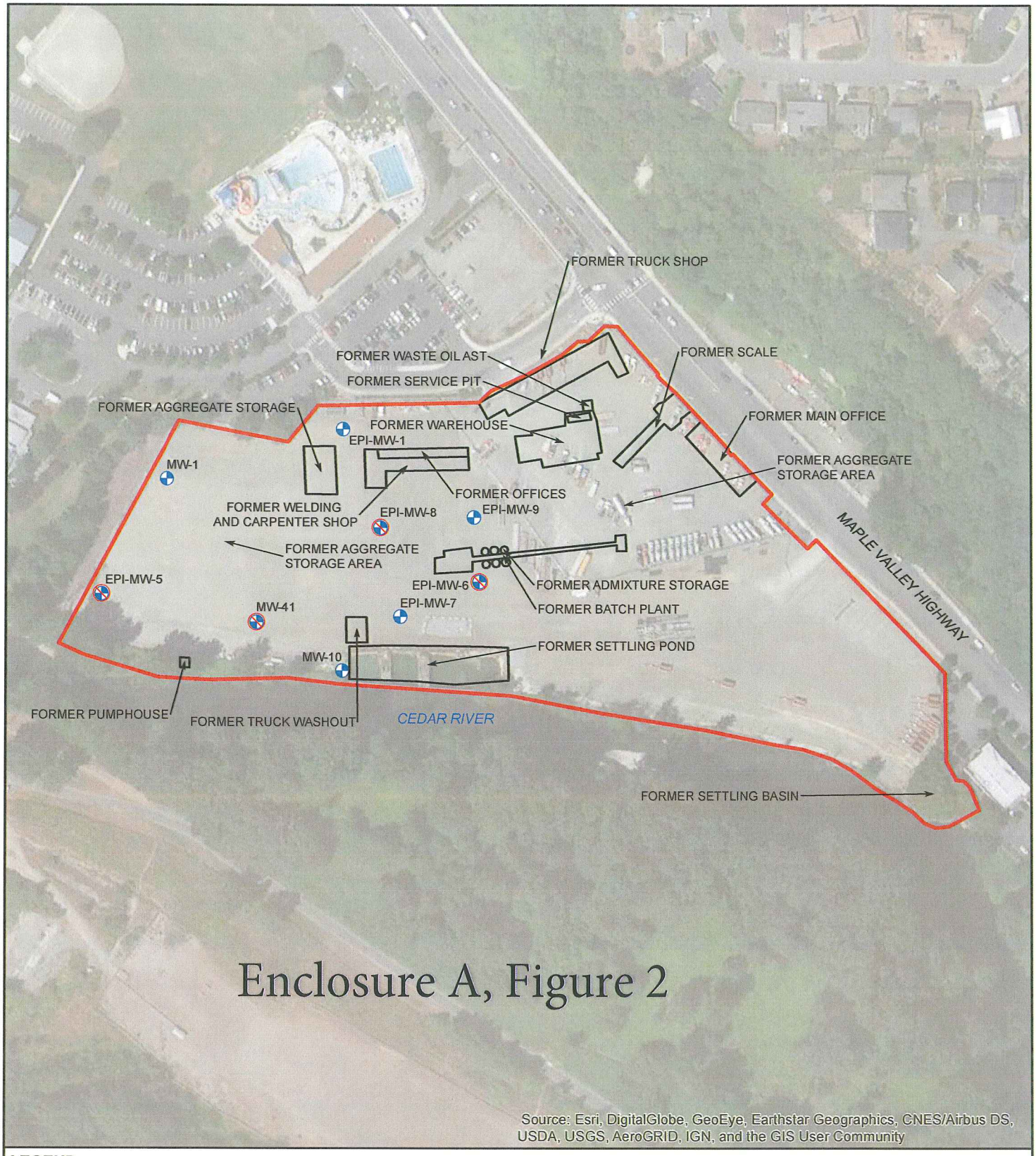
FIGURE 1

SITE VICINITY MAP
OLD STONEWAY CONCRETE SITE
1915 SOUTHEAST MAPLE VALLEY HIGHWAY
RENTON, WASHINGTON

FARALLON PN: 266-008

Drawn By: pemahiser | Checked By: JR | Date: 4/13/2017 | Disc Reference:

Document Path: Q:\Projects\266 Gary Merlino\008 Old Stoneway\FIGURE 1_SITE VICINITY MAP.mxd



Enclosure A, Figure 2

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- MONITORING WELL (INSTALLED BY EPI AND OTHERS)
- ABANDONED MONITORING WELL
- APPROXIMATE SITE BOUNDARY
- HISTORIC SITE FEATURES

0 200
SCALE IN FEET

N

FARALLON CONSULTING

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend | Baker City

California
Oakland | Sacramento | Irvine

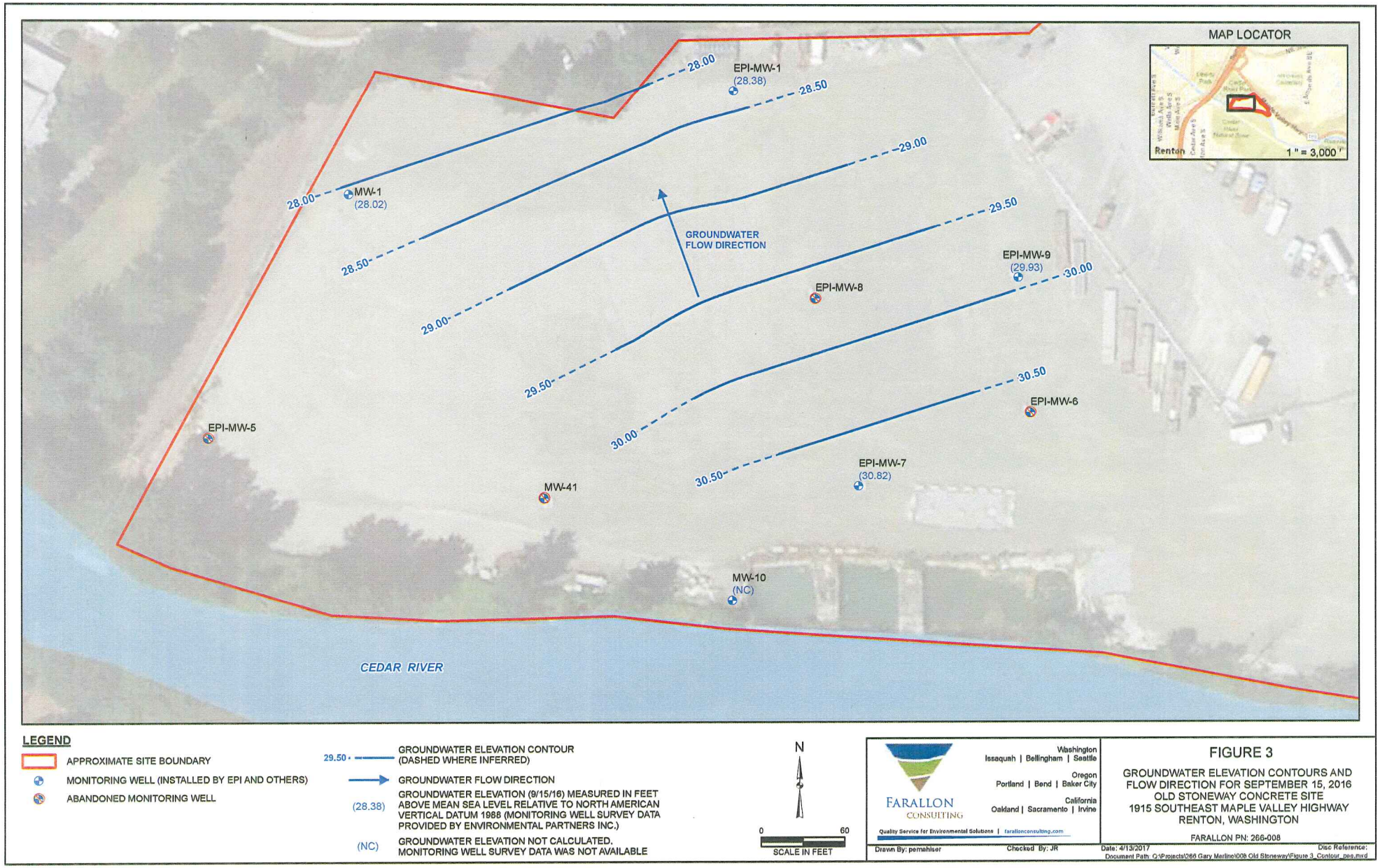
Quality Service for Environmental Solutions | farallonconsulting.com

FIGURE 2

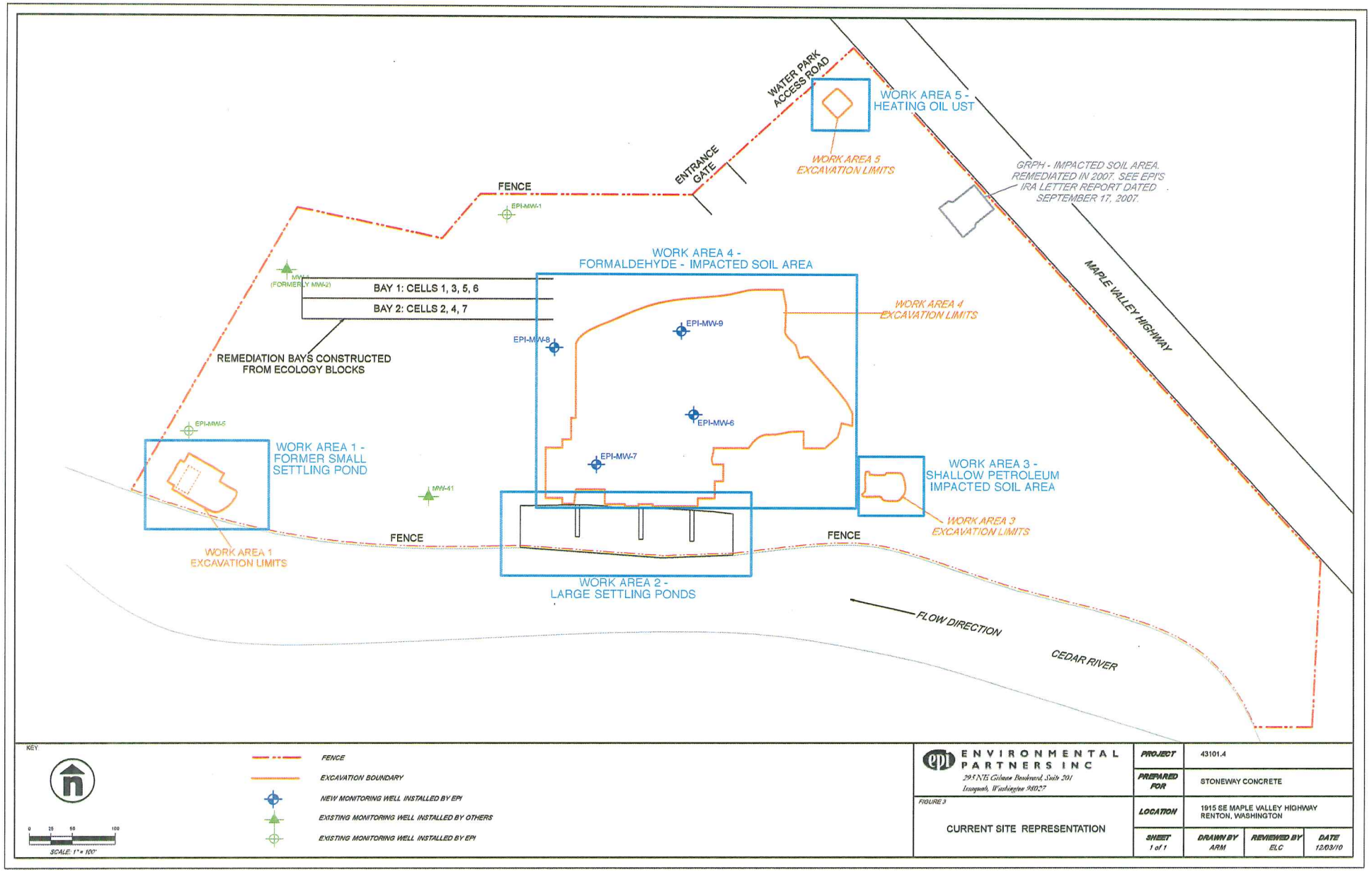
SITE PLAN
OLD STONEWAY CONCRETE SITE
1915 SOUTHEAST MAPLE VALLEY HIGHWAY
RENTON, WASHINGTON

FARALLON PN: 266-008

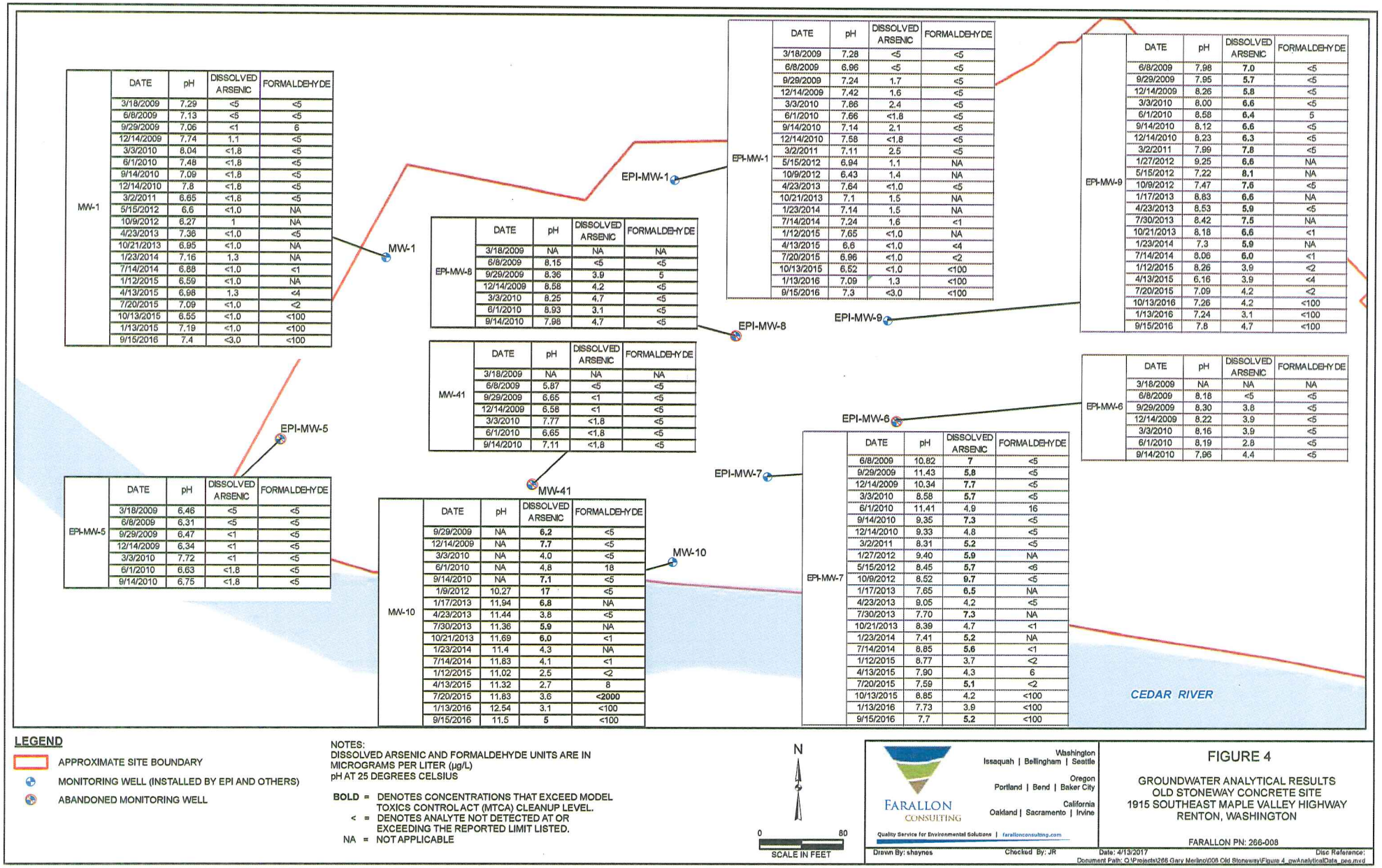
Drawn By: pemahiser | Checked By: JR | Date: 4/13/2017 | Disc Reference:
Document Path: Q:\Projects\266 Gary Merlino\008 Old Stoneway\FIGURE 2_SITE PLAN.mxd



Enclosure A, Figure 3



Enclosure A, Figure 4



Enclosure A, Figure 5