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

December 29, 2011

Michael Merlino
Stoneway Concrete
1915 SE Maple Valley Hwy
Renton, WA 98055

Re: Opinion pursuant to WAC 173-340-515(5) Interim Action Report, October 12, 2011, for the following Hazardous Waste Site:

- **Site Name:** Stoneway Concrete
- **Property Address:** 1915 SE Maple Valley Hwy, Renton
- **Facility/Site No.:** 6244377
- **Cleanup Site Id.:** 2121
- **VCP Project No.:** VCP NW1702

Dear Mr. Merlino:

Thank you for submitting documents regarding your proposed remedial action for the Stoneway Concrete facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site:

- Formaldehyde into the soil and ground water.
- Gasoline- range petroleum hydrocarbons (TPHg) into the soil.
- Diesel-range petroleum hydrocarbons (TPHd) into the soil.
- Oil-range petroleum hydrocarbons (TPHo) into the soil.
- Arsenic in ground water (historic records indicate arsenic was not released at the site but is present as a result of the high pH of ground water at the Site).

This opinion letter focuses on the proposed remedial action of monitored natural attenuation of ground water until it meets MTCA cleanup levels. This proposed action includes implementation of an environmental covenant on the Property until ground water complies with

MTCA cleanup levels. The proposed action hinges on the consistent flow of ground water away from the Cedar River and containment of ground water contamination within the Property boundaries.

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial action(s):

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

2. May 9, 2011. Further Action Opinion Letter on Interim Action Report, Volumes I and 2, Former Stoneway Batch plant, 1915 SE Maple Valley Highway, Renton Washington, WA. Washington State Department of Ecology.

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

4. 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.

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

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

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

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

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

10. 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 425-649-7190.

The Site is defined by the extent of contamination caused by the following release(s):

- Formaldehyde into the soil and ground water.
- Gasoline- range petroleum hydrocarbons (TPHg) into the soil.
- Diesel-range petroleum hydrocarbons (TPHd) into the soil.
- Oil-range petroleum hydrocarbons (TPHo) into the soil.
- Arsenic in ground water (historic records indicate arsenic was not released at the site but is present as a result of the high pH of ground water at the Site).

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has determined:**

- Information provided in the Interim Action Report, October 12, 2011 is not sufficient to determine that ground water flow direction at the Site is away from the Cedar River towards the northwest specifically at periods of time when the City of Renton is not using drinking water wells northwest of the Site;
- At the completion of remedial actions at the Site, concentrations of arsenic in ground water are above MTCA Method A. The location of monitoring wells at the Site are not adequately placed to confirm that ground water flow is away from the Cedar River, towards the northwest and ground water with elevated levels of arsenic is not entering the Cedar River.

This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action. To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does**

not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at 425-649-7242.

Sincerely,

Libby S. Goldstein
NWRO Toxics Cleanup Program

NWRO Toxics Cleanup Program

Enclosures (1): A – Description of the Site

cc: Mr. Thomas C. Morin, Environmental Partners, Inc.
Ms. Dolores Mitchell, VCP Financial Manager (without enclosures)
Ms. Sonia Fernandez, ECY NWRO

Enclosure A – Site Description and Diagram of Site

Site Name: Stoneway Concrete (Site)
Site address: 1915 SE Maple Valley Highway, Renton
Township 23N, Range 5E, Section 17, Quarter-Quarter NE of SE
VCP # NW1702

Site Description

Stoneway Concrete is located on an irregularly shaped parcel of approximately 13 acres (Property) situated between the Cedar River and SE Maple Valley Highway. The Site boundaries generally follow the Property boundaries. Cleanup of the area around the batch plant (focus of this remediation effort) is centrally located on the Property and encompasses an approximate area of 400' by 300'. A map of the Property and approximate boundaries of the Site is attached.

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 1950 and 1960s the Property appears to have been leased by many businesses including an asphalt manufacturing company. By 1966, the Property was owned and operated by Stonway 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. Operations at the Property ceased prior to October 2002 in order to conform with the City of Renton's Aquifer Protection Zone which precludes industrial activities that use, handle, or store hazardous substances. The Property is also located within the historical flood plain of the Cedar River. Most of the Property's river frontage is protected with erosion control features such as rip-rap, 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.

The elevation at the entrance of the Property is 10- 12 feet higher than the lowest point which is nearer the river and about 10 feet above the summertime level of the Cedar River. 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.

A shallow water table aquifer is present beneath the Property. Unconfined saturated conditions generally begin at a depth of about 10 to 20 feet below grade and extends to a depth of at least 72 feet below grade. This unconfined aquifer is connected to the surface water in the Cedar River. Piezomtetric data from 1998 indicate that the local ground water flow direction is northwesterly and away from the Cedar River, indicating that the Cedar River recharges the water table aquifer. Additional data is needed to confirm that ground water flow at the Site will continue to be away

from the Cedar River (towards the northwest) when the City of Renton is not pumping water from the municipal drinking water wells located northwest of the Site.

Characterization of Contamination

The remedial investigations identified chemical of concerns (COCs) for soil and ground water that were above MTCA Method A and Method B cleanup levels. The COCs are:

- Formaldehyde into the soil and ground water.
- Gasoline- range petroleum hydrocarbons into the soil.
- Diesel-range petroleum hydrocarbons into the soil.
- Oil-range petroleum hydrocarbons into the soil.
- Arsenic in ground water (a release of arsenic has not been identified at the site but is present in ground water).

Petroleum hydrocarbons were present in soil due to historic surface spillage and historic releases from underground storage tanks which have been removed. Impacts from the underground storage tanks were remediated (excavation of soil) to MTCA Method A cleanup levels and was documented in the Interim Remedial Action report dated September 17, 2007.

Formaldehyde was present in soil and ground water as a result of spills associated with use as an additive in the concrete batch process.

Arsenic above cleanup levels is present in ground water at two of eight monitoring wells on the Property. Arsenic has not been detected in soil at concentrations exceeding natural background concentrations.

Maximum levels of COCs observed at the Site are listed in Table 1.

Table 1. Summary of Maximum Detected Concentrations of Chemical of Concerns

Compound	Maximum detected Soil Concentration (mg/kg)	Maximum Detected Ground Water Concentration (µg/l)
Gasoline-range petroleum hydrocarbon	630	Below MTCA Method A cleanup level
Diesel-range petroleum hydrocarbon	11,000	Below MTCA Method A cleanup level
Oil-range petroleum hydrocarbon	4,800	Below MTCA Method A cleanup level
Formaldehyde	42	140
Arsenic	Does not exceed natural occurring background levels	13

In the 1990s, tetrachloroethylene was observed in City of Renton drinking water well PW-9. The source of the contamination was tracked down to a pile of contaminated soil that was temporarily stored on the Stoneway Concrete Property. The soil was removed and the area

cleaned. Quarterly monitoring of ground water was conducted after the soil was removed. In 2001, Ecology gave approval for Stoneway Concrete to stop monitoring the ground water for tetrachloroethylene because 4 quarters of data were below MTCA Method A cleanup levels.

Cleanup Levels

MTCA Method A Cleanup levels were used for remediation of petroleum contaminated soil.

The cleanup level for formaldehyde in soil and ground water using MTCA results in a level that is below the detection limits of available analytical methods. Therefore, in accordance with MTCA WAC 173-340-707, 720, and 740 the laboratory practical quantitation limit (PQL) was be used as the cleanup level. Analyses were conducted by Bodycote Testing Group (a lab accredited in Washington) using EPA Method 8315.

The clean up level for arsenic in ground water was the MTCA Method A Cleanup Level which is the same at the federal maximum contaminant level (MCL) for drinking water.

Table 2. Summary of Cleanup Levels

Contaminant of Concern	Soil Cleanup level (mg/kg)	Ground Water Cleanup Level (µg/l)	Basis for Cleanup level
Gasoline-range petroleum hydrocarbon	100	Not applicable	MTCA Method A Cleanup Level
Diesel-range petroleum hydrocarbon	2,000	Not applicable	MTCA Method A Cleanup Level
Oil-range petroleum hydrocarbon	2,000	Not applicable	MTCA Method A Cleanup Level
Formaldehyde	0.04	5	PQL (WAC 173-340-707, 720, 740)
Arsenic	20	5	MTCA Method A Cleanup Level

Using the PQL as the cleanup level for formaldehyde in soil and ground water triggers a five-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.

Remedial Actions

From 2005 through 2010, numerous remedial actions have taken place at the Property. The actions that took place at each work area are described below.

Work Area 1- Former Small Settling Pond (sw corner of Property). High pH soil was present in this area. 200 cubic yards was removed to a depth of 6' with the southwest area excavated to 8'.

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. 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 will 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 4 feet. Approximately 190 cubic yards of TPHo contaminated soil were removed. 12 performance samples indicated TPHo and TPHd were below culs (ranging from less than detection limits to 410 mg/kg.

Work Area 4 – Formaldehyde Impacted Area. This area is the largest 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' bgs. Approximately 21,030 cubic yards of material were excavated from the area with 13,430 cubic yards of material bioremediated on site. Performance samples were collected and areas over excavated if a performance sample was above the formaldehyde cul. 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 cul.

Work Area 5 – Heating oil UST. A 600 gallon UST was removed from this area. 300 cubic yards were removed from this area (24' x 24' to a depth of 23 feet). During the remediation effort approximately 3,000 gallons of water that accumulated in the pit was removed. 11 performance samples collected. Only one of the performance samples was above analytical detection levels and was 28 mg/kg for TPHd. TPHd levels in the water that accumulated in the pit were 320 ug/l.

At the completion of remedial actions at the Site, concentrations of arsenic in ground water are above MTCA Method A at two of the eight monitoring wells on Site (EPI-MW-7 and EPI-MW-9). The location of monitoring wells at the Site are not adequately placed to confirm that ground water flow is away from the Cedar River, towards the northwest and ground water with elevated levels of arsenic is not entering the Cedar River.

Approximate Boundary of Cleanup Action Plan Site