STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

May 9, 2011

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

Re: Further Action at the following Site:

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

Dear Mr. Merlino:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Stoneway Concrete facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- 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 (arsenic was not released at the site but is present as a result of the high pH of ground water at the Site).

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:

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.

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

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

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

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

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

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.

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 **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

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

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site do not meet the substantive requirements of MTCA. The conditional point of compliance requested is not approved.

a. Cleanup levels.

MTCA Method A Cleanup levels will be 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 the laboratory practical quantitation limit (PQL) will be used as the cleanup level. Analyses will be conducted by Bodycote Testing Group (a lab accredited in Washington) using EPA Method 8315.

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

Soil

MTCA Method A Cleanup Level will be used for gasoline-, diesel-, and oil- range petroleum hydrocarbons. This will be protective of ground water and direct contact.

The cleanup level for formaldehyde in soil will be protective of ground water, potential vapor intrusion into buildings, and direct contact. Because the cleanup level for formaldehyde in soil calculated under MTCA is below the available analytical method to reliably detect formaldehyde the practical quantitation limit (PQL) of 0.04 mg/kg will be used as the cleanup level in accordance with WAC 173-340-707.

Ground water

MTCA Method A cleanup level for ground water will be used for arsenic. This is based on protection of drinking water and federal maximum contaminant level for arsenic in drinking water.

The cleanup level for formaldehyde in ground water will be protective of ground water and drinking water to the extent practicable. Because the cleanup level for formaldehyde in ground water calculated under MTCA is below the available analytical method to reliably detect formaldehyde, the PQL of 5 µg/l will be used as the cleanup level in accordance with WAC 173-340-707.

Using the PQL as the cleanup level for formaldehyde in soil and ground water will trigger 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.

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	Not applicable	5	MTCA Method A Cleanup Level

b. Points of compliance.

Soil

- Soil throughout the site.

Ground water

- Standard point of compliance.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site does not meet the substantive requirements of MTCA.

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 (southwest 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 was removed. 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 was 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 was 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 the remedial actions, levels of arsenic in ground water are above MTCA Method A cleanup levels.

The Conditional Point of Compliance requested in the Interim Action Report is denied because the disproportional cost analysis is incomplete. More than two viable alternatives need to be evaluated and the weighting of alternatives in the DCA needs to be reevaluated, specifically protectiveness, performance, and long-term effectiveness. Leaving contamination in place is not as protective or effective as removal.

A Conditional Point of Compliance at the Site must also take into account the potential that ground water flow and gradient could change dramatically if the amount of water the City wells draw changes by either increasing or decreasing. The Point of Compliance wells would need to be protective of the City of Renton drinking water wells and the Cedar River which was not presented in the Interim Action report.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

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

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. 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 at 425-649-7242.

Sincerely,

Libby S. Goldstein
NWRO Toxics Cleanup Program

LSG:ll

Enclosures (1): A – Description of the Site

cc: Mr. Thomas C. Morin, Environmental Partners, Inc.
Ms. Delores Mitchell, VCP Financial Manager (without enclosures)
Ms. Donna Musa, 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 use of the property appears to have been 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. 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.

The northern portion of the property is generally underlain by sand containing variable quantities of silt and gravel to a depth ranging from about 5 to 18 feet below grade. The soil type is consistent with alluvial flood plain deposits. The sands are underlain by brown, very dense, poorly graded sand with gravel consistent with glacial till. The southern portion of the property is generally underlain by various types of fill material including (but not limited to) concrete, gravel, and sands to depths ranging from near surface to 13 feet below grade. Glacial till underlies the fill material in the southern portion of the property.

A shallow water table aquifer is present beneath the property. Unconfined saturated conditions are generally present 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. There are currently eight monitoring wells on the property

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 (arsenic was not released at the site but is present ground water at the Site).

Petroleum hydrocarbons are 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. Soil excavated during this remediation effort has been stored on-site and will be treated on-site in bio-remediation cells as part of this CAP.

Formaldehyde is present in soil and ground water as a result of spills associated with use as an additive in the concrete batch process. While formaldehyde is not present in soil at levels that pose a risk from direct contact from soil, levels observed may pose a threat to ground water used for drinking water and indoor air quality if residential structures are built directly over the impacted soils.

Arsenic is present in ground water. 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	4,800	Below MTCA Method A

Compound	Maximum detected Soil Concentration (mg/kg)	Maximum Detected Ground Water Concentration (µg/l)
hydrocarbon		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	Not applicable	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 sw 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 was removed. 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.

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At the completion of remedial actions at the Site, concentrations of arsenic in ground water are above MTCA Method A..

Approximate Boundary of Cleanup Action Plan Site