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

March 8, 2010

Ms. Melanie Kling
6326 Brooklyn Avenue NE
Seattle, WA 98115-6701

Re: No Further Action at the following Site:

- **Site Name:** 6326 Brooklyn Property
- **Site Address:** 6326 Brooklyn Avenue NE, Seattle
- **Facility/Site No.:** 7942345
- **VCP Project No.:** NW2005

Dear Ms. Melanie Kling:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the 6326 Brooklyn Property 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?

NO. Ecology has determined that no 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:

- Lead into the Soil.

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. Closure Report, dated January 28th 2010, prepared by Sound Environmental Strategies (SES).

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 425.649.7239.

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 **no 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.**

The lateral and vertical extent of lead contamination in soil was thoroughly characterized upon completion of excavation activities.

2. Establishment of cleanup standards.

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

The cleanup standard selected for this site was MTCA Method A for unrestricted land use with standard point of compliance throughout the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The remedial action selected for this Site was excavation of all soil which exceeded MTCA Method A cleanup level for lead in soil. This cleanup action is the most protective and permanent and meets the minimum requirements in WAC 173-340-360(2).

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

On August 17th 2009 Sound Environmental Strategies commenced remedial activities on the property. These activities are explained in the report titled "*Closure Report*" dated January 28th 2010.

Side Yard and Southwest Half of Front Yard Excavation

Remedial activities began at this excavation area on August 17, 2009. One soil sample (EX01CF12-1.0) was collected under the gravel near the southeast corner of the house at a depth of 12 inches below ground surface (bgs) to assess the condition of the soil beneath. Analysis of sample EX01CF12-1.0 exhibited a lead concentration of 8.22 mg/kg, well below the cleanup level.

Soil was removed from the side yard and southwest half of the front yard with a small excavator to a depth of 6 inches bgs from the building foundation to the Property boundary, as depicted on Figures 2 and 3. SES collected eight samples from the southwestern and southern portions of the Property on August 19, 2009 after the extent of the excavation was reached. Samples EX01C04-0.5, EX01C05-0.5, EX01C06-0.5, EX01C07-0.5, EX01C08-0.5, and EX01C11-0.5 had concentrations of lead less than the cleanup level. Samples EX01C09-0.5 and EX01C10-0.5 had lead concentrations greater than cleanup levels (Table 1). The two areas represented by these samples locations were subsequently over excavated to a depth of approximately 12 inches bgs. Confirmation samples EX01C09A-1.0 and EX01C10A-1.0, collected at the limits of the excavation on August 24, 2009, both contained lead concentrations below the cleanup level (Table 1). Based on the confirmation sample results, further excavation was not warranted along the southwestern and southern portions of the Property.

Front Yard Excavation

Remedial activities began under the front porch on August 19, 2009. Excavation was conducted by hand and soil was transported to the side yard for staging and subsequent loading into the dump truck for off-Property disposal. Samples EX01C01-0.5, EX01C02-0.5, and EX01C03-0.5 were collected from the floor of the excavation beneath and adjacent to the porch after the top 6 inches of soil was removed. Samples EX01C01-0.5 and EX01C02-0.5 contained lead concentrations less than the cleanup level. Sample EX01C03-0.5, collected adjacent to the porch, had a lead concentration of 287 mg/kg. An additional 3-inch lift was excavated from the area surrounding sample location EX01C03-0.5. Soil sample EX01C03A-0.75 was collected at the base of the excavated area on August 21, 2009, and the sample exhibited a lead concentration of 12.4 mg/kg. Based on these sample results, further excavation was not warranted beneath and adjacent to the front porch in the front yard excavation area.

Back Yard Excavation

Excavation activities in the eastern portion of the Property (back yard) commenced on August 20, 2009. Spooner excavated soil from the surface to depths ranging from 6 to 18 inches bgs. SES collected seven samples from the east side of the house on August 20, 2009, at the extent of the excavation (Figures 2 and 3). Six of the samples, EX01C13-0.5, EX01C14-0.5, EX01C16-0.5, EX01C17-0.75, EX01C18-1.0, and EX01C19-1.5, had lead concentrations less than the cleanup level. Sample EX01C15-1.5, collected from the planter box immediately adjacent to the house, had a lead concentration of 1,150 mg/kg. The remaining soil in the planter box was excavated and a concrete floor was discovered at the bottom of the planter box. The concrete appeared to be an integrated part of the planter box and foundation of the house. As discussed in Section 2.3.2, paint-related maintenance work is the most likely source of lead in soil on the Property; therefore, lead-contaminated soil would most likely be present in soil above the original base of the planter box and not below it. Confirmation soil sampling below the base of the planter box was not warranted.

Confirmation sampling was used to verify that soil with lead concentrations greater than the cleanup level had been effectively removed from the Property.

Areas of the excavation were subdivided into approximately 100 square foot sections, and soil samples were collected from the floor in the approximate center of each section at the extent of the excavation (Figure 3). If confirmation soil samples contained concentrations of lead greater than the cleanup level, the soil sample location was over excavated and the soil sample was reclassified as a performance sample. Upon completion of over excavation, additional soil sampling was conducted to document that concentrations of lead were less than the cleanup level.

A total of 82.83 tons of lead-contaminated soil was excavated and removed from the property on August 20th, 21st, and 25th, 2009

The nature and extent of lead contamination found at the 6326 Brooklyn Ave Site was fully characterized. Soil with lead concentrations exceeding MTCA Method A cleanup level were excavated and removed from the property. The remedial activities performed at this Site have met the substantive requirements of MTCA.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

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).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#NW2005).

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 or the termination of the Agreement, please contact me by phone at 425.649.4446 or e-mail damy461@ecy.wa.gov.

Sincerely,

Dale R. Myers
Site Manager
NWRO Toxics Cleanup Program

rm/kp

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

cc: Mr. Chris Carter
Sound Environmental Strategies
2400 Airport Way South
Seattle, Washington 98134

Ms. Dolores Mitchell, Ecology (without enclosures)

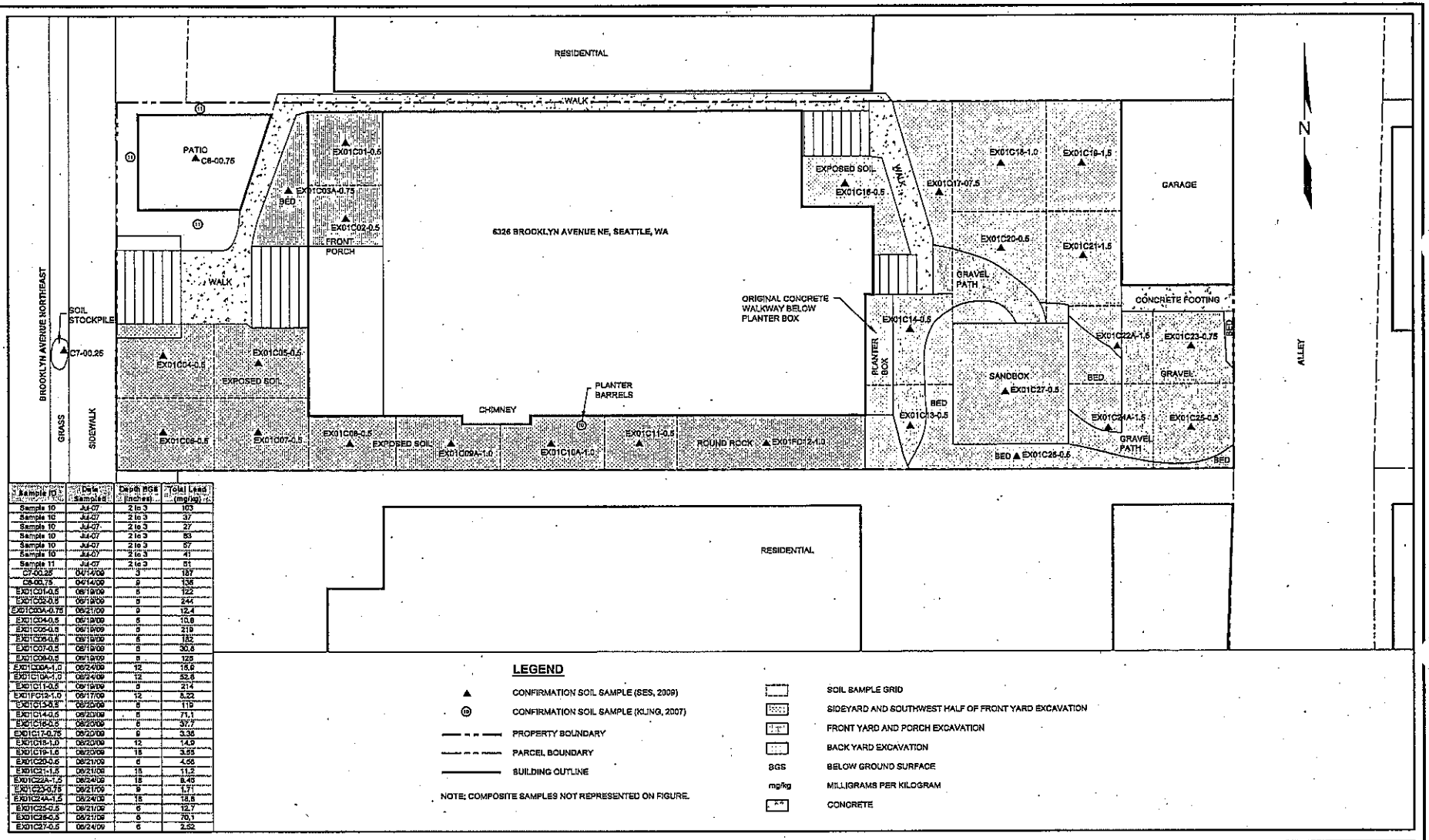
Enclosure A

Description and Diagrams of the Site

Site Description

NW2005, the 6326 Brooklyn property consists of one rectangular shaped parcel that covers a total of approximately 4,480 square feet (0.10 acres) of land. According to King County Assessor records for the Property, one residence comprises the Property. The residence is a single-story building constructed in 1918 with a finished basement that occupies 2,200 square feet. The Property and surrounding area are currently zoned as residential. An approximately 160 square foot, single-story detached garage is located in the northeast corner of the Property. The front yard, back yard, and south side yard all have exposed soil adjacent to the structures on Property. The north side of the residence is capped by a concrete walkway, which adjoins the building foundation and extends to the north Property boundary.

Residual exterior lead-based paint from the property house and garage has been identified as the source for lead contamination on the property. Soil with lead concentrations exceeding Method A were limited to the surface soils surrounding the property structures, and the maximum vertical extent was approximately 18-inches below ground surface (bgs). The Site is therefore defined as the excavation areas shown on Figure 3



Sample ID	Date Sampled	Depth BGS (inches)	Total Lead (mg/kg)
Sample 10	Jul-07	2 to 3	103
Sample 10	Jul-07	2 to 3	37
Sample 10	Jul-07	2 to 3	27
Sample 10	Jul-07	2 to 3	83
Sample 10	Jul-07	2 to 3	57
Sample 10	Jul-07	2 to 3	41
Sample 11	Jul-07	2 to 3	51
C7-00.25	04/14/09	3	187
C8-00.75	04/14/09	9	138
EX01C01-0.5	06/19/09	6	122
EX01C02-0.5	06/19/09	6	244
EX01C03A-0.75	06/21/09	9	12.4
EX01C04-0.5	06/19/09	6	10.6
EX01C05-0.5	06/19/09	6	219
EX01C06-0.5	06/19/09	6	182
EX01C07-0.5	06/19/09	6	30.6
EX01C08-0.5	06/19/09	6	128
EX01C09A-1.0	06/24/09	12	18.6
EX01C10A-1.0	06/24/09	12	52.8
EX01C11-0.5	06/19/09	6	21.4
EX01FC12-1.0	06/17/09	12	5.22
EX01C13-0.5	06/25/09	6	119
EX01C14-0.5	06/20/09	6	71.1
EX01C18-0.5	06/20/09	6	37.7
EX01C17-0.75	06/20/09	9	3.36
EX01C18-1.0	06/20/09	12	14.9
EX01C19-1.5	06/20/09	18	3.55
EX01C20-0.5	06/21/09	6	4.56
EX01C21-1.5	06/21/09	18	11.2
EX01C22A-1.5	06/24/09	18	8.46
EX01C23-0.75	06/21/09	9	1.71
EX01C24A-1.5	06/24/09	18	18.5
EX01C25-0.5	06/21/09	6	12.7
EX01C28-0.5	06/21/09	6	70.1
EX01C27-0.5	06/24/09	6	2.92

LEGEND

- ▲ CONFIRMATION SOIL SAMPLE (SES, 2009)
- ⑩ CONFIRMATION SOIL SAMPLE (KLING, 2007)
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- BUILDING OUTLINE

NOTE: COMPOSITE SAMPLES NOT REPRESENTED ON FIGURE.

- SOIL SAMPLE GRID
- SIDEYARD AND SOUTHWEST HALF OF FRONT YARD EXCAVATION
- FRONT YARD AND PORCH EXCAVATION
- BACK YARD EXCAVATION
- BGS — BELOW GROUND SURFACE
- mg/kg — MILLIGRAMS PER KILOGRAM
- CONCRETE

SOUND ENVIRONMENTAL STRATEGIES
SOUNDENVIRONMENTAL.COM

DATE: 01/13/10
DRAWN BY: JQC
CHECKED BY: CMC
CAD FILE: 0710-001-2009_CSL

PROJECT NAME: KLING RESIDENCE
SES PROJECT NUMBER: 0710-001-01
STREET ADDRESS: 6326 BROOKLYN AVENUE NE
CITY: SEATTLE, WASHINGTON

REGION:

0 5 10 20
APPROXIMATE SCALE IN FEET

FIGURE 3
CONFIRMATION SOIL SAMPLE LOCATIONS

P:\0710 KLING RESIDENCE\TECHNICAL\CAD\BASEMAP\0710-001-2009_CSL.DWG 1/13/2010