STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. THE LUTHERAN RETIREMENT HOME OF GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING), Defendant.	NO. SUMMONS

TO: Charles R. Wolfe, attorney for Defendant, The Lutheran Retirement Home of Greater Seattle (D/B/A The Hearthstone Retirement Living).

A lawsuit has been started against you in the above-entitled court by the State of Washington, Department of Ecology. Plaintiff's claim is stated in the written Complaint, a copy of which is served upon you with this Summons.

The parties have agreed to resolve this matter by entry of a Consent Decree, a copy of which is also attached. Accordingly, this Summons shall not require the filing of an Answer.

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Further, all disputes arising under this cause shall be resolved under the terms of the Consent Decree.

DATED this 2 day of June 2016.

ROBERT W. FERGUSON
Attorney General

IVY M. ANDERSON, WSBA #30652
Assistant Attorney General
Attorneys for Plaintiff
State of Washington, Department of Ecology
(360) 586-4619

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STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. THE LUTHERAN RETIREMENT HOME OF GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING), Defendant.	NO. COMPLAINT

Plaintiff, State of Washington, Department of Ecology (Ecology) alleges as follows:

I. DESCRIPTION OF ACTION

1. This action is brought on behalf of the State of Washington, Department of Ecology to enter a settlement agreement known as a Consent Decree (Decree), which requires remedial action at a facility where there has been a release and/or threatened release of hazardous substances.

2. The Complaint and settlement are limited to the scope of the Decree. The facility, or Site, is referred to as Plastic Sales and Service, Inc. and is generally located at 6860, 6869, and 6870 Woodlawn Avenue North East, Seattle, Washington.

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II. JURISDICTION

3. This Court has jurisdiction over the subject matter and over the parties pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D. Venue is proper in King County, the location of the Site.

III. PARTIES

4. Plaintiff Ecology is an agency of the State of Washington responsible for overseeing remedial action at sites contaminated with hazardous substances under RCW 70.105D, the MTCA.

5. Defendant is The Lutheran Retirement Home of Greater Seattle (D/B/A The Hearthstone Retirement Living).

IV. FACTUAL ALLEGATIONS

6. The Site is generally located at 6860, 6869, and 6870 Woodlawn Avenue North East, Seattle, Washington. The Site is defined by the extent of contamination caused by the release of hazardous substances at the Site. Release(s) and/or potential release(s) of hazardous substances at the Site including, but not limited to, tetrachloroethene (PCE), trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride are documented in the Remedial Investigation/Feasibility Study.

7. Defendant has been named and has accepted status as potentially liable person (PLP) for the Site under MTCA.

8. Defendant is the current owner or operator of the Site.

9. Ecology has determined that there has been a release or threatened release of hazardous substances at the Site. Ecology has further determined that contamination at the Site presents a threat to human health and the environment, and that a final cleanup is necessary to remedy contamination.

10. Ecology developed a draft Cleanup Action Plan (CAP) for the Site and negotiated a draft Consent Decree with Defendant for implementation of the CAP.

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11. The draft CAP and Consent Decree were subject to public notice and comment between April 1, 2016 and May 2, 2016.

12. After consideration of all comments received, Ecology issued a final CAP.

13. Ecology and Defendant have now entered into the final Consent Decree requiring cleanup of the Site. The final CAP is an integral and enforceable exhibit to the Decree.

V. CAUSES OF ACTION

14. Ecology alleges all preceding paragraphs.

15. Ecology alleges that Defendant is responsible, jointly and severally, for remedial action at the Site, pursuant to RCW 70.105D.

VI. PRAYER FOR RELIEF

16. Ecology requests that the Court approve and order entry of the proposed Consent Decree.

17. Ecology further requests that the Court retain jurisdiction to enforce the terms of the Consent Decree.

DATED this 2 day of June 2016.

ROBERT W. FERGUSON
Attorney General

IVY M. ANDERSON, WSBA #30652
Assistant Attorney General
Attorneys for Plaintiff
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STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. THE LUTHERAN RETIREMENT HOME OF GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING), Defendant.	NO. DECLARATION OF SUNNY L. BECKER

I, Sunny L. Becker, declare as follows:

1. I am over 21 years of age and am competent to testify herein. The facts set forth in this declaration are from my personal knowledge.

2. I am employed by the Washington State Department of Ecology as an Environmental Engineer 5 in the Northwest Regional Office of Ecology's Toxics Cleanup Program. I am the designated Project Coordinator for, and am therefore knowledgeable about, matters relating to the Plastic Sales and Service, Inc. Site.

3. The Plastic Sales and Service, Inc. Site is located in Seattle, Washington.

4. Ecology has determined that a release or threatened release of hazardous substances has occurred at the Site.

5. Investigations conducted at the Site indicate that release(s) and/or potential release(s) of hazardous substances occurred at the Site, including: PCE, trichloroethene, cis-

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1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride. Hazardous substances have been and may continue to be released from the Site into the environment including soil, groundwater and air.

6. Ecology has determined that contamination at the Site presents a threat to human health and the environment.

7. Ecology has given notice to Defendant of Ecology's determination that the Defendant is a potentially liable party (PLP) for the Site, as required by RCW 70.105D.020(26) and WAC 173-340-500.

8. Ecology has developed a draft Cleanup Action Plan (CAP) for the Site and negotiated a draft Consent Decree with Defendant.

9. Ecology has determined that the actions to be taken pursuant to the Consent Decree are necessary to protect public health and the environment, and will lead to a more expeditious cleanup of hazardous substances at the Site in compliance with cleanup standards established under RCW 70.105D.030(2)(e) and WAC 173-340.

10. The draft Consent Decree and draft CAP were subject to public notice and comment as required by RCW 70.105D.040(4)(a) from April 1, 2016 to May 2, 2016.

11. Ecology received one comment during the public comment period. Ecology determined that no additional public comment was required under WAC 173-340-600.

12. Ecology has now issued the final CAP for the Site, and the parties have entered into the final Consent Decree. The final CAP is an integral and enforceable exhibit to the Decree.

I declare under penalty of perjury of the laws of the state of Washington that the foregoing is true and correct.

DATED this 23rd day of May 2016, in Seattle, Washington.

Sunny Becker

SUNNY L. BECKER

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STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. THE LUTHERAN RETIREMENT HOME OF GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING), Defendant.	NO. JOINT MOTION FOR ENTRY OF CONSENT DECREE

COMES NOW Plaintiff, State of Washington, Department of Ecology, by and through its attorney, Ivy M. Anderson, Assistant Attorney General, and Defendant, The Lutheran Retirement Home of Greater Seattle (D/B/A The Hearthstone Retirement Living), by and through its attorney, Charles R. Wolfe, respectively, and jointly move for entry of the Consent Decree in the matter captioned above. This motion is based upon the records and files herein, including the Declaration of Sunny L. Becker submitted with this motion.

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The Consent Decree has been signed by the parties to this action and has been the subject of public notice and comment as required by RCW 70.105D.040(4)(a).

DATED this 2 day of June 2016.

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Attorney General

IVY M. ANDERSON, WSBA #30652
Assistant Attorney General
Attorneys for Plaintiff
State of Washington, Department of Ecology
(360) 586-4619

CHARLES R. WOLFE

CHARLES R. WOLFE, WSBA #14585
Attorney for Defendant
The Lutheran Retirement Home of Greater Seattle
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STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. THE LUTHERAN RETIREMENT HOME OF GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING), Defendant.	NO. CONSENT DECREE

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I. INTRODUCTION

A. The mutual objective of the State of Washington, Department of Ecology (Ecology) and The Lutheran Retirement Home of Greater Seattle, d/b/a Hearthstone Retirement Living (Hearthstone) under this Decree is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Decree requires The Hearthstone to implement the Cleanup Action Plan (CAP) attached as Exhibit A.

B. Ecology has determined that these actions are necessary to protect human health and the environment.

C. The Complaint in this action is being filed simultaneously with this Decree. An Answer has not been filed, and there has not been a trial on any issue of fact or law in this case. However, the Parties wish to resolve the issues raised by Ecology's Complaint. In addition, the Parties agree that settlement of these matters without litigation is reasonable and in the public interest, and that entry of this Decree is the most appropriate means of resolving these matters.

D. By signing this Decree, the Parties agree to its entry and agree to be bound by its terms.

E. By entering into this Decree, the Parties do not intend to discharge non-settling parties from any liability they may have with respect to matters alleged in the Complaint. The Parties retain the right to seek reimbursement, in whole or in part, from any liable persons for sums expended under this Decree.

F. This Decree shall not be construed as proof of liability or responsibility for any releases of hazardous substances or cost for remedial action nor an admission of any facts; provided, however, that Hearthstone shall not challenge the authority of the Attorney General and Ecology to enforce this Decree.

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G. The Court is fully advised of the reasons for entry of this Decree, and good cause having been shown:

Now, therefore, it is HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

II. JURISDICTION

A. This Court has jurisdiction over the subject matter and over the Parties pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.

B. Authority is conferred upon the Washington State Attorney General by RCW 70.105D.040(4)(a) to agree to a settlement with any potentially liable person (PLP) if, after public notice and any required hearing, Ecology finds the proposed settlement would lead to a more expeditious cleanup of hazardous substances. RCW 70.105D.040(4)(b) requires that such a settlement be entered as a consent decree issued by a court of competent jurisdiction.

C. Ecology has determined that a release or threatened release of hazardous substances has occurred at the Site that is the subject of this Decree.

D. Ecology has given notice to Hearthstone of Ecology's determination that Hearthstone is a PLP for the Site, as required by RCW 70.105D.020(26) and WAC 173-340-500.

E. The actions to be taken pursuant to this Decree are necessary to protect public health and the environment.

F. This Decree has been subject to public notice and comment.

G. Ecology finds that this Decree will lead to a more expeditious cleanup of hazardous substances at the Site in compliance with the cleanup standards established under RCW 70.105D.030(2)(e) and WAC 173-340.

H. The Hearthstone has agreed to undertake the actions specified in this Decree and consents to the entry of this Decree under MTCA.

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III. PARTIES BOUND

This Decree shall apply to and be binding upon the Parties to this Decree, their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Decree and to execute and legally bind such party to comply with this Decree. Hearthstone agrees to undertake all actions required by the terms and conditions of this Decree. No change in ownership or corporate status shall alter Hearthstone's responsibility under this Decree. Hearthstone shall provide a copy of this Decree to all agents, contractors, and subcontractors retained to perform work required by this Decree, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Decree.

IV. DEFINITIONS

Unless otherwise specified herein, all definitions in RCW 70.105D.020 and WAC 173-340-200 shall control the meanings of the terms in this Decree.

A. Site: The Site is referred to as Plastic Sales and Service, Inc., is generally located at 6860, 6869, and 6870 Woodlawn Avenue North East, Seattle, Washington. The Site is more particularly described in the Site Diagram (Exhibit B). The Site constitutes a facility under RCW 70.105D.020(8).

B. Parties: Refers to the State of Washington, Department of Ecology and Lutheran Retirement Home of Greater Seattle (d/b/a The Hearthstone Retirement Living).

C. Defendant: Refers to The Lutheran Retirement Home of Greater Seattle (d/b/a The Hearthstone Retirement Living).

D. Consent Decree or Decree: Refers to this Consent Decree and each of the exhibits to this Decree. All exhibits are integral and enforceable parts of this Consent Decree. The terms "Consent Decree" or "Decree" shall include all exhibits to this Consent Decree.

E. Potentially Liable Persons (PLPs): Refers to The Lutheran Retirement Home of Greater Seattle (d/b/a The Hearthstone Retirement Living), Plastic Sales and Service, Inc.,

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Karkrie, LLC, Ruben and Patricia Rael, and Mr. and Mrs. Bell. The following PLPs have been named for the Site but are not a part of this Consent Decree: Plastic Sales and Service, Inc.; Karkrie, LLC; Ruben and Patricia Rael; Mr. and Mrs. Bell.

V. FINDINGS OF FACTS

Ecology makes the following findings of fact without any express or implied admissions of such facts by Hearthstone.

A. The Site is located in Seattle, Washington, and consists of approximately 1.04 acres. A diagram of the Site is attached as Exhibit B.

B. In 1947, Sunshine Cleaners acquired property within the Site and constructed a dry cleaning facility. The building (known as the Dry Cleaner Building Property) utilized steam heat fueled by a heating oil underground storage tank (UST). The dry cleaning facility operated from 1948 to 1977. Sunshine Cleaners used Stoddard solvent, which was stored in two USTs with capacities of 1,500 and 2,000 gallons. The USTs were reportedly abandoned in-place in 1958, when Sunshine Cleaners began using tetrachloroethene (PCE) for dry cleaning operations. Sunshine Cleaners reportedly stored PCE in an aboveground storage tank (AST) with a capacity of 200 gallons.

C. Plastic Sales and Service (PSS) began operating at the Dry Cleaner Building Property in 1978, as a plastic fabrication facility. PSS stored, finished, and transformed plastic stock materials into final products from 1978 until 2014.

D. Hearthstone purchased the Dry Cleaner Building Property in June 2014.

E. Ecology conducted a Site Hazard Assessment at the Site in 2007-2008. Based on the releases of hazardous substances to soil, groundwater, and suspected releases to surface water, the Site was ranked "2" on the Washington State Hazardous Sites List on February 5, 2008. This ranking is based on a scale of 1 to 5. According to this scale, "1" represents the highest relative risk and "5" represents the lowest relative risk. This ranking is designed to estimate the potential threat to human health and/or the environment, relative to all

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other sites in Washington State. WAC 173-340-120(3)(b); "Model Toxics Control Act Cleanup Regulation: Process for Cleanup of Hazardous Waste Sites" Ecology Focus No. 94-129, Nov. 2007 (revised), pg. 5.

F. In September 2009, Agreed Order No. DE 7084 was entered into by Ecology, The Hearthstone, PSS, Karkrie LLC, and Ruben and Patricia Rael. Under the terms of the Agreed Order, the PLPs agreed to complete a Remedial Investigation/Feasibility Study (RI/FS), a preliminary draft Cleanup Action Plan (dCAP), and an Interim Action Work Plan. The PLPs also agreed to implement the Ecology-approved Interim Action Work Plan.

G. As detailed in Ecology's letter of January 22, 2015, the interim action requirements under Agreed Order No. DE 7084 have been satisfactorily completed.

H. Release(s) and/or potential release(s) of hazardous substances occurred at the Site, including: PCE, trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride. Hazardous substances have been and may continue to be released from the Site into the environment including soil, groundwater, and air.

I. Two groundwater-bearing zones which have been impacted by hazardous substances are present within the alluvial deposits beneath the Site and are designated as the Shallow Zone and Deep Zone. The Shallow Zone is an unconfined water-bearing zone and is present from approximately 6 to 20 feet below ground surface (bgs). The Shallow Zone is underlain by the Deep Zone, a semiconfined to confined groundwater-bearing zone present from approximately 21 to 70 feet bgs. The Deep Zone is underlain by a silt and clay layer encountered at a depth of approximately 70 feet bgs. The groundwater contours indicate a groundwater flow direction to the north-northeast in the Shallow Zone and to the north-northeast in the Deep Zone.

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VI. WORK TO BE PERFORMED

This Decree contains a program designed to protect human health and the environment from the known release, or threatened release, of hazardous substances or contaminants at, on, or from the Site.

A. Defendant will perform a final cleanup action at the Site by implementing the attached CAP (Exhibit A), which establishes the required remedial actions at the Site, in accordance with the Schedule (Exhibit C) and all other requirements of this Decree.

B. As further detailed in the CAP, the cleanup action shall include but is not limited to:

1. Demolition of the Dry Cleaner Building to slab on grade for preparation of in situ treatment of soil located in the source area.

2. Removal of the two closed-in-place USTs that reportedly stored Stoddard solvent located directly north of the Dry Cleaner Building Property in the right-of-way of Woodlawn Avenue North East.

3. Removal of the heating oil USTs located on the Dry Cleaner Building Property.

4. In situ treatment of soil to a depth of 16 feet below ground surface with concentrations of PCE, designated as dangerous waste when generated, located at the Dry Cleaner Building Property in combination with segregation, excavation, and disposal of contaminated and clean soil and fill materials to meet MTCA cleanup standards.

5. Temporary dewatering and treatment of the Shallow Zone groundwater within the perimeter of the Dry Cleaner Building Property and South-Adjoining Property.

6. While Hearthstone is installing a shoring system for proposed development at the Dry Cleaner Building Property and South-Adjoining Property

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(which is not a remedial action under this Decree and CAP), it will conduct segregation, treatment, and disposal of contaminated and clean soil and fill materials to meet MTCA cleanup standards.

7. Installation of remediation well network and the injection of emulsified oil substrate to treat contaminated soil and groundwater located in the Shallow Zone and Deep Zone.

8. Installation of sub-slab dewatering system for the proposed development at the Dry Cleaner Building Property and South-Adjoining Property, and pre-treatment of extracted groundwater with concentrations of PCE.

9. Installation of vapor barrier with a passive ventilation system below the slab of the proposed development at the Dry Cleaner Building Property and South-Adjoining Property and mitigation of the potential inhalation exposure pathway of vapors from residual soil with concentrations of PCE left in-place or groundwater with concentrations of PCE present.

10. Implementation of Institutional Controls at property parcels for areas with residual soil with concentrations of PCE located below the practicable limits of excavation at the Site in accordance with WAC 173-340-440. Implementation of Institutional Controls at property parcels with groundwater concentrations above cleanup levels in accordance with WAC 173-340-440.

11. Ongoing compliance groundwater monitoring to monitor groundwater quality for constituents of potential concern at the standard point of compliance and performance monitoring to monitor natural attention and geochemical processes and PCE decay rates to assess the subsurface environment and redox conditions within the Shallow Zone and Deep Zone and assess effectiveness of the groundwater treatment program.

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C. Hearthstone shall implement and complete remedial actions as required in the Schedule (Exhibit C).

D. Hearthstone agrees not to perform any remedial actions outside the scope of this Decree unless the Parties agree to modify the CAP (Exhibit A) and Schedule (Exhibit C) to cover these actions. All work conducted by Hearthstone under this Decree shall be done in accordance with WAC 173-340 unless otherwise provided herein.

E. All plans or other deliverables submitted by Hearthstone for Ecology's review and approval under the CAP (Exhibit A) or Schedule (Exhibit C) shall, upon Ecology's approval, become integral and enforceable parts of this Decree.

VII. DESIGNATED PROJECT COORDINATORS

The project coordinator for Ecology is:

Sunny Becker
Department of Ecology
Toxics Cleanup Program
3190 160th Avenue SE
Bellevue, WA 98008
Phone: (425) 649-7187

The project coordinator for Hearthstone is:

Daniel Ramras
Ramras Specialty Company
6720 E Green Lake Way N
Seattle WA 98103
206-619-0560

Each project coordinator shall be responsible for overseeing the implementation of this Decree. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and Hearthstone and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Decree shall be directed through the project coordinators. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the work to be performed required by this Decree.

Any party may change its respective project coordinator. Written notification shall be given to the other party at least ten (10) calendar days prior to the change.

VIII. PERFORMANCE

All geologic and hydrogeologic work performed pursuant to this Decree shall be under the supervision and direction of a geologist or hydrogeologist licensed by the State of Washington or under the direct supervision of an engineer registered by the State of Washington, except as otherwise provided for by RCW 18.43 and 18.220.

All engineering work performed pursuant to this Decree shall be under the direct supervision of a professional engineer registered by the State of Washington, except as otherwise provided for by RCW 18.43.130.

All construction work performed pursuant to this Decree shall be under the direct supervision of a professional engineer or a qualified technician under the direct supervision of a professional engineer. The professional engineer must be registered by the State of Washington, except as otherwise provided for by RCW 18.43.130.

Any documents submitted containing geologic, hydrologic, or engineering work shall be under the seal of an appropriately licensed professional as required by RCW 18.43 and 18.220.

Hearthstone shall notify Ecology in writing of the identity of any engineer(s) and geologist(s), contractor(s) and subcontractor(s), and others to be used in carrying out the terms of this Decree, in advance of their involvement at the Site.

IX. ACCESS

Ecology or any Ecology authorized representative shall have access to enter and freely move about all property at the Site that Hearthstone either owns, controls, or has access rights to at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Decree; reviewing Hearthstone's progress in carrying out the terms of this Decree; conducting such tests or collecting such

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samples as Ecology may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Decree; and verifying the data submitted to Ecology by Hearthstone. Hearthstone shall make all reasonable efforts to secure access rights for those properties within the Site not owned or controlled by Hearthstone where remedial activities or investigations will be performed pursuant to this Decree. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Site property owned or controlled by Hearthstone unless an emergency prevents such notice. All Parties who access the Site pursuant to this section shall comply with any applicable health and safety plan(s). Ecology employees and their representatives shall not be required to sign any liability release or waiver as a condition of Site property access.

X. SAMPLING, DATA SUBMITTAL, AND AVAILABILITY

With respect to the implementation of this Decree, Hearthstone shall make the results of all sampling, laboratory reports, and/or test results generated by it or on its behalf available to Ecology. Pursuant to WAC 173-340-840(5), all sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with Section XI (Progress Reports), Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent procedures specified by Ecology for data submittal.

If requested by Ecology, Hearthstone shall allow Ecology and/or its authorized representative to take, split, or duplicate samples of any samples collected by Hearthstone pursuant to the implementation of this Decree. Hearthstone shall notify Ecology seven (7) days in advance of any sample collection or work activity at the Site. Ecology shall, upon request, allow Hearthstone and/or its authorized representative to take, split, or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Decree, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section IX (Access), Ecology shall notify Hearthstone prior to any sample collection activity unless an emergency prevents such notice.

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In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses shall be conducted by a laboratory accredited under WAC 173-50 for the specific analyses to be conducted, unless otherwise approved by Ecology.

XI. PROGRESS REPORTS

The Hearthstone shall submit to Ecology written monthly Progress Reports that describe the actions taken during the previous month to implement the requirements of this Decree, unless directed by Ecology in writing to submit progress reports under a different timeline. The Progress Reports shall include the following:

A. A list of on-site activities that have taken place during the month;

B. Detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests;

C. Description of all deviations from the CAP (Exhibit B) or Schedule (Exhibit C) during the current month and any planned deviations in the upcoming month;

D. For any deviations in schedule, a plan for recovering lost time and maintaining compliance with the schedule;

E. All raw data (including laboratory analyses) received by Hearthstone during the past month and an identification of the source of the sample; and

F. A list of deliverables for the upcoming month if different from the schedule.

All Progress Reports shall be submitted by the tenth (10th) day of the month in which they are due after the effective date of this Decree, unless Hearthstone is directed by Ecology in writing to submit progress reports under a different timeline. Unless otherwise specified, Progress Reports and any other documents submitted pursuant to this Decree shall be submitted both electronically and by certified mail, or equivalent shipping/mailing alternative, return receipt requested, to Ecology's project coordinator unless Ecology approves of a change in the method of submittal.

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XII. RETENTION OF RECORDS

During the pendency of this Decree, and for ten (10) years from the date this Decree is no longer in effect as provided in Section XXVII (Duration of Decree), Hearthstone shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Decree and shall insert a similar record retention requirement into all contracts with project contractors and subcontractors. Upon request of Ecology, Hearthstone shall make all records available to Ecology and allow access for review within a reasonable time.

Nothing in this Decree is intended by Hearthstone to waive any right it may have under applicable law to limit disclosure of documents protected by the attorney work-product privilege and/or the attorney-client privilege. If Hearthstone withholds any requested records based on an assertion of privilege, Hearthstone shall provide Ecology with a privilege log specifying the records withheld and the applicable privilege. No Site-related data collected pursuant to this Decree shall be considered privileged.

XIII. TRANSFER OF INTEREST IN PROPERTY

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by Hearthstone without provision for continued operation and maintenance of any containment system, treatment system, and/or monitoring system installed or implemented pursuant to this Decree.

Prior to Hearthstone's transfer of any interest in all or any portion of the Site (other than the lease of individual units or the sale or resale of individual units within improvements to be constructed at the Site), and during the effective period of this Decree, Hearthstone shall provide a copy of this Decree to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, Hearthstone shall notify Ecology of said transfer. Upon transfer of any interest, The Hearthstone shall

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notify all transferees of the restrictions on the activities and uses of the property under this Decree and incorporate any such use restrictions into the transfer documents.

XIV. RESOLUTION OF DISPUTES

A. In the event that Hearthstone elects to invoke dispute resolution, Hearthstone must utilize the procedure set forth below.

1. Upon the triggering event (receipt of Ecology's project coordinator's written decision or an itemized billing statement), Hearthstone has fourteen (14) calendar days within which to notify Ecology's project coordinator in writing of its dispute (Informal Dispute Notice).

2. The Parties' project coordinators shall then confer in an effort to resolve the dispute informally. The parties shall informally confer for up to fourteen (14) calendar days from receipt of the Informal Dispute Notice. If the project coordinators cannot resolve the dispute within those fourteen (14) calendar days, then within seven (7) calendar days Ecology's project coordinator shall issue a written decision (Informal Dispute Decision) stating: the nature of the dispute; Hearthstone's position with regards to the dispute; Ecology's position with regards to the dispute; and the extent of resolution reached by informal discussion.

3. Hearthstone may then request regional management review of the dispute. This request (Formal Dispute Notice) must be submitted in writing to the Northwest Region Toxics Cleanup Section Manager within seven (7) calendar days of receipt of Ecology's Informal Dispute Decision. The Formal Dispute Notice shall include a written statement of dispute setting forth: the nature of the dispute; the disputing Party's position with respect to the dispute; and the information relied upon to support its position.

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4. The Section Manager shall conduct a review of the dispute and shall issue a written decision regarding the dispute (Decision on Dispute) within thirty (30) calendar days of receipt of the Formal Dispute Notice.

5. If Hearthstone finds Ecology's Regional Section Manager's decision unacceptable, Hearthstone may then request final management review of the decision. This request (Final Review Request) shall be submitted in writing to the Toxics Cleanup Program Manager within seven (7) calendar days of Hearthstone's receipt of the Decision on Dispute. The Final Review Request shall include a written statement of dispute setting forth: the nature of the dispute; the disputing Party's position with respect to the dispute; and the information relied upon to support its position.

6. Ecology's Toxics Cleanup Program Manager shall conduct a review of the dispute and shall issue a written decision regarding the dispute (Final Decision on Dispute) within thirty (30) calendar days of receipt of the Final Review Request. The Toxics Cleanup Program Manager's decision shall be Ecology's final decision on the disputed matter.

B. If Ecology's Final Decision on Dispute is unacceptable to Hearthstone, Hearthstone has the right to submit the dispute to the Court for resolution. The Parties agree that one judge should retain jurisdiction over this case and shall, as necessary, resolve any dispute arising under this Decree. In the event Hearthstone presents an issue to the Court for review, the Court shall review the action or decision of Ecology on the basis of whether such action or decision was arbitrary and capricious and render a decision based on such standard of review.

C. The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used. Where either party utilizes the dispute resolution process in bad faith or for purposes of delay, the other party may seek sanctions.

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D. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Decree, unless Ecology agrees in writing to a schedule extension or the Court so orders.

E. In case of a dispute, failure to either proceed with the work required by this Decree or timely invoke dispute resolution may result in Ecology's determination that insufficient progress is being made in preparation of a deliverable, and may result in Ecology undertaking the work under Section XXIV (Implementation of Remedial Action).

XV. AMENDMENT OF DECREE

The project coordinators may agree to minor changes to the work to be performed without formally amending this Decree. Minor changes will be documented in writing by Ecology.

Substantial changes to the work to be performed shall require formal amendment of this Decree. This Decree may only be formally amended by a written stipulation among the Parties that is entered by the Court, or by order of the Court. Such amendment shall become effective upon entry by the Court. Agreement to amend the Decree shall not be unreasonably withheld by any party.

The Hearthstone shall submit a written request for amendment to Ecology for approval. Ecology shall indicate its approval or disapproval in writing and in a timely manner after the written request for amendment is received. If the amendment to the Decree is a substantial change, Ecology will provide public notice and opportunity for comment. Reasons for the disapproval of a proposed amendment to the Decree shall be stated in writing. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section XIV (Resolution of Disputes).

XVI. EXTENSION OF SCHEDULE

A. An extension of schedule shall be granted only when a request for an extension is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the

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deadline for which the extension is requested, and good cause exists for granting the extension. All extensions shall be requested in writing. The request shall specify:

1. The deadline that is sought to be extended;

2. The length of the extension sought;

3. The reason(s) for the extension; and

4. Any related deadline or schedule that would be affected if the extension were granted.

B. The burden shall be on Hearthstone to demonstrate to the satisfaction of Ecology that the request for such extension has been submitted in a timely fashion and that good cause exists for granting the extension. Good cause may include, but may not be limited to:

1. Circumstances beyond the reasonable control and despite the due diligence of Hearthstone including delays caused by unrelated third parties or Ecology, such as (but not limited to) delays by Ecology in reviewing, approving, or modifying documents submitted by Hearthstone;

2. Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or

3. Endangerment as described in Section XVII (Endangerment).

However, neither increased costs of performance of the terms of this Decree nor changed economic circumstances shall be considered circumstances beyond the reasonable control of Hearthstone.

C. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give Hearthstone written notification of any extensions granted pursuant to this Decree. A requested extension shall not be effective until approved by Ecology or, if required, by the Court. Unless the extension is a substantial change, it shall not be necessary to amend

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this Decree pursuant to Section XV (Amendment of Decree) when a schedule extension is granted.

D. An extension shall only be granted for such period of time as Ecology determines is reasonable under the circumstances. Ecology may grant schedule extensions exceeding ninety (90) days only as a result of:

1. Delays in the issuance of a necessary permit which was applied for in a timely manner;

2. Other circumstances deemed exceptional or extraordinary by Ecology; or

3. Endangerment as described in Section XVII (Endangerment).

XVII. ENDANGERMENT

In the event Ecology determines that any activity being performed at the Site under this Decree is creating or has the potential to create a danger to human health or the environment, Ecology may direct Hearthstone to cease such activities for such period of time as it deems necessary to abate the danger. Hearthstone shall immediately comply with such direction.

In the event Hearthstone determines that any activity being performed at the Site under this Decree is creating or has the potential to create a danger to human health or the environment, Hearthstone may cease such activities. Hearthstone shall notify Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after making such determination or ceasing such activities. Upon Ecology's direction, Hearthstone shall provide Ecology with documentation of the basis for the determination or cessation of such activities. If Ecology disagrees with Hearthstone's cessation of activities, it may direct Hearthstone to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to this section, Hearthstone's obligations with respect to the ceased activities shall be suspended until Ecology determines the danger is abated, and the time for performance of such activities, as well as the

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time for any other work dependent upon such activities, shall be extended, in accordance with Section XVI (Extension of Schedule), for such period of time as Ecology determines is reasonable under the circumstances.

Nothing in this Decree shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

XVIII. COVENANT NOT TO SUE

A. Covenant Not to Sue: In consideration of Hearthstone's compliance with the terms and conditions of this Decree, Ecology covenants not to institute legal or administrative actions against Hearthstone regarding the release or threatened release of hazardous substances covered by this Decree.

This Decree covers only the Site specifically identified in the Site Diagram (Exhibit B) and those hazardous substances that Ecology knows are located at the Site as of the date of entry of this Decree. This Decree does not cover any other hazardous substance or area. Ecology retains all of its authority relative to any substance or area not covered by this Decree.

This Covenant Not to Sue shall have no applicability whatsoever to:

1. Criminal liability;
2. Liability for damages to natural resources; and
3. Any Ecology action, including cost recovery, against PLPs not a party to this Decree.

If factors not known at the time of entry of this Decree are discovered and present a previously unknown threat to human health or the environment, the Court shall amend this Covenant Not to Sue.

B. Reopeners: Ecology specifically reserves the right to institute legal or administrative action against Hearthstone to require it to perform additional remedial actions at the Site and to pursue appropriate cost recovery, pursuant to RCW 70.105D.050 under the following circumstances:

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1. Upon Hearthstone's failure to meet the requirements of this Decree;

2. Failure of the remedial action to meet the cleanup standards identified in the Cleanup Action Plan (CAP) (Exhibit A);

3. Upon Ecology's determination that remedial action beyond the terms of this Decree is necessary to abate an imminent and substantial endangerment to human health or the environment;

4. Upon the availability of new information regarding factors previously unknown to Ecology, including the nature or quantity of hazardous substances at the Site, and Ecology's determination, in light of this information, that further remedial action is necessary at the Site to protect human health or the environment; or

5. Upon Ecology's determination that additional remedial actions are necessary to achieve cleanup standards within the reasonable restoration time frame set forth in the CAP.

C. Except in the case of an emergency, prior to instituting legal or administrative action against Hearthstone pursuant to this section, Ecology shall provide Hearthstone with fifteen (15) calendar days' notice of such action.

XIX. CONTRIBUTION PROTECTION

With regard to claims for contribution against Hearthstone, the Parties agree that Hearthstone is entitled to protection against claims for contribution for matters addressed in this Decree as provided by RCW 70.105D.040(4)(d).

XX. LAND USE RESTRICTIONS

As detailed in the CAP, the remedial action for the Site requires institutional controls which will be Environmental (Restrictive) Covenants. In consultation with Hearthstone, Ecology will prepare the Environmental (Restrictive) Covenants consistent with WAC 173-340-440, RCW 64.70, the Toxics Cleanup Program Procedure 440A and/or any subsequent policies or procedures specified by Ecology for Environmental (Restrictive) Covenants. The

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Environmental (Restrictive) Covenants shall restrict future activities and uses of the Site as agreed to by Ecology and Hearthstone.

After approval by Ecology, Hearthstone shall record the Environmental (Restrictive) Covenant for affected properties it owns with the office of the King County Auditor as detailed in the Schedule (Exhibit C). Hearthstone shall provide Ecology with the original recorded Environmental (Restrictive) Covenants within thirty (30) days of the recording date.

As detailed in the CAP, Environmental (Restrictive) Covenants are also required on properties not owned by Hearthstone where hazardous substance(s) exceed applicable cleanup levels. Hearthstone will insure that the property owner for the affected property will record an Ecology-approved Environmental (Restrictive) Covenant as detailed in the Schedule (Exhibit C). Upon a showing that Hearthstone has made all reasonable efforts to secure an Environmental (Restrictive) Covenant and failed to do so, Ecology may provide assistance to Hearthstone in obtaining the property owner(s) signature on the Environmental (Restrictive) Covenant(s). Unless Ecology determines otherwise, affected properties include 6869 Woodlawn Avenue NE and the Woodlawn Avenue City of Seattle Right Of Way. Hearthstone shall provide Ecology with the original recorded Environmental (Restrictive) Covenants within thirty (30) days of the recording date.

XXI. INDEMNIFICATION

Hearthstone agrees to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action (1) for death or injuries to persons, or (2) for loss or damage to property to the extent arising from or on account of acts or omissions of Hearthstone, its officers, employees, agents, or contractors in entering into and implementing this Decree. However, Hearthstone shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action to the extent arising out of the negligent acts or omissions of the State of

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Washington, or the employees or agents of the State, in entering into or implementing this Decree.

XXII. COMPLIANCE WITH APPLICABLE LAWS

A. All actions carried out by Hearthstone pursuant to this Decree shall be done in accordance with all applicable federal, state, and local requirements, including requirements to obtain necessary permits, except as provided in RCW 70.105D.090. The permits or other federal, state, or local requirements that the agency has determined are applicable and that are known at the time of entry of this Decree have been identified in the CAP (Exhibit A).

B. Pursuant to RCW 70.105D.090(1), Hearthstone is exempt from the procedural requirements of RCW 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 and of any laws requiring or authorizing local government permits or approvals. However, Hearthstone shall comply with the substantive requirements of such permits or approvals. The exempt permits or approvals and the applicable substantive requirements of those permits or approvals, as they are known at the time of entry of this Decree, have been identified in the CAP (Exhibit A).

Hearthstone has a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Decree. In the event either Ecology or Hearthstone determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Decree, it shall promptly notify the other party of this determination. Ecology shall determine whether Ecology or Hearthstone shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Hearthstone shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by Hearthstone and on how Hearthstone must meet those requirements. Ecology shall inform Hearthstone in writing of these requirements. Once

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established by Ecology, the additional requirements shall be enforceable requirements of this Decree. Hearthstone shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

C. Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the exemption from complying with the procedural requirements of the laws referenced in RCW 70.105D.090(1) would result in the loss of approval from a federal agency that is necessary for the state to administer any federal law, the exemption shall not apply and Hearthstone shall comply with both the procedural and substantive requirements of the laws referenced in RCW 70.105D.090(1), including any requirements to obtain permits.

XXIII. REMEDIAL ACTION COSTS

Hearthstone shall pay to Ecology costs incurred by Ecology pursuant to this Decree and consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology or its contractors for, or on, the Site under RCW 70.105D, including remedial actions and Decree preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the entry of this Decree. Ecology's costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). Ecology has accumulated $7,688.60 in remedial action costs related to this facility as of March 31, 2016. Payment for this amount shall be submitted within thirty (30) days of the effective date of this Decree. For all costs incurred subsequent to March 31, 2016, Hearthstone shall pay the required amount within thirty (30) days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. A general statement of work performed will be provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded monthly.

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In addition to other available relief, pursuant to RCW 70.105D.055, Ecology has authority to recover unreimbursed remedial action costs by filing a lien against real property subject to the remedial actions.

XXIV. IMPLEMENTATION OF REMEDIAL ACTION

If Ecology determines that Hearthstone has failed to make sufficient progress or failed to implement the remedial action, in whole or in part, Ecology may, after notice to Hearthstone, perform any or all portions of the remedial action or at Ecology's discretion allow Hearthstone opportunity to correct. Hearthstone shall reimburse Ecology for the costs of doing such work in accordance with Section XXIII (Remedial Action Costs).

Except where necessary to abate an emergency situation, Hearthstone shall not perform any remedial actions at the Site outside those remedial actions required by this Decree, unless Ecology concurs, in writing, with such additional remedial actions pursuant to Section XV (Amendment of Decree).

XXV. PERIODIC REVIEW

As remedial action, including groundwater monitoring, continues at the Site, the Parties agree to review the progress of remedial action at the Site, and to review the data accumulated as a result of monitoring the Site as often as is necessary and appropriate under the circumstances. At least every five (5) years after the initiation of cleanup action at the Site the Parties shall meet to discuss the status of the Site and the need, if any, for further remedial action at the Site. At least ninety (90) days prior to each periodic review, Hearthstone shall submit a report to Ecology that documents whether human health and the environment are being protected based on the factors set forth in WAC 173-340-420(4). Under Section XVIII (Covenant Not to Sue), Ecology reserves the right to require further remedial action at the Site under appropriate circumstances. This provision shall remain in effect for the duration of this Decree.

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XXVI. PUBLIC PARTICIPATION

A Public Participation Plan is required for this Site. Ecology shall review any existing Public Participation Plan to determine its continued appropriateness and whether it requires amendment, or if no plan exists, Ecology shall develop a Public Participation Plan alone or in conjunction with Hearthstone.

Ecology shall maintain the responsibility for public participation at the Site. However, The Hearthstone shall cooperate with Ecology, and shall:

A. If agreed to by Ecology, develop appropriate mailing lists, prepare drafts of public notices and fact sheets at important stages of the remedial action, such as the submission of work plans, remedial investigation/feasibility study reports, cleanup action plans, and engineering design reports. As appropriate, Ecology will edit, finalize, and distribute such fact sheets and prepare and distribute public notices of Ecology's presentations and meetings.

B. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before major meetings with the interested public and local governments. Likewise, Ecology shall notify Hearthstone prior to the issuance of all press releases and fact sheets, and before major meetings with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by Hearthstone that do not receive prior Ecology approval, Hearthstone shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

C. When requested by Ecology, participate in public presentations on the progress of the remedial action at the Site. Participation may be through attendance at public meetings to assist in answering questions, or as a presenter.

D. When requested by Ecology, arrange and/or continue information repositories at the following locations:

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1. Seattle Public Library-Central Library
1000 4th Avenue
Seattle, WA 98002

2. Ecology's Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98104

At a minimum, copies of all public notices, fact sheets, and documents relating to public comment periods shall be promptly placed in these repositories. A copy of all documents related to this Site shall be maintained in the repository at Ecology's Northwest Regional Office in Bellevue, Washington.

XXVII. DURATION OF DECREE

The remedial program required pursuant to this Decree shall be maintained and continued until Hearthstone has received written notification from Ecology that the requirements of this Decree have been satisfactorily completed. This Decree shall remain in effect until dismissed by the Court. When dismissed, Section XVIII (Covenant Not to Sue) and Section XIX (Contribution Protection) shall survive.

XXVIII. CLAIMS AGAINST THE STATE

Hearthstone hereby agrees that it will not seek to recover any costs accrued in implementing the remedial action required by this Decree from the State of Washington or any of its agencies; and further, that Hearthstone will make no claim against the State Toxics Control Account or any local Toxics Control Account for any costs incurred in implementing this Decree. Except as provided above, however, Hearthstone expressly reserves its right to seek to recover any costs incurred in implementing this Decree from any other PLP. This section does not limit or address funding that may be provided under WAC 173-322.

XXIX. EFFECTIVE DATE

This Decree is effective upon the date it is entered by the Court.

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XXX. WITHDRAWAL OF CONSENT

If the Court withholds or withdraws its consent to this Decree, it shall be null and void at the option of any party and the accompanying Complaint shall be dismissed without costs and without prejudice. In such an event, no party shall be bound by the requirements of this Decree.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

JAMES PENDOWSKI
Program Manager
Toxics Cleanup Program
(360) 407-7177

Date: 6/2/16

ROBERT W. FERGUSON
Attorney General

IVY M. ANDERSON, WSBA #30652
Assistant Attorney General
(360) 586-4619

Date: 6/2/16

THE LUTHERAN RETIREMENT HOME OF THE GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING)

JOHN ENGBER
President
Board of Directors
(206) 525-9666

Date: 5-27-16

ENTERED this _____ day of _____ 2016.

JUDGE
King County Superior Court

ATTORNEY GENERAL OF WASHINGTON
Ecology Division
PO Box 40117
Olympia, WA 98504-0117
(360) 586-6770

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

JAMES PENDOWSKI
Program Manager
Toxics Cleanup Program
(360) 407-7177

Date: _____

ROBERT W. FERGUSON
Attorney General

IVY M. ANDERSON, WSBA #30652
Assistant Attorney General
(360) 586-4619

Date: _____

THE LUTHERAN RETIREMENT HOME OF THE GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING)

JOHN ENGBER
President
Board of Directors
(206) 525-9666

Date: _____

nunc pro tunc to 6/2/16

ENTERED this _____ day of 6/13 2016.

HENRY H. JUDSON

JUN 13 2016

COURT COMMISSIONER

JUDGE
King County Superior Court

Exhibit A

CLEANUP ACTION PLAN

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ACRONYMS AND ABBREVIATIONS (CONTINUED)

EPA	U.S. Environmental Protection Agency
ERD	enhanced reductive dechlorination
ERH	electrical resistance heating
Farallon	Farallon Consulting, L.L.C.
Former Laundry Property	the former parcel located within the Hearthstone Property, located at 6860 Woodlawn Avenue Northeast
Former Yasuko Property	the former parcel located within the Hearthstone Property, located at 6850 Woodlawn Avenue Northeast
ft/ft	feet per foot
Hearthstone	The Lutheran Retirement Home of Greater Seattle, d/b/a The Hearthstone
Hearthstone Property	the property adjoining the Dry Cleaner Building to the west, located at 6850 Woodlawn Avenue Northeast
Karkrie	Karkrie LLC
mg/kg	milligrams per kilogram
ml	milliliter
MTCA	Washington State Model Toxics Control Act
NAVD88	North American Vertical Datum of 1988
North-Adjoining Property	the property adjoining the Dry Cleaner Building Property to the north, located at 6869 Woodlawn Avenue Northeast
PCE	tetrachloroethene
PCU	power control unit
PSCAA	Puget Sound Clean Air Agency
PSCAA Regulation I	Section 6.03 (94) Regulation I of the Puget Sound Clean Air Agency dated September 24, 2009

ACRONYMS AND ABBREVIATIONS (CONTINUED)

trans-1,2-DCE	trans-1,2-dichloroethene
TSDF	treatment, storage, and disposal facility
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code
ZVI/sand filter	zero valent iron in combination with a sand filter

for the media of concern at the Site. The section also includes a discussion of remediation levels for the Site.

- **Section 4.0, Remedial Investigation/Feasibility Study Addendum.** This section provides a description of the results RI/FS Addendum field work program conducted at the Site in 2014. This section also includes a discussion of cleanup action alternatives, disproportionate cost analysis, and the preferred cleanup action alternative.
- **Section 5.0, Cleanup Action Plan Implementation.** This section provides a description of the cleanup action components that will be implemented in order to remediate soil and groundwater containing concentrations of the chemicals of concern (COCs) exceeding the cleanup levels beneath the Site.
- **Section 6.0, Compliance Monitoring.** This section describes the protection, performance, and confirmation monitoring for the media of concern. This section also includes a discussion of waste profiling that will be conducted as part of the cleanup action.
- **Section 7.0, Documentation Requirements.** This section describes the documentation to be provided as part of the cleanup action, and it includes a discussion of document management, waste disposal tracking, and compliance reports.
- **Section 8.0, References.** This section lists the references used to prepare this document.
- **Section 9.0, Limitations.** This section discusses limitations imposed on use of the information in this document.

2.0 BACKGROUND

This section provides a summary of the Site features and location, historical Site use, environmental setting, Agreed Order No. DE 7084, and the CSM. Detailed descriptions of the background information for the Site prior to 2014 are provided in the 2013 Draft Final RI/FS Report. A detailed summary of the groundwater monitoring event conducted in 2014 in provided in the RI/FS Addendum.

2.1 Site Description and History

The Site is defined by the extent of contamination caused by the releases of hazardous substances at the Dry Cleaner Building Property, as shown in Figure 2A. The Site is located in Section 5, Township 25 South, Range 4 West, in the Green Lake neighborhood of Seattle,

6850 Woodlawn Avenue Northeast (the Former Yasuko Property), and the third located at 6560 Latona Avenue Northeast (Single-Family Lot). The Hearthstone Property is located to the west of the Dry Cleaner Building Property, across the alley (Figure 2A). The three parcels were purchased by The Hearthstone in 2005, and the Former Laundry and Yasuko Properties were replatted into a single tax parcel (King County tax parcel #952810-4695). The Hearthstone Property currently includes two tax parcels (King County tax parcel #952810-4695 and #952810-4696) that cover approximately 18,203 square feet (0.42 acres) of land. The Hearthstone Property is listed at 6850 Woodlawn Avenue Northeast. The northern portion of the Hearthstone Property has been redeveloped as a 4-story building with one level of underground parking to be used as retirement residences, with commercial shops occupying the first floor. The Single-Family Lot (King County tax parcel #952810-4696) is undeveloped and is not considered part of the Site.

Sunshine Cleaners owned and occupied the Former Laundry Property as early as 1931. According to the former owner of Sunshine Cleaners, only laundry, pressing, and packaging operations were conducted on the Former Laundry Property. Former tenants on the Former Yasuko Property included Scott's Trophies, a restaurant, a dance studio, an antique shop, and a cabinetmaker.

In 1977, Mr. Robert Bell, the former owner and operator of Sunshine Cleaners, transferred interest in the Former Laundry Property. Ruben and Patricia Rael acquired the Former Laundry Property in 1995 and transferred the property to Karkrie in 2000. Karkrie sold the Former Laundry Property to The Hearthstone in 2005. PSS operated at the Former Laundry Property at various times between 1977 and 2006 (Ecology 2009a).

All aboveground structures within the Hearthstone Property were demolished between 2008 and 2009 as part of the interim cleanup action and redevelopment at Hearthstone Property.

2.1.3 North-Adjoining Property

The North-Adjoining Property, located at 6869 Woodlawn Avenue Northeast, includes two tax parcels (King County tax parcels #952810-0525 and #952810-0535) that cover approximately 8,500 square feet (0.20 acres) of land. The North-Adjoining Property is improved with a 1926-vintage, wood-framed, office building on the eastern portion and an asphalt-paved parking lot on the western portion. The North-Adjoining Property was occupied by residences as early as 1904, a machine shop in the 1950s, and a film development facility in 1966 (GeoEngineers, Inc. 2004b).

2.1.4 City of Seattle Rights-of-Way

The existing PCE groundwater plume extends from the Dry Cleaner Building Property into the adjoining City of Seattle right-of-ways (ROWs). The adjoining ROWs include

potentiometric surface measurements from the existing well network that generally indicate a positive hydraulic head in wells installed in the Deep Zone.

2.3 Agreed Order No. DE 7084

The Hearthstone, Plastic Sales and Service, Inc., Karkrie, and Ruben and Patricia Rael entered into an Agreed Order with Ecology on September 14, 2009 (Agreed Order No. DE 7084). Remedial investigations conducted by Farallon under the Agreed Order included the following:

- 2010 Remedial Investigation
  - Installed three monitoring wells (TMW-1 through TMW-3) in the Shallow Zone and collected soil and groundwater samples at the Hearthstone Property.
  - Advanced six borings (SB-20 through SB-25) and collected soil and reconnaissance groundwater samples from locations in the ROW of Woodland Avenue Northeast.
  - Installed monitoring wells MW-25 and MW-26 in the Shallow Zone within the Woodlawn Avenue Northeast ROW at located north the Former Laundry Property.
  - Performed a groundwater monitoring event, including groundwater sampling of 16 wells screened in the Shallow Zone and 10 wells screened in the Deep Zone.
- 2011 Remedial Investigation
  - Advanced 11 borings (SB-26 through SB-36) and collected soil and groundwater samples at select locations at the Dry Cleaner Building Property.
  - Installed monitoring well MW-27 in the Shallow Zone within the Woodlawn Avenue Northeast ROW, located northeast of the Dry Cleaner Building Property. One soil sample was analyzed for select COCs.
- 2012 Remedial Investigation
  - Repaired four monitoring wells (MW-10, MW-16, MW-21, and MW-27) due to damage during a Seattle Department of Transportation paving project conducted in 2011.
  - Advanced three boring (SB-37 through SB-39) and collected and analyzed soil samples at select locations at the Dry Cleaner Building Property.

The details of the remedial investigations are provided in the 2013 Draft Final RI/FS Report and the results are incorporated in the CSM summary below.

Interim action completed by SoundEarth in 2011 and 2012 under the Agreed Order included the following:

concentrations of PCE in Shallow Zone soil and groundwater, and the possible presence of PCE as dense nonaqueous-phase liquids (DNAPL) at borings SB-1 and SB-37 (Figures 8, 9, and 10).

On the Former Laundry Property, elevated concentrations of dissolved-phase PCE have been detected in groundwater in the vicinity of monitoring wells TMW-2, TMW-3, MW-24, and boring P-14, which indicates that a separate and distinct source area on the north-central portion of the Hearthstone Property was present prior to completion of the interim remedial action. The suspected source of PCE in groundwater at this area was a leaking sanitary side sewer line that was present in the vicinity of these elevated groundwater sample locations (Figures 6, 7, 10, 12, and 13 of the 2013 Draft Final RI/FS Report).

2.4.2 Chemicals and Media of Concern

The primary COC identified for the Site is PCE. Other COCs include the degradation products of PCE: trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride.

The media of concern for the Site are soil, groundwater, and air as soil vapor. The interim remedial action addressed contaminated soil and vapor within the boundary of the Hearthstone Property; the vapor pathway is no longer a medium of concern for the Hearthstone Property.

2.4.3 Contaminant Fate and Transport

Soil analytical data for the Site indicates that PCE in soil within the Shallow Zone has migrated from the primary source area, beneath the former dry cleaning machines located on the Dry Cleaner Building Property, to a portion of the northeast corner of the Hearthstone Property and a portion of the Woodlawn Avenue Northeast ROW (Figure 7). The smaller secondary source of PCE contamination in soil located on the north-central portion of the Hearthstone Property has also migrated beneath a portion of the Woodlawn Avenue Northeast ROW. This migration has occurred by vapor-phase transport via diffusion within the vadose zone and/or dissolved-phase advective transport. The interim remedial action conducted in 2011 and 2012 has effectively removed the majority of Shallow Zone PCE contamination at the Hearthstone Property; however, residual concentrations of PCE in soil are present below the maximum excavation depth of 15 feet bgs.

The lateral extent of the Shallow Zone dissolved-phase PCE plume (where concentrations exceed the MTCA Method A cleanup level) is bounded by monitoring wells MW-15, MW-16, MW-17, MW-19, MW-23, MW-26, and MW-27 and borings SB-6, SB-7, SB-20, and SB-21 in the cross- and downgradient directions to the west, north, and east of the Site, and by monitoring well MW-1 in the upgradient direction, located on the South-Adjoining Property (Figure 5). Figure 5 also shows the PCE isoconcentration contours

SB-11 through SB-13 to the north, east, and west of the Site, and by monitoring wells MW-11 and MW-20 located upgradient to the south (Figure 6). The upper Deep Zone groundwater from 20 to 45 feet bgs is impacted with CVOCs that extend from beneath the former dry cleaning machines toward the north–northwest, beneath the Woodlawn Avenue Northeast ROW, and beneath a portion of the North-Adjoining Property (Figures 9 and 10). Figure 6 shows the PCE isoconcentration contours for the groundwater in the Deep Zone based on the results from historical reconnaissance groundwater samples and groundwater samples and from the 2014 groundwater monitoring event.

The dissolved-phase PCE plume extends farther downgradient in the Deep Zone than in the Shallow Zone. The limited dissolved-phase PCE plume extent is a result of the higher transmissivity of sand and gravel soils within the Deep Zone and the absence of a Shallow Zone groundwater downgradient of the Site (Figures 8, 9, and 10). The lateral and vertical extent of the Deep Zone dissolved-phase CVOC plume has been sufficiently characterized with the existing Deep Zone monitoring well network and deep borings.

PCE in soil and groundwater may volatilize into vapor-phase. At portions of the Site where no impermeable caps are present, some vapor-phase PCE may escape from the subsurface into the atmosphere where photodegradation of the vapor will occur.

The estimated distribution of PCE mass in soil and groundwater for the Site was calculated in the 2013 Draft Final RI/FS Report using the available data for the Dry Cleaner Building Property and the downgradient ROWs. The calculated percentages of mass are summarized in the following table.

Area	Percent Mass in Soil	Percent Mass in Groundwater	Percent Mass in Shallow Zone	Percent Mass in Deep Zone
Dry Cleaner Building Property	92	0.69	74	19
ROWs	6.9	0.19	4.3	2.8
TOTAL (approximate)	**100**		**100**	

NOTE: ROW = right-of-way

The data above indicate that the majority of PCE mass at the Site (i.e., greater than 90 percent) is contained in soil on the Dry Cleaner Building Property, less than 7 percent is present in soil in the ROWs, and less than 1 percent is contained in groundwater.

2.4.4 Potential Exposure Pathways

The following potential exposure pathways have been identified for future human health exposure at the Site:

3.1.1 Identification of Applicable or Relevant and Appropriate Requirements

The ARARs for the Site were identified. The following table identifies the ARARs that are applicable to the Site.

Preliminary ARAR	Citation or Source
MTCA	Chapter 70.105 of the RCW
MTCA Cleanup Regulation	WAC 173-340
Ecology, Toxics Cleanup Program – Guidance(s) To Be Considered	*Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*, Review DRAFT, October 2009, Publication No. 09-09-047 *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*, Revised, May 2003, Publication No. 90-52
State Environmental Policy Act	RCW 43.21C
The Clean Water Act	33 United States Code 1251 et seq.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980	42 United States Code 9601 et seq. and Part 300 of Title 40 of the Code of Federal Regulations [40 CFR 300]
Washington Dangerous Waste Regulations	WAC 173-303
Resource Conservation and Recovery Act	40 CFR Parts 260-280 and 148
Solid Waste Management Act	RCW 70.95; WAC 173-304 and 173-351
Occupational Safety and Health Administration Regulations	29 CFR 1910, 1926
Washington Department of Labor and Industries Regulations	WAC 296
Water Quality Standards for Ground Water	WAC 173-200
Department of Transportation Hazardous Materials Regulations	40 CFR 100 through 185
Washington State Water Well Construction Act	RCW 18.104; WAC 173-160
King County regulations, codes, and standards	King County Code 28.81, 28.82, 28.83; King County Public Rules PUT 8-12 through PUT 8-16
City of Seattle regulations, codes, and standards	All applicable or relevant and appropriate regulations, codes, and standards

NOTES:

CFR = Code of Federal Regulations

RCW = revised code of Washington

WAC = Washington Administrative Code

3.1.2 **Permits and Registrations**

A list of permit and registration requirement

direct contact with the residual soil with concentrations of PCE and its degradation compounds left in place at the Dry Cleaner Building Property.

3.2.2 Point of Compliance for Groundwater

In accordance with WAC 173-340-720(8)(a) and (b), the point of compliance for groundwater is defined as the uppermost level of the saturated zone extending vertically to the lowest depth that potentially could be impacted by the COCs throughout the Site. The lowest depth of the dissolved-phase PCE plume in the Deep Zone is approximately 135 feet above mean sea level (Figures 9 and 10).

The Shallow Zone and Deep Zone dissolved-phase PCE plumes extend downgradient of the Dry Cleaner Building Property beneath Woodlawn Avenue Northeast ROW. The dissolved-phase PCE plume extends farther downgradient in the Deep Zone beneath the North-Adjoining Property. The lateral and vertical extent of the Shallow Zone and Deep Zone groundwater has been characterized with the existing monitoring well network and borings. The source of the plume appears to be located at the Dry Cleaner Building property boundary.

An off-Property conditional point of compliance for groundwater in the Shallow Zone and Deep Zone is established because it is not practicable to meet the cleanup level for COCs in the groundwater throughout the Site within a reasonable restoration time frame and the requirements of WAC 173-340-720(8)(d)(ii) will have been met under the requirements of this CAP. Within 30 days from the effective date of the Consent Decree, Hearthstone will provide Ecology with a letter from the affected property owner stating that property owner agrees to "the use of the groundwater off-property conditional point of compliance detailed in WAC 173-340-720(8)(d)(ii)."

3.2.3 Off-Property Conditional Point of Compliance for Groundwater

Groundwater analytical results for selected performance monitoring wells will be used to show cleanup remedy for the Site will achieve the cleanup objectives in a reasonable restoration time frame as discussed below.

Following completion of the electrical resistance heating (ERH) treatment at the Dry Cleaner Building Property, the upper Shallow Zone groundwater, located directly downgradient of the Dry Cleaner Building Property, will likely exceed the cleanup levels for COCs. Enhanced reductive dechlorination (ERD) will be utilized to biodegrade the remaining COCs present in the Shallow Zone and Deep Zone located downgradient of the Dry Cleaner Building Property. The ERD treatment will remediate the residual source of PCE in the lower Shallow Zone and the Deep Zone groundwater at the Dry Cleaner Building Property and will treat residual dissolved-phase COCs present in the Shallow Zone and Deep Zone groundwater located downgradient of the Dry Cleaner Building Property. The ERD treatment will significantly reduce the overall restoration time frame;

slab of the proposed underground parking garage at the Hearthstone Property. These engineering controls are preventative measures for managing potential vapor containing PCE and/or its degradation by-products. These measures will provide long-term protection of the indoor air quality within the development building. After completion of the development, vapor sampling will be periodically conducted from the stacks of the passive ventilation system located on the roof the proposed development building. A detained discussion of the engineering controls and compliance monitoring will be presented in the Engineering Design Report and the Compliance Monitoring Plan. If post development monitoring indicates the mass of PCE in vapor exceeds the Puget Sound Clean Air Agency regulatory threshold (500 pound PCE per year) at the point of discharge for the passive ventilation system, contingency measures may implemented in consultation with Ecology to ensure compliance with PSCAA PCE threshold.

3.3 Cleanup Levels

The cleanup levels for COCs confirmed or suspected in environmental media of concern are based on established MTCA Method A cleanup levels in accordance with WAC 173-340-720 through WAC 173-340-760. MTCA Method B cleanup levels are used for hazardous substances where MTCA Method A cleanup levels were not established. For example, a MTCA Method A cleanup level has not been established for cis-1,2-DCE; therefore, the MTCA Method B cleanup level will be used for cis-1,2-DCE.

3.3.1 Soil

The CSM for the Site indicates that the most likely human health exposure scenario for soil is by direct contact during excavation. Because groundwater in the Shallow Zone is not considered to be a potable groundwater source per WAC 173-340-720(2)(b)(i), MTCA Method B direct contact cleanup levels were selected as cleanup levels for soil, with one exception. The MTCA Method B cleanup level for PCE protective of direct contact is 480 mg/kg, exceeding the MTCA Method A cleanup level protective of groundwater of 0.05 mg/kg by a factor of nearly 10,000. The MTCA Method A cleanup level was selected as the cleanup level for PCE in soil.

The cleanup levels for COCs in soil are listed below:

- PCE—0.05 mg/kg, MTCA Method A cleanup level protective of groundwater
- TCE—12.0 mg/kg, MTCA Method B carcinogenic exposure cleanup level protective of direct contact (ingestion only)
- Cis-1,2-DCE—800 mg/kg, MTCA Method B non-carcinogenic exposure cleanup level protective of direct contact (ingestion only)
- Trans-1,2-DCE—1,600 mg/kg, MTCA Method B non-carcinogenic exposure cleanup level protective of direct contact (ingestion only)

- Cis-1,2-DCE—MTCA Method B non-carcinogenic cleanup level not established
- Trans-1,2-DCE—2.74 $\mu g/m^3$, MTCA Method B non-carcinogenic standard formula value
- Vinyl chloride—0.28 $\mu g/m^3$, MTCA Method B carcinogenic standard formula value

3.4 Remediation Levels

The cleanup action involves a combination of cleanup action components to treat soil and groundwater at the Site. Remediation levels are used to identify the concentrations (or other methods of identification) of hazardous substances at which different cleanup action components will be used. Remediation levels are not the same as cleanup levels. A cleanup level defines the concentration of hazardous substances above which a contaminated medium (e.g., soil) must be remediated in some manner (e.g., treatment, containment, institutional controls). A remediation level, on the other hand, defines the concentration (or other method of identification) of a hazardous substance in a particular medium above or below which a particular cleanup action component (e.g., soil treatment or containment) will be used. Remediation levels, by definition, exceed cleanup levels and obtaining a remediation level is not considered being in compliance with cleanup standards.

Remediation levels are applicable for the Site because several treatment technologies are necessary to aggressively treat the majority of the contaminated mass in soil and groundwater at the Site. The remediation level for soil were established that allow one cleanup technology to transition to another cleanup technology. The selected remediation level for COCs in soil at the Site is presented below.

3.4.1 Remediation Level for Soil ERH Treatment

The remediation level for PCE in soil located in the upper Shallow Zone at the Dry Cleaner Building Property is 14 mg/kg[1,2]. ERH will be used to lower the concentrations

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[1] If total PCE concentrations are found to be 10 mg/kg or higher, a TCLP test shall be conducted on that soil sample also.

[2] The remediation level for soil is set at concentrations of F002 listed dangerous waste soils, under an Ecology approved contained out determination, would be disposed at a permitted solid waste landfill. PCE is likely to be found in the soils at this site at concentrations much higher than its degradation products TCE, cis-1,2 DCE, trans-1,2 DCE, and vinyl chloride. However, from a RCRA regulatory perspective, TCE, cis-1,2 DCE, trans-1,2 DCE, and vinyl chloride are all considered part of the F002 dangerous waste listing. As is the requirement for PCE, soils contaminated with any F002 constituent must pass the TCLP for that constituent, contain F002 listed constituents below LDR treatment standards for soils, and be below MTCA Method B unrestricted soil cleanup levels.

MW14 and MW22. Groundwater measurements were collected from the existing monitoring wells on September 9, 2014, relative to the top of well casings to an accuracy of 0.01 feet using an electronic water meter.

SoundEarth collected groundwater samples from each monitoring well in September and October 2014 in accordance with the U.S. Environmental Protection Agency's (EPA) *Low Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (1996). Purging and sampling of each well were performed using a peristaltic pump for Shallow Zone wells and a bladder pump for Deep Zone monitoring wells. During purging, water quality parameters were monitored and recorded, including temperature, pH, specific conductivity, dissolved oxygen, turbidity, and oxidation-reduction potential. Each well was purged until the six water quality parameters stabilized.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. A duplicate groundwater sample was collected from monitoring well MW04 for quality assurance/quality control purposes. The groundwater samples were submitted for analysis of CVOCs by EPA Method 8260C. Samples collected from wells MW01, MW07 through MW11, and MW22 were also submitted for the following natural attenuation and geochemical parameters:

- Nitrate by EPA Method 353.2
- Dissolved manganese and iron by EPA Method 6010C
- Ferrous iron by Standard Method (SM) 3500
- Sulfate by American Society for Testing and Materials Method D516-07
- Methane, ethane, and ethene by Method RSK 175
- Total alkalinity by SM 2320B
- Total organic carbon by SM 5310B

Total manganese and iron were analyzed in the field using HACH field kits. Groundwater samples were submitted to Onsite Environmental Inc., of Redmond, Washington, and subcontracted for laboratory analysis to Aquatic Research Incorporated, of Seattle, Washington, under standard chain-of-custody protocols. Purge water and decontamination water were temporarily stored on the Dry Cleaner Building Property pending analytical results.

4.1.2 Remedial Investigation Results

The groundwater elevations measured in Shallow Zone monitoring wells within and adjacent to the Site ranged from 164.69 feet (MW21) to 169.95 feet (MW03) above mean sea level, and groundwater elevations measured in the Deep Zone monitoring wells at the

modified cleanup action alternative. Groundwater analytical results for CVOCs are presented in Table 2 and on Figures 5 and 6 for the Shallow Zone and Deep Zone, respectively.

4.2 Feasibility Study

This section provides a summary of the selected preferred cleanup action alternative, a detailed comparison of enhanced modified versions of the previously selected preferred cleanup action alternative, and a disproportionate cost analysis of each of the modified cleanup action alternatives. A detailed description of the previous cleanup action alternatives and Farallon's complete feasibility study is presented in the 2013 Draft Final RI/FS Report.

4.2.1 Treatability Studies

Groundwater entering the subsurface drainage system of the proposed redevelopment at the former Dry Cleaner Building Property may contain elevated concentrations of PCE that require treatment before discharge to the sanitary sewer system. SoundEarth performed a bench scale test using zero valent iron in combination with a sand filter (ZVI/sand filter) to evaluate if these combined technologies could reduce the concentrations of PCE and its degradation products in the groundwater entering the subsurface drainage system.

ZVI has been demonstrated to abiotically degrade PCE to vinyl chloride and vinyl chloride to non-toxic ethene. Ethene naturally degrades to water and carbon dioxide. The ZVI adsorbs the chlorinated ethene on the surface of the iron and then strips the chlorinated ions off the chlorinated ethenes. This creates iron oxides that can foul the iron, but it also releases chlorine that forms an acid when in the presence of water. The acid tends to dissolve the iron oxides, somewhat cleaning the iron surface for the next reaction. To date an accurate rate of degradation of the ZVI has not been quantified. The best evidence that the use of ZVI is not fouled quickly is site data from a ZVI permeable reactive barrier that has been in use for more than 25 years and is still completing dechlorination of PCE.

4.2.1.1 Bench Scale Test Design and Implementation

SoundEarth's bench scale test was designed as follows:

- Groundwater from a site similar to the Site was collected and chilled to 4 degrees Celsius.
- ZVI from Hepure Technologies Inc. was procured.
- A 50-pound bag of clean, white filter sand was procured.
- Two 360-milliliter (ml) vessels were built.

4.2.1.3 Bench Scale Test Conclusions

The ZVI/sand filter was successful in treating the PCE and TCE to below the laboratory practical quantitation limit and resulted in a significant reduction in cis-1,2-DCE and vinyl chloride. The limiting compound for treatment to the cleanup standard is vinyl chloride, which has a groundwater cleanup level of 0.2 µg/L.

Based on the test results, the ZVI/sand filter would need to be about 4.5 pore volumes in size to treat a given flow rate. The estimated flow rate for the footing drain that this filter was to be used for is 25 gallons per minute. This leads to a ZVI/sand filter volume of 19,300 gallons, when taking the effective porosity into account. Though this is a significant size given the tight quarters of the parking garage area, it should be a viable filter for a decade based on the life of other ZVI filter barriers that were installed in the 1990s.

4.2.2 Remedial Alternative Development and Description

In the 2013 Draft Final RI/FS Report, Farallon developed and evaluated six cleanup action alternatives for the Site. On completion of their evaluation, Farallon selected Cleanup Alternative 3 as the preferred alternative for the Site. Cleanup Alternative 3 included the following cleanup action elements:

- Removing the Stoddard solvent USTs in the Woodlawn Avenue Northeast ROW.
- Demolishing the existing Dry Cleaner Building.
- Removing the decommissioned USTs and the heating oil UST beneath the Dry Cleaner building.
- Conducting thermal treatment of Shallow Zone soil and groundwater.
- Applying a chemical oxidant reagent to the Shallow Zone to assess the practicability to treat residual PCE downgradient of the dry cleaning equipment source area within the Woodlawn Avenue Northeast ROW.
- Treating Deep Zone groundwater using chemical oxidation or bioremediation.
- Implementing institutional and engineering controls to prevent future exposure of residual contamination.
- Conducting long-term monitoring.

Farallon concluded that Cleanup Alternative 3 would require a total restoration time frame of 25 to 35 years, but provided a high degree of protectiveness, permanence, long-term effectiveness, and had the highest degree of practicability to implement when compared to the five other alternatives.

potassium permanganate. A summary of each of the modified cleanup action alternatives is presented in the subsections below. Feasibility-level cost estimates for each of the four modified cleanup action alternatives are presented in Section 3.2 of the RI/FS Addendum.

4.2.4 Modified Cleanup Action Alternative 3.1

The initial steps of modified Cleanup Action Alternative 3.1 are to remove the existing Dry Cleaner Building and decommission and remove the two Stoddard solvent USTs beneath the Woodlawn Avenue Northeast ROW. Following completion of the UST removal, ERH remediation would be implemented in Areas 1, 2, and 3 (Figure 11) to an approximate depth of 16 feet bgs (Figures 12, 13, and 14). ERH treatment applies heat to the subsurface to degrade or volatilize contaminants. Mobilized and/or volatilized contaminants are then collected by a soil vapor extraction (SVE) system component at each electrode and captured on activated carbon. The activated carbon can be processed off-site for recycled use or disposed of in an appropriate Subtitle D landfill.

SoundEarth estimates that ERH treatment will take approximately 45 to 60 days once heating starts and will volatize the majority of the chlorinated contamination from the soil in the treatment areas. The goal[3] of ERH treatment is to reduce F002 listed waste contaminant concentrations in the treated soil to remediation levels. If the goal is met, the soil treated will be excavated to approximately 16 feet bgs and disposed of off-site in a Subtitle D land fill under a contained-out determination.

Following completion of ERH treatment in Area 1, the lower Shallow Zone below the treatment area and on and off the Dry Cleaner Building Property Deep Zone will be remediated with ERD technology (Figures 15 through 19). ERD utilizes bioremediation to degrade the remaining contaminants present in groundwater. To implement ERD, injection wells will be installed in the treatment areas and/or existing wells will be converted into injection wells (e.g., well MW-4). The Ecology Underground Injection Control Program requires that all injection wells are registered and a permit procured for all injectates prior to commencement of injection.

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[3] The remediation level for soil is set at concentrations of F002 listed dangerous waste soils, under an Ecology approved contained out determination, would be disposed at a permitted solid waste landfill. PCE is likely to be found in the soils at this site at concentrations much higher than its degradation products TCE, cis-1,2 DCE, trans-1,2 DCE, and vinyl chloride. However, from a RCRA regulatory perspective, TCE, cis-1,2 DCE, trans-1,2 DCE, and vinyl chloride are all considered part of the F002 dangerous waste listing. As is the requirement for PCE, soils contaminated with any F002 constituent must pass the TCLP for that constituent, contain F002 listed constituents below LDR treatment standards for soils, and be below MTCA Method B unrestricted soil cleanup levels.

increased, shifting the bulk of expenses from the remediation costs to the development costs.

4.2.7 Modified Cleanup Action Alternative 3.4

Modified Cleanup Action Alternative 3.4 operates similarly to modified Cleanup Action Alternative 3.1, where ERH remediation would be implemented in Areas 1, 2, and 3 to an approximate depth of 16 feet bgs, but replaces ERD treatment with chemical oxidation. Chemical oxidation involves the injection of potassium permanganate to chemically oxidize residual soil and groundwater. The oxidizer chemically reacts with and destroys the contaminants present in the subsurface, converting them to non-hazardous compounds. For simplicity, the planned injection grid for ERD treatment was assumed adequate for potassium permanganate injections. In fact, that assumption is optimistic since emulsified oil normally moves through the soil column more readily than permanganate, as the permanganate reacts with naturally occurring organics in the soil. The risk for both failure and liability of chemical oxidation is higher due to natural degradation processes, such as soil oxidant demand, that consume the permanganate. In addition, the propensity for the dissolved permanganate solution to enter sewers or storm drains is slightly greater.

4.3 Alternatives Comparison and Evaluation

A detailed summary of the comparative evaluation of the modified cleanup action alternatives using the MTCA evaluation criteria (WAC 173-340-360[3][f]) is presented in the RI/FS Addendum. All four of the focused modified cleanup action alternatives evaluated fall under Farallon's selected Cleanup Action Alternative 3, which had a total ranking score of 7.8 out of a possible 10. Farallon used weighting factors for the six criteria evaluated below. A description of the weighting factors and an example is provided in Section 7.4.3 of the 2013 Draft Final RI/FS Report.

Below we compare the same MTCA evaluation criteria for each of our modified alternatives relative to each other. A detailed presentation for the ranking for each modified alternative for each evaluation criteria is present in the RI/FS Addendum.

- Protectiveness. All four modified cleanup action alternatives end at the same level of cleanup— MTCA Method A. In fact, the estimated time to meet this goal for the four alternatives is not discernible.

Although modified Cleanup Action Alternative 3.4 proposes the use of chemical oxidation, which is generally faster than ERD processes, for this site the degradation rate is controlled by the time that it takes for the PCE to move from immobile pore spaces and dissolve into the groundwater. For chemical oxidation applications, this creates timing issues as the oxidant dissolves into the groundwater and moves away from the

- **Public** Concerns. As stated in the 2013 Draft Final RI/FS Report, community concerns are considered by Ecology in the selection of cleanup actions and are formally obtained during the required Public Notice and Participation period- for the proposed remedy and associated documents, including this CAP and the Consent Decree. Public concerns will be considered in the selection and implementation of the modified cleanup action alternative for the Site. Therefore, all modified alternatives receive the same ranking score of 7 for Public Concern.

SoundEarth used the same weighting of the scores as presented in the 2013 Draft Final RI/FS Report. Farallon's preferred Cleanup Action Alternative 3 had a total ranking score of 7.8. Results of the comparative evaluation indicate that modified Cleanup Action Alternative 3.1 ranks slightly higher, with a total ranking score of 7.9, versus modified Cleanup Action Alternatives 3.2 and 3.3, with total ranking score of 7.8. Modified Cleanup Action Alternative 3.4 ranks last with respect to the SoundEarth preferred modified cleanup action alternative with a total ranking score of 7.7. The four modified versions of the preferred cleanup action alternative are within 0.2 of each other. Based on the comparative evaluation, modified Cleanup Action Alternative 3.1 meets or exceeds all of the other alternatives evaluated by Farallon in the 2013 Draft Final RI/FS Report.

4.4 Disproportionate Cost Analysis

Costs estimates for the proposed modified cleanup action alternatives were compared using a disproportionate cost analysis to determine if the incremental cost of an alternative compared to a lower cost alternative exceeds the incremental degree of benefit by an alternative over that of a lower cost alternative. The results from the disproportionate cost analysis showed that the modified Cleanup Action Alternative 3.1 has the lowest cost to implement. In addition, modified Cleanup Action Alternative 3.1 also has a slightly higher benefit score, making it the most favorable modified alternative. A detailed presentation of the disproportionate cost analysis for each modified alternative for each evaluation criteria is presented in the RI/FS Addendum.

4.5 Selected Cleanup Action

After performing the comparative analysis and ranking of modified alternatives in accordance with the MTCA evaluation criteria and the disproportionate cost analysis, modified Cleanup Action Alternative 3.1, in concert with remediation levels and conditional points of compliance (as presented in Section 3.0) is the recommended alternative for the Site. ERH and ERD are proven technologies for the effective remediation of COCs. Modified Cleanup Action Alternative 3.1 meets the threshold requirements for cleanup actions set forth in WAC 173-340-360(3) and WAC 173-340-370. Modified Cleanup Action Alternative 3.1 is protective of human health and the environment, is more easily implemented than competing alternatives, and provides a permanent solution for reducing concentrations of COCs at the Site within a reasonable restoration time frame as described above. The cost to implement modified Cleanup

5.1 Site Preparation

The first phase of remediation will include site preparation by conducting public and private utility location assessments, decommissioning applicable wells, demolishing the former dry cleaner building, removing decommissioned underground utilities within the ERH treatment area, removing the two former Stoddard solvent USTs beneath the Woodlawn Avenue Northeast ROW, and removing a former heating oil USTs beneath the Dry Cleaner Building Property.

5.1.1 Utility Location

The public utility location services will be contacted to locate utilities within the public ROWs. In addition, a private underground utility location service will be contracted to locate utilities within the boundaries of the Dry Cleaner Building Property.

5.1.2 Well Decommissioning and Installation

Prior to the operation of the proposed ERH system, monitoring wells MW-4, MW-7 and MW-14 will be decommissioned by a licensed professional (Figure 2A). The wells will be decommissioned in-place in accordance with WAC 173-160-381, "Minimum Standards for Construction and Maintenance of Wells, Standards for Decommissioning a Well." After the thermal treatment has been completed, a replacement compliance monitoring well will be installed in the vicinity of the former dry cleaning equipment.

5.1.3 Building Demolition and Removal of Underground Utilities

The former Dry Cleaner Building will be demolished as part of the site preparation activities. The northern half of the former Dry Cleaner Building concrete slab will be left in place to act as an impermeable barrier for the ERH system. Conductive underground utilities on the former Dry Cleaner Building Property, within Areas 1, 2, and 3, will be removed prior to the operation of the ERH system.

5.1.4 Removal of the Two Stoddard Solvent Underground Storage Tanks

The two closed-in-place Stoddard solvent USTs and associated underground pipelines will be removed in accordance with *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* (Ecology 1991) by a certified UST Site Assessor. The two USTs are located in designated Area 3, where detectable concentrations of PCE were not above 60 mg/kg, but were greater than 14 mg/kg. Generated waste soil from UST removal activities will be temporarily placed in plastic-lined containers, sampled for waste profiling, and transported to a treatment, storage, and disposal facility (TSDF) for proper disposal.

5.1.5 Removal of the a Former Heating Oil Underground Storage Tank

One closed-in-place heating oil UST is located in the boiler room of the Dry Cleaner Building. This heating oil UST is located in designated Area 4, where detectable

moisture, followed by dissolved-phase VOCs, and finally, uncontaminated groundwater. This is explained by Dalton's law of partial pressures. When a VOC is immersed in water, the combined boiling point is depressed. Consequently, the VOC/water interface will boil when the vapor pressure of the VOC plus the vapor pressure of water are equal to the ambient pressure. The boiling temperature of water that contains dissolved-phase VOCs is also depressed, depending on the VOC concentration. However, the boiling point depression due to dissolved-phase VOCs is negligible unless the concentration is in the percent range.

The heating contractor estimates that 260,000 kilowatt hour of electrical energy will need to be inputted into the subsurface in order to achieve the remediation level for soil of 14 mg/kg. Additional estimated 20,000 kilowatt hours will be used by surface equipment. The approximate time to apply this amount of energy to the subsurface will be 45 to 60 days.

5.3 Electrical Resistance Heating Confirmation Soil Sampling

Confirmation soil sampling will be conducted to confirm that the soil remediation level is met in Areas 1, 2, and 3 to propose a contained-out determination to allow for the disposal of the soil at a non-hazardous Subtitle D landfill.

The confirmation soil sampling will be performed after contaminated soils intended for a contained out approval have cooled to 30°C, and when ERH performance data, including soil vapor recovery of CVOCs, and energy input, indicate that the remediation level has likely been achieved. The confirmation sampling event will consist of using a probe rig and collecting performance soil samples at locations determined by historical soil sampling data in the treatment area, performance soil vapor monitoring results from the ERH operations, and agreed on locations with Ecology to attain a contained-out determination for PCE-contaminated soil located within the designated remediation Areas 1, 2, and 3. Hot soil sampling procedures will be specified in the sample and analysis plan.

5.4 Installation and Operation of a Temporary Construction Dewatering System

Following installation of the soldier pile shoring system, a temporary construction dewatering system will be constructed for the duration of excavation activities at the Dry Cleaner Building Property. The dewatering system will prevent and minimize water infiltration to allow for excavation to the depth of approximately 15 to 16 feet bgs during redevelopment. In general, the temporary dewatering system will consist of collection trenches and sump with a high-capacity pump, two or more dewatering wells installed in the Deep Zone around the elevator pit, two or more dewatering wells installed in the Shallow Zone in the western alley and in the western sidewalk of 4th Avenue Northeast, and six of the injection wells located in the south sidewalk of Woodlawn Avenue Northeast (Figure 20) will be utilized as temporary dewatering wells during the construction to remove or reduce the concentrations of PCE in groundwater in the Shallow Zone.

5.5.1 Installation of Soldier Pile Shoring System

Shoring will be installed around the entire perimeter of the redevelopment and will consist of soldier piles and lagging. The shoring along the southern property line of the South-Adjoining Property (which is being excavated for development purposes and is not part of the remedial action for the Site) will also include tie backs. The shoring design will be incorporated into the future redevelopment plans and is not considered a remedial action or presented in this CAP. Shoring will be installed in approximate 5- to 10-foot vertical increments as the excavation proceeds, to facilitate the safe excavation of contaminated soil to the required depth.

It is anticipated that soil removed from the perimeter shoring installation activities will meet the contained-out criteria for F002 listed dangerous waste soils for disposal at a Subtitle D TSDF (Figure 11); however, if concentrations of F002 listed dangerous waste soils do not meet the requirements of the contained-out determination, the F002 listed dangerous waste soil will disposed of at a Subtitle C TSDF. To meet the requirements of the contained-out determination, detectable concentrations of PCE must be below 14 mg/kg. Approximately 278 cubic yards of soil cuttings from the perimeter of the excavation area will be removed from the Dry Cleaner Building Property for off-site disposal.

5.5.2 Excavation of Accessible PCE-Contaminated Soil at the Dry Cleaner Building Property

The average ground surface elevation for the Dry Cleaner Building Property is 177.84 feet NAVD88. The excavation limits will extend from lot-line to lot-line and to an average bottom of elevation of 163.79 feet NAVD88. Based on the averages of the ground surface and bottom of excavation elevations, the average depth of excavation will be approximately 14 feet bgs.

Field activities will involve excavating soil from the Shallow Zone to the proposed final depths of the redevelopment project and transporting the excavated material off-site for land disposal (Figures 11, 12, 13, and 14). A grid system will be developed to guide the segregation of PCE-contaminated soil and handling procedures for the contractor and to confirm compliance with the contained-out determination. Field screening and performance soil samples will be used to document COC concentrations in soil at the final limits of excavation.

It is anticipated that soil removed from the excavation area will meet the contained-out criteria for PCE for disposal at a Subtitle D TSDF (Figure 11). To meet the requirements of the contained-out determination, detectable concentrations of PCE must be below 14 mg/kg. Approximately 4,800 cubic yards of soil will be removed from the Dry Cleaner Building Property for off-site disposal.

and conveyed to a common manifold. The injection wells will be completed by a licensed well driller and comply with a variance from Ecology or the requirements of WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells."

Each injection well will be constructed of 2- to 4-inch-diameter blank PVC casing, flush-threaded to 0.020-inch slotted well screen. The bottom of each well will be fitted with a threaded PVC bottom cap, and the top of each well will be fitted with a PVC reducer bushing and connected to a 1-inch-diameter PVC conveyance pipe. Each injection well will have a dedicated conveyance pipe that connects the injection well head to the system piping manifold at the system enclosure.

Each injection well will be completed with a bentonite seal extending down from the top of casing, which will be the approximate elevation at the base of the excavation. The annulus of the injection wells will be filled with #10/20 silica sand extending from the bottom of the bentonite seal to total depth. The well completion will be recorded on boring log forms.

On completion of drilling and injection well installation activities, a survey of injection well locations will be performed and the wells will be developed. The horizontal and vertical injection well locations and top of casing elevations will be surveyed by a licensed surveyor for the purposes of providing an as-built drawing for the injection system well configuration. Elevations will be surveyed relative to NAVD88 using a City of Seattle benchmark. The injection well locations and elevations will be surveyed prior to covering the injection wells and conveyance piping beneath the rat-slab.

The injection wells will be developed by field staff with the use of a Grundfos submersible pump or equivalent and will consist of surging and purging until a minimum of five well volumes are removed and the groundwater no longer appears turbid. Turbidity will be measured visually by field staff conducting development activities. The installation of the injection wells and system piping will be completed concurrently with construction activities and prior to the installation of the rat-slab.

5.6.1 Injection Program

Each injection well will be equipped with a pipe that runs beneath the rat-slab from the wellhead to the injection manifold, which will be housed in either a system piping enclosure or subgrade vault. A temporary injection system will be used to introduce EOS into each of the injection wells (Figures 15 and 16). The temporary injection system will connect directly to the manifold piping to avoid the need for permanent injection equipment to be maintained within the parking garage. The injection manifold will be readily accessible for both the initial and future injection events, if necessary.

Contingency actions for ERD treatment, including additional injections, injection of dechlorinating bacteria (e.g., *Dehalococcoides*), installation of additional injection wells or points, or use of different ERD substrates, may be warranted in consultation with Ecology, if concentrations of COCs in the groundwater from selected performance monitoring wells indicate that the contaminated groundwater plume is expanding and/or COCs will not reach their cleanup levels within 30 years of the initial EDR treatment. The methodologies for evaluating plume stability and restoration time frame are presented in the Engineering Design Report. .

5.6.4 Injection Well Decommissioning

On completion of the Ecology-required confirmation monitoring and Ecology's issuance of a No Further Action determination letter, the injection wells will be decommissioned in accordance with the Ecology Water Well Construction Act (1971), Revised Code of Washington Chapter 18.104 (WAC 173-160-460). The wells will be decommissioned in place using bentonite clay chips or slurry or equivalent.

5.7 Installation of Sub-Slab Drainage System

A permanent sub-slab drainage system will be installed within the footprint of the new building footprint (Figure 21). The primary functions of the sub-slab drainage system are to minimize the amount of groundwater in contact with the vapor barrier and to drain water collected between the soldier pile shoring system and shotcrete wall.

The sub-slab drainage system will be installed beneath the concrete foundation slab and vapor barrier and above the concrete rat-slab. The sub-slab drainage piping will be installed within an approximate 1-foot-thick layer of drainage rock. The perimeter walls of the drainage rock and sub-slab drainage system will be partially sealed by the vapor barrier and shotcrete wall.

The sub-slab drainage system will be designed to treat groundwater with concentrations of PCE and its degradation compounds. An in-line treatment system using filter media, such as ZVI or granular activated carbon, is proposed for pretreatment of collected water from the drainage system prior to discharge to the sanitary sewer system. A wastewater discharge authorization permit will be procured from King County and the City of Seattle prior to discharge to the sanitary sewer system.

5.8 Installation of Vapor Barrier and Passive Ventilation System

A vapor barrier and a passive ventilation system will be installed below the foundation concrete slab of the underground parking garage as an engineering control measure to mitigate potential vapor with concentrations of PCE and its degradation compounds and to provide long-term protection of the indoor air quality within the building. The design of the vapor barrier and passive ventilation system are discussed in the Engineering Design Report.

Toxics Cleanup Program Procedure 440A and/or any subsequent policies or procedures specified by Ecology for environmental (restrictive) covenants and will likely include, but not be limited to, the following:

- Restriction on disturbing residual soil with concentrations of the COCs exceeding applicable cleanup levels left in place.
- Requirement to perform routine maintenance on accessible equipment for the sub-slab drainage system.

Engineering controls will be incorporated into the redevelopment plans at the Site to eliminate exposure pathways from residual contaminated soil left in place, including installation of a 4-inch thick rat slab on the bottom of the excavation, installation of a sub-slab drainage system, and installation of a foundation slab vapor barrier. The environmental (restrictive) covenant will include requirements to insure the long-term integrity and maintenance of accessible to the engineering control systems.

6.0 COMPLIANCE MONITORING

Compliance monitoring will be performed in accordance with the requirements of WAC 173-340-410, and will address protection, performance, and confirmation monitoring. The compliance monitoring requirements are presented briefly in the sections below. Specific requirements for the compliance monitoring are provided in the sampling and analysis plan, under separate cover.

6.1 Protection Monitoring

A Health and Safety Plan will be prepared for the cleanup action that meets the minimum requirements for such a plan identified in federal (29 CFR 1910.120 and 1926) and state regulations (WAC 296). The Health and Safety Plan identifies all known physical, chemical, and biological hazards; hazard monitoring protocols; and administrative and engineering controls required to mitigate the identified hazards.

6.2 Performance Monitoring

Performance monitoring includes the collection of soil and groundwater samples from within the treatment area and throughout the Site to document that the cleanup action has achieved the cleanup standards.

6.2.1 Soil Performance Monitoring—Electrical Resistance Heating/Soil Vapor Extraction Treatment Area

During redevelopment, ERH-treated soil will be excavated, stockpiled, if possible, and sampled to determine its final disposition. Stockpile soil samples will be collected in general accordance with Ecology's *Guidance for Remediation of Petroleum*

- Soil with concentrations of PCE and its degradation products; gasoline-, diesel-, oil-, range petroleum hydrocarbons; and associated compounds.
- Contaminated groundwater from excavation dewatering.
- Contaminated personal protective equipment.
- Decontamination solutions.
- Miscellaneous solid wastes.

Each waste stream will be profiled separately in accordance with the minimum waste *analyses* requirements of the respective permitted TSDF. If unforeseen soil conditions are encountered, additional waste profiling may be required for proper classification and disposal.

6.3 Confirmation Monitoring

Confirmation monitoring will commence after the analytical data from the performance monitoring indicates that cleanup objectives have been achieved.

6.3.1 Soil Confirmation Monitoring

Confirmation monitoring for soil will be conducted to verify that concentrations of F002 listed waste constituents are below the remediation levels required to obtain a contained-out determination from Ecology for soil. Additional confirmation soil samples will be collected directly from the bottom of the excavation in the ERH treatment area and from the bottom and sidewall of the South-Adjoining Property to assess for the presence of potential residual contaminated soil located beyond the excavation limits. Based on the anticipated extent of the remedial excavation and estimated extent of soil potentially requiring disposal, confirmation samples will be collected within a surveyed grid to confirm that F002 listed waste contaminated soils are below remediation levels designated for this site. The sampling grid provides a mechanism for systematic sample collection and identification.

6.3.2 Groundwater Confirmation Monitoring

It is anticipated that the groundwater quality beneath the Dry Cleaner Building Property will be improved by virtue of removing the source area and treating the residual contamination by ERH and in situ ERD. To confirm the effectiveness of the cleanup action on groundwater quality, groundwater samples will be collected on a regular basis from designated monitoring wells at the Site. Confirmational groundwater monitoring will be presented in the Confirmational Monitoring Plan. Four quarters of confirmation groundwater monitoring will be implemented once the cleanup level for PCE has been achieved at the conditional points of compliance for groundwater.

7.3 Cleanup Action Completion

When the goals and objectives of the CAP and Consent Decree have been met, a Cleanup Action Completion Report will be submitted to Ecology. Once the Completion Report has been approved by Ecology, Ecology will prepare status letters for submittal to The Hearthstone documenting completion for the major components of the CAP and the Consent Decree. Upon receipt of such status letters, The Hearthstone may then request to have the Site removed from the Hazardous Sites List, pursuant to WAC 173 340 330(7).

8.0 REFERENCES

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FIGURES

SoundEarth Strategies

Table 1
Summary of Groundwater Elevation Data
Plastic Sales and Service Site
6870 Woodlawn Avenue Northeast
Seattle, Washington

Well ID	Screened Interval (feet bgs)	TOC Elevation (feet msl)[1]	Total Well Depth (feet below TOC)[2]	Date Measured	Depth to Groundwater (feet below TOC)[2]	Groundwater Elevation (feet msl)[2]
Shallow Water Bearing Zone Wells						
MW01	4 to 19	178.24	18.42	08/05/04	7.91	170.33
			18.42	11/18/04	7.00	171.24
			--	01/07/05	5.91	172.33
			--	05/31/06	6.36	171.88
			--	06/22/06	8.22	170.02
			18.15	01/08/07	3.93	174.31
			18.15	04/20/07	5.38	172.86
			18.48	11/19/08	6.78	171.46
			18.37	05/03/10	6.33	171.91
			--	05/07/10	6.52	171.72
			--	09/09/14	11.19	167.05
MW02	5 to 20	176.22	19.48	08/05/04	6.39	169.83
			19.50	11/18/04	6.41	169.81
			--	01/07/05	5.88	170.34
			--	05/31/06	5.75	170.47
			--	06/22/06	7.01	169.21
			--	01/08/07	4.56	171.66
			--	04/20/07	4.90	171.32
			19.31	11/19/08	6.86	169.36
			19.45	05/03/10	6.50	169.72
			--	05/07/10	6.48	169.74
			--	09/09/14	9.01	167.21
MW03	5 to 20	175.87	19.55	08/05/04	6.56	169.31
			19.56	11/18/04	6.64	169.23
			--	01/07/05	5.86	170.01
			--	05/31/06	2.79	173.08
			--	06/22/06	3.69	172.18
			19.54	01/08/07	2.18	173.69
			19.54	04/20/07	1.96	173.91
			19.6	11/19/08	2.65	173.22
			19.45	05/03/10	2.54	173.33
			--	05/07/10	2.59	173.28
			--	09/09/14	5.92	169.95
MW04	4 to 18	176.15	18.08	08/05/04	7.66	168.49
			18.08	11/18/04	7.35	168.80
			--	01/07/05	6.82	169.33
			--	05/31/06	7.88	168.27
			--	06/22/06	8.19	167.96
			17.95	01/08/07	5.80	170.35
			17.95	04/20/07	6.49	169.66
			17.61	11/19/08	8.45	167.70
			17.54	05/03/10	8.02	168.13
			--	05/04/10	8.09	168.06
			--	05/07/10	7.98	168.17
			--	09/09/14	10.26	165.89
MW05	2.5 to 17.5	177.37	17.45	08/05/04	8.71	168.66
			17.45	11/18/04	7.86	169.51
			--	01/07/05	7.15	170.22
			--	05/31/06	7.50	169.87
			--	06/22/06	9.12	168.25
			17.44	01/08/07	2.90	174.47
			17.44	04/20/07	6.63	170.74
			17.47	11/19/08	8.30	169.07
			17.45	05/03/10	7.54	169.83
			--	05/04/10	7.87	169.50
			--	05/07/10	8.01	169.36
			--	09/09/14	10.97	166.40

SoundEarth Strategies

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Well ID	Screened Interval (feet bgs)	TOC Elevation (feet msl)[1]	Total Well Depth (feet below TOC)[2]	Date Measured	Depth to Groundwater (feet below TOC)[3]	Groundwater Elevation (feet msl)[1]
Shallow Water Bearing Zone Wells						
TMW01	8 to 18	176.98	18.75	04/05/10	5.12	171.86
			18.80	05/04/10	5.27	171.71
			--	05/07/10	5.31	171.67
TMW02	8 to 18	176.91	18.79	04/05/10	5.62	171.29
			18.83	05/04/10	6.31	170.60
			--	05/07/10	6.25	170.66
TMW03	8 to 18	177.14	18.22	04/05/10	6.96	170.18
			18.25	05/04/10	7.53	169.61
			--	05/07/10	7.52	169.62
MW27	8.5 to 13.5	--	13.5	06/28/11	--	--
			--	09/09/14	11.54	--
Deep Water Bearing Zone Wells						
MW07	21 to 31	176.56	31.00	12/06/04	7.45	169.11
			--	01/07/05	7.30	169.26
			--	05/31/06	8.09	168.47
			--	06/22/06	8.42	168.14
			31.01	01/08/07	6.52	170.04
		176.59	--	04/20/07	7.00	169.59
			30.67	11/19/08	8.38	168.21
			30.84	05/03/10	7.99	168.60
			--	05/07/10	8.04	168.55
			--	09/09/14	10.37	166.22
MW08	30 to 40	175.90	40.09	12/06/04	6.55	169.35
			--	01/07/05	6.34	169.56
			--	05/31/06	6.35	169.55
			--	06/22/06	7.55	168.35
			40.09	01/08/07	5.54	170.36
			40.09	01/08/07	5.98	169.92
			40.15	11/19/08	9.00	166.90
			40.15	05/03/10	8.49	167.41
			--	05/07/10	8.51	167.39
			--	09/09/14	10.32	165.58
MW09	30 to 40	176.43	39.81	12/06/04	6.81	169.62
			--	01/07/05	6.49	169.94
			--	05/31/06	6.34	170.09
			--	06/22/06	7.48	168.95
			39.75	01/08/07	5.85	170.58
			39.75	04/20/07	6.01	170.42
			39.81	11/19/08	7.30	169.13
			39.80	05/03/10	6.74	169.69
			--	05/07/10	6.73	169.70
			--	09/09/14	9.25	167.18
MW10	30 to 40	176.01	39.98	12/06/04	7.12	168.89
			--	01/07/05	6.89	169.12
			--	05/31/06	6.99	169.02
			--	06/22/06	8.12	167.89
			--	01/08/07	6.05	169.96
			--	04/20/07	6.57	169.44
			40.01	11/19/08	10.21	165.80
			40.00	05/03/10	9.72	166.29
			--	05/07/10	9.75	166.26
			--	09/09/14	11.26	164.75

SoundEarth Strategies

Table 2
Groundwater Analytical Results for CVOCs
Plastic Sales and Service Site
6870 Woodlawn Avenue Northeast
Seattle, Washington

Well ID	Sample ID	Sampled By	Sample Date	Sample Point Depth (feet bgs)	Analytical Results[1] (micrograms per liter)					
					PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl Chloride
Shallow Zone Wells										
MW01	MW-1	GeoEngineers	10/30/03	--	< 2.0	< 2.0	< 2.0	< 2.0	--	< 2.0
	MW1-060206	Farallon	06/02/06	16.42	1.1	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW1-112008	Farallon	11/20/08	16.48	1.5	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW1-050410	Farallon	05/04/10	11.50	1.8	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW01-20140910	SoundEarth	09/10/14	13.50	1.6	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW02	MW-2	GeoEngineers	10/30/03	--	< 2.0	< 2.0	< 2.0	< 2.0	--	< 2.0
	MW2-060106	Farallon	06/01/06	17.50	< 0.2	5.5	< 0.2	< 0.2	--	< 0.2
	MW2-111908	Farallon	11/19/08	17.31	6.80	4.6	< 0.2	< 0.2	--	< 0.2
	MW2-050410	Farallon	05/04/10	12.50	9.50	3.5	< 0.2	< 0.2	--	< 0.2
	MW02-20140910	SoundEarth	09/10/14	11.50	4.0	0.49	< 0.2	< 0.2	< 0.2	< 0.2
MW03	MW-3	GeoEngineers	10/30/03	--	170	< 2.0	< 2.0	< 2.0	--	< 2.0
	MW3-060106	Farallon	06/01/06	17.56	150	1.1	< 1.0	< 1.0	--	< 1.0
	MW3-111908	Farallon	11/19/08	17.60	230	1.6	2.0	< 1.0	--	< 1.0
	MW3-050410	Farallon	05/04/10	12.50	150	< 1.0	< 1.0	< 1.0	--	< 1.0
	MW03-20140910	SoundEarth	09/10/14	8.50	64	0.58	0.79	< 0.2	< 0.2	< 0.2
MW04	MW-4	GeoEngineers	10/30/03	--	2,100	220	92	< 2.0	--	20
	MW4-080504	Farallon	08/05/04	16.00	860	1200	250	< 10	--	68
	MW4-060206	Farallon	06/02/06	16.08	1,100	730	590	< 10	--	170
	MW4-042007	Farallon	04/20/07	14.95	3,100	720	940	< 20	--	160
	MW4-112008	Farallon	11/20/08	15.61	10,000	640	1,100	< 50	--	130
	MW4-050510	Farallon	05/05/10	11.00	10,000	1,000	1,600	< 50	--	370
	MW04-20140910	SoundEarth	09/10/14	12.50	28,000	3,400	3,800	< 200	< 200	920
MW05	MW-5	GeoEngineers	10/30/03	--	270	46	< 2.0	< 2.0	--	< 2.0
	MW5-060106	Farallon	06/01/06	15.45	54	9.6	3.3	< 0.4	--	< 0.4
	MW5-20080328	SoundEarth	03/28/08	--	19	110	40	< 1	--	2.8
	MW5-112008	Farallon	11/20/08	15.47	86	67	37	1.4	--	5.5
	MW5-050410	Farallon	05/04/10	10.00	82	34	27	0.44	--	0.88
	MW05-20140911	SoundEarth	09/11/14	13.50	71	22	5.6	0.27	< 0.2	< 0.2
MW06	MW-6	GeoEngineers	11/08/04	--	29	18	11	< 2.0	--	6
	MW6-050410	Farallon	05/04/10	14.50	4,100	330	440	< 20	--	110
	MW06-20141007	SoundEarth	10/07/14	17.50	10,000	450	320	< 50	< 0.050	72
MW15	MW15-060106	Farallon	06/01/06	16.12	0.22	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW15-112008	Farallon	11/20/08	13.20	0.26	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW15-050410	Farallon	05/04/10	12.50	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW15-20140910	SoundEarth	09/10/14	17.50	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW16	MW16-060106	Farallon	06/01/06	17.45	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW16-111908	Farallon	11/19/08	17.60	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW16-050510	Farallon	05/05/10	12.50	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW16-20140909	SoundEarth	09/09/14	12.00	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW17	MW17-060106	Farallon	06/01/06	17.19	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	Monitoring Well Decommissioned									
MW19	MW17-20080328	SoundEarth	03/28/08	--	< 1	< 1	< 1	< 1	--	< 0.2
	MW19-20090311	SoundEarth	03/11/09	--	< 1	< 1	< 1	< 1	--	< 0.2
	MW19-050310	Farallon	05/03/10	15.00	< 1	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW19-20140909	SoundEarth	09/09/14	17.00	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW21	MW21-112008	Farallon	11/20/08	21.74	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW21-050410	Farallon	05/04/10	19.00	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW21-20140909	SoundEarth	09/09/14	19.00	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.73
MW23	MW23-112008	Farallon	11/20/08	18.15	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW23-050410	Farallon	05/04/10	15.00	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	Monitoring Well Decommissioned									
MTCA Cleanup Levels for Groundwater					5[2]	5[2]	16[3]	160[3]	400[3]	0.2[2]

SoundEarth Strategies

Table 2
Groundwater Analytical Results for CVOCs
Plastic Sales and Service Site
6870 Woodlawn Avenue Northeast
Seattle, Washington

Well ID	Sample ID	Sampled By	Sample Date	Sample Point Depth (feet bgs)	Analytical Results[1] (micrograms per liter) PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl Chloride
Deep Zone Wells										
MW14	MW14-060206	Farallon	06/02/06	71.31	0.99	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW14-032507	Farallon	03/25/07	70.08	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW14-042007	Farallon	04/20/07	68.80	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW14-112008	Farallon	11/20/08	70.16	1.10	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW14-050410	Farallon	05/04/10	68.00	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW14-20140910	SoundEarth	09/10/14	68.00	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW18	MW18-060106	Farallon	06/01/06	75.92	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	Monitoring Well Decommissioned									
MW20	MW20-112008	Farallon	11/20/08	47.19	0.28	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW20-050410	Farallon	05/04/10	45.00	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	Monitoring Well Decommissioned									
MW22	MW22-112008	Farallon	11/20/08	47.19	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW22-050410	Farallon	05/04/10	44.00	< 1.0	< 0.2	< 0.2	< 0.2	--	< 0.2
	MW22-20140910	SoundEarth	09/10/14	44.50	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MTCA Cleanup Levels for Groundwater					5[2]	5[2]	16[3]	160[3]	400[3]	0.2[2]

NOTES:

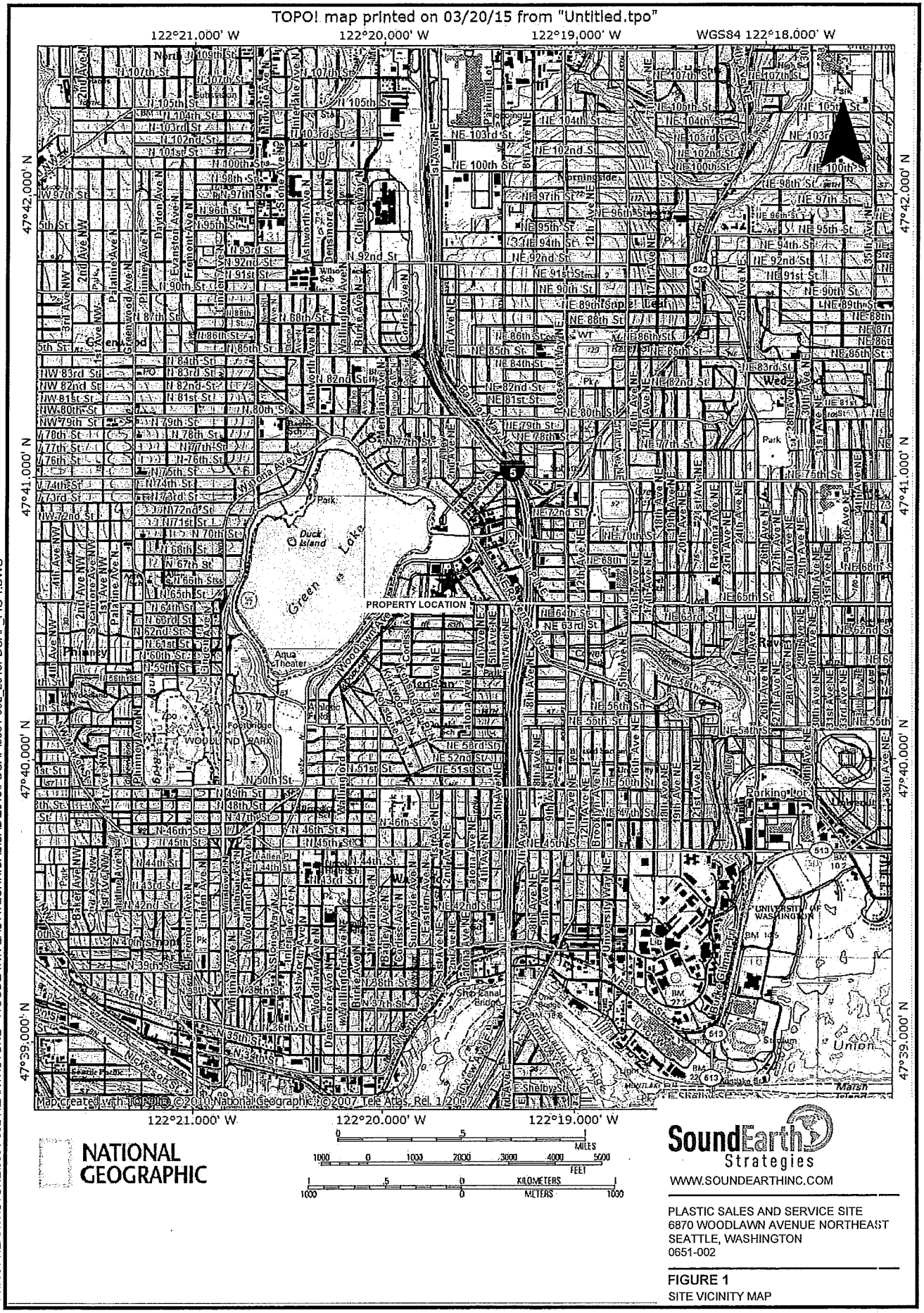
Red denotes concentration exceeds MTCA cleanup level for groundwater.

[1]Analyzed by U.S. Environmental Protection Agency Method 8260B or 8260C.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B, Non-Carcinogen, Standard Formula Value, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

-- = not analyzed
< = not detected at a concentration above the laboratory reporting limit
bgs = below ground surface
CLARC = cleanup levels and risk calculations
CVOC = chlorinated volatile organic compound
DCE = dichloroethene
Farallon = Farallon Consulting, L.L.C.
GeoEngineers = GeoEngineers, Inc.
MTCA = Washington State Model Toxics Control Act
PCE = tetrachloroethene
SoundEarth = SoundEarth Strategies, Inc.
TCE = trichloroethene
WAC = Washington Administrative Code



NATIONAL GEOGRAPHIC

SoundEarth Strategies

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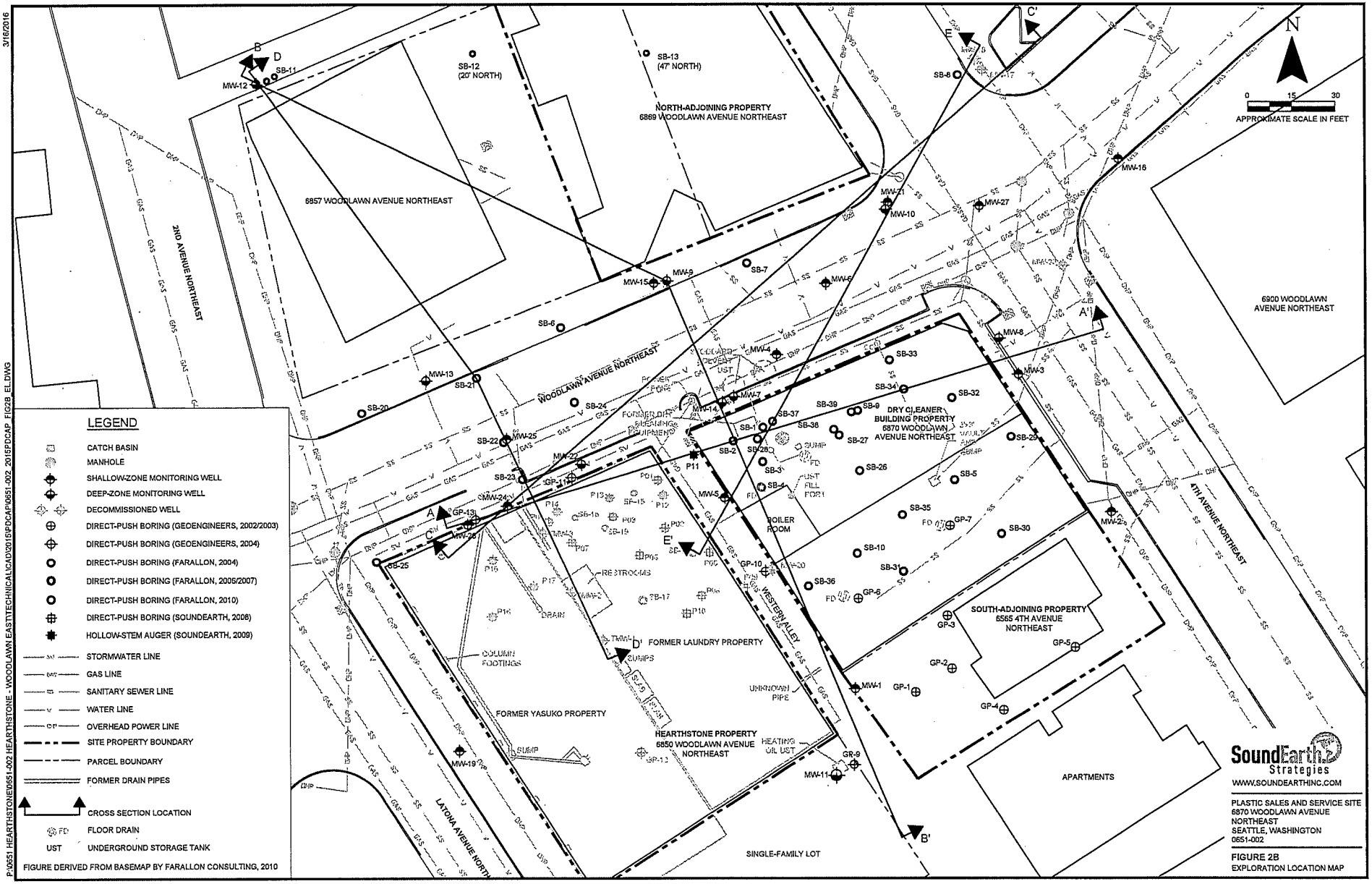
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE NORTHEAST
SEATTLE, WASHINGTON
0651-002

FIGURE 1
SITE VICINITY MAP

P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002_2015PDCAP_FIG 1.DWG


LEGEND
CATCH BASIN
MANHOLE
SHALLOW-ZONE MONITORING WELL
DEEP-ZONE MONITORING WELL
DECOMMISSIONED WELL
DIRECT-PUSH BORING (GEOENGINEERS, 2002/2003)
DIRECT-PUSH BORING (GEOENGINEERS, 2004)
DIRECT-PUSH BORING (FARALLON, 2004)
DIRECT-PUSH BORING (FARALLON, 2005/2007)
DIRECT-PUSH BORING (FARALLON, 2010)
DIRECT-PUSH BORING (SOUNDEARTH, 2008)
HOLLOW-STEM AUGER (SOUNDEARTH, 2009)
STORMWATER LINE
GAS LINE
SANITARY SEWER LINE
WATER LINE
OVERHEAD POWER LINE
SITE PROPERTY BOUNDARY
PARCEL BOUNDARY
FORMER DRAIN PIPES
CROSS SECTION LOCATION
FD FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
FIGURE DERIVED FROM BASEMAP BY FARALLON CONSULTING, 2010
N
0 15 30
APPROXIMATE SCALE IN FEET
NORTH-ADJOINING PROPERTY
6869 WOODLAWN AVENUE NORTHEAST
6857 WOODLAWN AVENUE NORTHEAST
6900 WOODLAWN AVENUE NORTHEAST
DRY CLEANER BUILDING PROPERTY
6870 WOODLAWN AVENUE NORTHEAST
FORMER DRY CLEANING EQUIPMENT
BOILER ROOM
FORMER LAUNDRY PROPERTY
SOUTH-ADJOINING PROPERTY
6565 4TH AVENUE NORTHEAST
FORMER YASUKO PROPERTY
HEARTHSTONE PROPERTY
6850 WOODLAWN AVENUE NORTHEAST
APARTMENTS
SINGLE-FAMILY LOT
WOODLAWN AVENUE NORTHEAST
2ND AVENUE NORTHEAST
4TH AVENUE NORTHEAST
LATONA AVENUE NORTH
WESTERN ALLEY
COLUMN FOOTINGS
UNKNOWN PIPE
HEATING OIL UST
SUMPS
DRAIN
SUMP
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PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE NORTHEAST
SEATTLE, WASHINGTON
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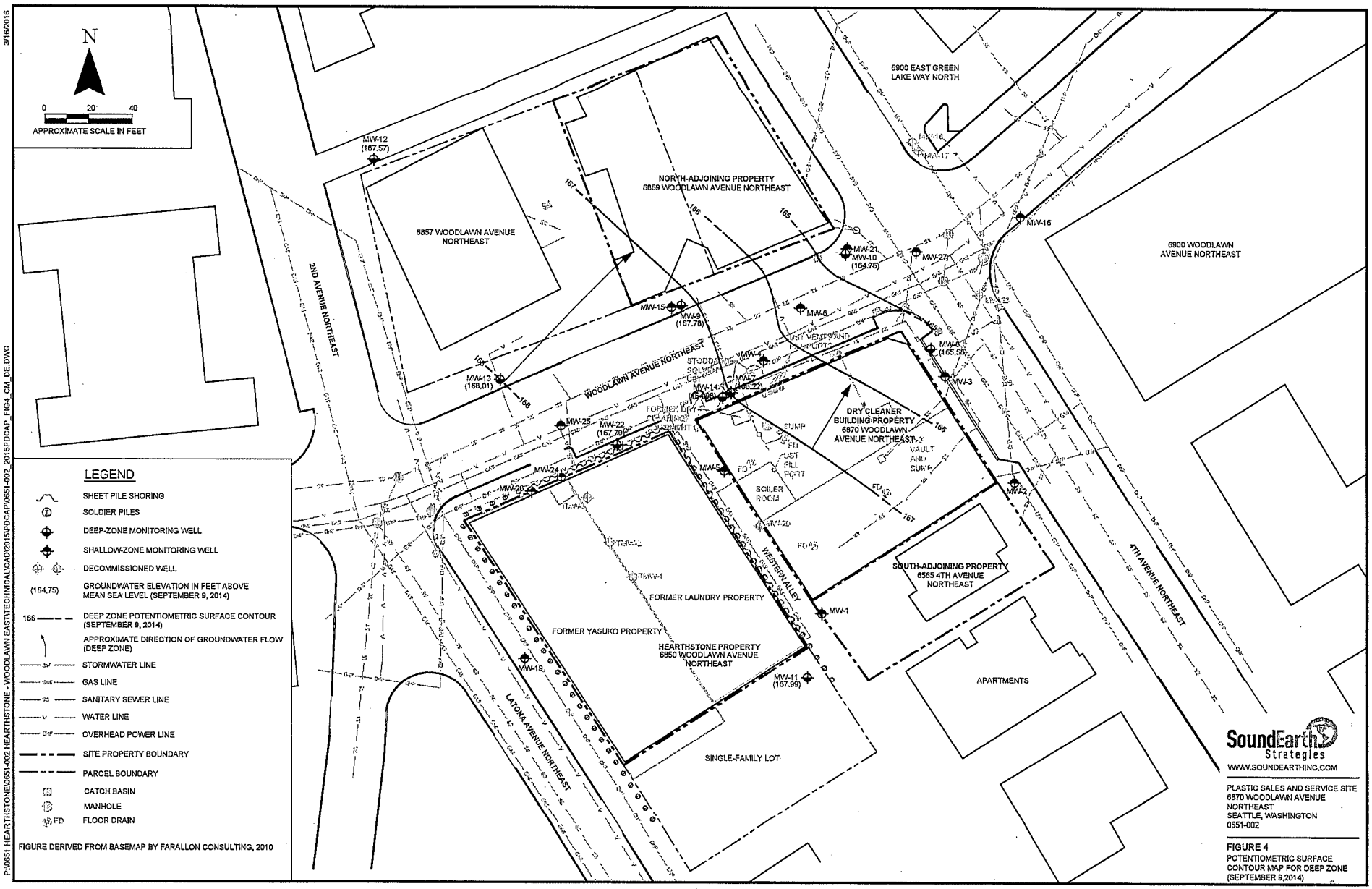
FIGURE 2B
EXPLORATION LOCATION MAP
3/16/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002 2015PDCAP FIG2B_EL.DWG


N
0 20 40
APPROXIMATE SCALE IN FEET
LEGEND
SHEET PILE SHORING
SOLDIER PILES
DEEP-ZONE MONITORING WELL
SHALLOW-ZONE MONITORING WELL
DECOMMISSIONED WELL
(164.75) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (SEPTEMBER 9, 2014)
165 DEEP ZONE POTENTIOMETRIC SURFACE CONTOUR (SEPTEMBER 9, 2014)
APPROXIMATE DIRECTION OF GROUNDWATER FLOW (DEEP ZONE)
STORMWATER LINE
GAS LINE
SANITARY SEWER LINE
WATER LINE
OVERHEAD POWER LINE
SITE PROPERTY BOUNDARY
PARCEL BOUNDARY
CATCH BASIN
MANHOLE
FD FLOOR DRAIN
FIGURE DERIVED FROM BASEMAP BY FARALLON CONSULTING, 2010
6900 EAST GREEN LAKE WAY NORTH
6900 WOODLAWN AVENUE NORTHEAST
NORTH-ADJOINING PROPERTY 6869 WOODLAWN AVENUE NORTHEAST
6857 WOODLAWN AVENUE NORTHEAST
2ND AVENUE NORTHEAST
WOODLAWN AVENUE NORTHEAST
4TH AVENUE NORTHEAST
LATONA AVENUE NORTHEAST
WESTERN ALLEY
DRY CLEANER BUILDING PROPERTY 6870 WOODLAWN AVENUE NORTHEAST
SOUTH-ADJOINING PROPERTY 6565 4TH AVENUE NORTHEAST
FORMER LAUNDRY PROPERTY
FORMER YASUKO PROPERTY
HEARTHSTONE PROPERTY 6850 WOODLAWN AVENUE NORTHEAST
APARTMENTS
SINGLE-FAMILY LOT
MW-12 (167.57)
MW-13 (168.01)
MW-15
MW-9 (167.78)
MW-21
MW-10 (164.75)
MW-27
MW-16
MW-17
MW-18
MW-6
MW-4
MW-7
MW-14 (165.48)
MW-8 (165.58)
MW-3
MW-25
MW-22 (167.78)
MW-24
MW-26
MW-5
MW-2
MW-1
MW-19
MW-11 (167.99)
SUMP
FD
UST FILL PORT
BOILER ROOM
VAULT AND SUMP
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6870 WOODLAWN AVENUE NORTHEAST
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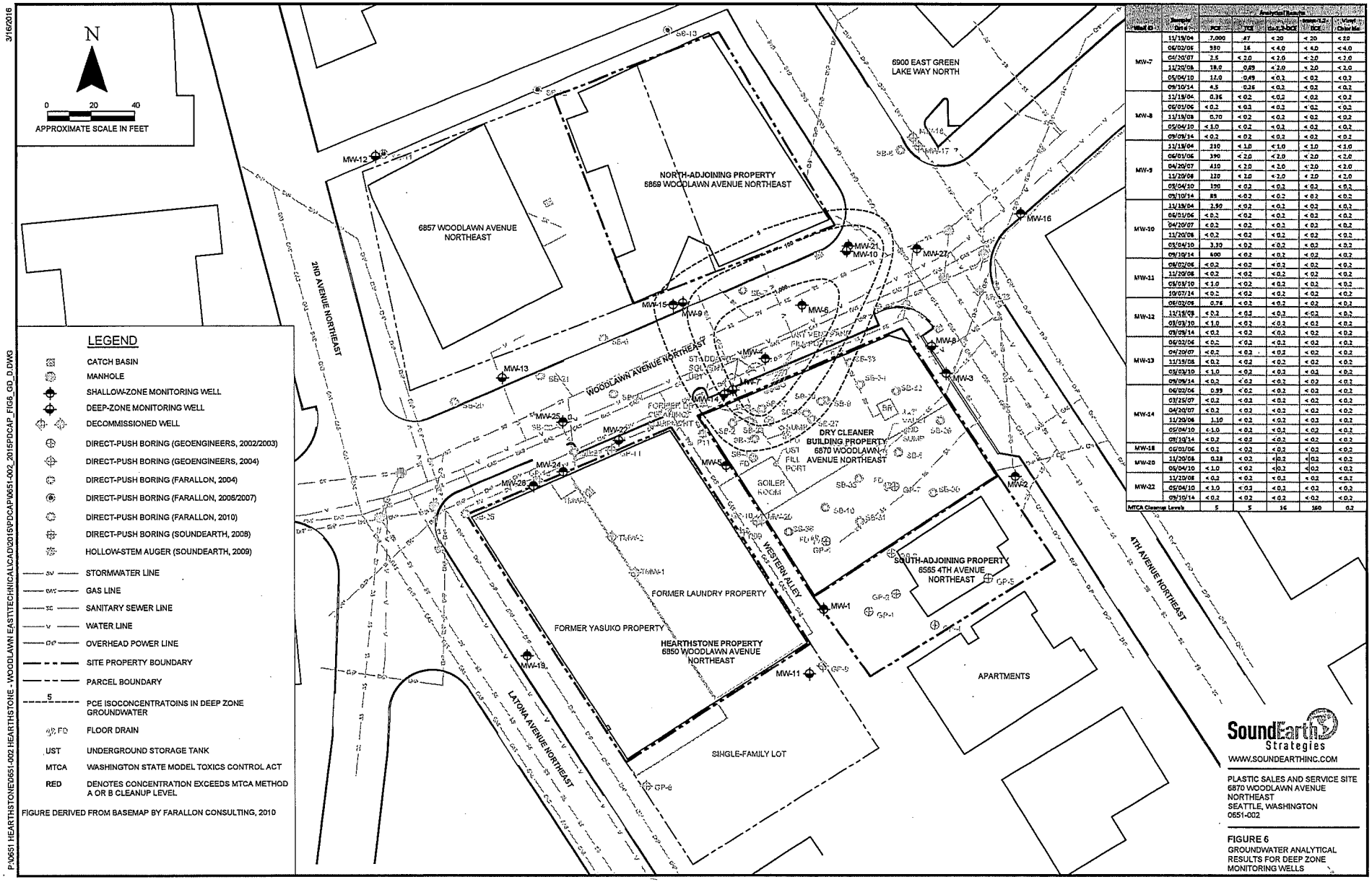
FIGURE 4
POTENTIOMETRIC SURFACE CONTOUR MAP FOR DEEP ZONE (SEPTEMBER 9,2014)
3/16/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002_2015PDCAP_FIG4_CM_DE.DWG



Well ID	Sample Date	Analytical Results PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
MW-7	11/19/04	7,000	87	< 20	< 20	< 20
	05/02/06	930	16	< 4.0	< 4.0	< 4.0
	04/20/07	2.5	< 2.0	< 2.0	< 2.0	< 2.0
	11/20/08	18.0	0.69	< 2.0	< 2.0	< 2.0
	05/04/10	12.0	0.49	< 0.2	< 0.2	< 0.2
	09/10/14	4.5	0.26	< 0.2	< 0.2	< 0.2
MW-8	11/19/04	0.36	< 0.2	< 0.2	< 0.2	< 0.2
	05/01/06	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	11/19/08	0.70	< 0.2	< 0.2	< 0.2	< 0.2
	05/04/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
	09/09/14	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-9	11/19/04	210	< 1.0	< 1.0	< 1.0	< 1.0
	05/01/06	390	< 2.0	< 2.0	< 2.0	< 2.0
	04/20/07	410	< 2.0	< 2.0	< 2.0	< 2.0
	11/20/08	220	< 2.0	< 2.0	< 2.0	< 2.0
	05/04/10	190	< 0.2	< 0.2	< 0.2	< 0.2
	09/10/14	88	< 0.2	< 0.2	< 0.2	< 0.2
MW-10	11/19/04	2.80	< 0.2	< 0.2	< 0.2	< 0.2
	05/01/06	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	04/20/07	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	11/20/08	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	05/04/10	3.30	< 0.2	< 0.2	< 0.2	< 0.2
	09/10/14	600	< 0.2	< 0.2	< 0.2	< 0.2
MW-11	05/02/06	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	11/20/08	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	05/03/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
	10/07/14	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-12	05/02/06	0.76	< 0.2	< 0.2	< 0.2	< 0.2
	11/19/08	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	05/03/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
	09/09/14	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-13	05/02/06	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	04/20/07	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	11/19/08	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	05/03/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
	09/09/14	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-14	05/02/06	0.99	< 0.2	< 0.2	< 0.2	< 0.2
	03/25/07	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	04/20/07	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	11/20/08	1.10	< 0.2	< 0.2	< 0.2	< 0.2
	05/04/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
	09/10/14	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-18	05/01/06	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-20	11/20/08	0.28	< 0.2	< 0.2	< 0.2	< 0.2
	05/04/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
MW-22	11/20/08	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	05/04/10	< 1.0	< 0.2	< 0.2	< 0.2	< 0.2
	09/10/14	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MTCA Cleanup Levels		5	5	16	160	0.2

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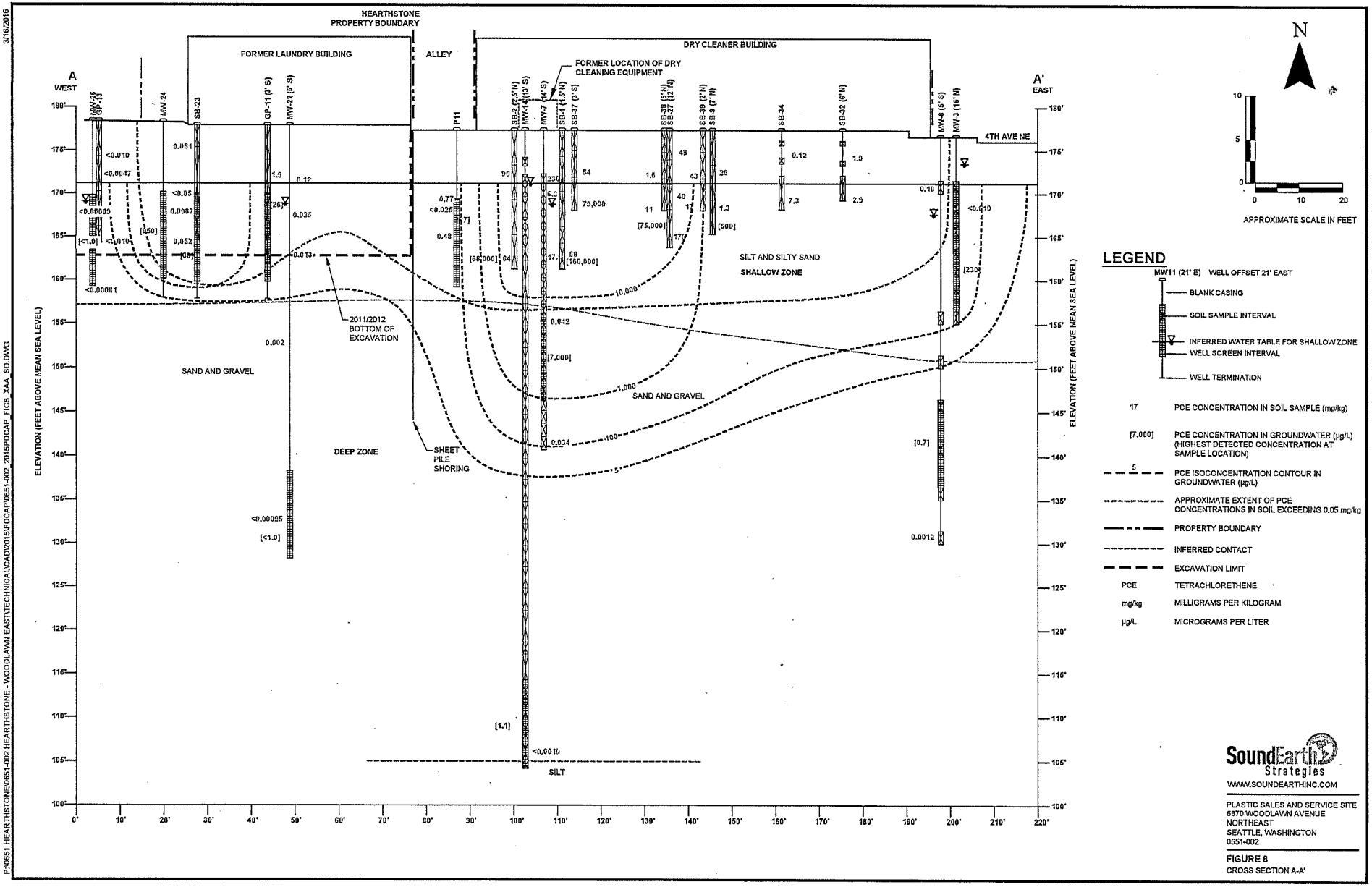
FIGURE 6
GROUNDWATER ANALYTICAL RESULTS FOR DEEP ZONE MONITORING WELLS

3/16/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2016\PDCAP\0651-002_2015PDCAP_FIG6_GD_D.DWG



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6870 WOODLAWN AVENUE NORTHEAST
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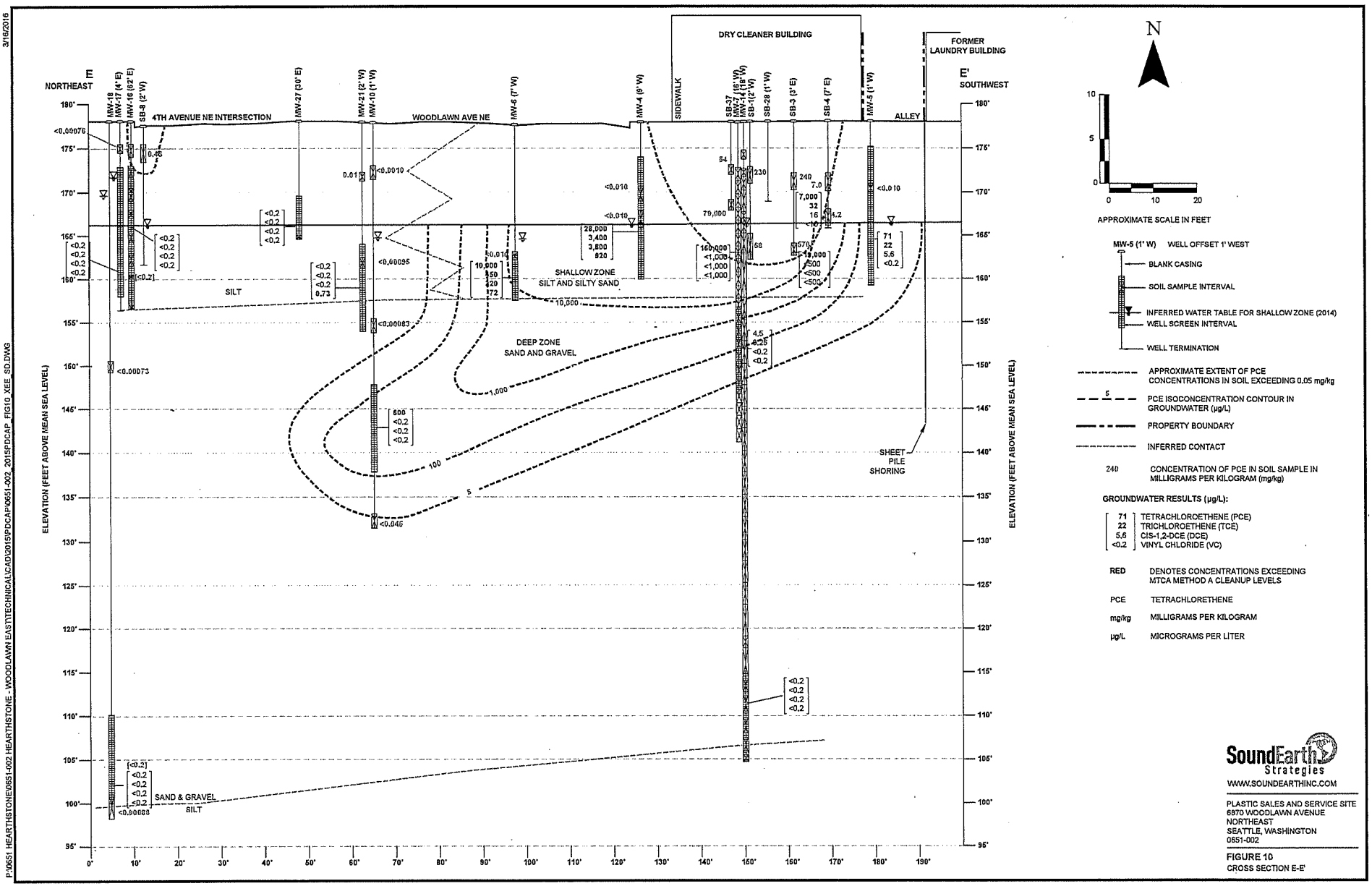
FIGURE 8
CROSS SECTION A-A'

3/16/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002_2015PDCAP_FIG8_XAA_SD.DWG



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NORTHEAST
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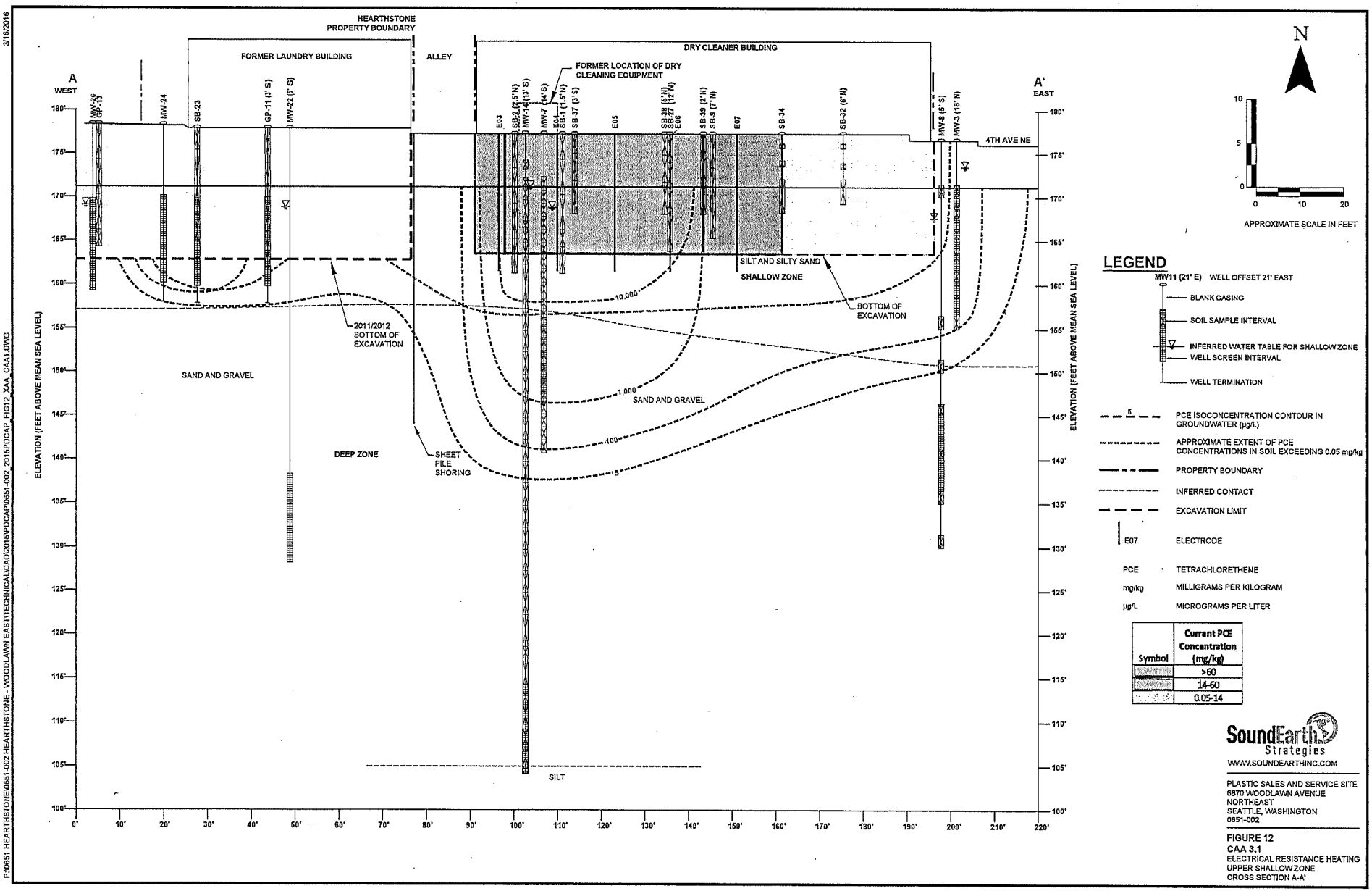
FIGURE 10
CROSS SECTION E-E'

3/16/2016
P:\0551 HEARTHSTONE\0551-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0551-002_2015PDCAP_FIG10_XEE_SD.DWG



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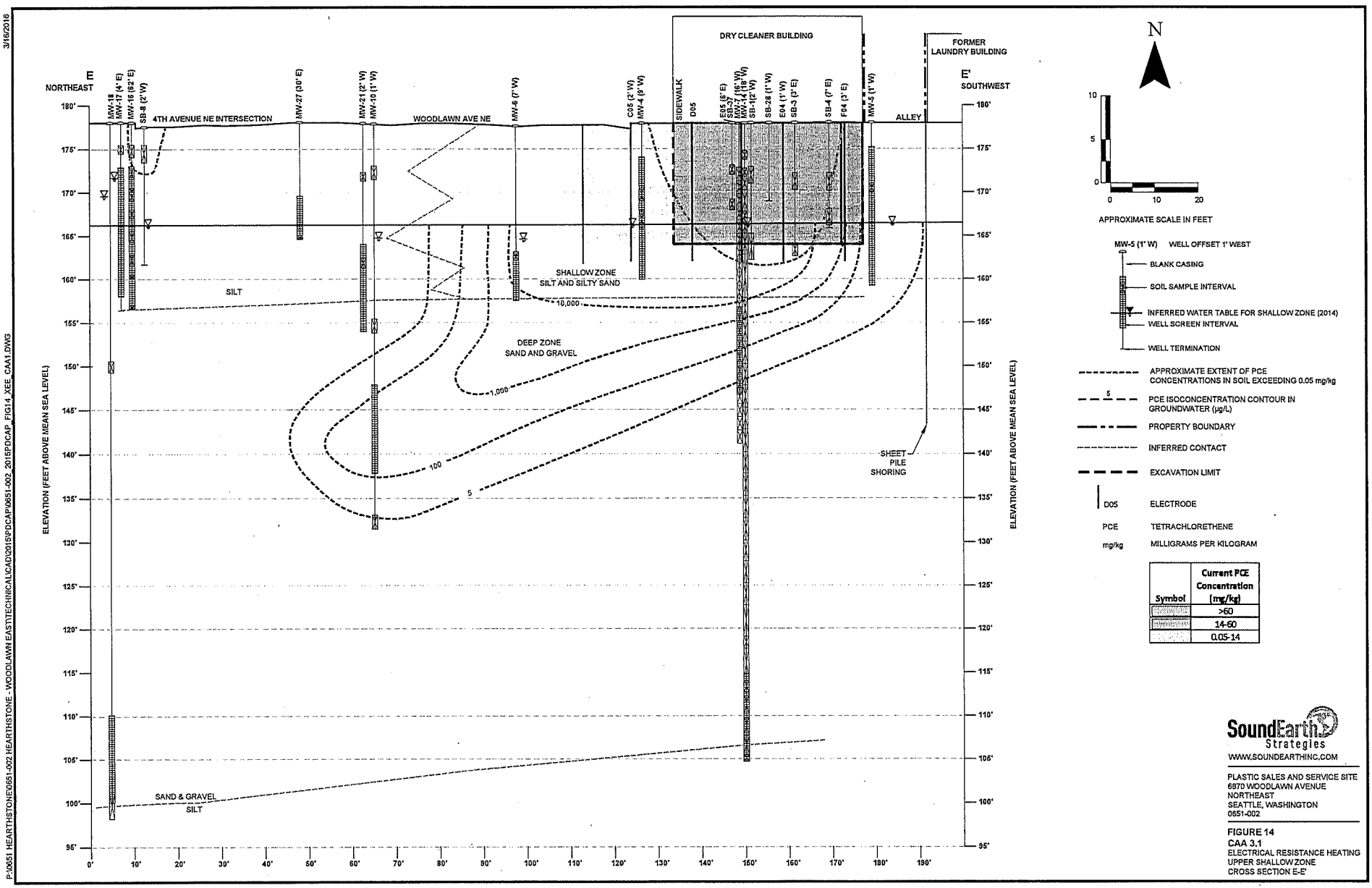
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE
NORTHEAST
SEATTLE, WASHINGTON
0851-002

FIGURE 12
CAA 3.1
ELECTRICAL RESISTANCE HEATING
UPPER SHALLOW ZONE
CROSS SECTION A-A'

3/16/2016
P:\0551 HEARTHSTONE\0551-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0551-002_2015PDCAP_FIG12_XAA_CAA1.DWG



APPROXIMATE SCALE IN FEET

APPROXIMATE EXTENT OF PCE CONCENTRATIONS IN SOIL EXCEEDING 0.05 mg/kg

5 PCE ISOCONCENTRATION CONTOUR IN GROUNDWATER (µg/L)

PROPERTY BOUNDARY

INFERRED CONTACT

EXCAVATION LIMIT

D05 ELECTRODE

PCE TETRACHLORETHENE

mg/kg MILLIGRAMS PER KILOGRAM

Symbol	Current PCE Concentration (mg/kg)
	>60
	14-60
	0.05-14

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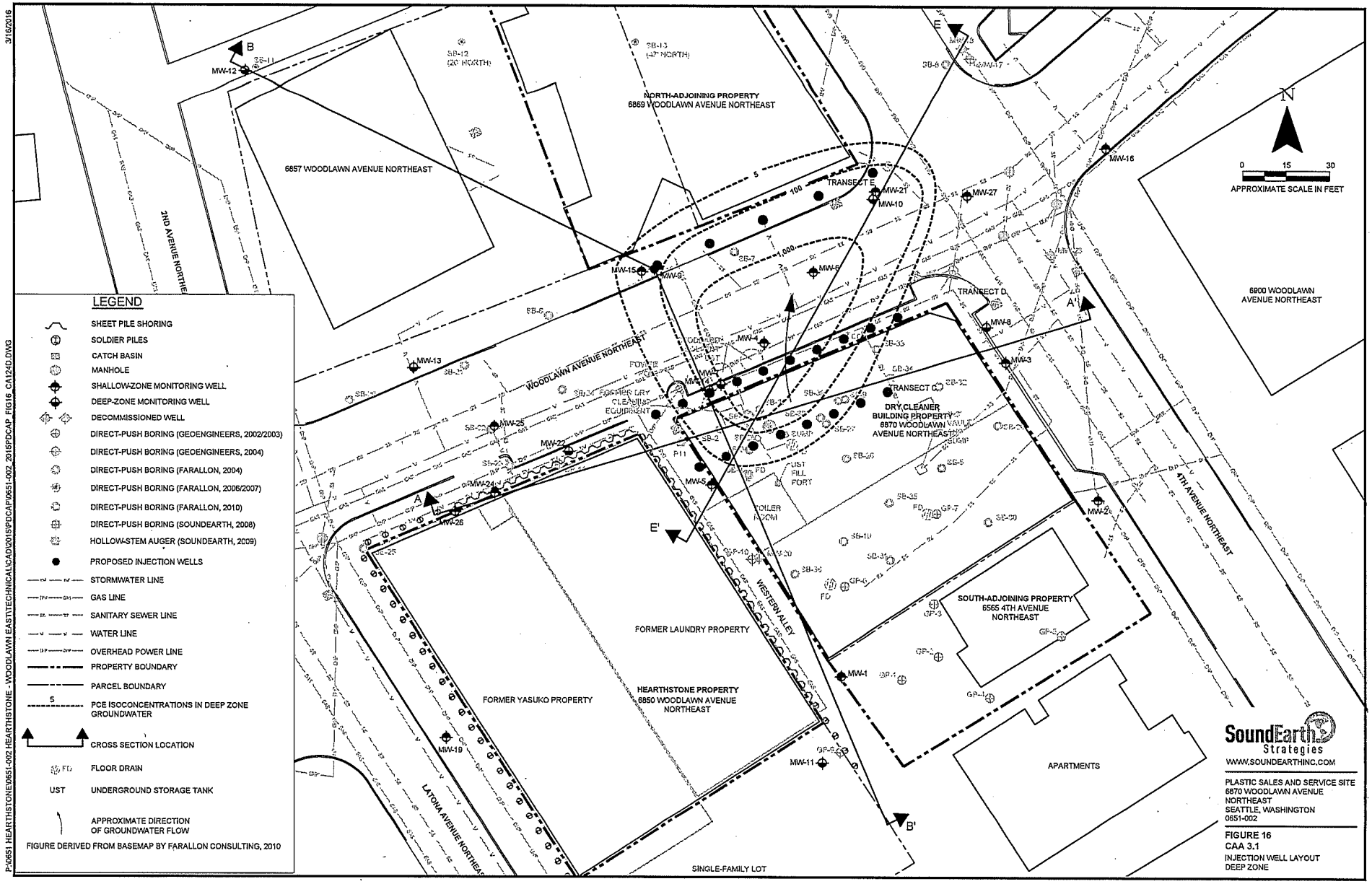
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE
NORTHEAST
SEATTLE, WASHINGTON
0651-002

FIGURE 14
CAA 3.1
ELECTRICAL RESISTANCE HEATING
UPPER SHALLOW ZONE
CROSS SECTION E-E'

3/16/2016

P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002_2015PDCAP_FIG14_XEE_CAA1.DWG


LEGEND
SHEET PILE SHORING
SOLDIER PILES
CATCH BASIN
MANHOLE
SHALLOW-ZONE MONITORING WELL
DEEP-ZONE MONITORING WELL
DECOMMISSIONED WELL
DIRECT-PUSH BORING (GEOENGINEERS, 2002/2003)
DIRECT-PUSH BORING (GEOENGINEERS, 2004)
DIRECT-PUSH BORING (FARALLON, 2004)
DIRECT-PUSH BORING (FARALLON, 2006/2007)
DIRECT-PUSH BORING (FARALLON, 2010)
DIRECT-PUSH BORING (SOUNDEARTH, 2008)
HOLLOW-STEM AUGER (SOUNDEARTH, 2009)
PROPOSED INJECTION WELLS
STORMWATER LINE
GAS LINE
SANITARY SEWER LINE
WATER LINE
OVERHEAD POWER LINE
PROPERTY BOUNDARY
PARCEL BOUNDARY
5 PCE ISOCONCENTRATIONS IN DEEP ZONE GROUNDWATER
CROSS SECTION LOCATION
FD FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
APPROXIMATE DIRECTION OF GROUNDWATER FLOW
FIGURE DERIVED FROM BASEMAP BY FARALLON CONSULTING, 2010
NORTH-ADJOINING PROPERTY 6869 WOODLAWN AVENUE NORTHEAST
6857 WOODLAWN AVENUE NORTHEAST
6900 WOODLAWN AVENUE NORTHEAST
WOODLAWN AVENUE NORTHEAST
2ND AVENUE NORTHEAST
4TH AVENUE NORTHEAST
WESTERN ALLEY
LATONA AVENUE NORTHEAST
DRY CLEANER BUILDING PROPERTY 6870 WOODLAWN AVENUE NORTHEAST
FORMER DRY CLEANING EQUIPMENT
FORMER LAUNDRY PROPERTY
FORMER YASUKO PROPERTY
HEARTHSTONE PROPERTY 6850 WOODLAWN AVENUE NORTHEAST
SOUTH-ADJOINING PROPERTY 6565 4TH AVENUE NORTHEAST
APARTMENTS
SINGLE-FAMILY LOT
TRANSECT C
TRANSECT D
TRANSECT E
A
A'
B
B'
E
E'
N
0 15 30
APPROXIMATE SCALE IN FEET
SoundEarth Strategies
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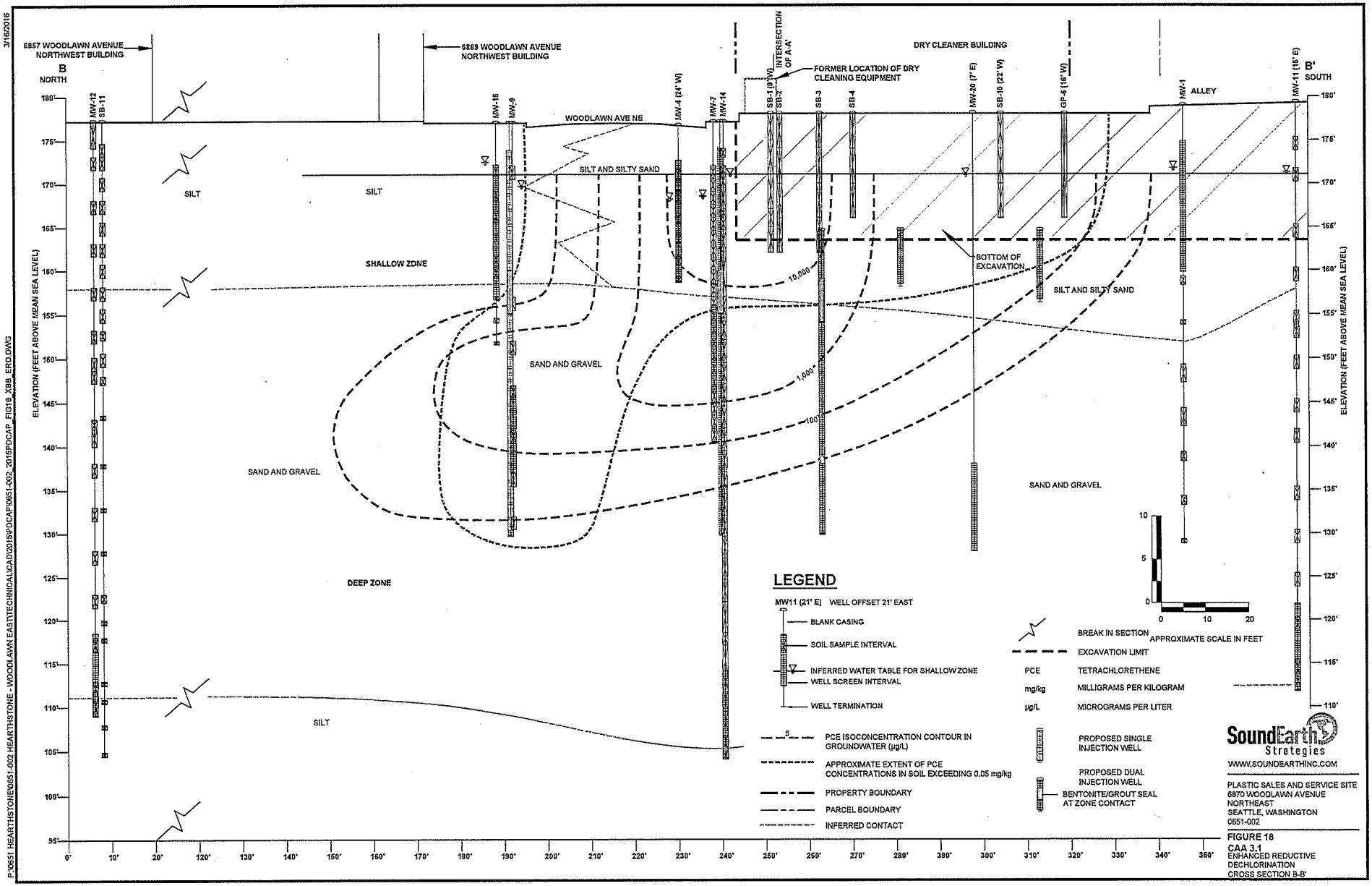
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE NORTHEAST
SEATTLE, WASHINGTON
0651-002
FIGURE 16
CAA 3.1
INJECTION WELL LAYOUT
DEEP ZONE
3/16/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002 2015PDCAP FIG16 CA12AD.DWG


6857 WOODLAWN AVENUE NORTHWEST BUILDING
6869 WOODLAWN AVENUE NORTHWEST BUILDING
B
NORTH
B'
SOUTH
INTERSECTION OF A-A'
FORMER LOCATION OF DRY CLEANING EQUIPMENT
DRY CLEANER BUILDING
ALLEY
WOODLAWN AVE NE
MW-12
SB-11
MW-15
MW-9
MW-4 (24' W)
MW-7
MW-14
SB-1 (8' W)
SB-2
SB-3
SB-4
MW-20 (7' E)
SB-10 (22' W)
GP-6 (16' W)
MW-1
MW-11 (15' E)
SILT
SILT AND SILTY SAND
SHALLOW ZONE
BOTTOM OF EXCAVATION
10,000
1,000
100
SAND AND GRAVEL
DEEP ZONE
ELEVATION (FEET ABOVE MEAN SEA LEVEL)
LEGEND
MW11 (21' E) WELL OFFSET 21' EAST
BLANK CASING
SOIL SAMPLE INTERVAL
INFERRED WATER TABLE FOR SHALLOW ZONE
WELL SCREEN INTERVAL
WELL TERMINATION
PCE ISOCONCENTRATION CONTOUR IN GROUNDWATER (µg/L)
APPROXIMATE EXTENT OF PCE CONCENTRATIONS IN SOIL EXCEEDING 0.05 mg/kg
PROPERTY BOUNDARY
PARCEL BOUNDARY
INFERRED CONTACT
BREAK IN SECTION
EXCAVATION LIMIT
PCE TETRACHLORETHENE
mg/kg MILLIGRAMS PER KILOGRAM
µg/L MICROGRAMS PER LITER
PROPOSED SINGLE INJECTION WELL
PROPOSED DUAL INJECTION WELL
BENTONITE/GROUT SEAL AT ZONE CONTACT
APPROXIMATE SCALE IN FEET
SoundEarth Strategies
WWW.SOUNDEARTHINC.COM
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE NORTHEAST
SEATTLE, WASHINGTON
0651-002
FIGURE 18
CAA 3.1
ENHANCED REDUCTIVE DECHLORINATION
CROSS SECTION B-B'
3/15/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002_2015PDCAP_FIG18_XBB_ERD.DWG

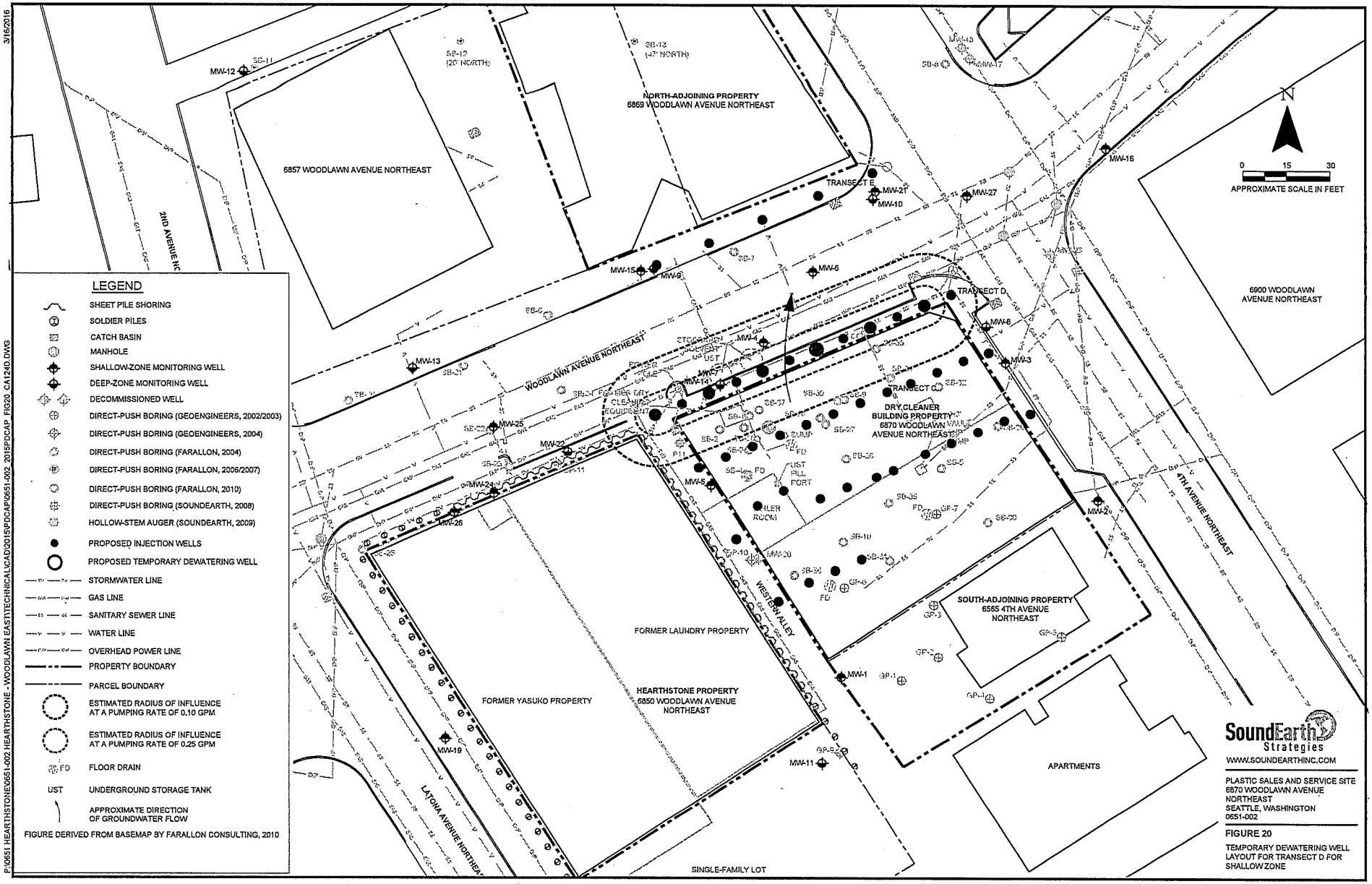
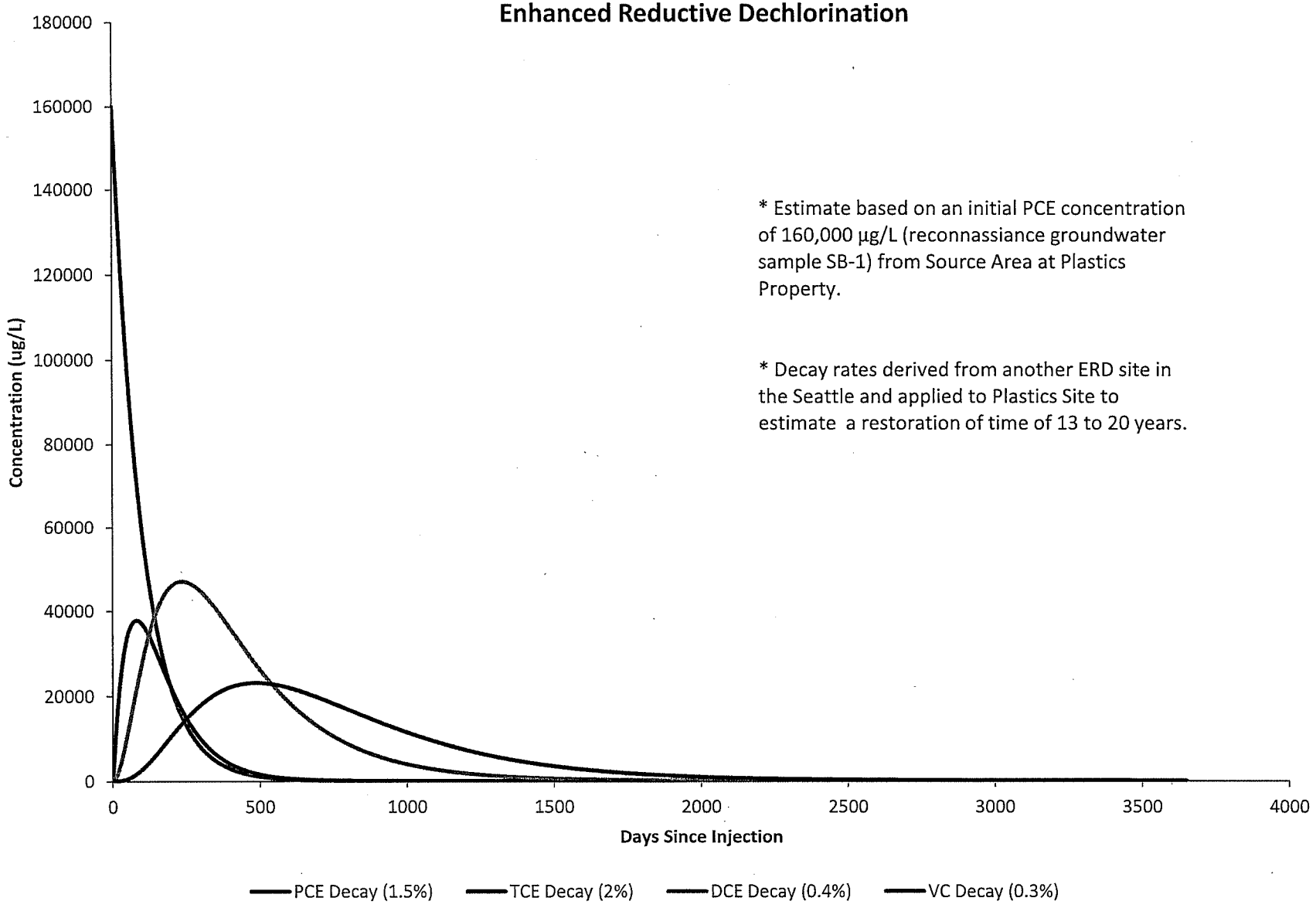

LEGEND
SHEET PILE SHORING
SOLDIER PILES
CATCH BASIN
MANHOLE
SHALLOW-ZONE MONITORING WELL
DEEP-ZONE MONITORING WELL
DECOMMISSIONED WELL
DIRECT-PUSH BORING (GEOENGINEERS, 2002/2003)
DIRECT-PUSH BORING (GEOENGINEERS, 2004)
DIRECT-PUSH BORING (FARALLON, 2004)
DIRECT-PUSH BORING (FARALLON, 2006/2007)
DIRECT-PUSH BORING (FARALLON, 2010)
DIRECT-PUSH BORING (SOUNDEARTH, 2008)
HOLLOW-STEM AUGER (SOUNDEARTH, 2009)
PROPOSED INJECTION WELLS
PROPOSED TEMPORARY DEWATERING WELL
STORMWATER LINE
GAS LINE
SANITARY SEWER LINE
WATER LINE
OVERHEAD POWER LINE
PROPERTY BOUNDARY
PARCEL BOUNDARY
ESTIMATED RADIUS OF INFLUENCE AT A PUMPING RATE OF 0.10 GPM
ESTIMATED RADIUS OF INFLUENCE AT A PUMPING RATE OF 0.25 GPM
FD FLOOR DRAIN
UST UNDERGROUND STORAGE TANK
APPROXIMATE DIRECTION OF GROUNDWATER FLOW
FIGURE DERIVED FROM BASEMAP BY FARALLON CONSULTING, 2010
N
0 15 30
APPROXIMATE SCALE IN FEET
NORTH-ADJOINING PROPERTY
6869 WOODLAWN AVENUE NORTHEAST
6857 WOODLAWN AVENUE NORTHEAST
6900 WOODLAWN AVENUE NORTHEAST
DRY CLEANER BUILDING PROPERTY
6870 WOODLAWN AVENUE NORTHEAST
SOUTH-ADJOINING PROPERTY
6555 4TH AVENUE NORTHEAST
FORMER LAUNDRY PROPERTY
FORMER YASUKO PROPERTY
HEARTHSTONE PROPERTY
6850 WOODLAWN AVENUE NORTHEAST
APARTMENTS
SINGLE-FAMILY LOT
WOODLAWN AVENUE NORTHEAST
2ND AVENUE NORTHEAST
4TH AVENUE NORTHEAST
LATONA AVENUE NORTHEAST
WESTERN ALLEY
TRANSECT D
TRANSECT E
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
MW-22
MW-24
MW-25
MW-26
MW-27
SB-11
SB-12 (20' NORTH)
SB-12 (47' NORTH)
SB-13
SB-15
SB-16
SB-17
SB-18
SB-19
SB-20
SB-21
SB-22
SB-23
SB-24
SB-25
SB-26
SB-27
SB-28
SB-29
SB-30
SB-31
SB-32
SB-33
SB-34
SB-35
SB-36
SB-37
GP-1
GP-2
GP-3
GP-4
GP-5
GP-6
GP-7
GP-8
GP-9
GP-10
GP-11
UST FILL PORT
BOILER ROOM
SUMP
FD
SoundEarth Strategies
WWW.SOUNDEARTHINC.COM
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE
NORTHEAST
SEATTLE, WASHINGTON
0651-002
FIGURE 20
TEMPORARY DEWATERING WELL LAYOUT FOR TRANSECT D FOR SHALLOW ZONE
3/16/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002 2015PDCAP FIG20 CA124D.DWG

Figure 22, Estimated Degradation of Chlorinated Solvents in Groundwater with Time by Enhanced Reductive Dechlorination



* Estimate based on an initial PCE concentration of 160,000 µg/L (reconnassiance groundwater sample SB-1) from Source Area at Plastics Property.

* Decay rates derived from another ERD site in the Seattle and applied to Plastics Site to estimate a restoration of time of 13 to 20 years.

Exhibit B

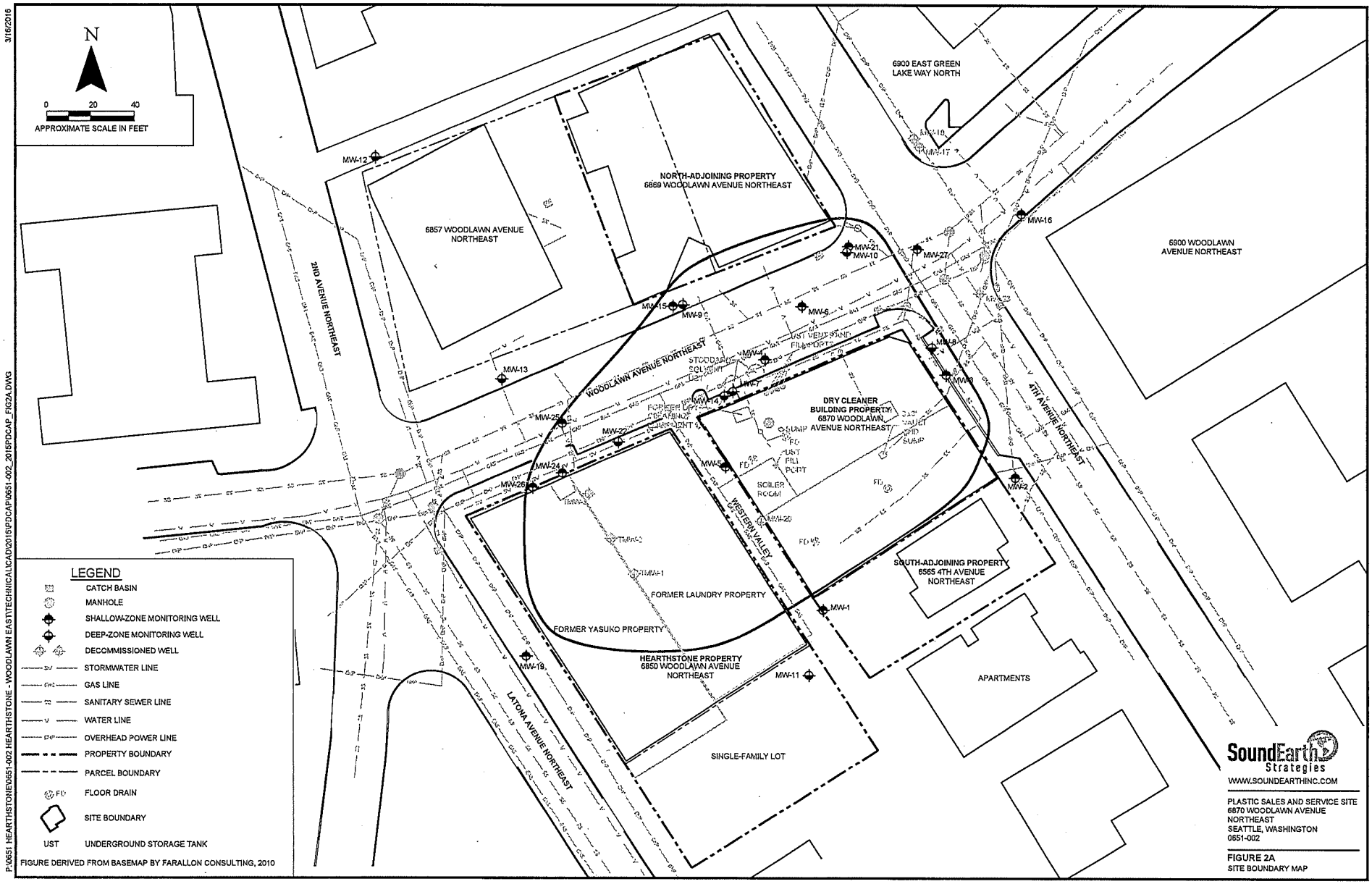

N
0 20 40
APPROXIMATE SCALE IN FEET
6900 EAST GREEN LAKE WAY NORTH
NORTH-ADJOINING PROPERTY
6869 WOODLAWN AVENUE NORTHEAST
6857 WOODLAWN AVENUE NORTHEAST
6900 WOODLAWN AVENUE NORTHEAST
2ND AVENUE NORTHEAST
WOODLAWN AVENUE NORTHEAST
4TH AVENUE NORTHEAST
LATONA AVENUE NORTHEAST
DRY CLEANER BUILDING PROPERTY
6870 WOODLAWN AVENUE NORTHEAST
SOUTH-ADJOINING PROPERTY
6565 4TH AVENUE NORTHEAST
FORMER LAUNDRY PROPERTY
FORMER YASUKO PROPERTY
HEARTHSTONE PROPERTY
6850 WOODLAWN AVENUE NORTHEAST
SINGLE-FAMILY LOT
APARTMENTS
MW-1
MW-2
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
MW-22
MW-24
MW-25
MW-26
MW-27
TMW-1
TMW-2
LEGEND
CATCH BASIN
MANHOLE
SHALLOW-ZONE MONITORING WELL
DEEP-ZONE MONITORING WELL
DECOMMISSIONED WELL
STORMWATER LINE
GAS LINE
SANITARY SEWER LINE
WATER LINE
OVERHEAD POWER LINE
PROPERTY BOUNDARY
PARCEL BOUNDARY
FD FLOOR DRAIN
SITE BOUNDARY
UST UNDERGROUND STORAGE TANK
FIGURE DERIVED FROM BASEMAP BY FARALLON CONSULTING, 2010
SoundEarth Strategies
WWW.SOUNDEARTHINC.COM
PLASTIC SALES AND SERVICE SITE
6870 WOODLAWN AVENUE NORTHEAST
SEATTLE, WASHINGTON
0651-002
FIGURE 2A
SITE BOUNDARY MAP
3/15/2016
P:\0651 HEARTHSTONE\0651-002 HEARTHSTONE - WOODLAWN EAST\TECHNICAL\CAD\2015\PDCAP\0651-002_2015PDCAP_FIG2A.DWG

Exhibit C

Schedule

Deliverable/Milestone	Start Date/Period	Estimated Time Required to Complete Task After Start Date
Progress Reports	Calendar monthly after effective date of Consent Decree	--
Engineering Design Report (EDR) Chapter on Thermal Treatment	3 months following effective date of Consent Decree	6 to 12 months
EDR	3 months following effective date of Consent Decree	2 months
Thermal Treatment	Within 3 months following approval of EDR Thermal Treatment Chapter by Ecology	2 months
Soil Excavation	Within 6 months following approval of EDR Thermal Treatment Chapter by Ecology	3 months
ERD treatment	Within 6 months following approval of EDR by Ecology	60 months
Record or have the Property Owner record Environmental Covenant for property parcels affected by groundwater contamination	Within 30 days following the effective date of Consent Decree	
Record or have the Property Owner record Environmental Covenant for property parcels affected by soil contamination	Within 30 days following completion of Thermal Treatment	
Submit proof of recording of Environmental Covenants to Ecology	Within 10 days of recording the Environmental Covenant	--
Periodic Reviews Conducted by Ecology	Every 5 years from the effective date of Consent Decree	--
Compliance Monitoring Plan	3 months after the completion of performance monitoring	
Compliance Monitoring	Within one month after Ecology approval of the Compliance Monitoring Plan	60 to 120 months

Exhibit D

STATE ENVIRONMENTAL POLICY ACT (SEPA)
DETERMINATION OF NONSIGNIFICANCE (DNS)

Name of Proposal: Plastic Sales & Services Inc Site Cleanup Actions

Description of Proposal:

- The cleanup action at the Plastics Sales and Service Inc. Site includes demolition of existing structures, removal of heating oil underground storage tanks, thermal treatment of soil and groundwater to reduce the tetrachloroethylene (PCE) concentrations to less than applicable regulatory thresholds.
- The cleanup action and redevelopment at the Plastics Sales and Service Inc. Site includes installation of standard augercast shoring system.
- The cleanup action at the Plastics Sales and Service Inc. Site includes excavation and off-site disposal of approximately 4,106 tons of contaminated soil and approximately 541 tons of clean soil.
- The cleanup of the Plastics Sales and Service Inc. Site includes construction dewatering with discharge to the King County municipal wastewater treatment system.
- The cleanup action at the Plastics Sales and Service Site includes installation injection wells and the injection of emulsified oil substrate into the groundwater to enhance the degradation of PCE.

Location of Proposal:

6870 Woodlawn Avenue North, Seattle, Washington

Proponent / Applicant:

The Hearthstone Retirement Living

Lead Agency: State of Washington Department of Ecology

Public Comment Period: April 1 to May 1, 2016. Comments will be accepted by email, US Mail, or fax.

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

SEPA ENVIRONMENTAL CHECKLIST

CLEANUP ACTIONS
AT PLASTIC SALES AND SERVICE, INC. SITE

A. BACKGROUND

1. **Name of proposed project, if applicable:**

   The Hearthstone Cleanup Action Plan for the Plastic Sales and Service, Inc. Property

2. **Name of applicant:**

   The Hearthstone Retirement Living

3. **Address and phone number of applicant and contact person:**

   Project Manager: Mary Lou Stuenzi, CEO
   The Hearthstone Retirement Living
   6720 East Green Lake Way North
   Seattle, Washington 98103

   206-517-2210

   Contact Person: Mary Lou Stuenzi, CEO

4. **Date checklist prepared:**

   October 20, 2015

5. **Agency requesting checklist:**

   Washington State Department of Ecology (Ecology)

6. **Proposed timing or schedule (including phasing, if applicable):**

Deliverable/Task	*Milestone Date(s)*
Ecology approval of the Cleanup Action Work Plan after completion of public notice and comment.	*June 2016*
Implementation of Cleanup Action at the Hearthstone Property (see Question 7 below)	*Within 30 days of receipt of Ecology's approval of the CAP*
Hearthstone submits a draft Preliminary Cleanup Action Completion Report to Ecology for review.	*January 2017*
Ecology provides comments on the Preliminary Cleanup Action Completion Report to Hearthstone.	*Within 30 days of receipt*
Hearthstone incorporates Ecology's comments in the draft Preliminary Cleanup Action Completion	*Within 60 days after receipt of Ecology's comments*

Side Sewer/ King County Discharge	---	--	--	--	Pending
King County Discharge	---	--	--	--	Pending

All pending permits are under review by the applicable regulator.

10. List any government approvals or permits that will be needed for your proposal, if known.

Draft Cleanup Action Plan, prepared by SoundEarth Strategies, Inc. (SoundEarth) and dated September 16, 2015, is currently under review by Ecology.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

- The cleanup action at the Plastics Sales and Service Site includes demolition of existing structures, removal of heating oil underground storage tanks, thermal treatment of soil and groundwater to reduce the tetrachloroethylene (PCE) concentrations to less than applicable regulatory thresholds.
- The cleanup action and redevelopment at the Plastics Sales and Service Site includes installation of standard augercast shoring system.
- The cleanup action at the Plastics Sales and Service Site includes excavation and off-site disposal of approximately 4,106 tons of contaminated soil and approximately 541 tons of clean soil.
- The cleanup of the Plastics Sales and Service Site includes construction dewatering with discharge to the King County municipal wastewater treatment system.
- The cleanup action at the Plastics Sales and Service Site includes installation injection wells and the injection of emulsified oil substrate into the groundwater to enhance the degradation of PCE.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The proposed project is located at 6870 Woodlawn Avenue NE, Seattle Washington (Figure 1).

The legal address of the Plastics Sales and Service Property is:

Parcel One—Northerly 15 feet of Lot 7 and all of Lot 8, Block 91, Woodlawn Addition to Green Lake, according to the Plat thereof recorded in Volume 6 of Plats, Page 20, records of King County, Washington. Tax Parcel No. 952810-4725.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (underscore one): Flat, rolling, steep slopes, mountainous, other ____.

Slight slope along Latona Avenue Northeast.

b. What is the steepest slope on the site (approximate percent slope)?

Slope along 4th Avenue Northeast is 2.5 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Loam.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The cleanup action at the Plastics Sales and Service Site includes excavation and off-site disposal of approximately 4,106 tons of contaminated soil, and approximately 541 tons of clean soil. Construction dewatering activity will include discharging construction water to the King County municipal wastewater treatment system.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion could occur as a result of cleanup/construction activities if and when a significant amount of precipitation falls. The subject site is for the most part flat. Excavation activities on the site will occur below all surrounding grades. Existing and proposed erosion potential for this site is very low.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

During and after the removal of PCE-contaminated soil from the Plastics Sales and Service Site, best management practices (BMPs) erosion control measures will be implemented in accordance with the approved Temporary Erosion Control Plan for the development. BMPs will include an interceptor swale, temporary dewatering system, a silt fence on the excavation perimeter, temporary chain link fencing around the Hearthstone Property, and weighted plastic sheeting to cover exposed soil.

The cleanup action project will allow for the completion of a development project on the Plastics Sales and Service Site. After construction of the development project (a four-story mixed-use building with one floor of below-grade parking), approximately 89 percent of the site will be covered. This additional project has been reviewed under a separate City of Seattle Department of Planning and Development SEPA review process.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

Not applicable.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No.

b. *Ground Water*

1) **Will ground water be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

Following installation of the shoring system, a temporary dewatering system will be constructed for the duration of excavation activities on the Plastics Sales and Service Site. The dewatering system will prevent/minimize groundwater infiltration to allow for excavation to the design depth of approximately 14.5 to 15 feet below ground surface during redevelopment. In general, the dewatering system will consist of a collection trench with a high-capacity pump, four primary dewatering wells along the western Plastics Sales and Service Site boundary, four secondary dewatering wells near the cleanup excavation, a Baker Tank(s), and associated piping. Aquifer testing suggests an optimum groundwater will discharge at rate of 16 to 30 gallons per minute for duration of interim remedial action, depending on the season the groundwater is withdrawn.

Water captured by the dewatering system will be temporarily stored in a Baker Tank(s) prior to discharge on a batch basis to the sewer system, pending the results of self-monitoring data collected in the field and receipt of analytical results for wastewater samples in accordance with the King County-Metro discharge authorization permit.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No waste material will be discharged into the ground.

__ orchards, vineyards or other permanent crops
__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other:
__ water plants: water lily, eelgrass, milfoil, other:
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

All.

c. List threatened or endangered species known to be on or near the site.

None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Trees and shrubs will be planted in the right-of-way and on the site in compliance with code requirements.

e. List all noxious weeds and invasive species known to be on or near the site.

None.

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

X birds: hawk, heron, eagle, songbirds, other: Seagulls, robins, crows, and starlings.
__ mammals: deer, bear, elk, beaver, other: None.
__ fish: salmon, trout, herring, shellfish, other: None.

b. List any threatened or endangered species known to be on or near the site.

None.

c. Is the site part of a migration route? If so, explain.

No.

d. Proposed measures to preserve or enhance wildlife, if any:

None.

e. List any invasive animal species known to be on or near the site.

None.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

3) **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

Soil and groundwater containing chlorinated solvents will be removed from the Property as part of the cleanup and redevelopment of the Property. Soil wil disposed of off-property as Subtitle C or D landfill and water will be discharged under permit to the municipal water treatment system.

4) **Describe special emergency services that might be required.**

During redevelopment, emergency services provide by the municipal fire department may be needed as result of work-related injuries occuring during cleanup and redevelopment of the Property.

5) **Proposed measures to reduce or control environmental health hazards, if any:**

The project-specific health and safety plan has been prepared in accordance with Chapter 296-843 of the Washington Administrative Code, Hazardous Waste Operations. These regulations apply to the activities to be performed at this Site as a site remediation, or cleanup, under the Federal Resource Conservation and Recovery Act of 1976 and/or the Washington State Model Toxics Control Act.

b. **Noise**

1) **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

- Existing urban site.
- Minimal noise—primarily associated with vehicular traffic.

2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

- Construction noise during thermal remediation, excavation/construction.
- Normal traffic noise during daytime.

3) **Proposed measures to reduce or control noise impacts, if any:**

None.

8. **Land and Shoreline Use**

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

The site is currently occupied by the Plastics Sales building and a small single-family house.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

m. **Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:**

None.

9. **Housing**

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

Not applicable. Housing would not be created as a result of the cleanup action project. The cleanup action project will allow for the completion of a development project on the Plastics Sales and Service Site. The development project will provide 22 living units. This additional project has been reviewed under a separate City of Seattle Department of Planning and Development SEPA review process.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

None.

c. **Proposed measures to reduce or control housing impacts, if any:**

The purpose of this project is to provide for the cleanup of hazardous substances at the Plastics Sales and Service Site and reduce threats to human health and the environment. Impacts to housing are not anticipated; therefore, mitigation measures are not proposed. The interim remedial action project will allow for the completion of a redevelopment project on the Plastics Sales and Service Site. The redevelopment project will provide an increase in 22 living units. This additional project has been reviewed under a separate City of Seattle Department of Planning and Development SEPA review process.

10. **Aesthetics**

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

Not applicable. No structures are proposed as part of this project.

b. **What views in the immediate vicinity would be altered or obstructed?**

The proposed project does not obstruct or alter any views. The only possible views are toward the Cascades and those mountains are not visible from the following points at Green Lake: The beaches, the play field, the park or the community center.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

None.

11. **Light and Glare**

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

Not applicable. No lighting is proposed as part of this project.

14. **Transportation**

a. **Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**

The site is located on 6870 Woodlawn Avenue between 4th Avenue and Latona Avenues. Vehicular site access is from the alleyway at the south end of the site. A ramp will be needed to access below-grade garage of the building. Vehicular access to the existing alley is from either Woodlawn Avenue Northeast or Northeast 65th Street.

b. **Is site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

The Number 8 bus line serves this site. The nearest bus stop is within two blocks.

c. **How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?**

Not applicable. The purpose of this project is to provide for the cleanup of hazardous substances at the Plastics Sales and Service Site and reduce threats to human health and the environment. No parking is proposed and none will be eliminated.

d. **Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

No new roads or streets will be required by the project. The existing alleyway, which is 15 feet wide, will be increased to 16 feet.

e. **Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

No.

f. **How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

The purpose of this project is to provide for the cleanup of hazardous substances at the Plastics Sales and Service Site and reduce threats to human health and the environment. No vehicle trips will be generated by the completed project.

g. **Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

No.

h. **Proposed measures to reduce or control transportation impacts, if any:**

None.

EXP07

STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. THE LUTHERAN RETIREMENT HOME OF GREATER SEATTLE (D/B/A THE HEARTHSTONE RETIREMENT LIVING), Defendant.	NO. ORDER ENTERING CONSENT DECREE RE: PLASTIC SALES SITE [PROPOSED]

Having reviewed the Joint Motion for Entry of the Consent Decree, it is hereby ORDERED AND ADJUDGED that the Consent Decree in this matter is entered and that the Court shall retain jurisdiction over the Consent Decree to enforce its terms.

DATED this 3 day of June 2016.

~~Judge~~/Commissioner
King County Superior Court

///

///

Larry Garrett
Pro Tem

///

///

ATTORNEY GENERAL OF WASHINGTON
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Olympia, WA 98504-0117
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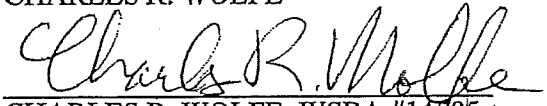

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