STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action by:	AGREED ORDER
Bremerton School District 134 Marion Avenue Bremerton, WA 98312	No. DE 11107

TO: Bremerton School District
Attn: Ron Carpenter
Facilities Director
Bremerton, WA 98312

TABLE OF CONTENTS

EXHIBIT D	Applicable Permits and Substantive Requirements
EXHIBIT E	Environmental Covenants
EXHIBIT F	Bremerton School District Crownhill Elementary School Site Remedial Design and Cleanup Action Scope of Work
EXHIBIT G	Final CAP

I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology) and Bremerton School District (BSD) under this Agreed Order (Order) is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Order requires BSD to implement a final cleanup action plan in accordance with WAC 173-340 with respect to contamination associated with a former Kitsap County landfill at the Bremerton School District Crownhill Elementary School Site (as defined below). Ecology believes the actions required by this Order are in the public interest.

II. JURISDICTION

This Agreed Order is issued pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.050(1).

III. PARTIES BOUND

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

IV. DEFINITIONS

Unless otherwise specified herein, the definitions set forth in Chapter 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms in this Order.

A. Site: The Site is referred to as the Bremerton School District Crownhill Elementary School Site, and is generally located at 1500 Rocky Point Road in the City of Bremerton, Kitsap County, Washington. The Site is defined by the extent of contamination caused by the release of hazardous substances at the Site. The Site includes property owned by

the Bremerton School District ("School Property") and the Bremerton United Methodist Church ("Church Property") and is defined by the extent of contamination caused by the release of hazardous substances at the Site, which may extend to adjacent properties. Such releases occurred when the Site was operated as a landfill by Kitsap County and utilized for disposal of waste products and debris by the United States Navy and other parties. Based upon factors currently known to Ecology, the Site is more particularly described in Exhibit A to this Order, which includes a detailed Site diagram. The Site constitutes a Facility under RCW 70.105D.020(5).

B. Parties: Refers to the State of Washington, Department of Ecology and BSD.

C. Potentially Liable Person (PLP): Refers to the signatory Parties that have been notified of PLP status, which includes BSD. Ecology may identify additional parties, not currently identified in this Order, as PLPs in the future based upon credible evidence.

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

V. FINDINGS OF FACT

Ecology makes the following findings of fact, without any express or implied admissions of such facts by BSD:

A. In the 1930s, the School Property was owned by Robert and Viola Barlow and other individuals. Successive title documents of properties at the site consisted of right-of-way and warranty deeds between private individuals. Portions of the School Property were progressively deeded to Kitsap County by various individuals between 1941 and 1948. Kitsap County and several individuals deeded the School Property to the BSD on February 15, 1954. First Methodist Church is the current owner of property to the south, the Church Property. Adjacent properties on other sides of the School Property and Church Property are primarily residential.

B. The Site was originally used for the mining of sand and gravel during the 1930's. The resulting mining excavations or "Borrow Pits" were used as a landfill for various materials including municipal and industrial wastes. Some of the industrial wastes were reported to be imported from the Puget Sound Naval Shipyard by the United States Navy, including sandblast grit, scrap metal, asbestos insulation material, metal shavings, and fire bricks. Some of the borrow pits at the Site were filled by the time the School Property was deeded to BSD in 1954.

C. The original Crownhill Elementary School was constructed on the School Property in 1956 and partially burned down in 1993. The burned sections and remaining portions of the school were demolished after the fire in 1993.

D. In 1994, site work for a new Crownhill Elementary School was started on the School Property. During site preparation and utility excavation work, soils were identified as known or suspected contaminated soils. BSD notified the Kitsap County Health Department (Health Department) and Ecology of the suspected contaminated soils. After consultation with the Health Department and Ecology, known or suspected contaminated soils were segregated and stockpiled for additional characterization work. Following analytical characterization, soils were disposed of at an appropriate landfill consistent with applicable state or local regulations. Construction of the new school was completed in 1996.

E. Between 1994 and 2009, a number of investigations (Parametrix 1994, AGRA 1995, Terracon 2010) confirmed the presence of elevated concentrations of metals, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons in subsurface soil at the Site. However, sampling of shallow soil conducted by the Kitsap County Health Department in April 2009 did not detect concentrations of arsenic, cadmium, chromium, lead, and mercury above applicable cleanup levels. On behalf of BSD,

Terracon submitted to Ecology a Limited Site Investigation Report dated December 17, 2009 and a draft Remedial Investigation Report dated May 4, 2010 that summarized the investigations. The May 2010 draft Remedial Investigation detected concentrations of lead (8,500 mg/kg), Arsenic (33.6 mg/kg), and diesel range petroleum products (10,000 mg/kg) above MTCA cleanup levels at depth.

F. The May 4, 2010 draft RI reported groundwater at the Site is at least 85 feet below ground surface and is not known to be used for drinking water. Groundwater sampling results between 1995 and 2004 indicated that contaminants from landfill materials do not appear to have impacted groundwater above applicable cleanup levels.

G. The School Property currently consists of a two-story elementary school, one portable classroom, paved parking areas, landscaping, and grass/gravel/soil play areas. Ground surface covering the majority of the School Property consists of grass in the playfield areas, asphalt and concrete in the parking areas, and the school building.

H. The Site has not received a Site Hazard Assessment Ranking.

I. On September 20, 2010, BSD and Ecology signed Agreed Order DE 7916 to develop and conduct a Remedial Investigation/Feasibility Study ("RI/FS") at the Site. Ecology approved the RI Work Plan and Sampling and Analysis Plan ("SAP") for the RI on March 22, 2011. BSD conducted field investigations in 2011 and 2012 to assess soil and groundwater quality on the School Property, the Church Property, and residential areas to the east and west. Sampling was performed using a grid-based approach. Soil sample results collected from the surface to 15 feet below the ground surface were compared to screening levels based on unrestricted land use, protection of groundwater, and terrestrial ecological exposure ("TEE"). Soil sample results collected more than 15 feet below the ground surface were compared to

screening levels based on protection of groundwater.

J. The 2011 and 2012 field investigations confirmed groundwater at a depth of 120 feet below ground surface and the existence of landfill materials at depth in two general areas of the Site: the north landfill area is on the School Property and the south landfill area extends from the School Property onto the Church Property. The size of the combined landfill areas is approximately 6 acres. The north landfill materials typically extend to a depth of about 15 feet but some areas could extend to depths of about 30 feet and 40 feet. The south landfill materials were typically less than 10 feet in thickness. Landfill materials are highly variable and contain a fragmented mixture of glass, wood, metal, brick, charcoal, fabric, wire, and ceramics. Soil sampling confirmed that contaminant impacts at the Site are generally limited to the two landfill areas and do not extend to residential areas.

a. The primary constituents of concern in landfill material are lead, arsenic, and diesel/oil-range petroleum hydrocarbons.

b. The primary arsenic exceedances were clustered in the central portion of the north landfill area at depths ranging from 3 to 15 feet. The maximum arsenic concentration exceeded the screening level by 3 times.

c. The primary lead exceedances were generally co-located with arsenic exceedances except that lead exceedances extend about 5 feet beneath landfill materials. The maximum lead concentration exceeded the screening level by 105 times.

d. A localized diesel/oil range petroleum hot spot in the north landfill area extends from the base of the landfill material (at a depth of approximately 40 feet) to the water table (at a depth of approximately 115 feet) where a 1-foot-thick layer of free product has accumulated.

K. The groundwater monitoring program included collecting samples from 3 existing monitoring wells and 8 new monitoring wells installed during the RI. The primary impact to groundwater at the Site is the accumulation of petroleum product beneath the north landfill area at a depth of about 115 feet below ground surface. In October and November 2012, BSD conducted an additional investigation to estimate the total volume of petroleum product and petroleum hydrocarbon mass in soils beneath the north landfill area.

L. BSD also conducted sub-slab soil vapor sampling in August and November 2010 to assess the potential for vapor intrusion inside the Crownhill Elementary School. The November 2010 sampling was conducted during the school day with the building's HVAC system operating. The results showed that indoor air concentrations were below levels of concern.

M. BSD implemented a second grid-based sampling approach in two areas where original sampling showed the potential for contaminants in soil near the ground surface exceeding cleanup levels for unrestricted land use. BSD conducted an Interim Action in March and April 2012 to remove surficial soil (*i.e.*, down to 1 foot below ground surface) with contaminants above cleanup levels for unrestricted land use. BSD removed approximately 342 tons of soil from the southern portion of the School Property and extending onto the Church Property. BSD collected samples from excavation sidewalls and confirmed that soil above cleanup levels had been removed down to 1 foot below ground surface. The contaminated soil was transported to a permitted landfill for disposal. BSD constructed a clean surficial contact barrier in the excavated area. A second interim action was conducted at two locations on the school property where soil was observed above lead cleanup levels at a depth of 1-3 feet. In the summer of 2013, these two areas were covered with a geotextile fabric placed directly on the undisturbed ground surface and covered with a foot of clean imported soil and hydroseeded to

form a clean soil cover of more than two feet.

N. BSD conducted a survey of upland water wells in the vicinity of the Site. Four domestic wells were found within one mile of the Site. Based on the locations of the wells relative to groundwater flow at the Site, it is unlikely that contaminants from the Site would impact these wells. During public review, two more domestic wells were identified in the vicinity of the Site. The wells were not entered in the Ecology database. The McKinney well is located approximately 190 feet north (upgradient of the Site) and serves two residences. The Kitsap Public Health District sampled this well and tested for the full suite of priority pollutants. The results for the tested constituents, including total petroleum hydrocarbons in the diesel and motor oil ranges, total metals, VOCs, PAHs, and SVOCs, were all below EPA's acceptable limits for drinking water. The Anderson well is located over 850 feet north-northeast of the Site and is not influenced by groundwater conditions at the Site.

O. As a result of the TEE, BSD determined that hazardous substances do not pose a risk to plants and animals at the Site.

P. BSD provided a draft RI report dated October 2013 that summarized the above findings. The RI Report was approved by Ecology on April 8, 2014.

Q. BSD provided a draft FS report and a draft Cleanup Action Plan ("DCAP"), both dated December 2013, that identified remedial action objectives ("RAOs"), summarized BSD's evaluation of remediation alternatives to achieve the RAOs, and identified the preferred alternative. A subsequent revision of the draft FS, dated March 7, 2014, was approved by Ecology on April 8, 2014. The DCAP, dated September 3, 2014, was approved by Ecology as a Public Review DCAP on September 16, 2014.

R. Ecology issued the RI/FS and DCAP for public comment on September 26, 2014 through October 27, 2014. After public comment, Ecology approved final versions of the RI and the FS dated November 2014. Ecology prepared a Final CAP on December 10, 2014. The Final CAP is fully incorporated herein as Exhibit G.

VI. ECOLOGY DETERMINATIONS

Ecology makes the following determinations, without any express or implied admissions of such determinations (and underlying facts) by BSD.

A. BSD is the owner of the referenced Property and is an "owner or operator" under RCW 70.105D.020(17) of a "facility" as defined in RCW 70.105D.020(5). The facility, including adjacent properties where releases of hazardous substances from the facility may have come to be located, is known as the Bremerton School District Crownhill Elementary School Site (the Site).

B. Based upon all factors known to Ecology, a "release" or "threatened release" of "hazardous substance(s)" as defined in RCW 70.105D.020(32) and (13), respectively, has occurred at the Site.

C. Based upon credible evidence, Ecology issued a PLP status letter to the BSD dated June 17, 2010, pursuant to RCW 70.105D.040, -.020(21) and WAC 173-340-500. By letter dated June 30, 2010, the BSD voluntarily waived its rights to notice and comment and accepted Ecology's determination that the BSD is a PLP under RCW 70.105D.040, without admitting liability. Ecology issued a determination that the BSD is a PLP under RCW 70.105D.040 by letter dated July 19, 2010.

D. Pursuant to RCW 70.105D.030(1) and .050(1), Ecology may require PLPs to investigate or conduct other remedial actions with respect to any release or threatened release of hazardous substances, whenever it believes such action to be in the public interest. Based on the

foregoing facts, Ecology believes the remedial actions required by this Order are in the public interest.

VII. WORK TO BE PERFORMED

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that BSD take the following remedial actions at the Site and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein. The purpose of this work is to implement the Final Cleanup Action Plan issued by Ecology for the Site. The Remedial Design and Cleanup Action Scope of Work (Scope of Work), attached as Exhibit F and fully incorporated herein, sets out the schedule for performance and the required deliverables. Each deliverable required by this Order, once approved by Ecology, becomes an integral and enforceable part of this Order. The Scope of Work consists of the following elements:

A. BSD shall prepare and submit quarterly progress reports to Ecology throughout the duration of this Order.

B. BSD shall implement the cleanup remedy selected in the Final Cleanup Action Plan by developing and complying with a Groundwater/LNAPL Monitoring and Contingency Plan, a LNAPL Removal Work Plan, and a Cover System Inspection and Maintenance Plan (I&M Plan), subject to Ecology approval.

C. Following Ecology approval of the Groundwater/LNAPL Monitoring and Contingency Plan and LNAPL Removal Work Plan, BSD shall report results of the cleanup remedy monitoring to Ecology in accordance with the Ecology-approved schedule in the Groundwater/LNAPL Monitoring and Contingency Plan, and the I&M Plan.

D. Future activity on the site will be governed by this Agreement, the Groundwater/LNAPL Monitoring and Contingency Plan and LNAPL Removal Work Plan, the Environmental Covenants (See § VIII.P) and requirements of the I&M Plan.

E. If Ecology determines additional remedial actions are warranted under Section VI.D, BSD shall prepare and submit to Ecology an Remedial Action Work Plan, including a

scope of work and schedule, by the date determined by Ecology. Ecology will provide public notice and opportunity to comment on the Remedial Action Work Plan in accordance with WAC 173-340-600(16). The PLP shall not conduct the remedial action until Ecology approves the Remedial Action Work Plan. Upon approval by Ecology, the Remedial Action Work Plan becomes an integral and enforceable part of this Order, and BSD is required to conduct the remedial action in accordance with the approved Remedial Action Work Plan.

F. If, at any time after the first exchange of comments on drafts, Ecology determines that insufficient progress is being made in the preparation of any of the deliverables required by this section after notice to BSD, Ecology may complete and issue the final deliverable.

VIII. TERMS AND CONDITIONS

A. Remedial Action Costs

BSD shall pay to Ecology costs incurred by Ecology pursuant to this Order 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 Chapter 70.105D RCW, including remedial actions and Order preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the issuance of this Order. 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 $26,768.43 in remedial action costs related to this Site as of June 30, 2014 which has been paid. For all costs incurred subsequent to July 1, 2014, BSD 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.

In addition to other available relief, pursuant to RCW 19.16.500, Ecology may utilize a collection agency and/or, pursuant to RCW 70.105D.055, file a lien against real property subject to the remedial actions to recover unreimbursed remedial action costs.

B. Implementation of Remedial Action

If Ecology determines that BSD has failed without good cause to implement the remedial action, in whole or in part, Ecology may, after notice to BSD, perform any or all portions of the remedial action that remain incomplete. Except in emergency situations, Ecology shall endeavor, where practicable, to provide BSD this notice in writing, and a thirty (30) day opportunity to cure. If Ecology performs all or portions of the remedial action because of BSD's failure to comply with its obligations under this Order, BSD shall reimburse Ecology for the costs of doing such work in accordance with Section VIII.A (Remedial Action Costs), provided that BSD is not obligated under this section to reimburse Ecology for costs incurred for work inconsistent with or beyond the scope of this Order.

Except where necessary to abate an emergency situation, BSD shall not perform any remedial actions at the Site outside those remedial actions required by this Order, unless Ecology concurs, in writing, with such additional remedial actions.

C. Designated Project Coordinators

The project coordinator for Ecology is:

Libby Goldstein
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008
425-649-7242
ligo461@ecy.wa.gov

The project coordinator for BSD is:

Ron Carpenter
Bremerton School District
200 Bruenn Avenue

Bremerton, WA 98312
360-473-0502
ron.carpenter@bremertonschools.org

Each project coordinator shall be responsible for overseeing the implementation of this Order. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and BSD, and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order 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 Order.

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.

D. Performance

All geologic and hydrogeologic work performed pursuant to this Order 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 Chapters 18.220 and 18.43 RCW.

All engineering work performed pursuant to this Order 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 Order 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 Chapters 18.220 and 18.43 RCW.

BSD 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 Order, in advance of their involvement at the Site.

E. Access

Ecology or any Ecology authorized representative shall have access to enter and freely move about all property at the Site that BSD 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 Order; reviewing BSD's progress in carrying out the terms of this Order; conducting such tests or collecting such samples as Ecology may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by BSD. Except in emergency situations, Ecology shall use reasonable efforts to coordinate its access to the Site with BSD's school schedule. BSD shall make all reasonable efforts to secure access rights for those properties within the Site not owned or controlled by BSD where remedial activities or investigations will be performed pursuant to this Order. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Site property owned or controlled by BSD unless an emergency prevents such notice. All persons 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.

F. Sampling, Data Submittal, and Availability

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

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

G. Public Participation

RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing this public notice and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which indicate to Ecology that this Order is inadequate or improper in any respect.

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 BSD.

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

1. If agreed to by Ecology, develop appropriate mailing lists and 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.

2. 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 BSD 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 BSD that do not receive prior Ecology approval, BSD shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

3. 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.

4. When requested by Ecology, arrange and/or continue information repositories to be located at the following locations:

a) Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008
425-649-7190

b) Bremerton School District
134 Marion Avenue Bremerton,
WA 98312-3542
360-473-1003

c) Kitsap Regional Library
612 5th Street N
Bremerton, WA 98337-1416
360-377-3955

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. The Public Participation Plan is attached as Exhibit C

H. Retention of Records

During the pendency of this Order, and for ten (10) years from the date of completion of work performed pursuant to this Order, BSD shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Order and shall insert a similar record retention requirement into all contracts with project contractors and subcontractors. Upon request of Ecology, BSD shall make all records available to Ecology and allow access for review within a reasonable time.

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

I. Resolution of Disputes

1. In the event a dispute arises as to an approval, disapproval, proposed change, or other decision or action by Ecology's project coordinator, or an itemized billing statement under Section VIII.A (Remedial Action Costs), the Parties shall utilize the dispute resolution procedure set forth below.

a. Upon receipt of Ecology's project coordinator's written decision or the itemized billing statement, BSD has fourteen (14) days within which to notify Ecology's project coordinator in writing of its objection to the decision or itemized statement.

b. The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.

c. BSD may then request regional management review of the decision. This request shall be submitted in writing to the Northwest Region Toxics Cleanup Section Manager within seven (7) days of receipt of Ecology's project coordinator's written decision.

d. The Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within thirty (30) days of BSD's request for review. The Section Manager's decision shall be Ecology's final decision on the disputed matter.

2. 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.

3. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Order, unless Ecology agrees in writing to a schedule extension.

J. Extension of Schedule

1. 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 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:

a. The deadline that is sought to be extended;

b. The length of the extension sought;

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

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

2. The burden shall be on BSD 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:

a. Circumstances beyond the reasonable control and despite the due diligence of BSD 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 BSD;

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

c. Endangerment as described in Section VIII.L (Endangerment).

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

3. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give BSD written notification of any extensions granted pursuant to this Order. A requested extension shall not be effective until approved by Ecology. Unless the extension is a substantial change, it shall not be necessary to amend this Order pursuant to Section VIII.K (Amendment of Order) when a schedule extension is granted.

4. 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:

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

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

c. Endangerment as described in Section VIII.L (Endangerment).

K. Amendment of Order

The project coordinators may verbally agree to minor changes to the work to be performed without formally amending this Order. Minor changes will be documented in writing by Ecology within seven (7) days of verbal agreement.

Except as provided in Section VIII.M (Reservation of Rights), substantial changes to the work to be performed shall require formal amendment of this Order. This Order may only be formally amended by the written consent of both Ecology and BSD. BSD 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 this Order represents a substantial change, Ecology will provide public notice and opportunity to comment. Reasons for the disapproval of a proposed amendment to this Order 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 VIII.I (Resolution of Disputes).

L. Endangerment

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

In the event BSD determines that any activity being performed at the Site under this Order is creating or has the potential to create a danger to human health or the environment, BSD may cease such activities. BSD 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, BSD shall provide Ecology with documentation of the basis for the determination or cessation of such activities. If Ecology disagrees with BSD's cessation of activities, it may direct BSD to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to this section, BSD'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 time for any other work dependent upon such activities, shall be extended in accordance with Section VIII.J

(Extension of Schedule) for such period of time as Ecology determines is reasonable under the circumstances.

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

M. Reservation of Rights

This Order is not a settlement under Chapter 70.105D RCW. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any of Ecology's rights or authority. Ecology will not, however, bring an action against BSD to recover remedial action costs paid to and received by Ecology under this Order. In addition, Ecology will not take additional enforcement actions against BSD regarding remedial actions required by this Order, provided BSD complies with this Order.

Ecology nevertheless reserves its rights under Chapter 70.105D RCW, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

By entering into this Order, BSD does not admit to any liability for the Site. Although BSD is committing to conducting the work required by this Order under the terms of this Order, BSD expressly reserves all rights available under law, including but not limited to the right to seek cost recovery or contribution against third parties, and the right to assert any defenses to liability in the event of enforcement.

N. 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 BSD without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to BSD's transfer of any interest in all or any portion of the Site, and during the effective period of this Order, BSD shall provide a copy of this Order to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, BSD shall notify Ecology of said transfer. Upon transfer of any interest, BSD shall notify all transferees of the restrictions on the activities and uses of the property under this Order and incorporate any such use restrictions into the transfer documents.

O. Compliance with Applicable Laws

1. All actions carried out by BSD pursuant to this Order 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 specific federal, state, or local requirements that the agency has determined are applicable and that are known at the time of the execution of this Order have been identified in Exhibit D.

2. Pursuant to RCW 70.105D.090(1), BSD is exempt from the procedural requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and of any laws requiring or authorizing local government permits or approvals. However, BSD shall comply with the substantive requirements of such permits or approvals. At this time, no state or local permits or approvals have been identified as being applicable but procedurally exempt under this section.

3. BSD 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 Order. In the event either Ecology or BSD determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order, it shall promptly notify the other party of its determination. Ecology shall determine whether Ecology or BSD shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, BSD 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 BSD and on how BSD must meet those requirements. Ecology shall inform BSD in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. BSD shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

3. 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 BSD 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.

P. Land Use Restrictions

In consultation with BSD, Ecology will prepare the Environmental Covenants for the School Property and the Church Property consistent with WAC 173-340-440 and Chapter 64.70 RCW. After approval by Ecology, BSD shall record the Environmental Covenants with the office of the Kitsap County Auditor within ten (10) days of transmittal. The Environmental Covenants shall restrict future activities and uses of the Site as agreed to by Ecology and BSD. BSD shall provide Ecology with certified copies of the original recorded Environmental Covenants within thirty (30) days of the recording date. The Environmental Covenants are attached as Exhibit E.

Q. Financial Assurances

Pursuant to WAC 173-340-440(11), BSD shall maintain sufficient and adequate financial assurance mechanisms to cover all costs associated with the operation and maintenance of the remedial action at the Site, including institutional controls, compliance monitoring, and corrective measures.

Within sixty (60) days of the effective date of this Order, BSD shall submit to Ecology for review and approval an estimate of the costs that it will incur in carrying out the terms of this

Order, including operation and maintenance, and compliance monitoring. Within sixty (60) days after Ecology approves the aforementioned cost estimate, BSD shall provide proof of financial assurances sufficient to cover all such costs in a form acceptable to Ecology.

BSD shall adjust the financial assurance coverage and provide Ecology's project coordinator with documentation of the updated financial assurance for:

1. Inflation, annually, within thirty (30) days of the anniversary date of the entry of this Order; or if applicable, the modified anniversary date established in accordance with this section, or if applicable, ninety (90) days after the close of BSD's fiscal year if the financial test or corporate guarantee is used.

2. Changes in cost estimates, within thirty (30) days of issuance of Ecology's approval of a modification or revision to the cleanup action plan (CAP) that result in increases to the cost or expected duration of remedial actions. Any adjustments for inflation since the most recent preceding anniversary date shall be made concurrent with adjustments for changes in cost estimates. The issuance of Ecology's approval of a revised or modified CAP will revise the anniversary date established under this section to become the date of issuance of such revised or modified CAP.

R. 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, BSD 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). 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 Order.

S. Indemnification

To the extent allowed under state law, BSD 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 BSD, its officers, employees, agents, or contractors in entering into and implementing this Order. However, BSD 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 Washington, or the employees or agents of the State, in entering into or implementing this Order.

IX. SATISFACTION OF ORDER

The provisions of this Order shall be deemed satisfied upon BSD's receipt of written notification from Ecology that BSD has completed the remedial activity required by this Order, as amended by any modifications, and that BSD has complied with all other provisions of this Agreed Order. Upon Ecology's review and approval of the three Plans required under Section VII.B of this Order, Ecology shall provide notice to BSD that, except for potential future actions that may be required under the Plans or based on the results of ongoing monitoring, and acknowledging BSD's continuing obligation to conduct ongoing monitoring and operations as detailed in the Plans, BSD has performed all cleanup actions specified and agreed to by Ecology as of the date of this Order.

X. ENFORCEMENT

Pursuant to RCW 70.105D.050, this Order may be enforced as follows:

A. The Attorney General may bring an action to enforce this Order in a state or federal court.

B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the Site.

C. A liable party who refuses, without sufficient cause, to comply with any term of this Order will be liable for:

1. Up to three (3) times the amount of any costs incurred by the State of Washington as a result of its refusal to comply.

2. Civil penalties of up to twenty-five thousand dollars ($25,000) per day for each day it refuses to comply.

D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

Effective date of this Order: 4-9-15

Bremerton School District

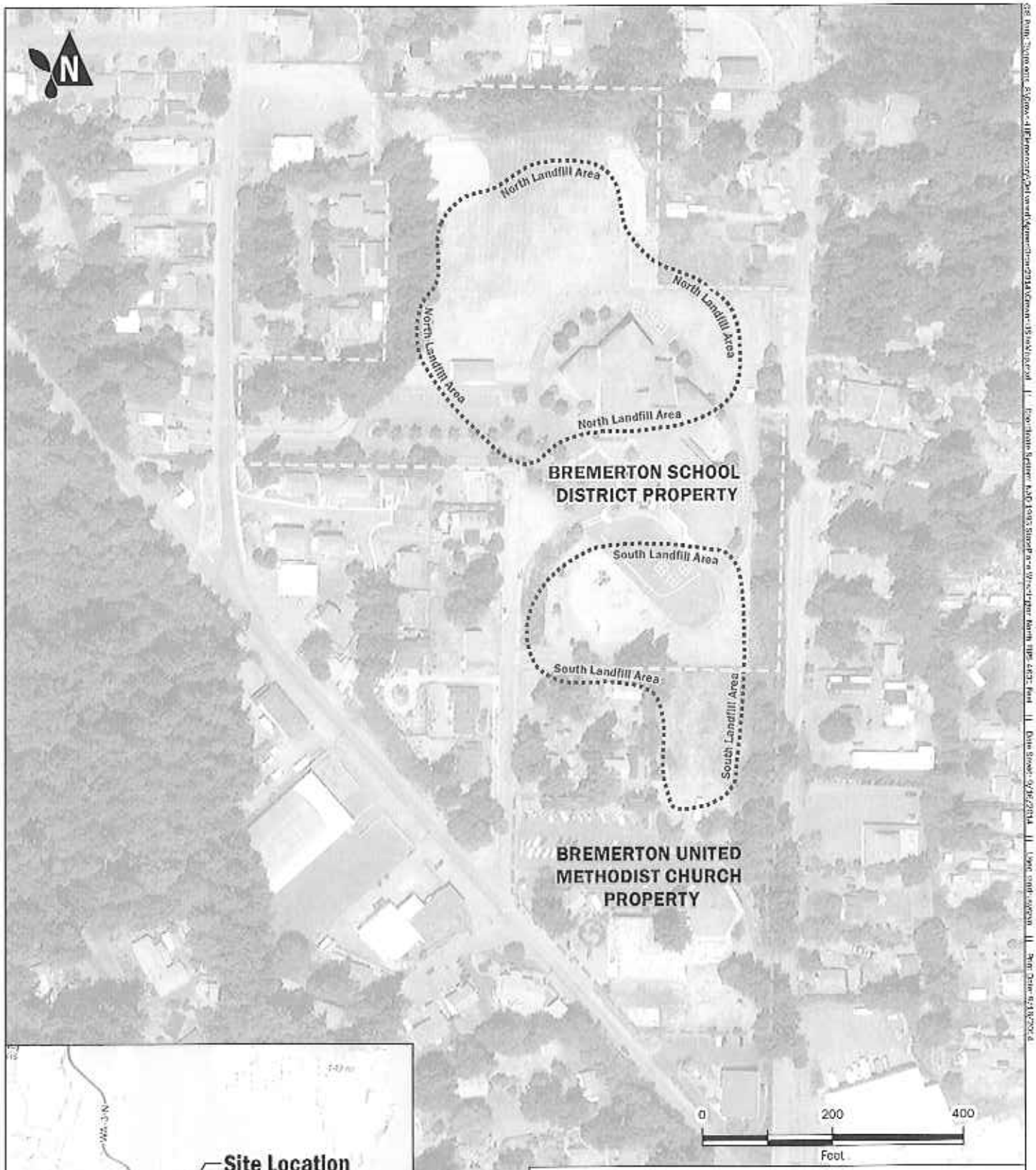
Dr. Aaron Leavell
Superintendent
Bremerton School District
134 N. Marion Ave.
Bremerton WA 98312-3542
Phone: 360-473-1004

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Robert W. Warren
Section Manager
Toxics Cleanup Program
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008
Phone: 425-649-7054

EXHIBIT A

SITE DIAGRAM



Bremerton School District
Crownhill Elementary School Site

Kitsap County, Washington

Aspect CONSULTING	SLP 2014	BY RAA	FIGURE NO. 1
	PROJECT NO 100091	REVISED BY ---	

EXHIBIT B

LEGAL DESCRIPTION

EXHIBIT B
LEGAL DESCRIPTION

School Property

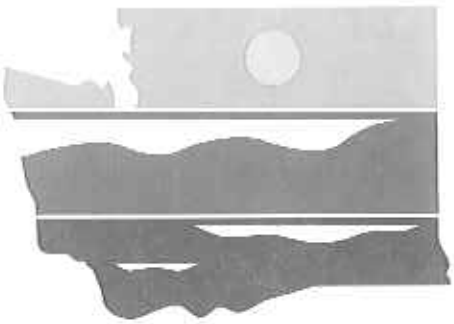
15241E
THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 24 NORTH, RANGE 1 EAST, W.M., KITSAP COUNTY, WASHINGTON, CONVEYED BY VOLUME 585/668 DESCRIBED FOR TAX PURPOSES ONLY AS FOLLOWS: BEGINNING AT A POINT 753.06 FEET SOUTH AND 660 FEET WEST OF THE NORTHEAST CORNER OF SAID SUBDIVISION; THENCE WEST 300 FEET; THENCE SOUTH 16 FEET; THENCE WEST 140 FEET; THENCE SOUTH 140 FEET; THENCE EAST 25 FEET; THENCE SOUTH 270 FEET; THENCE WEST 219.53 FEET TO THE EAST MARGIN OF ROCKY POINT ROAD; THENCE ALONG SAID MARGIN TO THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE EAST 434.09 FEET; THENCE SOUTH 300 FEET; THENCE EAST 400 FEET; THENCE NORTH 579.56 FEET; THENCE WEST 200 FEET; THENCE NORTH 300 FEET TO THE TRUE POINT OF BEGINNING.

Church Property

15241E
THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 24 NORTH, RANGE 1 EAST, W.M., KITSAP COUNTY, WASHINGTON, CONVEYED BY VOLUME 751, PAGES 661 THRU 666, DESCRIBED FOR TAX PURPOSES ONLY AS FOLLOWS: BEGINNING AT A POINT 460 FEET WEST AND 300 FEET SOUTH OF THE NORTHEAST CORNER OF SAID SUBDIVISION; THENCE WEST 200 FEET; THENCE SOUTH 200 FEET; THENCE WEST 200 FEET; THENCE SOUTH 145.93 FEET TO THE NORTH MARGIN OF MARINE DRIVE; THENCE SOUTHEASTERLY 143.38 FEET; THENCE NORTH 47° EAST 5 FEET; THENCE SOUTH 42°23' EAST 138.55 FEET; THENCE SOUTH 88°52'15" EAST 205.60 FEET; THENCE NORTH 150 FEET; THENCE WEST 10 FEET; THENCE NORTH 100 FEET; THENCE EAST 10 FEET; THENCE NORTH 300 FEET TO THE TRUE POINT OF BEGINNING.

EXHIBIT C

PUBLIC PARTICIPATION PLAN



DEPARTMENT OF
ECOLOGY
State of Washington

Crownhill Elementary School

Public Participation Plan
December 10, 2014

Northwest Region Office – Toxics Cleanup Program
3190 160th Ave SE
Bellevue, WA 98008

Table of Content

1.0 Introduction

The Washington State Department of Ecology (Ecology) has developed this public participation plan in cooperation with Bremerton School District, pursuant to the Model Toxics Control Act (MTCA) WAC 173-340-600. The intent is to promote meaningful community involvement during the cleanup process at the Crownhill Elementary School cleanup site in Bremerton, Washington. Bremerton School District – Crownhill Elementary School Site (Site) is located at 1500 Rocky Point in the City of Bremerton, Kitsap County, Washington. The boundaries of the Site extend south onto the northern section of Bremerton United Methodist Church. This plan outlines and describes the tools that Ecology uses to inform the public about site activities and identifies opportunities for the community to become involved.

2.0 Site Background

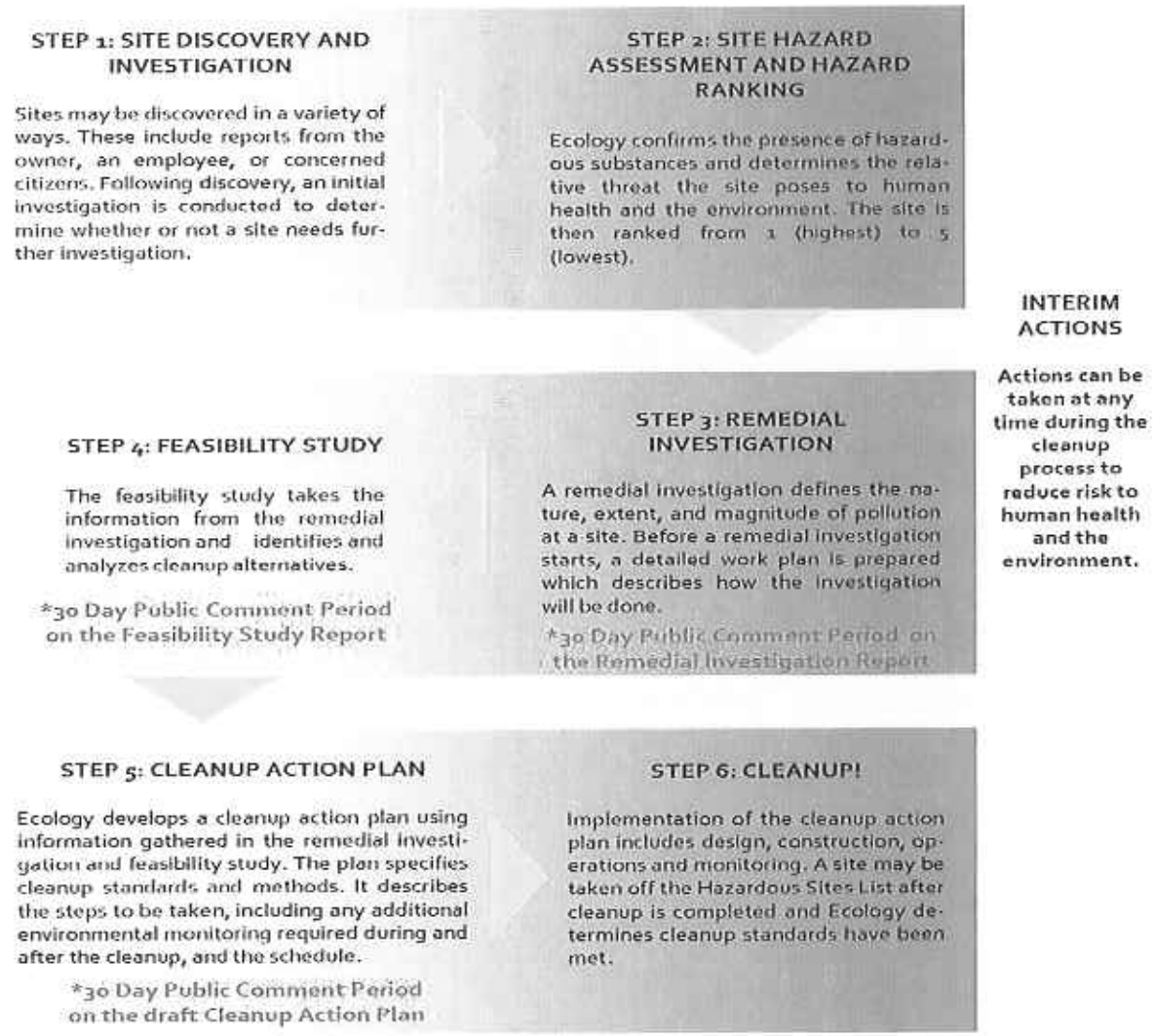
In 1994, the Bremerton School District (BSD) started this cleanup project as an independent cleanup action with limited Ecology oversight. The property was once used as a landfill in the 1940s. The construction of a new Crownhill Elementary School was initiated after a 1993 fire burned the original school. During site preparation work, numerous areas were uncovered that contained known and suspected hazardous materials in addition to contaminated soils. Contaminated soil was removed and the current Crownhill building was completed in 1998. However, a complete characterization of the site was not done and the extent and type(s) of contamination present is also not known.

September 2010, Ecology and BSD entered into an agreement called Agreed Order No DE-7916 (AO). This order required that BSD characterize the Site, identify appropriate clean up alternatives, and perform interim cleanup actions as needed. As part of the AO, BSD was required to conduct a remedial investigation (RI), Feasibility Study (FS), and draft Cleanup Action Plan (dCAP). Two interim cleanup actions were conducted as part of the 2010 Agreed Order.

Contaminants of Concern

The primary sources of contaminants are those associated with landfills including chemicals found in petroleum products, lead, and industrial solvents. Once the cleanup actions are completed, the end result will reduce the exposure of children to soils containing potentially harmful levels of contamination.

Figure 2. Model Toxics Control Act Cleanup Steps.



*Comment periods can be combined when possible.

3.0 Public Participation Activities and Responsibilities

The purpose of this Public Participation Plan is to promote public understanding and participation in the Model Toxics Control Act (MTCA) cleanup activities planned for this site. This section of the plan addresses how Ecology will share information and receive public comments and community input on the site activities.

Ecology urges the public to become involved in the cleanup process. Information will be provided regularly to provide many opportunities to review material and provide comments. This plan is intended to be a flexible working document that will be updated as community concerns emerge and/or more information becomes available during the cleanup process. To arrange for a briefing with project staff, ask questions, or provide comments on the plan or other aspects of the cleanup, please contact one of the persons listed below.

For technical questions, please contact:
Libby Goldstein, Site Manager
Washington State Department of Ecology
Address: 3190 160th Avenue SE
Bellevue, WA 98008
Phone: (425) 649-7242
Email: libby.goldstein@ecy.wa.gov

For community outreach questions for Department of Ecology, please contact:
Nancy Lui, Community Outreach Coordinator
Washington State Department of Ecology
Address: 3190 160th Avenue SE
Bellevue, WA 98008
Phone: (425) 649-7117
Email: nancy.lui@ecy.wa.gov

For community outreach questions for the Bremerton School District, please contact:
Patty Glaser, Bremerton School District, Community Relations Coordinator
Address: 134 Marion Avenue N.
Bremerton, WA 98312
Phone: (360) 473-1003
Email: patty.glaser@bremertonschools.org
Website: http://www.bremertonschools.org

For public health questions, please contact:
Grant Holdcroft, Kitsap County Health District
Address: 345 6th Street, Suite 300
Bremerton, WA 98337
Phone: (360) 337-5605
Email: holdcg@health.co.kitsap.wa.us
Website: http://www.kitsapcountyhealth.com

4.0 Public Involvement Activities

Ecology uses a variety of activities to facilitate public participation in the investigation and cleanup of contaminated sites. Ecology will take into consideration input provided by the community.

This list details the public involvement activities that Ecology will use, their purposes, and description of when and how they will be used during this site cleanup.

Formal Public Comment Periods

Comment periods are the primary method Ecology uses to get feedback from the public on proposed cleanup decisions. Comment periods usually last 30 days and are required at key points during the investigation and evaluation of proposed cleanup process before final decision are made.

During a comment period, the public can comment in writing. At the conclusion of the comment period, Ecology reviews all comments and may respond in a document called a Responsiveness Summary. Ecology will consider the need for changes or revisions based on input from the public. If significant changes are made, then a second comment period may be held. If no significant changes are made, then the draft document(s) will be finalized.

Public Meetings may be held at key points during the cleanup process. Ecology may also offer public meetings for actions expected to be of particular interest to the community. Also, if ten or more people request a public meeting or hearing during the 30 day comment period, Ecology will hold a meeting for the purpose of taking public comments on draft documents undergoing public comment.

Information Repositories

Information repositories are convenient places where the public can go to read and review site information. The information repositories are often at libraries or community sites which provide public access. During the comment period, the site documents will be available for review at each repository listed below. To request ADA accommodations or materials in a format for the visually impaired, or translation assistance, call Ecology at 425-649-7117, Relay Service 711, or TTY 877-833-6341. Please indicate you would like assistance with Bremerton School District – Crownhill Elementary School Cleanup Site.

Ecology has established the following repositories:

Kitsap Regional Library – Downtown Bremerton Library Branch
612 5th Street
Bremerton, WA 98337
Phone: (360) 377-3955

Washington State Department of Ecology – Northwest Regional Office
3190 160th Avenue S.E.
Bellevue, WA 98008

Please contact Sally Perkins to schedule an appointment at (425) 649-7190 or send an email to sally.perkins@ecy.wa.gov

Bremerton School District
134 Marion Avenue N.
Bremerton WA 98312
Phone: (360) 470-1003

Crownhill Elementary School Bremerton District Website

Ecology has a webpage for the Crownhill Elementary School site called Crownhill Elementary School Bremerton SD. This website will be updated when new information becomes available. Documents will be available on the website:

Crownhill Elementary School Bremerton SD website address:
https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=4487

Site Register and Public Events Calendar

Ecology's Toxics Cleanup Program uses the Site Register and web-based Public Involvement Calendar to announce all of its public meetings and comment periods as well as additional site activities.

To receive the Site Register in electronic or hard copy format, please contact Seth Preston at (360) 407-6848 or via email seth.preston@ecy.wa.gov. The site register is available on Ecology's website at: http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html

The Public Involvement Calendar is available on Ecology's website at:
http://apps.ecy.wa.gov/pubcalendar/calendar.asp

Fact Sheet

Ecology will prepare and mail fact sheets to persons and organizations interested in the Crownhill Elementary School Site to inform them of public meetings and comment opportunities and important site activities. Ecology also may mail fact sheets about the progress of site activities. The fact sheets will be posted on Ecology's website for this site.

Mailing List

Ecology has compiled and maintained a list of interested parties, organizations and residents living near the cleanup site. This mailing list will be used to provide information regarding this project. If you are not on the mailing list for this site and wish to be added, please contact Nancy Lui at nancy.lui@ecy.wa.gov or at (425) 649-7117. In the subject line, please indicate "Crownhill Elementary School" mailing list. To request to be taken off the mailing list, please indicate "Remove from Crownhill Elementary School" mailing list.

Newspaper Display Ads

Ecology will place ads in the local Newspaper to announce public comment periods, public meetings or hearing for this site.

5.0 Participation Grants and Technical Assistance

Additionally, citizen groups living near known or suspected contaminated sites may apply for public participation grants during open application periods. These grants help citizens receive technical assistance in understanding the cleanup process and create additional public participation avenues. For more information about the public participation grant, please go to Ecology's website at: http://www.ecy.wa.gov/programs/swfa/grants/ppg.html

Ecology currently does not have a citizen technical advisor for providing technical assistance to citizens on issues related to the Site.

6.0 Public Participation Plan Amendments

This Public Participation Plan Update was developed by Ecology and complies with the MTCA regulations (Chapter 173-340 WA). It will be reviewed as cleanup progresses and may be amended if necessary. Amendments may be submitted to Ecology's Site Manager, Libby Goldstein for review and consideration at libby.goldstein@ecy.wa.gov or mail your request to Department of Ecology, 3190 160th Ave. SE, Bellevue, WA 98008.

EXHIBIT D

APPLICABLE PERMITS AND SUBSTANTIVE REQUIREMENTS

EXHIBIT D
APPLICABLE PERMITS AND SUBSTANTIVE REQUIREMENTS

Chapter 70.105D RCW (Model Toxics Control Act), and Chapter 173-340 WAC (MTCA Regulations);

Chapter 70.105 RCW (Washington State Hazardous Waste Management Act), and Chapter173-303 WAC (State Dangerous Waste Regulations);

Chapter 173-160 RCW (Minimum Standards for Construction and Maintenance of Wells);

Washington Industrial Safety and Health Act (WISHA);

EXHIBIT E

ENVIRONMENTAL COVENANTS

CrownHill Elementary School
Bremerton United Methodist Church

After Recording Return
Original Signed Covenant to:

Libby Goldstein
Toxics Cleanup Program
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008

Environmental Covenant

Grantor: Bremerton School District
Grantee: State of Washington, Department of Ecology
Brief Legal Description: See Exhibit A
Tax Parcel No.: 152401-2-027-2005
Cross Reference: None

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as the Bremerton School District Crownhill Elementary School Site ("Site"), Ecology facility ID number 99722456. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principle contaminants remain on the Property:

Medium	Principle Contaminants Present
Soil	Antimony, arsenic, chromium (iii), copper, lead, zinc, petroleum hydrocarbons, trichloroethene, and carcinogenic polycyclic aromatic hydrocarbons
Groundwater	Arsenic, lead, petroleum hydrocarbons, and trichlorocthene
Surface Water/Sediment	N/A

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through the Washington State Department of Ecology ("Ecology").

Remedial Investigation Report, Aspect Consulting, LLC, November 2014

Feasibility Study Report, Aspect Consulting, LLC, November 2014

Cleanup Action Plan, Washington State Department of Ecology

e. This Covenant grants the Washington State Department of Ecology, as holder of this Covenant, certain rights specified in this Covenant. The right of the Washington State Department of Ecology as a holder is not an ownership interest under MTCA, Chapter 70.105D RCW or the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") 42 USC Chapter 103.

COVENANT

Bremerton School District, as Grantor, fee simple owner of the Property, hereby grants to the Washington State Department of Ecology, and its successors and assignees, (hereafter "Ecology") the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. **Protection of Human Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. **Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. **Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. **Amendment to the Covenant.** Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. Before approving any proposal, Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal. If Ecology approves the proposal, the Covenant will be amended to reflect the change.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Containment of soil/waste materials.

The remedial action for the Property is based on containing contaminated soil and waste materials under a cap consisting of Crownhill Elementary School and associated paved parking lots and roadways and a minimum one-foot thick soil cap in playfields and yard areas, as illustrated in Exhibit B. The primary purpose of this cap is to minimize the potential for contact with contaminated soil. As such, the following restrictions shall apply within the north and south landfill and surrounding areas as illustrated in Exhibit B:

Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. However, if invasive work will be limited to the top 1-foot depth in the area shown on Exhibit B, Grantor is required only to notify Ecology's project manager in advance via email or letter, ensure that such work shall be supervised by BSD's Facilities Supervisor, and notify workers of subsurface conditions. For invasive work that will extend deeper than 1-foot, Grantor shall use only personnel with hazardous waste health and safety training, shall notify such personnel of subsurface conditions, and provide notice to and request approval by Ecology prior to performing the work. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

In addition, the Grantor shall not alter or remove the existing structures on the Property in any manner that would expose contaminated soil and waste materials, result in a release to the environment of contaminants, or create a new exposure pathway, without prior written approval of Ecology. Should the Grantor propose to remove all or a portion of the existing structures illustrated in Exhibit B so that access to the underlying contamination is feasible, Ecology may require treatment or removal of the underlying contaminated soil and waste materials.

The Grantor covenants and agrees that it shall inspect the cap in accordance with the Ecology-approved Cover System Inspection and Maintenance (I&M) Plan.

b. Groundwater use.

The groundwater beneath the area of the Property illustrated in Exhibit C remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted within this area for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

c. **Monitoring**

Several groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall comply with the Ecology-approved Groundwater/LNAPL Monitoring and Contingency Plan.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. **Conveyance of Any Interest.** The Grantor, when conveying any interest within the area of the Property described/illustrated in Exhibits A and B, including but not limited to title, easement, leases, and security or other interests, must:

i. Notify Ecology at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] **AND RECORDED WITH THE KITSAP COUNTY AUDITOR UNDER RECORDING NUMBER** [RECORDING NUMBER]**. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.**

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation to Ecology.

c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Any required written notice, approval, or communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant.

Ron Carpenter Bremerton School District 200 Bruenn Avenue Bremerton, WA 98312 360-473-0502	**Section Manager, Toxics Cleanup Program** Northwest Regional Office Toxics Cleanup Program Washington State Department of Ecology 3190 160th Avenue SE Bellevue, WA 98008 425-649-7000

As an alternative to providing written notice and change in contact information by mail, these documents may be provided electronically in an agreed upon format at the time of submittal.

Section 5. Modification or Termination.

If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in Chapter 64.70 RCW and Chapter 70.105D RCW and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Grantor shall provide Ecology with an original signed Covenant and proof of recording within ten (10) days of execution of this Covenant.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 20__.

BREMERTON SCHOOL DISTRICT

Dr. Aaron Leavell _____
Superintendent
Bremerton School District
134 N. Marion Ave.
Bremerton WA 98312-3542
Phone: 360-473-1004

Dated: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Robert W. Warren _____
Section Manager
Toxics Cleanup Program
Northwest Regional Office
Phone: 425-649-7054

Dated: _____

GRANTOR ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of Bremerton School District that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for Bremerton School District.

_____
Notary Public in and for the State of Washington, residing at _____.
My appointment expires _____.

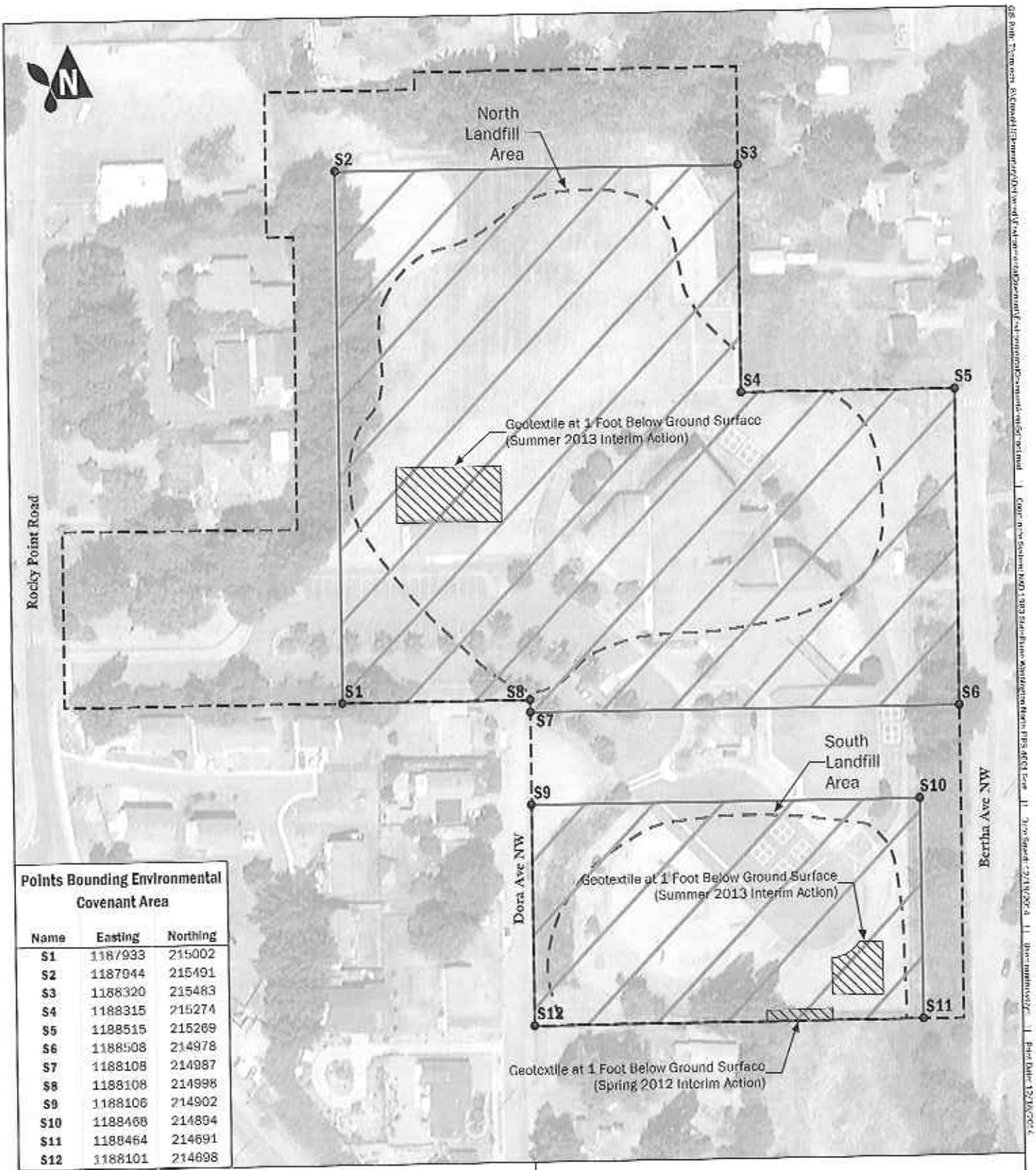
Exhibit A

LEGAL DESCRIPTION

15241E
THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 24 NORTH, RANGE 1 EAST, W.M., KITSAP COUNTY, WASHINGTON, CONVEYED BY VOLUME 585/668 DESCRIBED FOR TAX PURPOSES ONLY AS FOLLOWS:
BEGINNING AT A POINT 753.06 FEET SOUTH AND 660 FEET WEST OF THE NORTHEAST CORNER OF SAID SUBDIVISION; THENCE WEST 300 FEET; THENCE SOUTH 16 FEET; THENCE WEST 140 FEET; THENCE SOUTH 140 FEET; THENCE EAST 25 FEET; THENCE SOUTH 270 FEET; THENCE WEST 219.53 FEET TO THE EAST MARGIN OF ROCKY POINT ROAD; THENCE ALONG SAID MARGIN TO THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE EAST 434.09 FEET; THENCE SOUTH 300 FEET; THENCE EAST 400 FEET; THENCE NORTH 579.56 FEET; THENCE WEST 200 FEET; THENCE NORTH 300 FEET TO THE TRUE POINT OF BEGINNING.

Exhibit B

PROPERTY MAP



Points Bounding Environmental Covenant Area

Name	Easting	Northing
S1	1187933	215002
S2	1187944	215491
S3	1188320	215483
S4	1188315	215274
S5	1188515	215269
S6	1188508	214978
S7	1188108	214987
S8	1188108	214998
S9	1188106	214902
S10	1188468	214894
S11	1188464	214691
S12	1188101	214698

Area of Environmental Covenant Soil and Structure Prohibitions

Interpreted Extent of Landfill Activity

Bremerton School District Property Boundary

0 120 240

Feet

Environmental Covenant Area, School Property

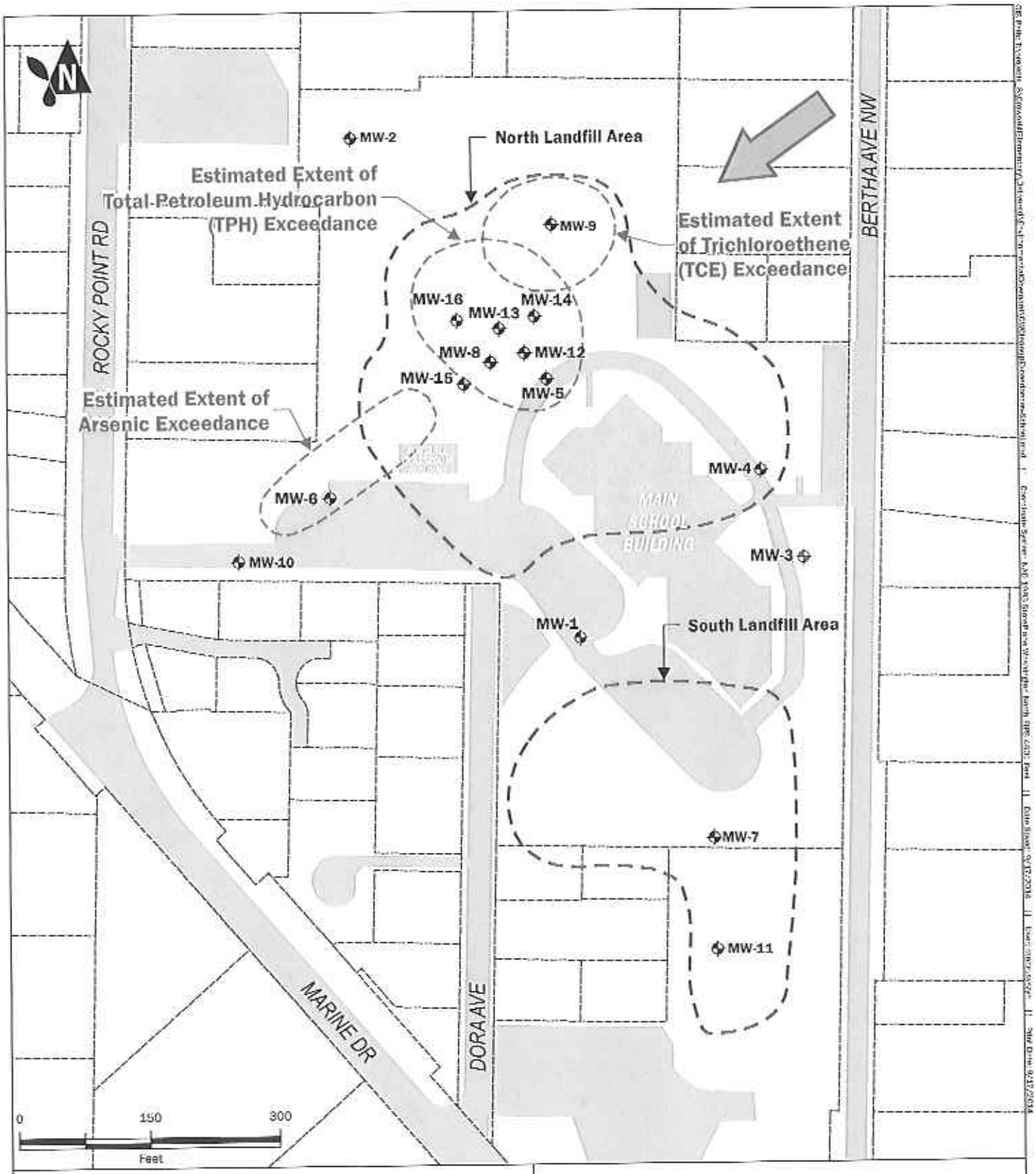
Bremerton School District Crownhill Elementary School Site
Kitsap County, Washington

Aspect Consulting	DEC-2014	BY HRI	FIGURE NO. 1
	PROJECT NO 100094	REVISED BY RAA	

Basemap Layer Credits || Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

Exhibit C

GROUNDWATER MAP



Groundwater Cleanup Level Exceedances

Bremerton School District Crownhill Elementary School Site
Kitsap County, Washington

Aspect Consulting	SEP-2014	BY DLH / PPW	FIGURE NO. 2
	PROJECT NO 100094	REVISED BY RM	

After Recording Return
Original Signed Covenant to:

Libby Goldstein
Toxics Cleanup Program
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008

Environmental Covenant

Grantor: Bremerton United Methodist Church
Grantee: State of Washington, Department of Ecology
Brief Legal Description: See Exhibit A
Tax Parcel No.: 152401-2-098-2009
Cross Reference: None

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as the Bremerton School District Crownhill Elementary School Site ("Site"), Ecology facility ID number 99722456. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principle contaminants remain on the Property:

Medium	Principle Contaminants Present
Soil	Antimony, arsenic, chromium (iii), copper, lead, zinc, petroleum hydrocarbons, trichloroethene, and carcinogenic polycyclic aromatic hydrocarbons
Groundwater	N/A
Surface Water/Sediment	N/A

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through the Washington State Department of Ecology ("Ecology").

Remedial Investigation Report, Aspect Consulting, LLC, November 2014

Feasibility Study Report, Aspect Consulting, LLC, November 2014

Cleanup Action Plan, Washington State Department of Ecology

e. This Covenant grants the Washington State Department of Ecology, as holder of this Covenant, certain rights specified in this Covenant. The right of the Washington State Department of Ecology as a holder is not an ownership interest under MTCA, Chapter 70.105D RCW or the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") 42 USC Chapter 103.

COVENANT

Bremerton United Methodist Church, as Grantor, fee simple owner of the Property, hereby grants to the Washington State Department of Ecology, and its successors and assignees, (hereafter "Ecology") the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. Amendment to the Covenant. Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. Before approving any proposal, Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal. If Ecology approves the proposal, the Covenant will be amended to reflect the change.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Containment of soil/waste materials.

The remedial action for the Property is based on containing contaminated soil and waste materials under a minimum one-foot thick soil cap in yard areas, as illustrated in Exhibit B. The primary purpose of this cap is to minimize the potential for contact with contaminated soil. As such, the following restrictions shall apply within the south landfill and surrounding areas as illustrated in Exhibit B:

Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. However, if invasive work will be limited to the top 1-foot depth in the area shown on Exhibit B, Grantor is required only to notify Ecology's project manager in advance via email or letter, ensure that such work shall be supervised by BSD's Facilities Supervisor, and notify workers of subsurface conditions. For invasive work that will extend deeper than 1-foot, Grantor shall use personnel with hazardous waste health and safety training, shall notify such personnel of subsurface conditions, and provide notice to and request approval by Ecology prior to performing the work. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall provide access to Bremerton School District ("BSD") to inspect the cap in accordance with the Ecology-approved Cover System Inspection and Maintenance (I&M) Plan.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. Except as identified above with respect to BSD, no right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest within the area of the Property described/illustrated in Exhibits A and B, including but not limited to title, easement, leases, and security or other interests, must:

i. Notify Ecology at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE KITSAP COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Any required written notice, approval, or communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant.

Lee Crawford, Church Administrator Bremerton United Methodist Church 1150 Marine Drive Bremerton, WA 98310	**Section Manager, Toxics Cleanup Program** Northwest Regional Office Toxics Cleanup Program Washington State Department of Ecology 3190 160th Avenue SE Bellevue, WA 98008 425- 649-7000

As an alternative to providing written notice and change in contact information by mail, these documents may be provided electronically in an agreed upon format at the time of submittal.

Section 5. Modification or Termination.

If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any

amendment or termination of this Covenant must follow the procedures in Chapter 64.70 RCW and Chapter 70.105D RCW and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Grantor shall provide Ecology with an original signed Covenant and proof of recording within ten (10) days of execution of this Covenant.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 20___.

BREMERTON UNITED METHODIST CHURCH

Lee Crawford, Church Administrator _____

Dated: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Robert W. Warren _____
Section Manager
Toxics Cleanup Program
Northwest Regional Office
Phone: 425-649-7054

Dated: _____

GRANTOR ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of Bremerton United Methodist Church that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for Bremerton United Methodist Church.

_____
Notary Public in and for the State of Washington, residing at _____.
My appointment expires_____.

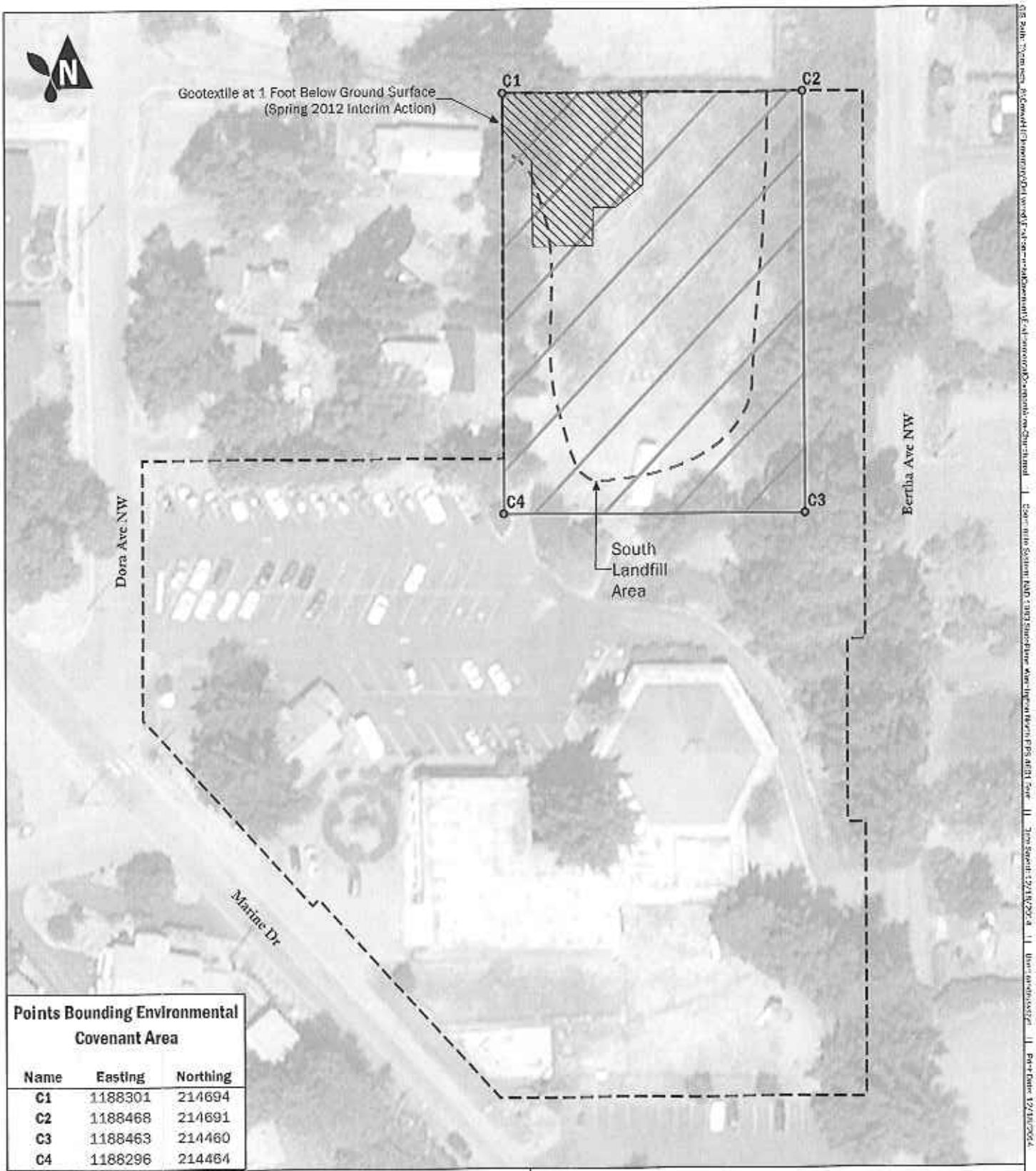
Exhibit A

LEGAL DESCRIPTION

15241E
THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 24 NORTH, RANGE 1 EAST, W.M., KITSAP COUNTY, WASHINGTON, CONVEYED BY VOLUME 751, PAGES 661 THRU 666, DESCRIBED FOR TAX PURPOSES ONLY AS FOLLOWS: BEGINNING AT A POINT 460 FEET WEST AND 300 FEET SOUTH OF THE NORTHEAST CORNER OF SAID SUBDIVISION; THENCE WEST 200 FEET; THENCE SOUTH 200 FEET; THENCE WEST 200 FEET; THENCE SOUTH 145.93 FEET TO THE NORTH MARGIN OF MARINE DRIVE; THENCE SOUTHEASTERLY 143.38 FEET; THENCE NORTH 47° EAST 5 FEET; THENCE SOUTH 42°23' EAST 138.55 FEET; THENCE SOUTH 88°52'15" EAST 205.60 FEET; THENCE NORTH 150 FEET; THENCE WEST 10 FEET; THENCE NORTH 100 FEET; THENCE EAST 10 FEET; THENCE NORTH 300 FEET TO THE TRUE POINT OF BEGINNING.

Exhibit B

PROPERTY MAP



Points Bounding Environmental Covenant Area

Name	Easting	Northing
C1	1188301	214694
C2	1188468	214691
C3	1188463	214460
C4	1188296	214464

Area of Environmental Covenant Soil Prohibitions

Interpreted Extent of Landfill Activity

Bremerton United Methodist Church Property Boundary

0 80 160

Feet

Environmental Covenant Area, Church Property

Bremerton School District Crownhill Elementary School Site
Kitsap County, Washington

Aspect Consulting	DLC 2014	By: HRL	FIGURE NO. 1
	Project No: 100091	Revised By: RAA	

Basemap Layer Credits || Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

EXHIBIT F

BREMERTON SCHOOL DISTRICT CROWNHILL ELEMENTARY SCHOOL SITE REMEDIAL DESIGN AND CLEANUP ACTION SCOPE OF WORK

Exhibit F

BREMERTON SCHOOL DISTRICT CROWNHILL ELEMENTARY SCHOOL SITE REMEDIAL DESIGN AND CLEANUP ACTION SCOPE OF WORK

PURPOSE

The purpose of this Remedial Design and Cleanup Action Scope of Work (SOW) for the Bremerton School District Crownhill Elementary School Site (the Site) is to implement the Agreed Order (AO) entered into by the Department of Ecology (Ecology) and Bremerton School District (BSD), to which this SOW is an Exhibit.

This SOW sets out the schedule for performance and the required deliverables to implement the Final Cleanup Action Plan issued by Ecology for the Site. It is divided into the following tasks:

1) Progress Reports
2) Cleanup Remedy Plan Preparation
3) Cleanup Remedy Monitoring and Reporting

TASK 1—PROGRESS REPORTS

The BSD shall submit progress reports quarterly unless a longer reporting period is approved by Ecology in writing. Progress reports shall be submitted to Ecology until satisfaction of the AO. Progress Reports shall be submitted to the Ecology project coordinator by the 10th of every third month following the effective date of the AO. If this day is a weekend or holiday, deliverables shall be submitted to Ecology on the next business day. At a minimum, progress reports shall contain the following information regarding the preceding reporting period:

- A description of the actions which have been taken to comply with the AO and SOW during the previous reporting period;
- Description of sampling, testing, inspection, and maintenance activities completed during the reporting period;
- Summaries of deviations from approved work plans;
- Summaries of contacts with representatives of the local community, public interest groups, press, and federal, state or tribal government;
- Summaries of problems or anticipated problems in meeting the schedule or objectives set forth in the SOW and approved work plans;
- Summaries of solutions developed and implemented or planned to address any actual or anticipated problems or delays;
- Changes in key personnel; and
- A description of work planned for the next reporting period.

TASK 2—CLEANUP REMEDY PLAN PREPARATION

BSD shall prepare the following plans to address cleanup remedy long-term compliance monitoring, contingency planning, and removal of light non-aqueous-phase liquid (LNAPL) at the Site:

- A **Groundwater/LNAPL Monitoring and Contingency Plan** will address monitoring procedures, monitoring frequency, groundwater sampling and analysis protocols, and reporting requirements. The plan will also specify how monitoring results are evaluated and the steps to be considered in the event that potential migration of LNAPL or contaminated groundwater is indicated. If LNAPL is detected at the conditional point of compliance for LNAPL migration (Well MW-6), the plan will require that more aggressive measures be considered to prevent further LNAPL migration. Similarly, an arsenic, lead, TCE, or TPH exceedance at the conditional point of compliance for achieving groundwater cleanup levels (Well MW-10) during periodic monitoring will trigger consideration of active measures to prevent further migration of the dissolved contaminant plume.
- A **LNAPL Removal Work Plan** will address LNAPL removal methods, removal frequency, and temporary storage, recycling/disposal, and reporting requirements. Periodic LNAPL removal will continue until the rate at which LNAPL enters a well is reduced to the point that further periodic removal from that well is impracticable.
- A **Cover System Inspection and Maintenance (I&M) Plan** will specify I&M procedures, schedule, and reporting requirements to ensure that the existing protective covers over landfilled materials and contaminated soils are adequately maintained;

The plans will be prepared in accordance with the requirements of WAC 173-340-410.

TASK 3—CLEANUP REMEDY MONITORING AND REPORTING

BSD shall conduct periodic groundwater/LNAPL monitoring, LNAPL removal, and cover system I&M, evaluate continued compliance with respect to migration of LNAPL and contaminated groundwater, and report results to Ecology in accordance with the Ecology-approved plans developed in Task 2.

DELIVERABLES

The BSD shall prepare and submit all plans and reports listed below (items a through c) as required by the Order. The deliverable process is as follows:

- All deliverables shall be submitted to Ecology in both electronic (Word and Adobe Portable Document Format [PDF] formats) and hard-copy formats;
- A draft shall be submitted to Ecology for review and approval in accordance with this SOW, including the schedule outlined below;
- Ecology will provide written comments on a draft as necessary. Technical comments will be provided under separate cover in addition to any redline editorial comments, directly from Ecology's Project Coordinator to BSD after Ecology's Project Coordinator has reviewed the comments for relevance and edited them appropriately, so that Ecology speaks with a unified voice when communicating with BSD;
- If Ecology provides comments on a draft document, the BSD shall revise the draft document by incorporating and/or otherwise addressing Ecology's comments. The BSD shall resubmit an electronic redlined/strikeout revised draft to Ecology for review and

approval (only revised sections shall be reviewed by Ecology for completion, unless necessary to review the document more comprehensively due to revisions); and

- Upon Ecology approval, the final version submitted shall be considered the final document.

Specific deliverables described in this SOW include:

a) Groundwater/LNAPL Monitoring and Contingency Plan.
b) LNAPL Removal Work Plan.
c) I&M Plan.
d) Reports documenting periodic groundwater/LNAPL monitoring and LNAPL removal, and evaluating continued compliance with respect to migration of LNAPL and contaminated groundwater.
e) Reports documenting periodic cover system I&M.

SCHEDULE

The schedule for all tasks described in this SOW is presented below. If, at any time during the process, unanticipated conditions or changed circumstances are discovered which may result in a schedule delay, the BSD shall bring such information to the attention of Ecology. Pursuant to Section VIII.J of the AO, Ecology shall determine whether a schedule extension is warranted.

Completion times are calendar days. Any deadline which falls on a holiday or weekend shall be extended to next business day.

Actions	Completion Time
Draft Groundwater/LNAPL Monitoring and Contingency Plan and LNAPL Removal Work Plan	45 days after Ecology issues Final CAP
Final Groundwater/LNAPL Monitoring and Contingency Plan and LNAPL Removal Work Plan	30 days from receipt of Ecology comments on Drafts
Draft I&M Plan	60 days after Ecology issues Final CAP
Final I&M Plan	30 days from receipt of Ecology comments on Draft
Cleanup Remedy Periodic Monitoring and Reporting	In accordance with the schedules in the Ecology-approved Groundwater/LNAPL Monitoring and Contingency Plan, LNAPL Removal Work Plan, and I&M Plan

EXHIBIT G

FINAL CAP

DEPARTMENT OF
ECOLOGY
State of Washington

CLEANUP ACTION PLAN
BREMERTON SCHOOL DISTRICT
CROWNHILL ELEMENTARY SCHOOL SITE

December 10, 2014

Washington State Department of Ecology
3190 160th Avenue Southeast
Bellevue, Washington 98008

Contents

List of Tables

List of Figures

1 Introduction and Background

This Cleanup Action Plan (CAP) defines the selected cleanup action for the Bremerton School District Crownhill Elementary School Site (Site). The Crownhill Elementary School (School) is located at 1500 Rocky Point in Bremerton, Washington. As stated in Agreed Order No. DE7916 between the Washington Department of Ecology (Ecology) and the Bremerton School District (BSD), *the Site includes property owned by BSD and is defined by the extent of contamination caused by the release of hazardous substances at the Site, which may extend to adjacent properties*. Adjacent properties are primarily residential, with the Bremerton United Methodist Church (Church) located on the adjacent property to the south (see Figure 1).

Contaminants at concentrations above cleanup levels were found only on the School and Church properties, not on adjacent residential properties. These properties were used for sand and gravel mining up to the 1930s, and the mined area was backfilled with municipal and industrial wastes in the 1930s and 1940s. The original school building was constructed in 1956, and partially burned down in 1993. A series of environmental investigations were conducted during the period between that fire and construction of the current school building, completed in 1996. Additional investigations were conducted beginning in 2009, culminating in the preparation of a Remedial Investigation (RI) report (Aspect, 2013). The purpose of the RI was to collect data necessary to adequately characterize the nature and extent of Site contamination, so that cleanup action alternatives could be developed and evaluated in the Site Feasibility Study (FS; Aspect, 2014).

The goal of the cleanup action is protection of human health and the environment from hazardous substances at the Site. Based on the RI results, soil contamination correlates closely with the occurrence of landfilled materials. Using multiple lines of evidence (e.g., historical photographs, site assessment activity, construction observations), two generalized areas of landfill accumulation (designated the 'north' and 'south' landfill areas) were identified in the RI. These areas, the interpreted boundaries of which are shown on Figure 1, cover approximately 5.5 acres.

The RI implemented a grid-based sampling approach to delineate areas of soil contamination to a depth of 15 feet below ground surface (bgs). Detected concentrations of arsenic, lead, and total petroleum hydrocarbon (TPH) in the diesel and motor oil ranges are summarized on Figures 16 through 19 of the RI report. Contaminant concentrations exceeding soil cleanup levels (Table 1) were identified within one foot of ground surface in a portion of the south landfill area, and an interim action was successfully implemented at that location in spring 2012. That interim action consisted of removing impacted soil to a 1-foot depth, installing a geotextile fabric (which does not reduce water infiltration but provides a "marker" between clean and contaminated soils, and reduces the potential for exposure to underlying contaminated soils), and constructing a clean soil and sod cover layer at least one foot thick.

Ecology subsequently required that a second interim action be conducted at two locations on the School property where lead cleanup level exceedances were identified in the 1- to

3-foot depth range, to better ensure the long-term integrity of the cover layer. In summer 2013 those areas were covered with a geotextile fabric (placed directly on the undisturbed ground surface), and an additional 1-foot thickness of fill soil was imported and hydroseeded to supplement the pre-existing clean soil cover layer.

The spring 2012 and summer 2013 interim action areas are shown on Figure 2 along with two other RI sampling locations where soil cleanup level exceedances were detected above 3-foot depth. The lead exceedance at exploration NG-M4 is currently covered by pavement. Follow-up sampling at exploration SG-J10 (located on Church property) indicated that the marginal arsenic exceedance at that location is cover by a minimum 1-foot thickness of "clean" soil.

Results of sub-slab soil vapor sampling conducted in 2010 indicated that vapor intrusion into the School building was not a concern. As a precaution to ensure that the soil-to-indoor-air exposure pathway remains protective over the long term, it was recommended that the standard practice of running the HVAC system throughout the school day be continued.

While typically limited to depths of less than 15 feet bgs, landfilled materials were found as deep as 40 feet bgs at some locations. Vadose zone soils (i.e., soils above the water table) beneath a deep portion of the north landfill area are impacted by petroleum hydrocarbons, and separate-phase petroleum-based product (referred to as light non-aqueous-phase liquid, or LNAPL) is floating on the water table at 120 to 130 feet bgs. Table 3 provides a summary of LNAPL thicknesses measured in four monitoring wells through April 2014. As discussed in the RI, LNAPL thickness was difficult to measure accurately, and measurements were highly variable from one monitoring round to the next.

Although a wide range of petroleum hydrocarbon liquids were likely disposed of at the Site, many decades of weathering (since landfilling activities ceased by the mid-1950s) have left behind a high-viscosity mixture of relatively low-solubility compounds. LNAPL in vadose zone soils, which comprises the majority of petroleum hydrocarbon mass at the Site, is likely trapped in the soil pore spaces (i.e., no longer moving downward), and the thickness and areal extent of LNAPL at the water table are unlikely to increase over time. The LNAPL is effectively isolated from the ambient environment.

TPH in the diesel and motor oil ranges has leached to groundwater beneath the impacted soils and LNAPL, forming a localized dissolved contaminant "plume." Localized plumes of dissolved arsenic and trichloroethene (TCE) are also present in Site groundwater, which flows in a southwesterly direction. Figure 1 shows the estimated areal extent of groundwater with cleanup level exceedances, which is confined to the School property. Similar to the LNAPL, impacted groundwater is likely no longer spreading due to the age of the release.

In the FS, Site cleanup alternatives were developed and comparatively evaluated with respect to criteria specified in the Washington State Model Toxics Control Act (MTCA; Chapter 173-340 WAC). Cleanup alternatives addressing landfilled materials and near-surface impacted soils were developed separately from those addressing deep petroleum hydrocarbon and groundwater impacts. These area/media-specific alternatives were then combined into Site-wide remedial alternatives. Based on the results of detailed evaluation

of the Site-wide remedial alternatives with respect to the MTCA criteria, the FS identified a "preferred alternative," which is the cleanup action selected for implementation.

This CAP describes the selected cleanup action and provides additional information in accordance with WAC 173-340-380(1)(a).

2 Remedial Action Objectives

Remedial action objectives (RAOs) are medium-specific or site-specific goals for protecting human health and the environment. RAOs for this Site include the following:

- Minimize the potential for direct-contact exposure to landfilled materials and soils with contaminant concentrations exceeding cleanup levels;
- Continue to ensure that the air in Site structures is not unacceptably impacted by soil vapor intrusion;
- Remediate LNAPL to the maximum extent practicable;
- Minimize the potential for ingestion of groundwater with contaminant concentrations exceeding cleanup levels; and
- Meet groundwater cleanup levels at a conditional point of compliance established at the School property boundary.

3 Description of Selected Cleanup Action

Based on the results of extensive grid-based sampling conducted during the RI, the existing cover over landfilled materials and near-surface impacted soils consists of a minimum 1-foot thickness of clean soil or a "hard" surface such as pavement. Under the selected cleanup action, the existing cover will be periodically inspected and maintained over the long term to prevent direct contact exposures. A Cover System Inspection and Maintenance (I&M) Plan will be developed addressing inspection procedures, maintenance, and documentation requirements. The I&M Plan will include a brief, separate summary of site conditions and requirements for performing invasive work in soil, to be provided to all supervisors and workers who may perform such invasive work. Environmental covenants on the School and Church properties will prohibit or restrict Site activities that would interfere with the integrity of the existing cover or continued protection of human health. The areas to be covered by the environmental covenants are shown on Figures 3 and 4, respectively, for the School and Church properties.

To address the soil vapor intrusion pathway, the HVAC system in the main school building will be run continuously during the school day, and sub-slab vapor and/or indoor air sampling will be conducted periodically to reconfirm that vapor intrusion is not a concern. In addition, vapor intrusion potential will be evaluated and/or vapor controls

incorporated into any future buildings constructed in the immediate vicinity of the north or south landfill areas.

On a periodic basis, LNAPL on the water table beneath the north landfill area will be removed from existing monitoring wells and properly disposed of. An LNAPL Removal Work Plan will be developed addressing removal methods, removal frequency, and temporary storage, recycling/disposal, and reporting requirements. Periodic LNAPL removal will continue until the rate at which LNAPL enters a well is reduced to the point that further periodic removal from that well is impracticable.

Groundwater quality and LNAPL layer thickness will be monitored periodically and conditional points of compliance for LNAPL migration and for achieving groundwater cleanup levels will be established at monitoring wells MW-6 and MW-10, respectively (Figure 1). A Groundwater/LNAPL Monitoring and Contingency Plan will be developed addressing monitoring procedures, monitoring frequency, groundwater sampling and analysis protocols, and reporting requirements. The plan will also specify how monitoring results are evaluated and the steps to be taken in the event that potential migration of LNAPL or contaminated groundwater is indicated. If LNAPL is detected in MW-6, the plan will require that more aggressive measures be considered/implemented to prevent further LNAPL migration. Similarly, exceedance of a groundwater cleanup level for arsenic, lead, TCE, or TPH at MW-10 (Table 1) during periodic monitoring will trigger consideration of active measures to prevent further migration of the dissolved contaminant plume.

The environmental covenant on the School property will also prohibit drinking water well installation or invasive activities that may result in exposure to LNAPL or groundwater contamination.

The long-term LNAPL and groundwater monitoring proposed in this alternative is distinct from monitored natural attenuation (MNA) in that there is no expectation that the contamination will attenuate over a "reasonable restoration time frame." Similar to the containment solution for the landfilled materials, the goal is to ensure that the LNAPL and groundwater contamination do not spread beyond their current boundaries.

4 Rationale for Selecting Cleanup Action

In the FS comparative evaluation, the cleanup alternatives were evaluated against the following MTCA criteria in accordance with WAC 173-340-360(2):

Threshold Criteria

- Protection of human health and the environment;
- Compliance with cleanup standards and applicable state and federal laws; and
- Provision for compliance monitoring;

Other Criteria

- Use of permanent solutions to the maximum extent practicable;

- Provision for a reasonable restoration time frame; and
- Consideration of public concerns.

The selected cleanup action meets the requirements of the "threshold criteria," uses permanent solutions to the maximum extent practicable, and is cost-effective.

The spring 2012 interim action remediated an area, primarily on the Church property, that contained contaminated soils within 1 foot of ground surface. Two additional areas where contaminated soils were identified in the 1- to 3-foot depth range were subsequently addressed in the summer 2013 interim action. The existing cover in place over the Site, which consists of a minimum 1-foot thickness of clean soil or pavement, will be effective in preventing direct contact with the limited areas of residual impacted near-surface soil so long as it is periodically inspected and maintained. In-place containment of landfilled materials is the presumptive remedy for landfill sites.

Continued routine operation of the HVAC system at the School, and periodic testing of sub-slab vapor and/or indoor air quality, will ensure that vapor intrusion is not a concern within the School.

LNAPL floating on the water table, located approximately 120 feet beneath the School property, will be physically removed from existing monitoring wells on a periodic basis. Due to the age of the release, the LNAPL and localized plumes of impacted groundwater, which are all confined to the School property, are likely no longer spreading. This will be confirmed through periodic monitoring of LNAPL layer thickness and groundwater quality. It is not practicable or cost-effective to try to treat the LNAPL and impacted groundwater at this Site using *in situ* technologies (e.g., thermal remediation).

To prevent exposure to deep contamination remaining at the Site, environmental covenants will be recorded on the School and Church properties to ensure that invasive activities, including the drilling of drinking water wells, are not allowed.

5 Other Cleanup Alternatives Evaluated in FS

5.1 Area/Media-Specific Alternatives for Landfilled Materials and Near-Surface Impacted Soils

In addition to the selected cleanup action to address landfilled materials and near-surface impacted soils (Alternative A2), the FS evaluated the following alternatives:

- **Alternative A1 – No Additional Action.** The completed Interim Action in the south landfill area would remain in place, but the existing cover over landfilled materials and near-surface impacted soils would not be maintained, and future Site activities would not be restricted by institutional controls.
- **Alternative A3 – Landfill Cap.** Except for the building footprint and paved areas, the existing cover systems at the Site do little to impede water infiltration, which can result in leaching of contaminants to groundwater. In this alternative, a

cap designed to meet Washington State standards for closure of a solid waste landfill would be installed over the landfill areas and areas of impacted soils.

5.2 Area/Media-Specific Alternatives for Deep Petroleum Hydrocarbon and Groundwater Impacts

In addition to the selected cleanup action to address deep petroleum hydrocarbon and groundwater impacts (Alternative B2), the FS evaluated the following three alternatives:

- **Alternative B1 – No Action**. No LNAPL removal or long-term monitoring of groundwater quality and LNAPL layer thickness would take place, and installation of drinking water wells would not be prohibited by institutional controls.
- **Alternative B3 – *In Situ* Treatment of Water Table LNAPL**. In this alternative, the LNAPL layer on the water table beneath the north landfill area would be treated *in situ* with the goal of maximizing removal of LNAPL mass. Multiple *in situ* technologies could potentially be used to treat petroleum hydrocarbon-based LNAPL. For the purposes of evaluating this alternative and estimating costs, it was assumed that electrical resistance heating (ERH) was selected for implementation.
- **Alternative B4 – *In Situ* Treatment of LNAPL, Impacted Vadose Zone Soils, and Groundwater**. In this alternative, TPH-impacted vadose zone soils as well as water table LNAPL would be treated *in situ* using ERH, with the goal of maximizing removal of LNAPL mass. After ERH treatment was completed, *in situ* chemical oxidation would be used to treat TPH and TCE dissolved in groundwater.

5.3 Evaluation of Site-Wide Cleanup Alternatives

Area/media-specific alternatives A1 and B1 were screened against the MTCA threshold criteria, and were eliminated from further consideration because they would not satisfy those criteria. The remaining area/media-specific alternatives were then combined into the following Site-wide alternatives for detailed evaluation:

- **Alternative A2/B2** – Periodic inspection and maintenance of the existing cover and physical removal of LNAPL from existing wells;
- **Alternative A3/B3** – Landfill cap and *in situ* treatment of LNAPL at the water table; and
- **Alternative A3/B4** – Landfill cap and *in situ* treatment of impacted vadose zone soils, LNAPL at the water table, and groundwater.

Alternatives A3/B3 and A3/B4 were not selected because their higher costs compared to Alternative A2/B2 are disproportionate to their incremental benefits. Remediating LNAPL at this Site via *in situ* treatment (Alternatives B3 and B4) may not be practicable, and the likelihood of achieving groundwater cleanup levels throughout the School property is highly uncertain. The impacted groundwater and water table LNAPL at 120 to 130 feet bgs are effectively isolated from the ambient environment; their extents are

confined to the School property and are likely stable or shrinking. Alternative A2/B2 is effective at preventing direct contact exposure to the localized areas where cleanup level exceedances exist in near-surface soil. The primary purpose of a landfill cap (Alternative A3) would be to reduce infiltration of surface water, which causes leaching of contaminants to groundwater. However, the impracticability of completely removing water table LNAPL undermines the benefit of reduced infiltration. And this benefit would be minimal in any case the groundwater contamination is localized and does not appear to be spreading.

6 Cleanup Standards

Cleanup standards consist of cleanup levels for hazardous substances present at a site, the location where cleanup levels must be met (point of compliance), and other regulatory requirements that apply to the site ("applicable state and federal laws"). Soil, groundwater, and air cleanup standards applicable to this Site are outlined below.

6.1 Soil

Table 1 lists soil cleanup levels for the constituents of concern (COCs) identified in the FS. The standard point of compliance for the direct-contact exposure pathway (i.e., throughout the site from the ground surface to 15 feet bgs) is not applicable to this containment remedy. Per WAC 173-340-700(4)(c):

> *Where a cleanup action involves containment of soils with hazardous substances above cleanup levels, the cleanup action may be determined to comply with cleanup standards, provided the compliance monitoring program is designed to ensure the long-term integrity of the containment system, and the other requirements for containment in this chapter are met.*

A compliance monitoring program will be designed to ensure the long-term integrity of the containment system, and other requirements for containment in WAC 173-340-700 will be met. Therefore, the cleanup action is determined to comply with soil cleanup standards.

6.2 Groundwater

Table 1 also lists groundwater cleanup levels for the COCs identified in the FS. The standard point of compliance for meeting groundwater cleanup levels (i.e., throughout the site aquifer) is not practicable at this Site due to the depth of the groundwater table, the quantity of LNAPL present, and its location beneath landfilled materials. Instead, a conditional point of compliance is established at monitoring well MW-10 near the School property boundary. Monitoring results indicate that groundwater cleanup level exceedances are currently confined to the School property. Groundwater quality monitoring will be conducted periodically to confirm that cleanup levels for arsenic, lead, TCE, and TPH continue to be met at well MW-10.

Compliance with groundwater cleanup standards also encompasses the MTCA requirement to remove soil with NAPL exceeding residual saturation. This requirement

will be addressed through periodic physical removal of LNAPL (e.g., via bailing) from existing wells until the rate at which LNAPL enters the wells is reduced to the point that further periodic removal is impracticable. In addition, a conditional point of compliance for LNAPL migration is established at monitoring well MW-6. If LNAPL is detected in MW-6 during periodic monitoring, more aggressive measures to prevent further LNAPL migration will be considered for implementation in accordance with the Groundwater/LNAPL Monitoring and Contingency Plan.

6.3 Air

Table 2 lists cleanup levels for constituents of potential concern (COPCs) in air. COPCs in air were identified in consultation with Ecology during development of the site-specific Soil Vapor Intrusion Assessment Work Plan (Aspect, 2010). The point of compliance for achieving air cleanup levels is the ambient air throughout the Site. Compliance with air cleanup standards was demonstrated by sub-slab vapor sampling conducted inside the school building in November 2010. Sub-slab vapor and/or indoor air sampling will be conducted periodically inside the school building to re-confirm that vapor intrusion is not a concern.

7 Tentative Cleanup Implementation Schedule

The tentative schedule for implementation of the selected cleanup action calls for development of the environmental covenants, the Cover System I&M Plan, the LNAPL Removal Work Plan, and the Groundwater/LNAPL Monitoring and Contingency Plan in the second half of 2014 (pending finalization of this CAP). Interim groundwater and LNAPL monitoring are ongoing (on approximately a quarterly basis), and interim LNAPL bailing from existing wells is scheduled to begin in April 2014. Periodic cover system I&M, LNAPL removal, and groundwater/LNAPL monitoring under the final remedy will commence as soon as the respective plans are approved by Ecology.

8 Institutional Controls

Institutional controls in the selected cleanup action will include environmental covenants on the School and Church properties to be recorded with Kitsap County. The covenants will prohibit or restrict activities on the Site that would interfere with the integrity of the existing cover or continued protection of human health.

Specific restrictions and requirements for Site use (School and Church properties) will likely include:

- A requirement to monitor and maintain the integrity of the existing cover features that provide protection against direct contact exposure, and to provide reports to Ecology, in accordance with the Cover System I&M Plan;

- A requirement to notify Ecology's project manager via email or letter prior to any invasive work within the top 1-foot depth in the north and south landfill and surrounding areas as shown on Figures 3 and 4. Such work shall be supervised by BSD's Facilities Supervisor. Workers shall be notified of subsurface conditions.
- A requirement to use only personnel with hazardous waste health and safety training for any invasive work to greater that 1-foot depth in the north and south landfill areas, to notify such personnel of subsurface conditions, and to provide notice to and receive approval from Ecology prior to performing the work; and
- A requirement to evaluate vapor intrusion potential and/or incorporate vapor controls into future buildings constructed in the immediate vicinity of the north and south landfill areas.

Institutional controls required for the School Property only will likely include:

- A requirement to conduct periodic LNAPL removal in accordance with the LNAPL Removal Work Plan;
- A requirement to conduct periodic groundwater quality and LNAPL layer thickness monitoring, and to perform contingency actions in accordance with the Groundwater/LNAPL Monitoring and Contingency Plan;
- A requirement to continue the standard practice of running the School's HVAC system throughout the school day, and to reevaluate vapor intrusion potential at a minimum frequency of once every 5 years; and
- A prohibition against water well installation for any purpose other than groundwater/LNAPL monitoring or remediation.

9 Applicable State and Federal Laws

Cleanup standards established for the Site incorporate applicable state and federal laws and regulations in the form of chemical-specific regulatory criteria for soil and water as described in the FS. Other local, state, and federal laws and requirements that potentially apply to the cleanup work at the Site include:

- State Environmental Policy Act (WAC 197-11)
- Resource Conservation and Recovery Act (RCRA)
- Washington State Minimum Functional Standards for Solid Waste (WAC 173-304)
- Washington State Dangerous Waste Regulations (WAC 173-303)
- USDOT/WSDOT Regulations (WAC 173-160)

10 Compliance with WAC 173-340-360

The selected cleanup action complies with the provisions of WAC 173-340-360. It will be protective of human health and the environment, comply with cleanup standards and applicable state and federal laws, and provide for compliance monitoring. LNAPL will be removed from the water table to the extent practicable using normally accepted engineering practices. Soils with hazardous substance concentrations that exceed soil cleanup levels will be contained to the maximum extent practicable. Containment will be monitored on a long-term basis, and a contingency plan will specify actions to be taken in the event that potential contaminant migration is indicated.

As discussed in the FS, the selected cleanup action is also considered to use permanent solutions to the maximum extent practicable, and to provide for a reasonable restoration time frame.

11 Contamination Remaining on Site

11.1 Landfilled Materials and Near-Surface Impacted Soils

The north and south landfill areas delineated on Figure 1 cover an area of approximately 5.5 acres. While typically limited to depths of less than 15 feet bgs, landfilled materials were found as deep as 40 feet bgs at some locations. An existing cover over landfilled materials and near-surface impacted soils consists of a minimum 1-foot thickness of clean soil or a "hard" surface such as pavement. Under the selected cleanup action, the existing cover will be periodically inspected and maintained over the long term to prevent direct contact exposures. Figure 2 shows the localized areas of the Site with near-surface (above 3-foot depth) soil cleanup level exceedances. Detected concentrations of arsenic, lead, and TPH to 15-foot depth are summarized on Figures 16 through 19 of the RI report (Aspect, 2013).

Environmental covenants on the School and Church properties will prohibit or restrict Site activities that would interfere with the integrity of the existing cover. The standard practice of running the HVAC system throughout the school day will be continued, and sub-slab vapor and/or indoor air sampling will be conducted periodically to reconfirm that vapor intrusion is not a concern in the school building.

11.2 LNAPL

Soils beneath a deep portion of the north landfill area contain an estimated 660,000 kg of petroleum hydrocarbon-based LNAPL. Most of this contaminant mass is LNAPL present in the pore spaces of vadose zone soils. A small portion of the LNAPL (estimated at 60,000 kg) is floating on the water table, covering an estimated 12,000-square-foot area beneath the north landfill area. Following many decades of weathering (since landfilling activities ceased by the mid-1950s), the present-day LNAPL is a high-viscosity mixture of relatively low-solubility compounds. As such, its mobility in the subsurface is expected to be extremely limited.

Under the selected cleanup action, the Environmental Covenant for the School property will prohibit invasive activities such as drinking water well installation that could result in exposure to LNAPL. In addition, LNAPL will be physically removed from existing monitoring wells to the extent practicable, and LNAPL layer thickness will be monitored to confirm that the areal extent of water table LNAPL is stable or shrinking. If LNAPL is detected at well MW-6 (the conditional point of compliance for LNAPL migration) during periodic monitoring, more aggressive measures to prevent further LNAPL migration will be considered for implementation in accordance with the Groundwater/LNAPL Monitoring and Contingency Plan. .

11.3 Contaminants Dissolved in Groundwater

Dissolved concentrations of TPH (in the diesel and motor oil ranges), arsenic, and TCE exceed groundwater cleanup levels. Figure 1 shows the estimated extent of groundwater cleanup level exceedances. These contaminant "plumes" are confined to the School property and, due to the age of the release, are likely no longer spreading.

Under the selected cleanup action, the Environmental Covenant for the School property will prohibit invasive activities such as drinking water well installation that could result in exposure to contaminated groundwater. In addition, groundwater quality will be periodically monitored to confirm that the areal extent of dissolved contamination is stable or shrinking. If an exceedance of the cleanup level for arsenic, lead, TCE, or TPH is detected at well MW-10 (the conditional point of compliance for groundwater), active measures to prevent further plume migration will be considered for implementation in accordance with the Groundwater/LNAPL Monitoring and Contingency Plan.

12 References

Aspect, 2010, Soil Vapor Intrusion Assessment Work Plan, Crownhill Elementary School, Bremerton, Washington, Prepared for Bremerton School District, dated July 21, 2010.

Aspect, 2013, Remedial Investigation Report, Crownhill Elementary School, Prepared for Bremerton School District, dated November 2014.

Aspect, 2014, Feasibility Study Report, Crownhill Elementary School, Prepared for Bremerton School District, dated November 24, 2014.

Table 1 - Soil and Groundwater Cleanup Levels

Cleanup Action Plan, Crownhill Elementary, Bremerton, Washington

Constituent of Concern	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)
Total Petroleum Hydrocarbon (TPH)		
Diesel Range	2,000	500
Motor Oil Range	2,000	500
Metals		
Antimony	5.4	(Note 1)
Arsenic	20	5
Chromium III	1,000	(Note 1)
Copper	260	(Note 1)
Lead	250	15
Zinc	6,000	(Note 1)
Volatile Organic Compounds (VOCs)		
Trichloroethene (TCE)	0.03	5
Polycyclic Aromatic Hydrocarbons (PAHs)		
cPAHs TEF	0.14[2]	(Note 1)

cPAH carcinogenic PAH
mg/kg milligrams per kilogram
TEF toxicity equivalency factor
µg/L micrograms per liter

Notes

1) Not identified as a constituent of concern in groundwater.
2) The cPAH TEF is calculated from the concentrations of seven carcinogenic PAHs, using the method described in WAC 173-340-708.

Table 2 - Air Cleanup Levels

Cleanup Action Plan, Crownhill Elementary, Bremerton, Washington

Constituent of Potential Concern [2]	Air Cleanup Level [3]
Freon 12 (Dichlorodifluoromethane)	91
Vinyl chloride	(Note 4)
1,1-Dichloroethene	91
trans-1,2-Dichloroethene	27
1,1-Dichloroethane	(Note 5)
cis-1,2-Dichloroethene	(Note 5)
Chloroform	0.11
Benzene	0.32
1,2-Dichloroethane	0.096
Trichloroethene	0.37
Tetrachloroethene	9.6
Ethylbenzene	460
Xylenes (total)	46
1,2,4-Trimethylbenzene	3.2
Naphthalene	1.4
Hydrogen sulfide	0.91

Notes:

1) All concentrations are in units of micrograms per cubic meter ($\mu g/m^3$).
2) Constituents of potential concern (COPC's) were identified in consultation with Ecology during development of the site-specific Soil Vapor Intrusion Assessment Work Plan (Aspect, 2010).
3) Based on the more restrictive of the carcinogenic and non-carcinogenic MTCA Method B values presented in Ecology's CLARC database.
4) Carcinogenic value not currently provided in CLARC database. Instead, a link is provided to "additional information."
5) No value provided in CLARC database ("not researched" or "researched - no data").

Table 3 - LNAPL Thickness Measurements

Cleanup Action Plan, Crownhill Elementary, Bremerton, Washington

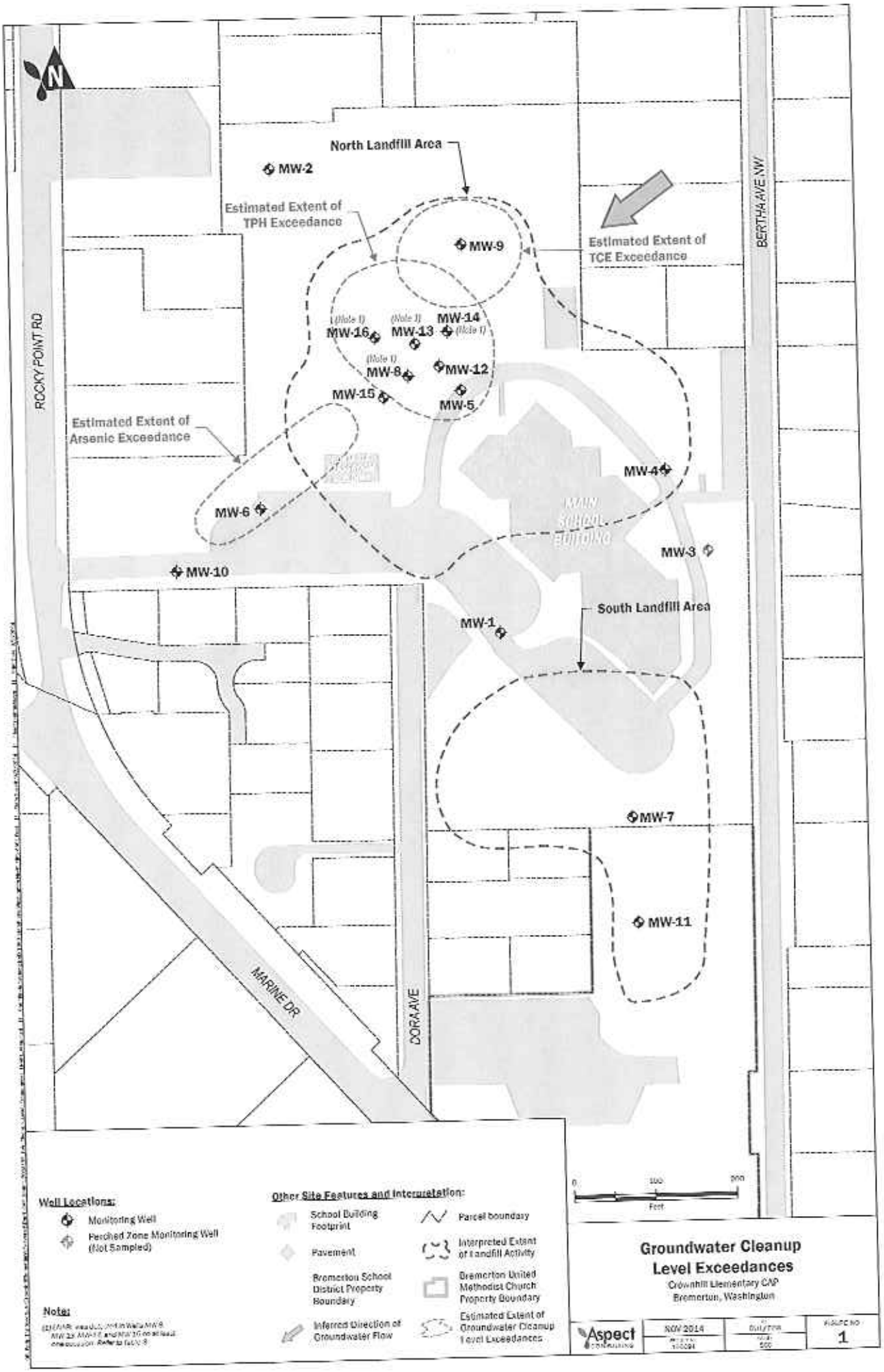
Monitoring Well ID[1]	Date	Measured LNAPL Thickness[2] in ft
MW-8	10/26/12	0.2
	01/31/13	0.1
	05/03/13	0.03
	08/07/13	0.23
	12/17/13	0.86
	04/02/14	0.39
MW-13[3]	11/01/12	1.46
	11/21/12	0.99
	01/31/13	0.1
	05/03/13	0.31
	08/07/13	0.49
	12/17/13	4.9
	04/02/14	1.35
MW-14	11/01/12	nd
	01/31/13	nd
	05/03/13	nd
	08/07/13	0.12
	12/17/13	0.10
	04/02/14	0.08
MW-16	11/01/12	nd
	01/31/13	0.5
	05/03/13	0.48
	08/07/13	2.61
	12/17/13	2.83
	04/02/14	3.02

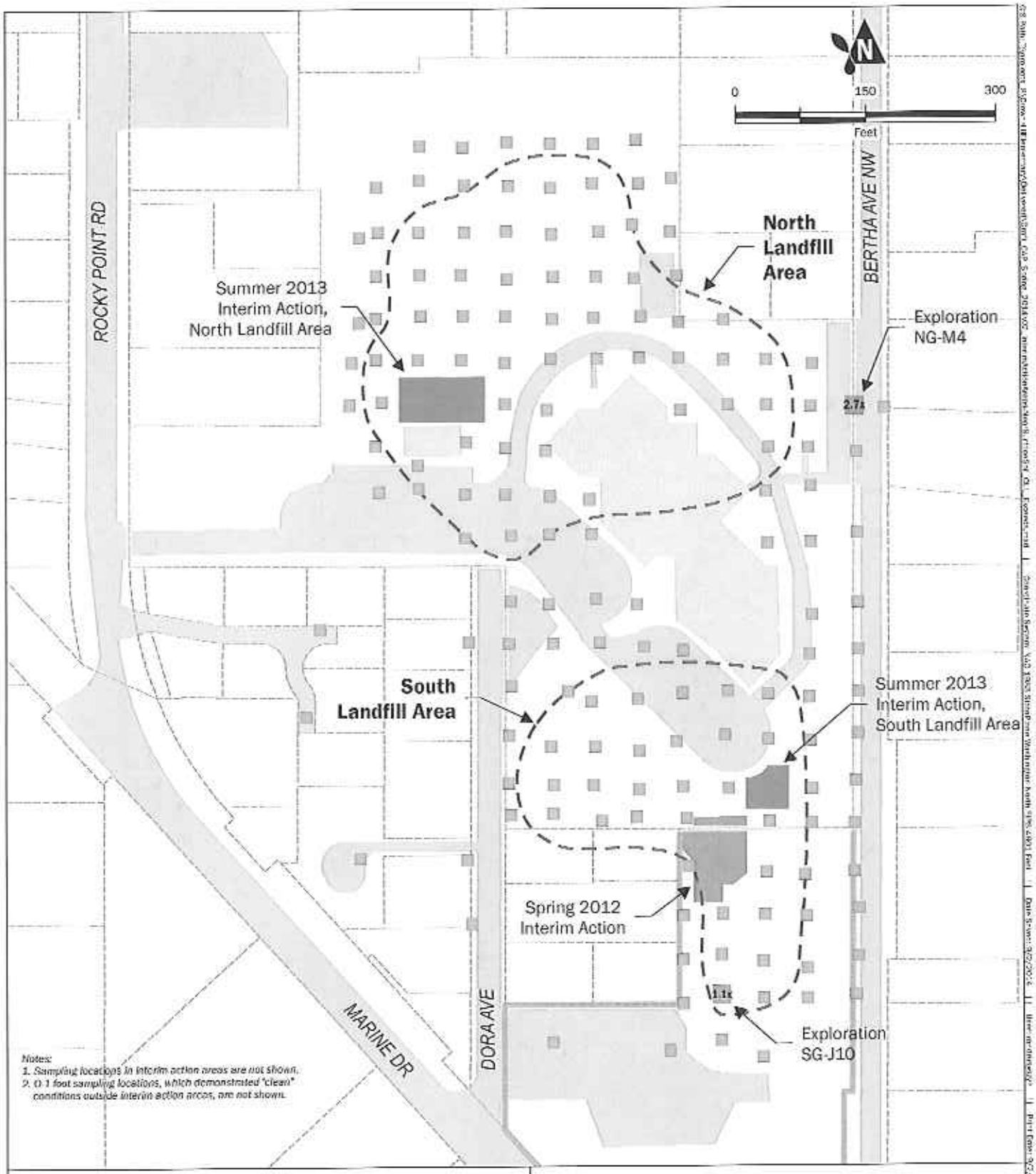
LNAPL light non-aqueous-phase liquid

nd no detectable separate-phase liquid thickness

Notes:

1) Well MW-8 was installed in December 2011. Wells MW-13, MW-14, and MW-16 were installed in October 2012. Refer to Figure 1 for well locations.
2) LNAPL thickness was measured using an oil/water interface probe. As discussed in Section 4.2.4 of the RI, the viscous, sticky nature of the LNAPL resulted in inconsistent readings. Therefore, these thickness measurements must be regarded as estimates only.
3) An LNAPL bailing test was conducted at Well MW-13 on 11/21/12 (after the thickness recorded above was measured), in which approximately 900 milliliters of LNAPL were removed from the 2-inch-diameter well over a 2-hour test period. This likely impacted subsequent thickness measurements in this well.

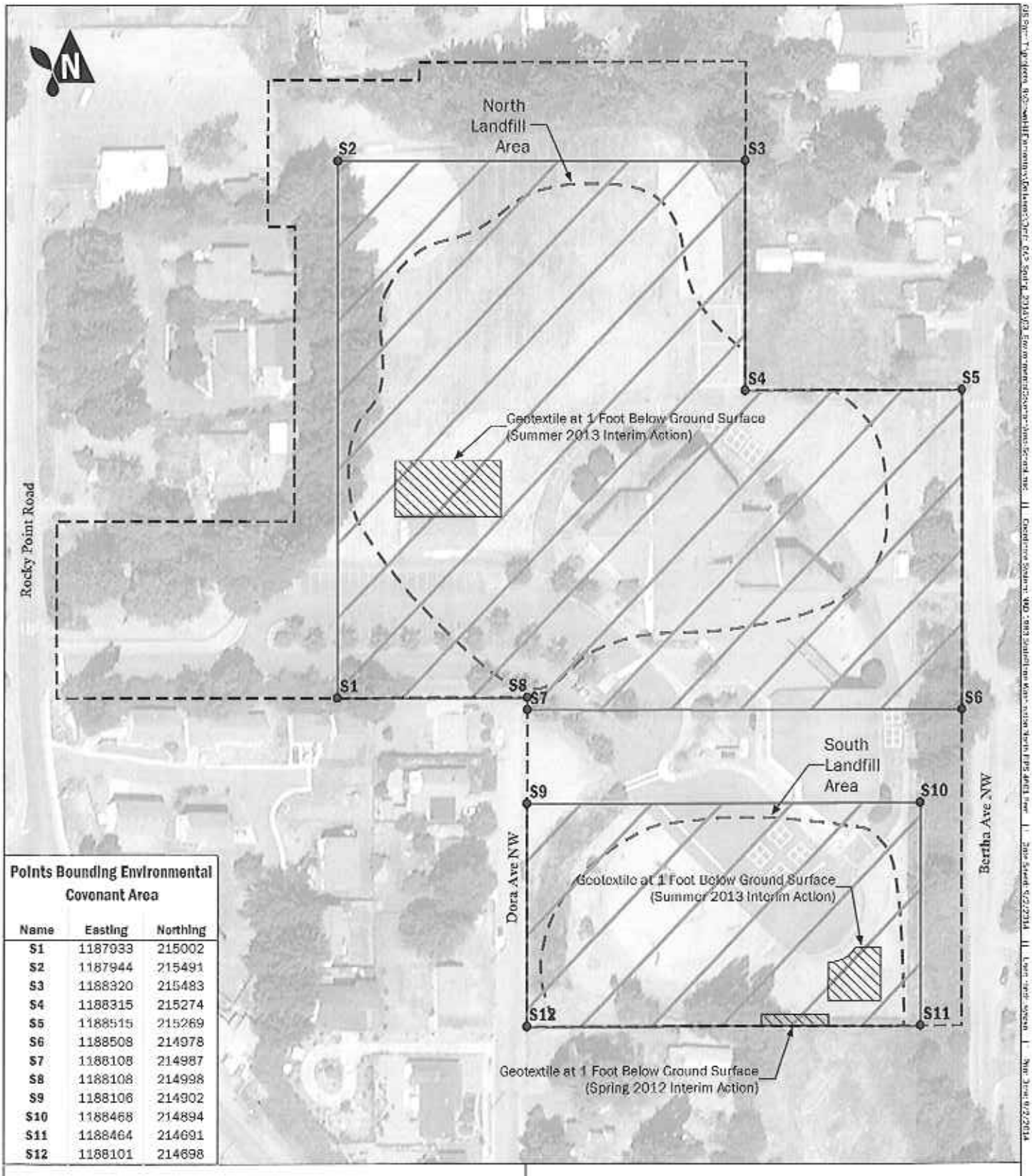

North Landfill Area
MW-2
Estimated Extent of TPH Exceedance
MW-9
Estimated Extent of TCE Exceedance
(Note 1)
MW-16
(Note 1)
MW-13
MW-14
(Note 1)
(Note 1)
MW-8
MW-12
MW-15
MW-5
Estimated Extent of Arsenic Exceedance
MW-4
MW-6
MW-3
MW-10
South Landfill Area
MW-1
MW-7
MW-11
ROCKY POINT RD
BERTHA AVE NW
MARINE DR
DORA AVE
Well Locations:
Monitoring Well
Perched Zone Monitoring Well (Not Sampled)
Other Site Features and Interpretation:
School Building Footprint
Pavement
Bremerton School District Property Boundary
Inferred Direction of Groundwater Flow
Parcel boundary
Interpreted Extent of Landfill Activity
Bremerton United Methodist Church Property Boundary
Estimated Extent of Groundwater Cleanup Level Exceedances
Note:
0
100
200
Feet
Groundwater Cleanup Level Exceedances
Crownhill Elementary CAP
Bremerton, Washington
Aspect Consulting
NOV 2014
1
FIGURE NO



Interim Action Areas and Near-Surface Soil Cleanup Level Exceedances

Crownhill Elementary CAP
Bremerton, WA

Aspect Consulting	NOV-2014	DAH / PPW	FIGURE NO.
	PROJECT NO 100004	REVIEW SOC	2



Points Bounding Environmental Covenant Area

Name	Easting	Northing
S1	1187933	215002
S2	1187944	215491
S3	1188320	215483
S4	1188315	215274
S5	1188515	215269
S6	1188508	214978
S7	1188108	214987
S8	1188108	214998
S9	1188106	214902
S10	1188468	214894
S11	1188464	214691
S12	1188101	214698

Area of Environmental Covenant Soil and Structure Prohibitions

Interpreted Extent of Landfill Activity

Bremerton School District Property Boundary

0 120 240

Feet

Environmental Covenant Area, School Property

Crownhill Elementary CAP
Bremerton, Washington

Aspect Consulting	NOV-2014	BY HRL	FIGURE NO. 3
	PROJECT NO 100091	REVIEW SCC	

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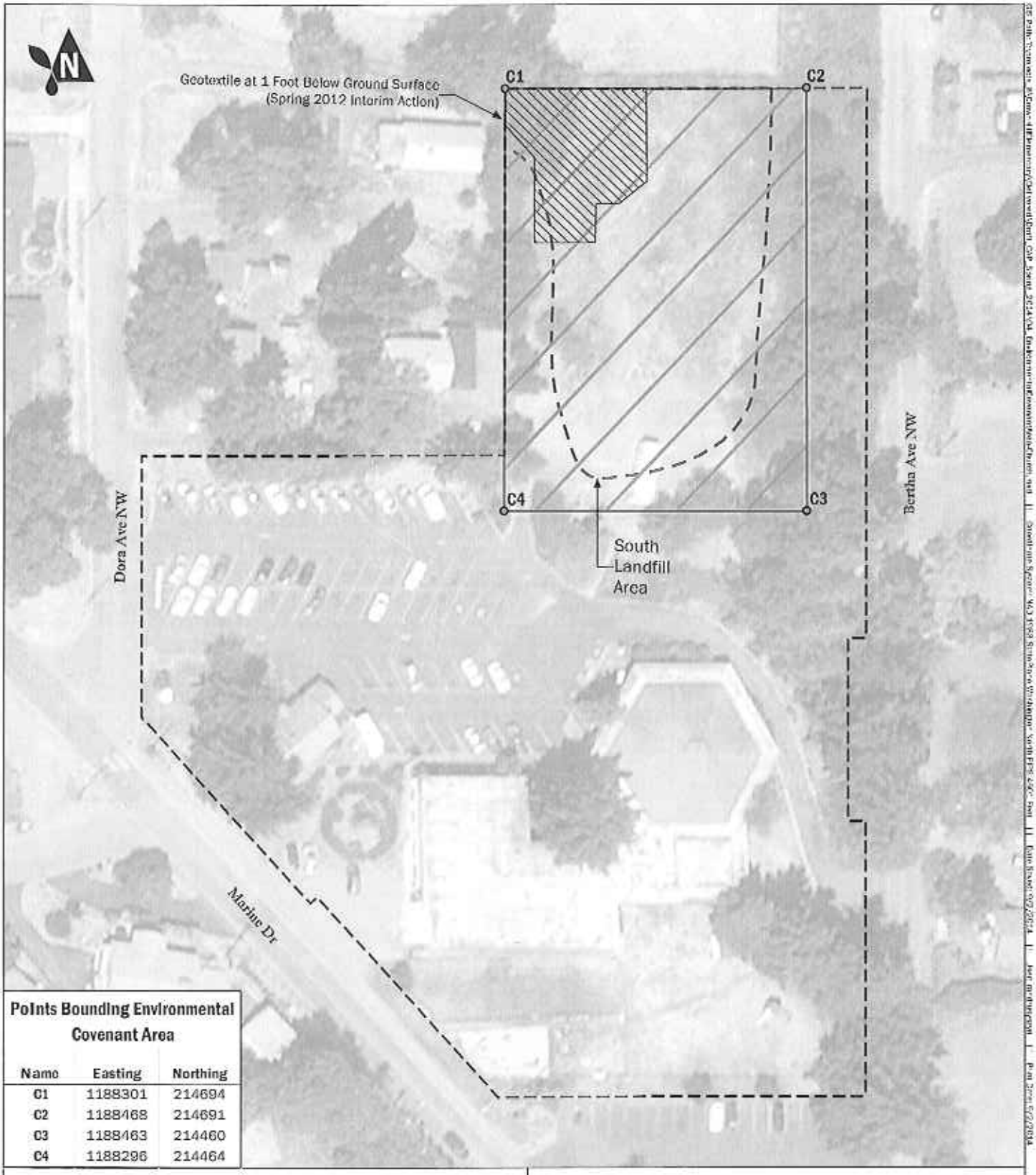

Points Bounding Environmental Covenant Area

Name	Easting	Northing
C1	1188301	214694
C2	1188468	214691
C3	1188463	214460
C4	1188296	214464

Area of Environmental Covenant Soil Prohibitions

Interpreted Extent of Landfill Activity

Bremerton United Methodist Church Property Boundary

0 80 160

Feet

Environmental Covenant Area, Church Property

Crownhill Elementary CAP
Bremerton, Washington

Aspect Consulting	NOV-2014	BY: DRL	FIGURE NO. 4
	PROJECT NO: 100094	REVIEW: SCC	

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