

**STATE OF WASHINGTON
SPOKANE COUNTY SUPERIOR COURT**

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

HOLCIM (US) INC. and the CITY OF
SPOKANE VALLEY,

Defendants.

NO.

CONSENT DECREE
RE: HOLCIM INC. SITE

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I. INTRODUCTION

A. The mutual objective of the State of Washington, Department of Ecology (Ecology) and Holcim (US) Inc. (Holcim) and the City of Spokane Valley (Spokane Valley) under this Decree is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Decree requires Holcim and Spokane Valley (hereinafter collectively referred to as "Defendants") to perform the remedial action(s) at the Holcim Inc. Site (Site) in Spokane Valley, Washington, in accordance with the Cleanup Action Plan (CAP) attached as Exhibit B to this Decree.

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

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

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

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

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

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

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

4 **II. JURISDICTION**

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

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

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

14 D. Ecology has given notice to Defendants of Ecology's determination that
15 Defendants are PLPs for the Site, as required by RCW 70.105D.020(26) and
16 WAC 173-340-500.

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

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

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

23 H. Defendants have agreed to undertake the actions specified in this Decree and
24 consent to the entry of this Decree under MTCA.

III. PARTIES BOUND

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

IV. DEFINITIONS

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

A. Site: The Site is referred to as the Holcim Inc. Site and is generally located at 12207 East Empire Way, Spokane Valley, Washington. The Site is more particularly described in the Site Diagram (Exhibit A). The Site constitutes a facility under RCW 70.105D.020(8).

B. Parties: Refers to the State of Washington, Department of Ecology, Holcim (US) Inc. (Holcim), and the City of Spokane Valley (Spokane Valley).

C. Defendants: Refers to Holcim and Spokane Valley.

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

V. FINDINGS OF FACTS

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

1 A. The Site is located in Spokane Valley, Washington, and consists of
2 approximately ten (10) acres. The Site consists of industrial land owned by Holcim, park land
3 owned by Spokane Valley, and residential land owned by Neighborhood, Inc. It is bounded by
4 the Centennial Trail (Spokane Valley property) and Spokane River to the east and north,
5 Neighborhood, Inc. property to the west, and multiple commercial businesses and government
6 entities to the south. A diagram of the Site is attached as Exhibit A.

7 B. The Site is listed on Ecology's Hazardous Sites List as the "Holcim Inc. Site,"
8 Facility Site ID No. 52126416. Ecology has assigned the Site an overall priority ranking of
9 one (1) pursuant to WAC 173-340-330.

10 C. The Holcim property was developed and operated as a cement manufacturing
11 plant from 1910 through 1967 and later used as a cement distribution terminal from 1967 to
12 2002. During the facility's operational history, cement kiln dust (CKD), a by-product of the
13 manufacturing process, was deposited on the Site. Numerous cement companies have operated
14 at and/or owned the Holcim property including: International Portland Cement Company
15 (1910–1932), Spokane Portland Cement Company (1933–1954), Ideal Cement Company
16 (1955–1977), Ideal Basic Industries Cement Division (1978–1992), Holnam Inc. (1993–2000),
17 Holnam Trucking Terminal Facility (2001), Holnam Cement Hydraulic (2002) and Holcim
18 (2003–present). Contamination at the Site is related to the manufacturing of cement and the
19 disposal of CKD.

20 D. Cement kiln dust was deposited on the Holcim property, described by Spokane
21 County Tax Parcel Number 45046.9067, the adjacent property to the north owned by Spokane
22 Valley, described by Spokane County Tax Parcel Number 45046.9062, and to a lesser extent
23 the property owned by Neighborhood, Inc., located west of Holcim's property and described
24 by Spokane County Tax Parcel Numbers 45045.1603 and 45045.1608.

25 E. A CKD deposit estimated at 109,000 cubic yards is present on the Holcim
26 property, and a separate CKD deposit estimated at 12,300 cubic yards is present on the

1 Spokane Valley property. Both deposits have minimal cover and show evidence of erosion
2 onto neighboring properties.

3 F. An estimated 2,300 cubic yards of CKD and metals-contaminated soil is present
4 on the Neighborhood, Inc. property.

5 G. An estimated 1,300 cubic yards of contaminated surface soil not associated with
6 CKD is present on Holcim's property.

7 H. In 2008, Holcim conducted an investigation to characterize the CKD and to
8 evaluate the quality of groundwater beneath and adjacent to it. In addition, Holcim has
9 conducted quarterly groundwater monitoring. The results of the investigation and groundwater
10 sampling are set forth in the following reports:

- 11 • Site Assessment Report, dated March 21, 2008, prepared by GeoEngineers;
- 12 • Groundwater Well Installation and Monitoring Report, May 2008 to August 2008,
13 dated November 6, 2008, prepared by GeoEngineers;
- 14 • Groundwater Monitoring Report, Fourth Quarter 2008, dated June 8, 2009,
15 prepared by GeoEngineers;
- 16 • Pilot Study Work Plan, dated September 3, 2009, prepared by GeoEngineers;
- 17 • Groundwater Monitoring Report, First Quarter 2009, dated September 3, 2009,
18 prepared by GeoEngineers;
- 19 • Groundwater Monitoring Report, Second Quarter 2009, dated November 20, 2009,
20 prepared by GeoEngineers;
- 21 • Groundwater Monitoring Report, Third Quarter 2009, dated November 20, 2009,
22 prepared by GeoEngineers;
- 23 • Groundwater Monitoring Report, Fourth Quarter 2009, dated April 21, 2010,
24 prepared by GeoEngineers;
- 25 • Groundwater Monitoring Report, First Quarter 2010, dated July 21, 2010, prepared
26 by GeoEngineers;

- Semi-Annual Groundwater Monitoring Report, Second and Third Quarters 2010, dated November 19, 2010, prepared by GeoEngineers;
- Pilot Test Results, dated November 22, 2010, prepared by GeoEngineers;
- Groundwater Monitoring Report, Fourth Quarter 2010, dated April 21, 2011, prepared by GeoEngineers.

I. On August 22, 2011, the Parties entered into Agreed Order No. 8549, which required the Defendants to conduct a remedial investigation/feasibility study (RI/FS) for the Site

J. The final RI report, dated April 29, 2013, and prepared by GeoEngineers, documented the nature and extent of hazardous substances in various media including soil and groundwater. The RI demonstrated the following contaminants of concern that exceed MTCA cleanup levels in soil are present at the Site: arsenic, cadmium, lead, petroleum hydrocarbons (total, gasoline), benzene, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs). Several soil samples also had a pH greater than 12.5, which is the dangerous waste threshold for corrosivity (WAC 173-303-090(6)(a)(i)). Contaminants of concern at the Site that exceed MTCA cleanup levels in groundwater are arsenic and lead.

VI. WORK TO BE PERFORMED

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

A. The Defendants will conduct a final cleanup action at the Site by implementing the Cleanup Action Plan (CAP) (Exhibit B) in accordance with the schedule and terms of the Scope of Work and Schedule (Exhibit C) and all other requirements of this Decree. This includes, but is not limited to, the following actions:

1. Excavate cement kiln dust (CKD) and contaminated soil from Spokane Valley's property and place it with CKD located on Holcim's property.

2. Excavate CKD and contaminated soil from Neighborhood, Inc.'s property and either place it with CKD located on Holcim's property or transport the material to an appropriately permitted off-site facility for disposal.

3. Excavate contaminated soil not related to CKD on Holcim's property and transport the material to an appropriately permitted off-site facility for disposal.

4. Backfill Spokane Valley's and Neighborhood, Inc.'s properties with clean soil and establish appropriate native vegetation on Spokane Valley's property.

5. Regrade the CKD on Holcim's property for slope stability, for stormwater control, and to meet setback requirements.

6. Install, operate, and maintain a cover system over the CKD on Holcim's property.

7. Provide for groundwater monitoring to assess cover system performance in accordance with the Compliance Monitoring Plan, which will be approved by Ecology.

8. Provide for and maintain institutional controls in the form of restrictive covenants, physical barriers, and signs in accordance with the Uniform Environmental Covenants Act (UECA – Chapter 64.70 RCW).

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

C. All plans or other deliverables submitted by Holcim and Spokane Valley for Ecology's review and approval under the Scope of Work and Schedule (Exhibit C) shall, upon Ecology's approval, become integral and enforceable parts of this Decree.

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2 **VII. DESIGNATED PROJECT COORDINATORS**

3 The project coordinator for Ecology is:

4 Jeremy Schmidt, P.E.
5 Site Manager
6 4601 N. Monroe St.
7 Spokane, WA 99205-1295
8 (509) 329-3484

9 The project coordinator for Holcim is:

10 Joel Bolduc
11 Senior Environmental Specialist
12 1170 Transit Dr.
13 Colorado Springs, CO 80903
14 (855) 719-6947

15 The project coordinator for Spokane Valley is:

16 Mike Stone, CPRP
17 Director of Parks and Recreation
18 2426 N. Discovery Place
19 Spokane Valley, WA 99216
20 (509) 720-5400

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

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

1 **VIII. PERFORMANCE**

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

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

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

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

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

19 **IX. ACCESS**

20 Ecology or any Ecology authorized representative shall have access to enter and freely
21 move about all property at the Site that Defendants either own, control, or have access rights to
22 at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and
23 contracts related to the work being performed pursuant to this Decree; reviewing Defendants'
24 progress in carrying out the terms of this Decree; conducting such tests or collecting such
25 samples as Ecology may deem necessary; using a camera, sound recording, or other
26 documentary type equipment to record work done pursuant to this Decree; and verifying the

1 data submitted to Ecology by Defendants. Defendants shall make all reasonable efforts to
2 secure access rights for those properties within the Site not owned or controlled by Defendants
3 where remedial activities or investigations will be performed pursuant to this Decree. Ecology
4 or any Ecology authorized representative shall give reasonable notice before entering any Site
5 property owned or controlled by Defendants unless an emergency prevents such notice. All
6 Parties who access the Site pursuant to this section shall comply with any applicable health and
7 safety plan(s). Ecology employees and their representatives shall not be required to sign any
8 liability release or waiver as a condition of Site property access.

9 **X. SAMPLING, DATA SUBMITTAL, AND AVAILABILITY**

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

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

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

4 **XI. PROGRESS REPORTS**

5 Defendants shall submit to Ecology written monthly Progress Reports that describe the
6 actions taken during the previous month to implement the requirements of this Decree. Upon
7 completion of Task 5 in the Scope of Work and Schedule (Exhibit C), Progress Reports shall
8 be submitted quarterly to coincide with quarterly groundwater monitoring reports. The
9 Progress Reports shall include the following:

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

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

13 C. Description of all deviations from the Scope of Work and Schedule (Exhibit C)
14 during the current month and any planned deviations in the upcoming month;

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

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

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

20 All Progress Reports shall be submitted by the tenth (10th) day of the month in which
21 they are due after the effective date of this Decree. Unless otherwise specified, Progress
22 Reports and any other documents submitted pursuant to this Decree shall be sent by certified
23 mail, return receipt requested, to Ecology's project coordinator.

24 **XII. RETENTION OF RECORDS**

25 During the pendency of this Decree, and for ten (10) years from the date this Decree is
26 no longer in effect as provided in Section XXVIII (Duration of Decree), Defendants shall

1 preserve all records, reports, documents, and underlying data in its possession relevant to the
2 implementation of this Decree and shall insert a similar record retention requirement into all
3 contracts with project contractors and subcontractors. Upon request of Ecology, Defendants
4 shall make all records available to Ecology and allow access for review within a reasonable
5 time.

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

12 **XIII. TRANSFER OF INTEREST IN PROPERTY**

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

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

24 **XIV. RESOLUTION OF DISPUTES**

25 A. In the event that a Defendant(s) elects to invoke dispute resolution, the
26 Defendant(s) must utilize the procedure set forth below.

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

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

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

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

23 5. If a Defendant(s) finds Ecology's Regional Section Manager's decision
24 unacceptable, the Defendant(s) may then request final management review of the
25 decision. This request ("Final Review Request") shall be submitted in writing to the
26 Toxics Cleanup Program Manager within seven (7) calendar days of Defendant's

1 receipt of the Decision on Dispute. The Final Review Request shall include a written
2 statement of dispute setting forth: the nature of the dispute; the disputing Party's
3 position with respect to the dispute; and the information relied upon to support its
4 position.

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

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

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

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

24 E. In case of a dispute, failure to either proceed with the work required by this
25 Decree or timely invoke dispute resolution may result in Ecology's determination that
26

1 insufficient progress is being made in preparation of a deliverable, and may result in Ecology
2 undertaking the work under Section XXV (Implementation of Remedial Action).

3 **XV. AMENDMENT OF DECREE**

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

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

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

19 **XVI. EXTENSION OF SCHEDULE**

20 A. An extension of schedule shall be granted only when a request for an extension
21 is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the
22 deadline for which the extension is requested, and good cause exists for granting the extension.

23 All extensions shall be requested in writing. The request shall specify:

- 24 1. The deadline that is sought to be extended;
- 25 2. The length of the extension sought;
- 26 3. The reason(s) for the extension; and

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

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

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

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

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

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

17 C. Ecology shall act upon any written request for extension in a timely fashion.
18 Ecology shall give Defendants written notification of any extensions granted pursuant to this
19 Decree. A requested extension shall not be effective until approved by Ecology or, if required,
20 by the Court. Unless the extension is a substantial change, it shall not be necessary to amend
21 this Decree pursuant to Section XV (Amendment of Decree) when a schedule extension is
22 granted.

23 D. An extension shall only be granted for such period of time as Ecology
24 determines is reasonable under the circumstances. Ecology may grant schedule extensions
25 exceeding ninety (90) days only as a result of:
26

1 **XVIII. COVENANT NOT TO SUE**

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

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

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

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

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

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

- 22 1. Upon Defendant's failure to meet the requirements of this Decree;
23 2. Failure of the remedial action to meet the cleanup standards identified in
24 the Cleanup Action Plan (CAP) (Exhibit B);
25
26

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

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

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

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

14 **XIX. CONTRIBUTION PROTECTION**

15 With regard to claims for contribution against Defendant, the Parties agree that
16 Defendants are entitled to protection against claims for contribution for matters addressed in
17 this Decree as provided by RCW 70.105D.040(4)(d).

18 **XX. LAND USE RESTRICTIONS**

19 In consultation with Holcim, Ecology will prepare the Environmental (Restrictive)
20 Covenant consistent with WAC 173-340-440 and RCW 64.70 and will be substantially similar
21 to Exhibit E. The restrictions associated with the Covenant will be applicable only to the
22 portion of the Site where residual soil contamination is contained after Task 5 of the Scope of
23 Work and Schedule (Exhibit C) is complete. After approval by Ecology, Holcim shall record
24 the Environmental (Restrictive) Covenant with the office of the Spokane County Auditor
25 within ten (10) days of the completion of cover construction (not including vegetation
26 establishment). The Environmental (Restrictive) Covenant shall restrict future activities and

1 uses of the Site as agreed to by Ecology and Holcim. Holcim shall provide Ecology with the
2 original recorded Environmental (Restrictive) Covenant within thirty (30) days of the
3 recording date.

4 **XXI. FINANCIAL ASSURANCES**

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

9 Within sixty (60) days of the effective date of this Decree, Defendants shall submit to
10 Ecology for review and approval an estimate of the costs that it will incur in carrying out the
11 terms of this Decree, including operation and maintenance, and compliance monitoring.
12 Within sixty (60) days after Ecology approves the aforementioned cost estimate, Defendants
13 shall provide proof of financial assurances sufficient to cover all such costs in a form
14 acceptable to Ecology.

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

17 A. Inflation, annually, within thirty (30) days of the anniversary date of the entry of
18 this Decree; or if applicable, the modified anniversary date established in accordance with this
19 section, or if applicable, ninety (90) days after the close of Defendants' fiscal year if the
20 financial test or corporate guarantee is used.

21 B. Changes in cost estimates, within thirty (30) days of issuance of Ecology's
22 approval of a modification or revision to the CAP that result in increases to the cost or
23 expected duration of remedial actions. Any adjustments for inflation since the most recent
24 preceding anniversary date shall be made concurrent with adjustments for changes in cost
25 estimates. The issuance of Ecology's approval of a revised or modified CAP will revise the
26

anniversary date established under this section to become the date of issuance of such revised or modified CAP.

XXII. INDEMNIFICATION

Defendants agree 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 Defendants, its officers, employees, agents, or contractors in entering into and implementing this Decree. However, Defendants 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 Decree.

XXIII. COMPLIANCE WITH APPLICABLE LAWS

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

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

Defendants have a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial

1 action under this Decree. In the event either Ecology or Defendants determine that additional
2 permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the
3 remedial action under this Decree, they shall promptly notify the other party of this
4 determination. Ecology shall determine whether Ecology or Defendants shall be responsible to
5 contact the appropriate state and/or local agencies. If Ecology so requires, Defendants shall
6 promptly consult with the appropriate state and/or local agencies and provide Ecology with
7 written documentation from those agencies of the substantive requirements those agencies
8 believe are applicable to the remedial action. Ecology shall make the final determination on
9 the additional substantive requirements that must be met by Defendants and on how
10 Defendants must meet those requirements. Ecology shall inform Defendants in writing of
11 these requirements. Once established by Ecology, the additional requirements shall be
12 enforceable requirements of this Decree. Defendants shall not begin or continue the remedial
13 action potentially subject to the additional requirements until Ecology makes its final
14 determination.

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

21 **XXIV. REMEDIAL ACTION COSTS**

22 Defendants shall pay to Ecology costs incurred by Ecology pursuant to this Decree and
23 consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology
24 or its contractors for, or on, the Site under RCW 70.105D, including remedial actions and
25 Decree preparation, negotiation, oversight, and administration. These costs shall include work
26 performed both prior to and subsequent to the entry of this Decree. Ecology's costs shall

1 include costs of direct activities and support costs of direct activities as defined in
2 WAC 173-340-550(2). Defendants shall pay the required amount within thirty (30) days of
3 receiving from Ecology an itemized statement of costs that includes a summary of costs
4 incurred, an identification of involved staff, and the amount of time spent by involved staff
5 members on the project. A general statement of work performed will be provided upon
6 request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4),
7 failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of
8 costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded
9 monthly.

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

13 **XXV. IMPLEMENTATION OF REMEDIAL ACTION**

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

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

23 **XXVI. PERIODIC REVIEW**

24 As remedial action, including groundwater monitoring, continues at the Site, the Parties
25 agree to review the progress of remedial action at the Site, and to review the data accumulated
26 as a result of monitoring the Site as often as is necessary and appropriate under the

1 circumstances. At least every five (5) years after the initiation of cleanup action at the Site the
2 Parties shall meet to discuss the status of the Site and the need, if any, for further remedial
3 action at the Site. At least ninety (90) days prior to each periodic review, Defendants shall
4 submit a report to Ecology that documents whether human health and the environment are
5 being protected based on the factors set forth in WAC 173-340-420(4). Under Section XVIII
6 (Covenant Not to Sue), Ecology reserves the right to require further remedial action at the Site
7 under appropriate circumstances. This provision shall remain in effect for the duration of this
8 Decree.

9 **XXVII. PUBLIC PARTICIPATION**

10 A Public Participation Plan (Exhibit D) is required for this Site. Ecology shall review
11 any existing Public Participation Plan to determine its continued appropriateness and whether it
12 requires amendment, or if no plan exists, Ecology shall develop a Public Participation Plan
13 alone or in conjunction with Defendants.

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

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

21 B. Notify Ecology's project coordinator prior to the preparation of all press
22 releases and fact sheets, and before major meetings with the interested public and local
23 governments. Likewise, Ecology shall notify Defendants prior to the issuance of all press
24 releases and fact sheets, and before major meetings with the interested public and local
25 governments. For all press releases, fact sheets, meetings, and other outreach efforts by
26 Defendants that do not receive prior Ecology approval, Defendants shall clearly indicate to its

audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

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

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

1. Spokane County Library
4322 N. Argonne Road
Spokane, WA 99212-1853
2. Ecology's Eastern Regional Office
4601 N. Monroe St.
Spokane, WA 99205-1295
3. Ecology's Website
<http://www.ecy.wa.gov/programs/tcp/sites/Holcim/Holcim-hp.html>

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 Eastern Regional Office in Spokane, Washington.

XXVIII. DURATION OF DECREE

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

XXIX. CLAIMS AGAINST THE STATE

Defendants hereby agree that they will not seek to recover any costs accrued in implementing the remedial action required by this Decree from the State of Washington or any

1 of its agencies; and further, that Defendants will make no claim against the State Toxics
2 Control Account or any local Toxics Control Account for any costs incurred in implementing
3 this Decree. Except as provided above, however, Defendants expressly reserves their right to
4 seek to recover any costs incurred in implementing this Decree from any other PLP. This
5 section does not limit or address funding that may be provided under WAC 173-322.

6 **XXX. EFFECTIVE DATE**

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

8 **XXXI. WITHDRAWAL OF CONSENT**

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

13 STATE OF WASHINGTON
14 DEPARTMENT OF ECOLOGY

ROBERT W. FERGUSON
Attorney General

15
16 JAMES PENDOWSKI
17 Program Manager
Toxics Cleanup Program
(360) 407-7177

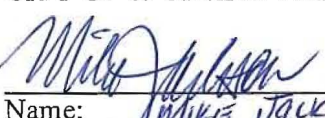
JOHN A. LEVEL, WSBA 20439
Assistant Attorney General
(360) 586-6753

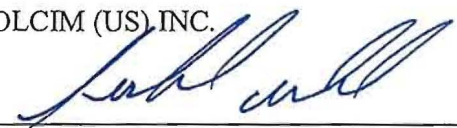
18 Date: _____

Date: _____

19 CITY OF SPOKANE VALLEY

HOLCIM (US) INC.

20 
21 Name: MIKE JACKSON
22 Title: CITY MANAGER
23 Telephone: 509-720-5200


Jeff Ouhl
Senior VP of Manufacturing
(636) 524-8178

24 Date: 6/30/2015

Date: 6/2/2015

25 //

1 ENTERED this ____ day of _____ 2015.

2
3 _____
4 JUDGE
5 Spokane County Superior Court
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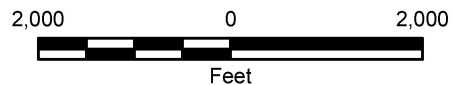
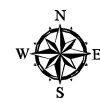


Exhibit A: Site Diagram

Exhibit B



DRAFT CLEANUP ACTION PLAN

Holcim Inc. Site
Spokane Valley, WA
FSID 52126416, CSID 4580

August 2014
Washington Department of Ecology
Toxics Cleanup Program
Eastern Regional Office
Spokane, WA

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1.0 INTRODUCTION

This report presents the Washington State Department of Ecology's proposed cleanup action for the Holcim Inc. Site (Site) (Facility Site #52126416, Cleanup Site #4580), located at 12207 East Empire Way in Spokane Valley, in Spokane County, Washington (Figure 1). This Cleanup Action Plan (CAP) is required as part of the Site cleanup process under the Model Toxics Control Act (MTCA), Ch. 70.105D RCW, implemented by the Washington State Department of Ecology (Ecology). The cleanup action decision is based on the Remedial Investigation/Feasibility Study (RI/FS) and other relevant documents in the administrative record. Holcim (US), Inc. (Holcim) and the City of Spokane Valley (City) have been named the potentially liable persons (PLPs) by Ecology. The PLPs have completed investigation activities under Agreed Order 8549 with Ecology.

This CAP outlines the following:

- The history of operations, ownership, and activities at the Site;
- The nature and extent of contamination as presented in the RI;
- Cleanup levels for the Site that are protective of human health and the environment;
- The selected remedial action for the Site; and
- Any required compliance monitoring and institutional controls.

1.1 DECLARATION

Ecology has selected this remedy because it will be protective of human health and the environment. Furthermore, the selected remedy is consistent with the preference of the State of Washington for permanent solutions, as stated in RCW 70.105D.030(1)(b).

1.2 APPLICABILITY

Cleanup standards specified in this cleanup action plan are applicable only to the Holcim Inc. Site. They were developed as a part of an overall remediation process under Ecology oversight using the authority of MTCA, and should not be considered as setting precedents for other sites.

1.3 ADMINISTRATIVE RECORD

The documents used to make the decisions discussed in this cleanup action plan are on file in the administrative record for the Site. Major documents are listed in the reference section. The entire administrative record for the Site is available for public review by appointment at Ecology's Eastern Regional Office, located at 4601 N. Monroe Street, Spokane, WA 99205-1295. Results from applicable studies and reports are summarized to provide background information pertinent to the CAP. These studies and reports include:

RI/FS Work Plan for the Holcim Inc. Site, GeoEngineers, November 18, 2011

Remedial Investigation Report, GeoEngineers, April 29, 2013

Feasibility Study Report, GeoEngineers, November 1, 2013

1.4 CLEANUP PROCESS

Cleanup conducted under the MTCA process requires the preparation of specific documents either by the PLPs or by Ecology. These procedural tasks and resulting documents, along with the MTCA section requiring their completion, are listed below with a brief description of each task.

- **Public Participation Plan – WAC 173-340-600**
Public Participation Plans summarize the methods that will be implemented to encourage coordinated and effective public involvement. This document is prepared by Ecology.
- **Remedial Investigation and Feasibility Study - WAC 173-340-350**
The RI/FS documents the investigations and evaluations conducted at the Site from the discovery phase to the RI/FS document. The RI collects and presents information on the nature and extent of contamination, and the risks posed by the contamination. The FS presents and evaluates Site cleanup alternatives and proposes a preferred cleanup alternative. The document is prepared by the PLPs, approved by Ecology, and undergoes public comment.
- **Cleanup Action Plan - WAC 173-340-380**
The CAP sets cleanup standards for the Site, and selects the cleanup actions intended to achieve the cleanup standards. The document is prepared by Ecology, and undergoes public comment
- **Engineering Design Report, Construction Plans and Specifications - WAC 173-340-400**
The report outlines details of the selected cleanup action, including any engineered systems and design components from the CAP. These may include construction plans and specifications with technical drawings. The document is prepared by the PLPs and approved by Ecology. Public comment is optional.
- **Operation and Maintenance Plan(s) - WAC 173-340-400**
These plans summarize the requirements for inspection and maintenance of cleanup actions. They include any actions required to operate and maintain equipment, structures, or other remedial systems. The document is prepared by the PLPs and approved by Ecology.
- **Cleanup Action Report - WAC 173-340-400**
The Cleanup Action Report is completed following implementation of the cleanup action, and provides details on the cleanup activities along with documentation of adherence to or variance from the CAP. The document is prepared by the PLPs and approved by Ecology.
- **Compliance Monitoring Plan - WAC 173-340-410**
Compliance Monitoring Plans provide details on the completion of monitoring activities required to ensure the cleanup action is performing as intended. It is prepared by the PLPs and approved by Ecology.

2.0 SITE BACKGROUND

2.1 SITE HISTORY

The Site consists of industrial land owned by Holcim (US) Inc., park land owned by the City of Spokane Valley, and residential land owned by Neighborhood, Inc. (Figure 1). It is bounded by the Centennial Trail (City property) and Spokane River to the east and north, Neighborhood, Inc. property to the west, and multiple commercial businesses and government entities to the south. One property south of Holcim is owned by the Irvin Water District, where a public water supply well is located. One small property located between Holcim and Neighborhood, Inc. is owned by Spokane County, where a wastewater pump station is located. The City property is zoned parks/open space. The Holcim and Neighborhood, Inc. properties are zoned mixed use center (MUC). According to the City of Spokane Valley, MUC zoning allows “employment, lodging, and retail along with higher density residential uses.”

The Holcim property was developed and operated as a cement manufacturing plant from 1910 through 1967 and later used as a cement distribution terminal from 1967 to 2002. During the facility’s operational history, cement kiln dust (CKD), a by-product of the manufacturing process, was deposited on the site. Numerous cement companies have operated at and/or owned the Holcim property including: International Portland Cement Company (1910–1932), Spokane Portland Cement Company (1933–1954), Ideal Cement Company (1955–1977), Ideal Basic Industries Cement Division (1978–1992), Holnam Inc. (1993–2000), Holnam Trucking Terminal Facility (2001), Holnam Cement Hydraulic (2002) and Holcim (2003–present).

Several structures were located at the Holcim property including a crushing mill and rotary kiln, offices and laboratory, coal and clinker storage buildings and sheds, precipitator building, packhouse, machine shop, crusher building, numerous storehouses and storage sheds, silos, truck wash and wash house, and a water tower. Rail spurs, sidings, and lines were located at and adjacent to the Holcim property; and at least two elevated rail spurs terminated on the west portion of the plant. Several buildings were demolished between 1970 and 1974 including the mill and kiln, the office and laboratory, coal storage building, precipitator building, and crusher building. During the operating period as a cement distribution terminal, powdered cement was delivered via rail, stored in silos, and loaded onto trucks. Remaining buildings primarily were used for storing powdered cement. In 2006, the remaining structures were demolished (GeoEngineers, 2013a).

A large deposit of CKD is present over approximately 7 acres of the Holcim property and another CKD deposit comprises approximately 1 acre on the City property. Intermittent subsurface lenses of CKD mixed with soil are located on the Neighborhood, Inc. property. Contaminants within the CKD include arsenic, lead, cadmium, and material with a pH greater than 12.5. The volume of CKD on the Holcim and City properties is estimated at 109,000 and 12,300 cubic yards, respectively. A portion of the western edge of the Holcim property consists of a CKD-laden slope with an approximate grade of one foot horizontal for every one foot vertical (1:1) with Neighborhood, Inc.’s property near the top of the slope. The intermittent and discontinuous lenses of CKD mixed with soil on the Neighborhood, Inc. property are estimated at 2,300 cubic yards. Also located on the Holcim property is 1300 cubic yards of material

contaminated with arsenic, lead, benzene, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and gasoline-range petroleum hydrocarbons. Contamination on the City property is related to a contiguous CKD deposit; contamination on the Neighborhood, Inc. property is related to metals generally located in areas where CKD lenses are present.

2.2 SITE INVESTIGATIONS

Ecology completed a Preliminary Assessment in 2000, which indicated that the CKD was not discharging to the river and that no further action under MTCA was necessary at the time. In 2007 Ecology was notified by Holcim that hazardous substances had been located at the site when soil sampling occurred during the excavation for a Spokane County sewer line project. In 2008, Ecology completed a Phase I Site Inspection to evaluate the nature of wastes, ascertain any immediate risks, and recommend any further actions. That report concluded that contamination at levels that exceeded screening values was present at the Site which was then officially added to the Confirmed and Suspected Contaminated Sites List database.

In 2009, the Spokane Regional Health District, under contract by Ecology, completed a Site Hazard Assessment to assess the site's risk to human health and the environment. The results of the Site Hazard Assessment were evaluated under the Washington Ranking Method (WARM). The ranking for the Holcim Inc. site was a one, with one representing the highest risk and five the lowest. The proximity of the Spokane River was a driving factor in the overall ranking of the Site as a one.

2.3 PHYSICAL SITE CHARACTERISTICS

2.3.1 Topography and Climate

The Holcim Property is at an approximate elevation 1980 feet. The elevation to the east, west, and north decreases as you approach the Spokane River. The City property surrounding the CKD deposit has an approximate elevation of 1935 feet. Near the Site, the Spokane River 100-year flood elevation ranges from 1928 to 1932 feet. The region is semi-arid, receiving around 18 inches of precipitation annually. The majority of the precipitation occurs in late fall through early spring; winter precipitation is usually in the form of snow. Summers are warm and dry. The annual mean temperature is about 50°F.

2.3.2 Regional Hydrogeology

The geology in the vicinity of the Site is primarily basalt flows of the Columbia Plateau overlain by Quaternary glacial flood deposits. The flood deposits are composed of thickly-bedded, poorly-sorted boulders, cobbles, gravel, and sand and are approximately 200 feet thick in the site vicinity. The coarse nature of the deposits results in very high permeabilities. Overlying the flood deposits are native surficial soils consisting of gravelly loam with thicknesses of up to five feet.

The primary aquifer underlying the Site is the Spokane Valley Rathdrum Prairie Aquifer, which is the sole source of drinking water for over 500,000 people in the greater Spokane area. It consists of unconsolidated glaciofluvial sediments and is largely unconfined. The aquifer flows from northern Idaho to the west and southwest down the Spokane Valley at rates of up to 80 feet per day. On the Holcim Property, depth to water varies topographically from about 43 to 74 feet, with a seasonal variation from 8 feet to more than 16 feet, and flows to the west-southwest. Depth to groundwater on the City and Neighborhood, Inc. properties ranges from approximately 10 to 32 feet. Groundwater elevation gradients at the site are fairly flat, with a change of approximately 0.001 feet/foot. Near the site, the Spokane River is within a losing reach and the aquifer is recharged by the river (GeoEngineers, 2013a).

3.0 REMEDIAL INVESTIGATION

A Remedial Investigation (RI) was performed to assess the nature and extent of contamination. Soil and groundwater were investigated to determine whether or not they were impacted by site contaminants.

3.1 SOIL

Two hundred forty-four (244) soil samples were collected from seventy-five (75) borings and test pits, of which 75 samples were submitted for chemical analysis of metals (arsenic, cadmium, lead) and pH. Sample selection (generally one sample per location) was conducted in general accordance with the Work Plan (GeoEngineers, 2011). Fifteen (15) of the seventy-five (75) samples submitted for analysis were also analyzed for total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylene (BTEX), and/or cPAHs.

Soil analytical results indicated 62 of the 75 analyzed samples did not contain concentrations of contaminants greater than the MTCA Method A unrestricted land use (residential) cleanup criteria. The contaminants exceeding cleanup criteria were limited to arsenic, cadmium, lead, gasoline-range petroleum hydrocarbons (GRPH), benzene, cPAHs, and material with a high pH (above 12.5) (GeoEngineers, 2013a).

The Remedial Investigation (GeoEngineers, 2013a) summarizes all soil sampling results.

3.2 GROUNDWATER

Ten groundwater monitoring wells were installed at the site during different phases of investigation work to evaluate potential groundwater contamination (Figure 2). Groundwater was evaluated for metals related to suspected CKD contamination. Groundwater elevations were also measured to determine flow direction and gradient.

Three monitoring events were conducted in 2012. Groundwater elevation at the site ranged from approximately 1910 to 1919 feet (NAVD 88), which represented a depth of between 11 and 70 feet below ground surface. The ground surface elevation ranges from approximately 1930 to 1980 feet. Groundwater generally flowed from northeast to southwest, and away from the

Spokane River. This stretch of the river is a losing reach, so any contamination in groundwater would not be expected to impact the river.

Sampling results showed concentrations of cadmium and lead did not exceed conservative screening levels, although occasional exceedances for lead at several wells have occurred during previous sampling events. During the RI sampling events, total arsenic was detected in samples collected from monitoring wells MW-2, MW-5, and MW-9 at concentrations greater than the MTCA Method A cleanup level for groundwater; concentrations ranged between 8.83 and 17.1 ug/l.

Based on the depth of CKD found in soil borings located in the deposit on the City of Spokane Valley property and the groundwater elevation of nearby monitoring wells, it appears that the CKD comes in contact with groundwater during periods of high groundwater. The City CKD deposit likely is the source of arsenic and lead exceedances in groundwater samples collected from several wells sited downgradient of the City of Spokane Valley property. Additionally, slightly elevated pH levels have been measured in groundwater downgradient of this area. The CKD deposit on the Holcim property does not appear to adversely affect groundwater quality because the base of the Holcim property CKD deposit is sited about 30 feet above the groundwater table. Furthermore, concentrations of metals and pH levels in soil samples collected directly beneath the Holcim property CKD deposit were similar to background levels, indicating metals were not leaching from the Holcim CKD deposit. The Remedial Investigation (GeoEngineers, 2012a) summarizes all groundwater sampling results.

3.3 RISKS TO HUMAN HEALTH AND THE ENVIRONMENT

The Holcim property is currently zoned as Mixed Use Center in the City of Spokane Valley. Property to the south and west are also zoned Mixed Use Center, but function as residential (west) and commercial (south). Property to the east and north (City of Spokane Valley property) are zoned Parks Open Space and contain a highly-used recreational trail (Centennial Trail).

Exposures to human populations could occur through contact with or ingestion of contaminated surface or subsurface soil, dust entrained in air, or use of contaminated groundwater (however no drinking water well is installed in the area of contaminated groundwater). The Irvin Water District well is located south of the site but elevated concentrations of site-related constituents have never been detected in water from this well, which is confirmed on a regular basis through sampling required by the Department of Health. Trespass is highly likely due to the Site's proximity to the Parks property and Centennial Trail. The site is fenced; however, that does not completely eliminate risk from trespassing. Potential exposed populations include workers at the Site, unauthorized trespassers to the fenced portions of the Holcim and City properties, residents, recreational users, and potentially users of contaminated groundwater, though on-site restrictions will prevent the use of contaminated groundwater.

Exposure to ecological receptors is likely given the presence of vegetation, open space, and the Spokane River. A terrestrial ecological assessment is presented in Section 4.3 which evaluates the ecological receptor exposure.

4.0 CLEANUP STANDARDS

MTCA requires the establishment of cleanup standards for individual sites. The two primary components of cleanup standards are cleanup levels and points of compliance. Cleanup levels determine the concentration at which a substance does not threaten human health or the environment. All material exceeding a cleanup level is addressed through a remedy that prevents exposure to the material. Points of compliance represent the locations on the site where cleanup levels must be met.

4.1 OVERVIEW

The process for establishing cleanup levels involves the following:

- Determining which method to use;
- Developing cleanup levels for individual contaminants in each media;
- Determining which contaminants contribute the majority of the overall risk in each media (indicators); and
- Adjusting the cleanup levels downward based on total site risk.

The MTCA Cleanup Regulation provides three options for establishing cleanup levels: Methods A, B, and C.

- Method A may be used to establish cleanup levels at routine sites or sites with relatively few hazardous substances.
- Method B is the standard method for establishing cleanup levels and may be used to establish cleanup levels at any site.
- Method C is a conditional method used when a cleanup level under Method A or B is technically impossible to achieve or may cause significantly greater environmental harm. Method C also may be applied to qualifying industrial properties.

The MTCA Cleanup Regulation defines the factors used to determine whether a substance should be retained as an indicator for the Site. When defining cleanup levels at a site contaminated with several hazardous substances, Ecology may eliminate from consideration those contaminants contributing a small percentage of the overall threat to human health and the environment. WAC 173-340-703(2) provides a substance may be eliminated from further consideration based on:

- The toxicological characteristics of the substance which govern its ability to adversely affect human health or the environment relative to the concentration of the substance;
- The chemical and physical characteristics of the substance which govern its tendency to persist in the environment;
- The chemical and physical characteristics of the substance which govern its tendency to move into and through the environment;
- The natural background concentration of the substance;
- The thoroughness of testing for the substance;
- The frequency of detection; and

- The degradation by-products of the substance.

4.2 SITE USE

The evaluation of both cleanup levels and ecological exposures depends on the nature of the Site use. Options under MTCA are either an unrestricted property or an industrial property. Industrial properties are defined in WAC 173-340-200; the definition includes properties characterized by transportation areas and facilities zoned for industrial use. Industrial properties are further described in WAC 173-340-745(1) with the following factors:

- People do not normally live on industrial property;
- Access by the general public is generally not allowed;
- Food is not grown/raised;
- Operations are characterized by chemical use/storage, noise, odors, and truck traffic;
- Ground surface is mostly covered by buildings, paved lots and roads, and storage areas; and
- Presence of support facilities serving the industrial facility employees and not the general public.

The Site is currently zoned Mixed-Use Center, and so potentially would qualify as an industrial site use. However, most of the site is not paved or covered by buildings, much of the surrounding land is not developed, and portions of land to the north and east of the site represent high quality habitat. Additionally, adjacent land has heavy recreational use due to the presence of parks and trails. This makes human and ecological exposure to any residual contamination highly possible. Therefore, even though the Site may qualify as industrial, Ecology considers it necessary that this Site be cleaned up to meet unrestricted property standards.

4.3 TERRESTRIAL ECOLOGICAL EVALUATION

WAC 173-340-7490 requires that sites perform a terrestrial ecological evaluation (TEE) to determine the potential effects of soil contamination on ecological receptors. A site may be excluded from a TEE if any of the following are met:

- All contaminated soil is or will be located below the point of compliance;
- All contaminated soil is or will be covered by physical barriers such as buildings or pavement;
- The site meets certain requirements related to the nature of on-site and surrounding undeveloped land; or
- Concentrations of hazardous substances in soil do not exceed natural background levels.

This Site will meet either the first condition (Alternatives 1 or 2) or the second condition (Alternatives 3, 4, or 5) following the final cleanup action. Therefore, the TEE process for this site is completed and no simplified or site-specific TEE is required.

4.4 SITE CLEANUP LEVELS

The RI and previous investigations have documented the presence of contamination in soil and groundwater at the Site. Therefore, cleanup levels will be developed for both soil and groundwater.

Because this site meets the requirements identified in WAC 173-340-704, Method A cleanup levels will apply to soil. Since groundwater is an established drinking water source, Method A is also appropriate for groundwater.

Tables 1 and 2 show screening of indicators based on detection frequencies for groundwater and soil. If contaminants are detected at a low frequency (generally < 5%), then they are not carried forward to cleanup level development. Tables 1 and 2 also show the applicable cleanup levels for groundwater and soil. Contaminants that require cleanup levels in soil at this site include arsenic, cadmium, lead, pH, petroleum hydrocarbons (total, gasoline, diesel, oil), BTEX and cPAHs. Contaminants that require cleanup levels in groundwater at this site include arsenic and lead.

Since some groundwater concentrations exceed cleanup levels, groundwater is contaminated and soil cleanup levels need to consider the leaching pathway in areas where a permanent, low-permeability engineered cover would not be installed. Therefore, cleanup levels will be set to be protective of both direct contact and for the protection of groundwater.

4.5 POINT OF COMPLIANCE

The MTCA Cleanup Regulation defines the point of compliance as the point or points where cleanup levels shall be attained. Once cleanup levels are met at the point of compliance, the Site is no longer considered a threat to human health or the environment.

WAC 173-340-740(6) gives the point of compliance requirements for soil. The standard soil point of compliance is established at a depth of fifteen feet and shall apply at this Site to contaminants that are not found in groundwater. The standard point of compliance for soil cleanup levels based on protection of groundwater is throughout the soil column. For cleanup actions that involve containment of hazardous substances, soil cleanup levels will typically not be met inside containment areas.

The standard point of compliance for groundwater cleanup levels will be all groundwater beneath the site from the top of the saturated zone to the lowest depth which could be affected by the site.

5.0 CLEANUP ACTION SELECTION

5.1 REMEDIAL ACTION OBJECTIVES

The remedial action objectives are statements describing the actions necessary to protect human health and the environment by eliminating, reducing, or otherwise controlling risks posed

through each exposure pathway and migration route. They are developed considering the characteristics of the contaminated media, the characteristics of the hazardous substances present, migration and exposure pathways, and potential receptor points.

Soil and groundwater have been contaminated by past activities at the Site. Given the current status of the Site, people may be exposed to: contaminated soil via dermal contact or inhalation of dust; or contaminated groundwater via dermal contact or ingestion (however no water well is installed in the area of contaminated groundwater). Potential human receptors include on-site workers, trespassers, residents, and recreational users. Exposure to both plant and animal receptors is also possible under the current status of the site due to the proximity to undeveloped land.

Given these potential exposure pathways, the following are the remedial action objectives for the Site:

- Prevent direct contact, ingestion, inhalation, or uptake of contaminated soil by humans or ecological receptors.
- Prevent direct contact, ingestion, inhalation, or uptake of CKD by humans or ecological receptors.
- Prevent direct contact, ingestion, or uptake of contaminated groundwater by humans.
- Prevent the potential for erosion to mobilize waste material and/or contaminated soil to adjacent properties.

5.2 CLEANUP ACTION ALTERNATIVES

Cleanup alternatives to meet these remedial action objectives are evaluated as part of the FS. The feasibility study evaluated multiple alternatives for addressing all contaminated media at the Site. The following five alternatives are based on the proposals made by the PLPs in their Feasibility Study. Note that Alternatives 3, 4, and 5 all include the use of one or more engineered cover systems. The Feasibility Study specified that several types of engineered cover systems could possibly be constructed. To comply with applicable ARARs and public input that Ecology received during the public review of the RI and FS reports, Ecology will complete its alternative analysis with the assumption that any cover system will, at a minimum, meet the requirements of the Limited Purpose Landfill Regulations, WAC 173-350-400.

5.2.1 Alternative 1: Excavation and Disposal of Contaminated Soils & CKD

This alternative would excavate the contaminated soil from the Neighborhood, Inc. property and the contaminated soil and CKD from the City of Spokane Valley and Holcim properties and transport the material to an appropriately-permitted landfill for disposal. The excavations on the Neighborhood, Inc. property and the City property would be backfilled with clean material. The City property would be planted with native plants and grasses.

5.2.2 Alternative 2: Excavation, Treatment & Disposal of Contaminated Soils & CKD

This alternative would excavate the contaminated soil from the Neighborhood, Inc. property and the contaminated soil and CKD from the City of Spokane Valley and Holcim properties. Any material that had a pH above 12.5 would be treated to reduce the pH and then all material would be transported to an appropriately-permitted landfill for disposal. The excavations on the Neighborhood, Inc. property and the City property would be backfilled with clean material. The City property would be planted with native plants and grasses.

5.2.3 Alternative 3: Engineered Covers and Restrictive Covenants

This alternative would install engineered covers over all contaminated soil and CKD on all three properties. Restrictive covenants which would prohibit excavation or the extraction of groundwater would be recorded on all three property deeds.

5.2.4 Alternative 4: City CKD Moved to Holcim Property & Capped, Contaminated Soil to Landfill

This alternative would excavate the contaminated soil from the Neighborhood, Inc. property and the non-CKD contaminated soil on the Holcim property and transport it to an appropriately-permitted landfill for disposal. The CKD on the City's property would be excavated and placed onto the Holcim property CKD and an engineered cap would be installed over the CKD on the Holcim Property. The excavations on the Neighborhood, Inc. property and the City property would be backfilled with clean material. The City property would be planted with native plants and grasses. A restrictive covenant which would prohibit excavation of any portion of the engineered cap and the extraction of groundwater would be recorded on the Holcim property deed.

5.2.5 Alternative 5: All Contaminated Soil Moved to Holcim Property & Capped

This alternative would excavate the contaminated soil from the Neighborhood, Inc. property, the non-CKD contaminated soil on the Holcim property, and the CKD on the City's property and place it onto the Holcim property CKD. An engineered cap would then be installed over all waste material on the Holcim Property. The excavations on the Neighborhood, Inc. property and the City property would be backfilled with clean material. The City property would be planted with native plants and grasses. A restrictive covenant which would prohibit excavation of any portion of the engineered cap and the extraction of groundwater would be recorded on the Holcim property deed.

5.3 REGULATORY REQUIREMENTS

The MTCA Cleanup Regulation sets forth the minimum requirements and procedures for selecting a cleanup action. A cleanup action must meet each of the minimum requirements specified in WAC 173-340-360(2), including certain threshold and other requirements. These requirements are outlined below.

5.3.1 Threshold Requirements

WAC 173-340-360(2)(a) requires that the cleanup action shall:

- Protect human health and the environment;
- Comply with cleanup standards (see Section 4.0);
- Comply with applicable state and federal laws (see Section 5.3.4); and
- Provide for compliance monitoring.

5.3.2 Other Requirements

In addition, WAC 173-340-360(2)(b) states the cleanup action shall:

- Use permanent solutions to the maximum extent practicable;
- Provide for a reasonable restoration time frame; and
- Consider public concerns

WAC 173-340-360(3) describes the specific requirements and procedures for determining whether a cleanup action uses permanent solutions to the maximum extent practicable. A permanent solution is defined as one where cleanup levels can be met without further action being required at the Site other than the disposal of residue from the treatment of hazardous substances. To determine whether a cleanup action uses permanent solutions to the maximum extent practicable, a disproportionate cost analysis is conducted. This analysis compares the costs and benefits of the cleanup action alternatives and involves the consideration of several factors, including:

- Protectiveness;
- Permanent reduction of toxicity, mobility and volume;
- Cost;
- Long-term effectiveness;
- Short-term risk;
- Implementability; and
- Consideration of public concerns.

The comparison of benefits and costs may be quantitative, but will often be qualitative and require the use of best professional judgment.

WAC 173-340-360(4) describes the specific requirements and procedures for determining whether a cleanup action provides for a reasonable restoration time frame.

5.3.3 Cleanup Action Expectations

WAC 173-340-370 sets forth the following expectations for the development of cleanup action alternatives and the selection of cleanup actions. These expectations represent the types of cleanup actions Ecology considers likely results of the remedy selection process; however, Ecology recognizes that there may be some sites where cleanup actions conforming to these expectations are not appropriate.

- Treatment technologies will be emphasized at sites with liquid wastes, areas with high concentrations of hazardous substances, or with highly mobile and/or highly treatable contaminants;
- To minimize the need for long-term management of contaminated materials, hazardous substances will be destroyed, detoxified, and/or removed to concentrations below cleanup levels throughout sites with small volumes of hazardous substances;
- Engineering controls, such as containment, may need to be used at sites with large volumes of materials with relatively low levels of hazardous substances where treatment is impracticable;
- To minimize the potential for migration of hazardous substances, active measures will be taken to prevent precipitation and runoff from coming into contact with contaminated soil or waste materials;
- When hazardous substances remain on-site at concentrations which exceed cleanup levels, they will be consolidated to the maximum extent practicable where needed to minimize the potential for direct contact and migration of hazardous substances;
- For sites adjacent to surface water, active measures will be taken to prevent/minimize releases to that water; dilution will not be the sole method for demonstrating compliance;
- Natural attenuation of hazardous substances may be appropriate at sites under certain specified conditions (see WAC 173-340-370(7)); and
- Cleanup actions will not result in a significantly greater overall threat to human health and the environment than other alternatives.

5.3.4 Applicable, Relevant, and Appropriate State and Federal Laws, and Local Requirements

WAC 173-340-710(1) requires that all cleanup actions comply with all applicable state and federal law. It further states the term “applicable state and federal laws” shall include legally applicable requirements and those requirements that the department determines “...are relevant and appropriate requirements.” This section discusses applicable state and federal law, relevant and appropriate requirements, and local permitting requirements which were considered and were of primary importance in selecting cleanup requirements. If other requirements are identified at a later date, they will be applied to the cleanup actions at that time.

MTCA provides an exemption from the procedural requirements of several state laws and from any laws authorizing local government permits or approvals for remedial actions conducted under a consent decree, order, or agreed order. [RCW 70.105D.090] However, the substantive requirements of a required permit must be met. The procedural requirements of the following state laws are exempted:

- Ch. 70.94 RCW, Washington Clean Air Act;
- Ch. 70.95 RCW, Solid Waste Management, Reduction, and Recycling;
- Ch. 70.105 RCW, Hazardous Waste Management;
- Ch. 75.20 RCW, Construction Projects in State Waters;
- Ch. 90.48 RCW, Water Pollution Control; and
- Ch. 90.58 RCW, Shoreline Management Act of 1971.

WAC 173-340-710(4) sets forth the criteria Ecology evaluates when determining whether certain requirements are relevant and appropriate for a cleanup action. Table 3 lists the state and federal laws containing the applicable or relevant and appropriate requirements that apply to the cleanup action at the Holcim Inc. Site. Local laws, which may be more stringent than specified state and federal laws, will govern where applicable.

5.4 EVALUATION OF CLEANUP ACTION ALTERNATIVES

The requirements and criteria outlined in Section 5.3 are used to conduct a comparative evaluation of Alternatives one through five and to select a cleanup action from those alternatives. Table 4 provides a summary of the ranking of the alternatives against the various criteria.

5.4.1 Threshold Requirements

5.4.1.1 Protection of Human Health and the Environment

Alternatives 1 and 2 would eliminate the risk posed from site-related contaminated soil through complete removal. Alternative 3 would reduce the risk posed from site-related contamination as it would no longer be available for contact by human and ecological receptors, however, it may not eliminate the soil-to-groundwater pathway on the City of Spokane Valley property. Alternatives 4 and 5 would equally and substantially reduce the risk posed from site-related contaminated soil. The contaminated soil would no longer be available for contact by human and ecological receptors and the soil-to-groundwater pathway on the City's property would be eliminated. As such, Alternatives 4 and 5 would protect human health and the environment.

5.4.1.2 Compliance with Cleanup Standards

Alternative 3 would potentially not meet cleanup standards in groundwater, as the soil-to-groundwater pathway on the City's property would not be eliminated. Alternatives 1, 2, 4, and 5 would meet cleanup standards in soil by ensuring all soil exceeding standards would be addressed in their respective remedial actions. Also, Alternatives 1, 2, 4, and 5 would most likely meet cleanup standards in groundwater, as the soil-to-groundwater pathway on the City's property would be eliminated.

5.4.1.3 Compliance with State and Federal Laws

All five alternatives would be performed in compliance with applicable state and federal laws listed in Table 3. Local laws, which can be more stringent, will govern actions when they are applicable. These will be established during the design phase of the project.

5.4.1.4 Provision for Compliance Monitoring

There are three types of compliance monitoring: protection, performance, and confirmational. Protection monitoring is designed to protect human health and the environment during the construction and operation & maintenance phases of the cleanup action. Performance monitoring confirms the cleanup action has met cleanup and/or performance standards.

Confirmational monitoring confirms the long-term effectiveness of the cleanup action once cleanup standards have been met or other performance standards have been attained. All five alternatives would meet this provision as all would require varying levels of all three types of compliance monitoring.

5.4.2 Other Requirements

5.4.2.1 Use of Permanent Solutions to the Maximum Extent Practicable

As discussed previously, to determine whether a cleanup action uses permanent solutions to the maximum extent practicable, the disproportionate cost analysis specified in the regulation is used. The analysis compares the costs and benefits of the cleanup action alternatives and involves the consideration of several factors. The comparison of costs and benefits may be quantitative, but will often be qualitative and require the use of best professional judgment. Table 4 provides a summary of the relative ranking of each alternative in the decision process.

- **Protectiveness**

Protectiveness measures the degree to which existing risks are reduced, time required to reduce risk and attain cleanup standards, on- and off-site risks resulting from implementing the alternative, and improvement of overall environmental quality.

Alternatives 1 and 2 would be protective. Both alternatives would equivalently reduce risks, attain cleanup standards, and improve overall environmental quality. Both would have risks associated with their implementation, with Alternative 2 having more risk due to the completion of on-site treatment. Alternative 3 would have little risk associated with its implementation but would have the lowest improvement in environmental quality and the highest likelihood of not attaining cleanup standards. Alternative 3 would be less protective than Alternatives 1 or 2. Alternatives 4 and 5 would have some risk with their implementation (moving material around the site), however less than Alternatives 1 and 2 which would haul all contaminated material a great distance over public roadways. Alternatives 4 and 5 would not improve environmental quality as much as Alternatives 1 and 2, but would attain cleanup standards.

- **Permanent Reduction of Toxicity, Mobility and Volume**

Permanence measures the adequacy of the alternative in destroying the hazardous substance(s), the reduction or elimination of releases or sources of releases, the degree of irreversibility of any treatment process, and the characteristics and quantity of any treatment residuals.

Alternatives 1 and 2 would permanently reduce the mobility of contaminants because all site-related contaminated materials would be removed, effectively eliminating any future sources of releases. Alternative 3 would rely on maintenance of several engineered covers and institutional controls on multiple properties, thereby making it less permanent because future actions could undo them. Alternatives 4 and 5 would also rely on

maintenance and institutional controls, but would be more permanent than Alternative 3 as contaminated soil would be consolidated in one place and institutional controls would only be required on one property.

- Cleanup Costs

Costs are approximated based on specific design assumptions for each alternative. Although the costs provided by the PLPs and their consultants are estimates based on design assumptions that might change, the relative costs can be used for this evaluation. For a detailed description of the costs involved with each alternative, please refer to the Feasibility Study.

Alternatives 1 and 2 are the most expensive, mostly due the cost of offsite disposal of contaminated material, at approximately \$11,200,000 and \$9,800,000, respectively. Alternative 3 is the least expensive at approximately \$1,600,000. Alternatives 4 and 5 have similar costs at \$2,200,000 and \$2,000,000, respectively.

- Long-Term Effectiveness

Long-term effectiveness measures the degree of success, the reliability of the alternative during the period that hazardous substances will remain above cleanup levels, the magnitude of residual risk after implementation, and the effectiveness of controls required to manage remaining wastes.

Alternatives 1 and 2 would rank higher than the rest because they completely remove contamination from the site. Alternative 3 relies solely on on-site containment, so it will have the most residual risk and require the most ongoing maintenance. The single containment area created by Alternatives 4 and 5 would utilize cover technologies that are widely-used and reliable. However, because Alternative 5 relies on containment rather than off-site disposal and Alternative 4 relied primarily on containment with limited off-site disposal, they would rank lower than Alternatives 1 and 2.

- Short-Term Risk

Short-term risk measures the risks related to an alternative during construction and implementation, and the effectiveness of measures that will be taken to manage such risks.

Alternative 3 presents the lowest short-term risk as no material is excavated, treated, or transported. Alternatives 1 and 2 present the highest short-term risk by excavating, treating (Alternative 2), and transporting all contaminated material on public roadways. Alternatives 4 and 5 have similar short-term risks; however, they are lower than Alternatives 1 and 2.

- Implementability

Implementability considers whether the alternative is technically possible, the availability of necessary off-site facilities, services, and materials, administrative and regulatory requirements, scheduling, size, complexity, monitoring requirements, access for operations and monitoring, and integrations with existing facility operations.

All five alternatives are implementable at the Site. Alternative 1 would be one of the least technically implementable due to the large amount of off-site facilities, resources, services, and the large amount of material that would require transport. Alternative 2 would be even lower as it would have the same technical difficulties as Alternative 1 plus the difficulty of on-site treatment. Alternative 3 would be the most technically feasible but the least administratively feasible due to the several properties that would require institutional controls. Alternatives 4 and 5 would be more technically feasible than 1 or 2 as material would be managed on-site and not require as much off-site transport and services. Alternatives 4 and 5 would be more administratively feasible than Alternative 3 as only one property would be affected by institutional controls.

- Consider Public Concerns

All five alternatives would provide opportunity for members of the public to review. Public review and comment on any proposals or plans will be provided for at the public's request.

Costs are disproportionate to the benefits if the incremental costs of an alternative are disproportionate to the incremental benefits of that alternative. Based on the analysis of the factors listed above, it has been determined that the additional costs of Alternatives 1 and 2 are disproportionate to their incremental benefits. The additional cost of Alternatives 4 or 5 over Alternative 3 is not disproportionate to the incremental benefits of Alternatives 4 or 5. Therefore, Alternatives 4 and 5 have the highest rankings for use of a permanent solution to the maximum extent practicable. Table 4 provides a summary of the relative ranking of each alternative in the decision process.

5.4.2.2 Provide a Reasonable Restoration Time Frame

WAC 173-340-360(4) describes the specific requirements and procedures for determining whether a cleanup action provides for a reasonable restoration time frame, as required under subsection (2)(b)(ii). The factors used to determine whether a cleanup action provides a reasonable restoration time frame are set forth in WAC 173-340-360(4)(b).

All five alternatives would have a similar restoration time frame, as the actions described in this CAP are consistent with or meet the factors in WAC 173-340-360(4)(b) and provide for a reasonable restoration time frame.

5.4.3 Groundwater Cleanup Action Requirements

Cleanup actions that address groundwater must meet the specific requirements described in

WAC 173-340-360(2)(c). Every alternative except Alternative 3 meets the requirement for use of a permanent groundwater cleanup action.

5.4.4 Cleanup Action Expectations

Specific expectations of cleanup actions are outlined in WAC 173-340-370 and are described in Section 5.3.3. The alternatives would address applicable expectations in the following manner:

- Alternatives 1 and 2 would remove all contaminated materials to concentrations below cleanup levels which would negate the need for long-term management.
- Alternatives 3, 4 and 5 would use engineering controls at this Site in areas that contain a large volume of low-level hazardous substances
- Alternatives 4 & 5 would consolidate materials to a much smaller footprint.
- Alternatives 3, 4 and 5 would be required to control surface runoff to prevent any impacts to surface water or groundwater.
- Alternative 4 would remove contamination from areas of the site where they are found in small volumes.

5.5 DECISION

Based on the analysis described above, Alternative 4, with some additional modifications and requirements outlined in Section 6.0 below, has been selected as the proposed remedial action for the Holcim Inc. Site. The alternative meets each of the minimum requirements for remedial actions. Furthermore, Alternative 4 provides a more reliable long-term protection of human health and the environment than Alternatives 3 and 5. The incremental costs of Alternatives 1 or 2 are disproportionate to the incremental benefits achieved by permanent removal.

6.0 SELECTED REMEDIAL ACTION

The selected cleanup action for the Site includes the relocation of CKD and contaminated soil from the City property to the Holcim property with the Holcim CKD, the removal and off-site disposal of contaminated soil on the Holcim property not associated with CKD, and the removal of contaminated soil from the Neighborhood, Inc. property to either be placed with the Holcim CKD or disposed of off-site. The combined Holcim, City, and possibly Neighborhood, Inc. CKD-related material would be re-graded to ensure that all CKD and contaminated soil was at least 10 feet away from the property boundary, 200 feet from the 100-year floodplain of the Spokane River, and 200 feet from the Irvin Water District Well. A low-permeability composite engineered cover system would be installed over the CKD material on the Holcim Property. The cover system would consist of the following layers, at a minimum, from the cover surface down to the graded CKD: Two feet topsoil, geotextile, one foot drainage material, and a geomembrane that is compatible with CKD with a minimum of 30-mil thickness, or a greater thickness that is commensurate with the ability to join the geomembrane material. The cover system would be vegetated with native grasses (or other Ecology-approved surface treatment) and maintained for perpetuity, and would thus require a restrictive covenant be placed on the deed for the Holcim property. Institutional controls that restrict access to the engineered cover system and to readily

identify its location would be required. The underlying CKD and cover system would be required to be graded such that any precipitation that entered the soil and drainage layer, or precipitation that ran off the surface of the cover, would be collected and appropriately managed on Holcim's property.

After visual confirmation that all CKD at the City property has been excavated and confirmational sampling indicating that all contamination associated with the CKD on the City property has been removed, the excavation would be backfilled with clean soil and planted with appropriate native plant species.

Contaminated soil on the Neighborhood, Inc. property would be excavated and transported to an appropriate off-site disposal facility or be placed with the CKD material to be covered on Holcim's property. If dangerous waste related to CKD is encountered on this property, it could either be transported and disposed of at an offsite facility permitted to accept the waste, or it could be placed with the CKD material to be covered on Holcim's property. After confirmational sampling indicates that all contamination above cleanup levels on Neighborhood, Inc.'s property has been removed, the excavations will be backfilled with clean soil.

Contaminated soil on Holcim's property not associated with CKD would be excavated and transported to an appropriate off-site disposal facility. After confirmational sampling indicates that all contamination above cleanup levels within these locations has been removed, the excavations may be backfilled with clean soil.

Compliance monitoring will take place, and will be established in a Compliance Monitoring Plan to be submitted to Ecology for review and approval in conjunction with Engineering Design Plans. As mentioned above, confirmational monitoring will be required at areas where the remedy requires excavation of contaminated material and/or CKD. Protection monitoring will involve dust control during any work with contaminated soil. Performance monitoring will involve periodic visits to the capped area to ensure that the integrity of the cap has not been compromised; the frequency and requirements of these visits will be documented in the Operation and Maintenance Plan.

6.1 GROUNDWATER MONITORING

Groundwater monitoring in an appropriate subset of Site groundwater monitoring wells will occur quarterly for a period of at least 20 years. Groundwater monitoring may be able to be reduced after consultation with Ecology if it appears that a reduction in groundwater monitoring may be warranted.

6.2 INSTITUTIONAL CONTROLS

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances at the Site. Such measures are required to assure both the continued protection of human health and the environment and the integrity of the cleanup action whenever hazardous substances remain at the Site at concentrations exceeding applicable cleanup levels. Institutional controls can include both physical measures and legal and administrative mechanisms. WAC 173-340-440 provides

information on institutional controls, and the conditions under which they may be removed. Institutional controls, which will prohibit excavation or the extraction of groundwater, will be included in the cleanup action to address soil contamination remaining below the engineered cover.

Because no contamination exceeding unrestricted cleanup levels would remain on properties owned by the City of Spokane Valley and Neighborhood, Inc., no institutional controls would be required for these properties.

6.3 FINANCIAL ASSURANCES

WAC 173-340-440 states that financial assurance mechanisms shall be required at sites where the selected cleanup action includes engineered and/or institutional controls. Financial assurances are required at this Site because engineered controls in the form of an engineered cover will be used to manage contaminated soil at the Site.

6.4 PERIODIC REVIEW

As long as groundwater cleanup levels have not been achieved, WAC 173-340-420 states that at sites where a cleanup action requires an institutional control, a periodic review shall be completed no less frequently than every five years after the initiation of a cleanup action. Additionally, periodic reviews are required at sites that rely on institutional controls as part of the cleanup action. Periodic reviews will be required at this Site. After groundwater cleanup levels have been achieved, periodic reviews will still be required because institutional controls are a part of the remedy.

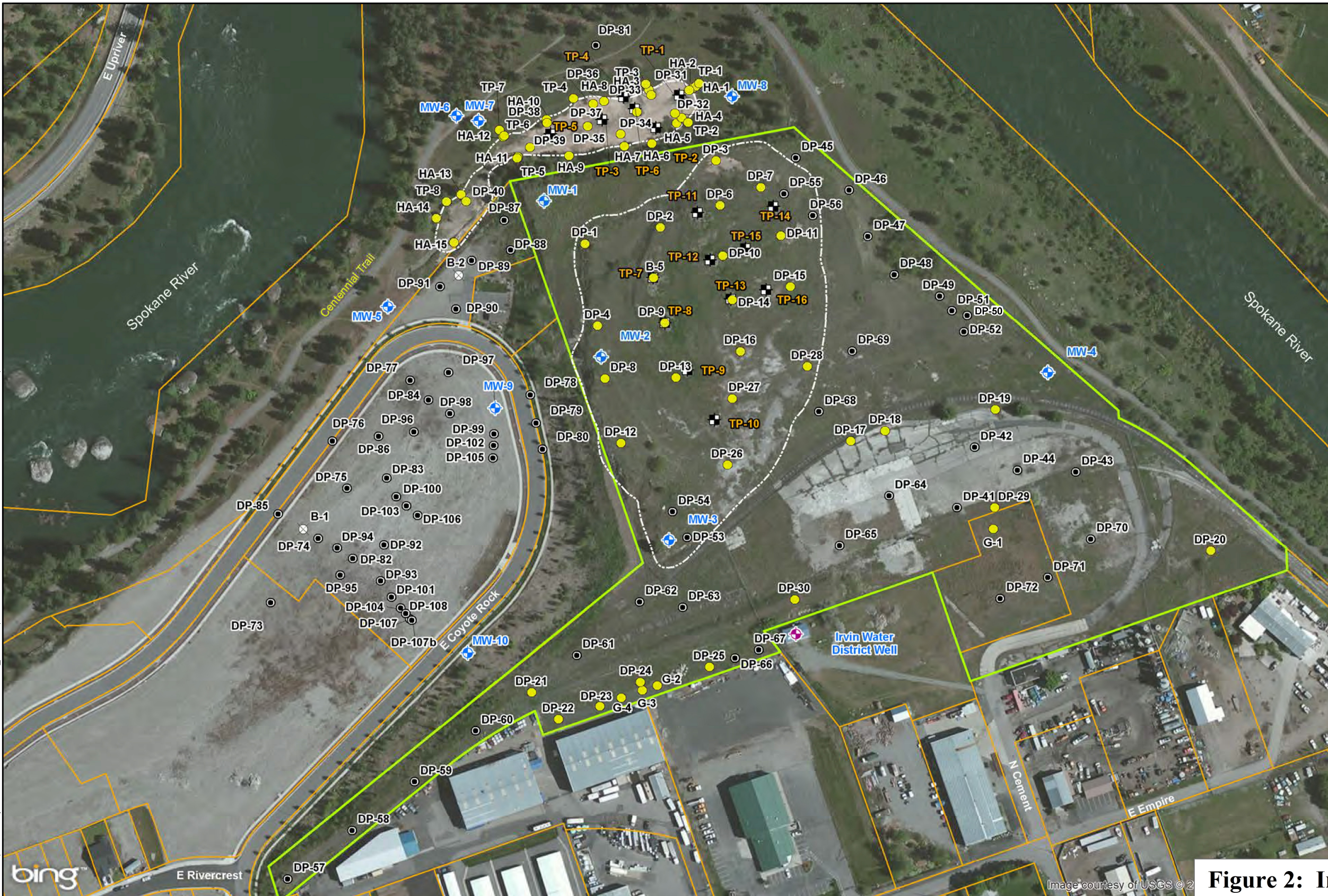
7.0 REFERENCES CITED

GeoEngineers, Inc., 2011, Remedial Investigation/Feasibility Study Work Plan, Holcim Inc. Site

GeoEngineers, Inc., 2013a, Remedial Investigation Report, Holcim Inc. Site

GeoEngineers, Inc., 2013b, Feasibility Study Report, Holcim Inc. Site

Washington State Department of Ecology, 2007, Model Toxics Cleanup Act Regulation Chapter 173-340 WAC



Legend

- MW-1 Monitoring well location and well number
- DP-44 Direct-Push Boring (2012, 2013)
- B-1 Air Rotary Boring (2012)
- TP-1 Previous Subsurface Exploration (2007)
- TP-1 Pilot Study Test Pit (2010)
- Water Supply Well
- Approximate Limits of Contiguous CKD Fill
- Holcim Property Boundary
- Tax Parcels

Figure 2: Investigation Locations

Table 1. Groundwater Detection Frequency and Cleanup Levels

Analyte	Total Samples	Number of Detections	Detection Frequency	Maximum Concentration, ug/L	Method A Cleanup Level, ug/L
Arsenic	164	94	57.32%	261	5
Cadmium	155	5	3.23%	3.8	5*
Lead	155	14	9.03%	278	15

*Cadmium will not be carried forward as an indicator due to low detection frequency and the maximum detected concentration is below the Method A Cleanup Level

ug/L = micrograms per liter

Table 2. Soil Detection Frequency and Cleanup Levels

Analyte	Total Samples	Number of Detections	Detection Frequency	Maximum Detection, mg/kg	Unrestricted Method A cleanup Level, mg/kg
Metals					
Arsenic	126	126	100.00%	219	20
Cadmium	114	26	22.81%	19.1	2
Lead	112	111	99.11%	1760	250
pH	116	116	100.00%	13.36 pH units	12.5 pH units*
TPH, BTEX					
TPH					2000
GRPH	28	9	32.14%	416	30
DRPH	27	6	22.22%	400	2000**
ORPH	27	8	29.63%	1830	2000**
Benzene	19	4	21.05%	0.0427	0.03
Toluene	19	10	52.63%	0.396	7**
Ethylbenzene	19	5	26.32%	0.433	6**
Total Xylene	19	9	47.37%	4.92	9**
PAHs					
Total PAH TEQ	15	9	60.00%	0.1845	0.1

*A pH of 12.5, while not a Method A cleanup level, will be used as a substantive requirement of the dangerous waste regulations, WAC 173-303

**DRPH, ORPH, Toluene, Ethylbenzene, and Total Xylene will not be carried forward as indicators because the maximum detected concentrations are below the Unrestricted Method A cleanup level

mg/kg = milligrams per kilogram

Table 3. Applicable or Relevant and Appropriate Requirements For the Cleanup Action

Jurisdiction	Summary of ARARs	
City of Spokane Valley	Municipal Code 7.05	Nuicances (Noise and Dust)
	Municipal Code	Stormwater Management Regulations
	Municipal Code 24.50	Land Disturbing Activities (TESC and Grading)
State of Washington Regulations	Ch. 18.104 RCW;	Water Well Construction;
	Ch. 173-160 WAC	Minimum Standards for Construction and Maintenance of Water Wells
	Ch. 173-162 WAC	Rules & Regulations Governing the Licensing of Well Contractors & Operators
	Ch. 173-303 WAC	Dangerous Waste Management
	Ch. 173-304 WAC	Solid Waste Handling Standards
	Ch. 70.105D RCW;	Model Toxics Control Act;
	Ch. 173-340 WAC	MTCA Cleanup Regulation
	Ch. 173-350 WAC	Solid Waste Handling Standards
	Ch. 43.21C RCW;	State Environmental Policy Act;
	Ch. 197-11 WAC	SEPA Rules
	Ch. 70.94 RCW;	Washington Clean Air Act;
	Ch. 43.21A RCW;	General Regulations for Air Pollution
	Ch. 173-400 WAC	General Regulations for Air Pollution
	Ch. 173-460 WAC	Controls for New Sources of Air Pollution
	Ch. 173-470 WAC	Ambient Air Quality Standards for Particulate Matter
Federal Regulations	29 CFR 1910	Occupational Safety and Health Act
	42 USC 7401;	Clean Air Act of 1977;
	40 CFR 50	National Ambient Air Quality Standards
	40 CFR 141	Drinking Water Regulations
	40 CFR 260-268	Hazardous Waste Regulations (RCRA)

Table 4. Evaluation of Cleanup Action Alternatives

Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
	Excavate All Contaminated Soil and CKD, Transport to Landfill	Excavate All Contaminated Soil and CKD, Reduce pH, Transport to Landfill	Install Engineered Covers Over all Contaminated Soil and CKD	Move City CKD to Holcim Property and Install Engineered Cover, Transport NI Soil to Landfill	Move City CKD and NI Soil to Holcim Property and Install Engineered Cover
Threshold Requirements					
Protection of human health & environment	yes	yes	yes	yes	yes
Compliant with cleanup standards	yes	yes	yes	yes	yes
Compliant with state & federal laws	yes	yes	yes	yes	yes
Provision for compliance monitoring	yes	yes	yes	yes	yes
Other Requirements*					
Use of Permanent Solutions (disproportionate cost analysis)	rank #3	rank #2	rank #1	rank #5	rank #4
Protectiveness	5	4	1	3	3
Permanent Reduction	4	5	1	3	3
Cleanup Cost (rank)	1	2	5	3	4
Cleanup Cost (estimated)	\$11,200,000	\$9,800,000	\$1,600,000	\$2,200,000	\$2,000,000
Long-term Effectiveness	5	5	1	3	2
Short-term Risk	2	1	5	4	4
Implementability	2	1	5	3	4
Consider Public Concerns	5	4	1	3	2
Total Relative Score	24	22	19	22	22
Provide Reasonable Time Frame	yes	yes	no	yes	yes
Consider Public Comments	yes	yes	yes	yes	yes

Note: This process utilizes a "ranking" method. Each alternative is ranked against the others, with 5 representing the "best" and 1 representing the "worst". Where a tie occurs, the alternatives are ranked the same.

EXHIBIT C
Consent Decree
Holcim Inc. Site
Scope of Work and Schedule

This Scope of Work implements the Cleanup Action Plan (Exhibit B) to address soil and groundwater contamination at the Holcim Inc. Site (Site) (Exhibit A) in Spokane Valley, Washington. Holcim (US), Inc. and the City of Spokane Valley (PLPs) will implement this Scope of Work to perform site cleanup. The Scope of Work requires the development of plans and designs, along with all other work products, that meet the requirements of the Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 WAC

The PLPs shall furnish all personnel, materials, and services necessary for, or incidental to, performing the cleanup action selected for the Site.

The Scope of Work contains the following tasks, to be accomplished in accordance with the schedule below:

Task 1: Engineering Design Report

The Engineering Design Report will comply with the requirements of WAC 173-340-400(4)(a). The report will provide engineering concepts and design criteria for major components of the selected cleanup action. The Engineering Design Report will describe the final grades of the cover system installed on Holcim (US), Inc.'s (Holcim) property, final seismic and slope stability analyses, stormwater control, and cover system design including compaction requirements for the contaminated soil and CKD to be covered, engineered layers, and surface treatment, as well as the materials and methods. The stormwater management design will describe the engineered controls that will be utilized to manage stormwater in accordance with applicable laws and regulations.

The Engineering Design Report should be adequate to obtain the necessary permits or meet the substantive provisions of laws for which there is a permit exemption in MTCA for the Site remediation. The Engineering Design Report will include a section describing the institutional controls for the Site. Institutional controls will be required for Holcim's property where the engineered cover is present. The controls will prohibit access to the engineered cover system.

The restrictive covenant to protect the integrity of the cover system and to prohibit groundwater extraction on Holcim's property is attached as Exhibit E to the Consent Decree. The institutional control section of the Engineering Design Report will provide the location of physical barriers and signs to prevent exposure to contamination.

Following completion of the Engineering Design Report, the Construction Plans and Specifications will be completed, submitted to Ecology for review and acceptance and made available for the purpose of bidding on the project construction. The Construction Plans and Specifications will comply with WAC 173-340-400(4)(b). The bid process should be completed in order to meet the construction start date.

Exhibit C – Scope of Work
Holcim (US), Inc. Site

Task 2: Permits and Substantive Conditions of Permit-Exempt Laws

The PLPs must obtain any necessary permits prior to construction of the cleanup action, or identify substantive requirements of laws for which MTCA creates a permit exemption.

Task 3: Compliance Monitoring Plan

The Compliance Monitoring Plan will be developed prior to installation of the remediation systems. The Compliance Monitoring Plan will include protection monitoring, performance monitoring, and confirmational monitoring plans. The Compliance Monitoring Plan will also include a Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP). Each plan will meet the requirements of WAC 173-340-410. All sampling data shall be submitted to Ecology according to the requirements of Section X of the Consent Decree.

Task 4: Operations and Maintenance Plan

An Operations and Maintenance (O&M) Plan will be developed in accordance with WAC 173-340-400(4)(c) for the engineered cover and stormwater systems. The O&M Plan will include the monitoring schedules for the stormwater management system and cover system components. The O&M Plan shall identify the person(s) responsible for each task outlined in the O&M Plan and relevant contact information. The O&M Plan will be completed prior to installation of the remediation systems. The O&M Plan shall describe and provide for continued implementation of the institutional controls for the Site as developed in the Engineering Design Report.

Task 5: Cleanup Action Implementation

The Engineering Design Report will be used to develop bid specifications to be used in obtaining bids for cleanup action implementation. Based on the Engineering Design Report and the project bids, the PLPs will prepare a final punch list of items to be completed during cleanup action implementation. The punch list items will be tracked as the implementation progresses.

The cleanup action to be implemented at the Site includes the relocation of CKD and contaminated soil from the City property to the Holcim property with the Holcim CKD, the removal and off-site disposal of contaminated soil on the Holcim property not associated with CKD, and the removal of contaminated soil from the Neighborhood, Inc. property to either be placed with the Holcim CKD or disposed of off-site. The combined Holcim, City, and possibly Neighborhood, Inc. CKD-related material will be regraded to ensure that all CKD and contaminated soil is at least 10 feet away from the property boundary, 200 feet from the 100-year floodplain of the Spokane River, and 200 feet from the Irvin Water District Well. A low-permeability composite engineered cover system will be installed over the CKD material on the Holcim Property. The cover system will consist of the following layers, at a minimum, from the cover surface down to the graded CKD: Two feet topsoil, geotextile, one foot drainage material, and a geomembrane that is compatible with CKD with a minimum of 30-mil thickness, or a greater thickness that is commensurate with the ability to join the geomembrane material. The cover system will be vegetated with native grasses (or other Ecology-approved surface

treatment) and maintained for perpetuity, and will require a restrictive covenant be placed on the deed for the Holcim property. The underlying CKD and cover system will be graded such that any precipitation that entered the soil and drainage layer, or precipitation that ran off the surface of the cover, would be collected and appropriately managed on Holcim's property.

Task 6: Institutional Controls

After the PLPs complete construction of the cleanup action, the PLPs will implement the institutional controls described in the approved Engineering Design Report and approved Operations and Maintenance Plan. Institutional controls that restrict access to the engineered cover system and to readily identify its location will be required.

Task 7: Cleanup Action Report

The PLPs will submit a Cleanup Action Report in accordance with WAC 173-340-400 (6)(b), 120 days after completion of the construction of the cleanup as defined by "construction complete" as set forth in schedule below. Laboratory data shall be included in the report and will be completely reviewed according to the quality assurance and quality control procedures outlined in the SAP and QAPP. Raw data shall be submitted Ecology following receipt of the data from the analytical laboratory. The Cleanup Action Report will be submitted with graphical representations of the work performed. The report will also provide documented evidence that institutional controls have been implemented.

SCHEDULE

Each of the documents required below are subject to Ecology's review and approval. Ecology will approve, approve with conditions, or disapprove of such documents. If Ecology disapproves of a document, Ecology will provide comments to the PLPs and the parties will establish a mutually agreed upon date for the PLP's re-submittal of the document, not to exceed forty-five (45) days after the PLP's receipt of Ecology's comments. The PLPs will then submit a revised document that addresses Ecology's comments. For the purposes of the following schedule, the construction season will be defined as April 15 through November 1.

<u>Deliverables</u>	<u>Date Due</u>
Effective date of Consent Decree	Start
PLPs submit Draft Engineering Design Report, Operations and Maintenance Plan, and Compliance Monitoring Plan	90 days after start
PLPs submit Final Engineering Design Report, Operations and Maintenance Plan, and Compliance Monitoring Plan	30 days after PLPs receive Ecology's written comments on Draft Documents

Exhibit C – Scope of Work
Holcim (US), Inc. Site

PLPs submit Construction Plans and Specifications	30 days after Ecology approval of Engineering Design Report
Begin constructing cleanup action	As described in Final EDR, but no later than July 15, 2016
Construction is complete	On or Before November 1, 2016
PLPs implement institutional controls	30 days after construction is complete
PLPs submit Draft Cleanup Action Report	90 days after construction is complete
PLPs submit Final Cleanup Action Report	30 days after PLPs receive Ecology's written comments on Draft Cleanup Action Report
PLPs submit Progress Reports	In accordance with Section XI of Decree.

EXHIBIT D

Amended Public Participation Plan for the Holcim Inc. Site Consent Decree

**Facility ID No. 52126416
Cleanup Site ID No. 4580**

Prepared by:
Washington State Department of Ecology
May 2015

Para asistencia en Español: Greg Bohn 509/454-4174

Если вам нужна помощь на русском, звоните:
Larissa Braaten 509/710-7552

Note: We are also working to obtain a translator for the Marshallese language.

To request **ADA** accommodations or materials in a format for the visually impaired, call Jeremy Schmidt 509/329-3484, Relay Service at 711, or TTY 877-833-6341.

Introduction

The original Public Participation Plan is being Amended to meet state regulatory requirements under the Model Toxics Control Act (MTCA). MTCA governs the cleanup of contaminated sites in Washington State. Holcim (US) Inc. and the City of Spokane Valley are known as the potentially liable persons (PLPs) responsible for cleanup at the site. The site is located at 12207 East Empire Avenue in the City of Spokane Valley, Spokane County, Washington (see Appendix A, Site Map).

The Amended Public Participation Plan (Plan) is part of a legal agreement called a Consent Decree. The Consent Decree formalizes the agreement reached between the state and potentially liable persons (PLPs) on the cleanup actions needed at a site. A decree is subject to public comment.

Cleanup at the Holcim Inc. site focuses on cement kiln dust (CKD) contamination. This work is necessary because cement kiln dust (CKD) remains in two locations on the property as a result of past cement manufacturing. CKD is found on the Holcim property on the north plateau portion of the land. A smaller deposit is located north of the fence on property owned by the City of Spokane Valley.

CKD generally may contain arsenic, cadmium, and lead, and can have a high pH. The property is close to the Spokane River and aquifer. Past studies found arsenic in groundwater at levels that exceeded state standards.

Getting Involved in the Cleanup at the Holcim Inc. Site

The Washington State Department of Ecology (Ecology) encourages the public to learn about and get involved in decision-making opportunities at the Holcim Inc. site. Several opportunities have already been available during specific stages of the investigation and cleanup of contamination at the site.

The Plan provides an overview of the Plan and the Model Toxics Control Act (MTCA), which guides the formal cleanup process at sites in Washington State. This document also outlines:

- The purpose of the Plan.
- When public notices will occur.
- The amount of time the public has to comment.
- Where the potentially affected area is located.
- Ways the public may get involved in providing feedback.
- The site background, a community profile, and community concerns.

Purpose of the Plan

The Public Participation Plan has three main purposes:

- To promote public understanding of Ecology's responsibilities, planning, and cleanup activities at the site.
- To serve as a way of gathering information from the public. This information has and will continue to assist Ecology and the potentially liable persons (PLPs) in conducting the investigation and plan for cleanup in a manner that is protective of human health and the environment.
- To inform the community living near the site, as well as the general public, about cleanup activities and how to contribute to the decision-making process.

The participation needs are assessed at each site according to the level of public interest and degree of risk posed by contaminants. Individuals who live near the site, community groups, businesses, government, other organizations and interested parties are provided an opportunity to become involved in commenting on the cleanup process.

Overview of the Public Participation Plan and Model Toxics Control Act (MTCA)

The Plan is required under authority of the Model Toxics Control Act. MTCA is a "citizen-mandated" law that became effective in 1989 to provide guidelines for the cleanup of contaminated sites in Washington State. This law sets standards to make sure the cleanup of sites is protective of human health and the environment. A glossary of MTCA terms is included as Appendix D of this Plan.

Ecology's Toxics Cleanup Program investigates reports of contamination that may threaten human health and the environment. If contaminants are confirmed during an investigation, the site is generally ranked and placed on a Hazardous Sites List (HSL). The Holcim Inc. site ranked a one on the Hazardous Sites List. A rank of one represents the highest level of concern and five the lowest.

Current and former owners or operators, as well as any other potentially liable persons (PLPs) of a site, may be held responsible for cleanup of contamination based on MTCA. Ecology identified Holcim (US) Inc. and the City of Spokane Valley as the PLPs for this site.

The Plan includes requirements for public notice such as:

- Identifying reports about the site.
- The repositories where reports may be read.
- Providing public comment periods.
- Holding public meetings or hearings.

Other forms of participation may be interviews, citizen advisory groups, questionnaires, or workshops.

Public Participation Grants and Technical Assistance

Additionally, citizen groups living near 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.

NOTE: Ecology currently does not have a citizen technical advisor for providing technical assistance to citizens on issues related to the investigation and cleanup of the site.

Amendments

The Plan was developed by Ecology and complies with the Model Toxics Control Act regulations (Chapter 173-340-600 WAC). The Plan, as noted previously, is being amended as part of the Consent Decree for cleanup at the site. The public will have an opportunity to comment on the amended Plan, and Ecology will make changes to the Plan, if appropriate. Ecology will determine final approval of the Plan as well as any additional amendments.

Review of Documents and Project Contacts

Documents relating to the cleanup may be reviewed at the repositories listed on page 8 of this Plan. If individuals are interested in knowing more about the site or have comments regarding the Plan, please contact one of the individuals listed below.

WA Department of Ecology Contacts: Jeremy Schmidt, P.E. WA State Department of Ecology Eastern Regional Office Toxics Cleanup Program 4601 N. Monroe Spokane, WA 99205 509/329-3484 e-mail jeremy.schmidt@ecy.wa.gov Carol Bergin, Public Involvement WA State Department of Ecology Eastern Regional Office Toxics Cleanup Program 4601 N. Monroe Spokane, WA 99205 509/329-3546 e-mail cabe461@ecy.wa.gov Kari Johnson, Public Disclosure WA State Department of Ecology Eastern Regional Office 4601 N. Monroe Spokane, WA 99205 509/329-3415 e-mail kajo461@ecy.wa.gov	Para asistencia Español Greg Bohn WA State Department of Ecology Central Regional Office Toxics Cleanup Program Greg Bohn (509) 454-4174 Если вам нужна помощь на русском, звоните Larissa Braaten 509/710-7552 ----- Holcim (US) Inc. Contact: Joel Bolduc Senior Environmental Specialist 1170 Transit Dr. Colorado Springs, CO 80903 855-719-6947 e-mail: joel.bolduc@holcim.com City of Spokane Valley Contact: Mike Stone, Parks Director City of Spokane Valley 11707 E. Sprague Ave., Ste 103 Spokane Valley, WA 99206 509/720-5400
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Site Background

Site Overview

The site is located at 12207 East Empire Avenue in the City of Spokane Valley, Spokane County, Washington. Holcim (US) Inc., and its affiliate companies operated a cement manufacturing plant on the property from 1910 to 1967. During that time cement kiln dust (CKD) was generated and deposited on the site. Some of the CKD also was deposited on an adjacent property owned by the City of Spokane Valley.

CKD is still found on the Holcim property on the north plateau portion of the land. This portion of the property is approximately 7 acres. A smaller deposit about 1 acre in size is located north of the fence on property owned by the City of Spokane Valley. Both deposits of the CKD have a minimal cover over them and show evidence of erosion onto neighboring properties.

Prior to 1984 CKD was not regulated as a hazardous or dangerous waste by the federal government or the State of Washington. In 1984 CKD became a regulated hazardous waste in Washington State.

In 2008 Holcim conducted an analysis of the CKD and groundwater under and adjacent to the site. Some of the CKD was very alkaline $\text{pH} > 12.5$ which means it was very corrosive and considered a dangerous waste. CKD also contained arsenic, cadmium, and lead. Past studies found arsenic and lead in groundwater at levels that exceeded state standards.

In 2009 Ecology conducted an assessment of the site and ranked it a 1. A rank of 1 represents the greatest threat to human health and the environment and a rank of 5 the least threat. The site's close proximity to the river and aquifer contributed to the high site ranking. Additionally, a drinking water well operated by the Irvin Water District is southwest of the site. Regular monitoring of that well has not shown any impacts to the drinking water. Groundwater at the site flows away from the Spokane River.

Ecology entered into an Agreed Order with the potentially liable persons (PLPs); Holcim (US) Inc. and the City of Spokane Valley. The Order required these property owners to conduct a Remedial Investigation and Feasibility Study at the site. The Remedial Investigation helped identify the details about the type of contamination and where it is located. The Feasibility Study identified and evaluated cleanup alternatives.

The Cleanup Process

The following is a general outline of the cleanup process. There may be variables at sites that require additional steps. Sometimes steps are combined if appropriate to move the cleanup forward more quickly. This information is provided as a general guideline.

A fact sheet about the Agreed Order, Remedial Investigation, and Feasibility Study is part of the first 30-day comment period. After the investigations and study are done, reports of the findings will be made available to the public for another 30-day comment period.

Property owners identified as potentially liable persons (PLPs) are responsible for the cost of cleanup at a site. Holcim (US) Inc. and the City of Spokane Valley have been identified as PLPs. Generally, after the initial investigations and findings are completed, if no interim actions are necessary, the next step is to prepare a Draft Cleanup Action Plan. This plan gives details about how additional work may be put into action. During this step Ecology also considers possible environmental impacts of the project. The Draft Cleanup Action Plan and documents associated with environmental impacts are made available for public comment.

The Consent Decree is a legal agreement between Ecology and the PLPs that ensures all applicable laws and regulations will be followed during the cleanup.

At the Holcim Inc. site the public notice for the DCAP is being combined with the Consent Decree. This provides the public opportunity to see the cleanup action Ecology is proposing and the legal agreement that will implement the DCAP. Both of these documents are DRAFT until Ecology reviews, considers and potentially amends the documents based on the public comment received during the comment period.

After the DCAP and Consent Decree are finalized, engineering design plans are completed and the cleanup is implemented.

Community Background

Community Overview

The site is located in a mixed use neighborhood in the City of Spokane Valley, Spokane County, Washington. The neighborhood contains residential, commercial, and industrial properties. North of the site is a popular recreational area known as the Centennial Trail. It is used by walkers, joggers, cyclists, area residents, and others who enjoy being near the Spokane River. The river lies just north of the site, and the site is on top of the Spokane Valley Rathdrum Prairie Aquifer. The aquifer is a sole source of drinking water for nearly 600,000 residents.

Across the river in a northeast direction is Plante's Ferry Park. The park is a busy spot for a variety of local sports events, family outings, and other recreational activities. Adjacent to the park on the east is a housing development.

A new housing development called Coyote Rock lies northwest of the site along the south banks of the Spokane River. Older homes may be found close to the southern portion of the site as well as south of the Coyote Rock development.

Community Concerns

Interviews were conducted near the site on September 1, 2010. Several residents declined to be interviewed and indicated they would read a fact sheet, but didn't want any involvement. One woman agreed to an interview. Her primary concerns were with the City of Spokane Valley rezoning property from residential to commercial and how it impacted her home and her deceased father's property.

A small group of people recreating on the Centennial Trail near the site were asked to participate in interviews. All of them declined a formal interview. However, several people were willing to informally share their thoughts about the site.

One group was interested in information about the site but didn't live near the site. They said they would read about it on-line if we had a website. They thought it was good idea to protect the river, wildlife, and environment.

Two men walking between the Centennial Trail and Coyote Ridge homes said people come from all over to use the trail. They said the Parkside Apartments are on the other side of Trent and people and families walk down from there to use the trail. They were concerned whether dust coming from the site would cause exposure to people on the trail. They were also concerned about other people using the trail and how they would know about the cleanup and any hazards.

Note: CKD at the site is covered by soil in one area and is in a clay-like material in the other location. It is not likely to become airborne in dust unless disturbed. People should stay away from the area where CKD is located. The public will be notified about the site as outlined on page 6-7 of this Plan.

A man was concerned whether the contamination would affect his house at Coyote Rock. He asked why there wasn't information about the site before they built homes at Coyote Rock. He asked if the site would decrease the value of his home.

Anyone interested in participating in a formal community interview may contact Carol Bergin at 509/329-3546.

Representatives from two Spokane environmental groups, The Riverkeepers and The Lands Council have expressed a variety of concerns about the Remedial Investigation and Feasibility Study Reports. Their concerns focused primarily on how the contamination will be cleaned up. These concerns were expressed during the comment period for the RI/FS and are available to review in Ecology's Responsiveness Summary. The summary is available at Ecology's website <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=4580> or at the repositories listed on page 8 of this Plan.

Public Participation Activities and Timeline

The following are public participation efforts that have occurred and will continue until the cleanup actions are completed:

- ❖ A **mailing list** has been developed for people who live near the site. It also includes businesses, organizations, and other individuals who have expressed interest in the cleanup process for the site. People on the mailing list will receive copies of fact sheets developed regarding the cleanup process via first class mail. Additionally, individuals, organizations, local, state and federal governments, and any other interested parties will be added to the mailing list upon request. Other people who are interested may request to be added to the mailing list by contacting Carol Bergin at the Department of Ecology (see Page 4 of this Plan for Carol Bergin's contact information).
- ❖ **Public Repositories** have been established and documents may be reviewed at the following offices:

Argonne County Library
4322 N. Argonne
Spokane, WA 99206
509/893-8260

Washington State Department of Ecology
Eastern Regional Office
4601 North Monroe
Spokane, WA 99205-1295
Contact: Kari Johnson 509/329-3515
e-mail: kari.johnson@ecy.wa.gov
Ecology's website:
<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=4580>

- ❖ During each stage of the cleanup process, **fact sheets** are created by Ecology, reviewed by Holcim (US) Inc. and the City of Spokane Valley, and distributed to individuals on the mailing list. These fact sheets explain the current status of the cleanup process, give a brief background, and ask for comments from the public. A **30-day comment period** allows the public time to comment at specific stages during the cleanup process.
- ❖ **Display ads or legal notices** are published in the **Spokesman Review** to inform the general public. These notices correlate with the 30-day comment period and associated stage of the cleanup process. They are also used to announce public meetings, workshops, open houses, or hearings.
- ❖ **Public meetings, workshops, open houses and public hearings** are held based upon the level of community interest. If ten or more persons request a public meeting or hearing based on the subject of the public notice, Ecology will hold a meeting or hearing and gather comments. Public meetings must be held in a facility that meets the Americans with Disabilities Act (ADA).

A public meeting was held at the CenterPlace Regional Event Center on February 13, 2014 in Spokane Valley, Washington. The date, time and locations of hearings, meetings, workshops, or open houses is announced in a legal notice in the newspaper, fact sheets, or display ads in accordance with the Model Toxics Control Act (MTCA).

- ❖ Written comments which are received during the 30-day comment periods may be responded to in a **Responsiveness Summary**. The Responsiveness Summary may be sent to those who make written comments and will be available for public review at the Repositories listed at the top of this page.

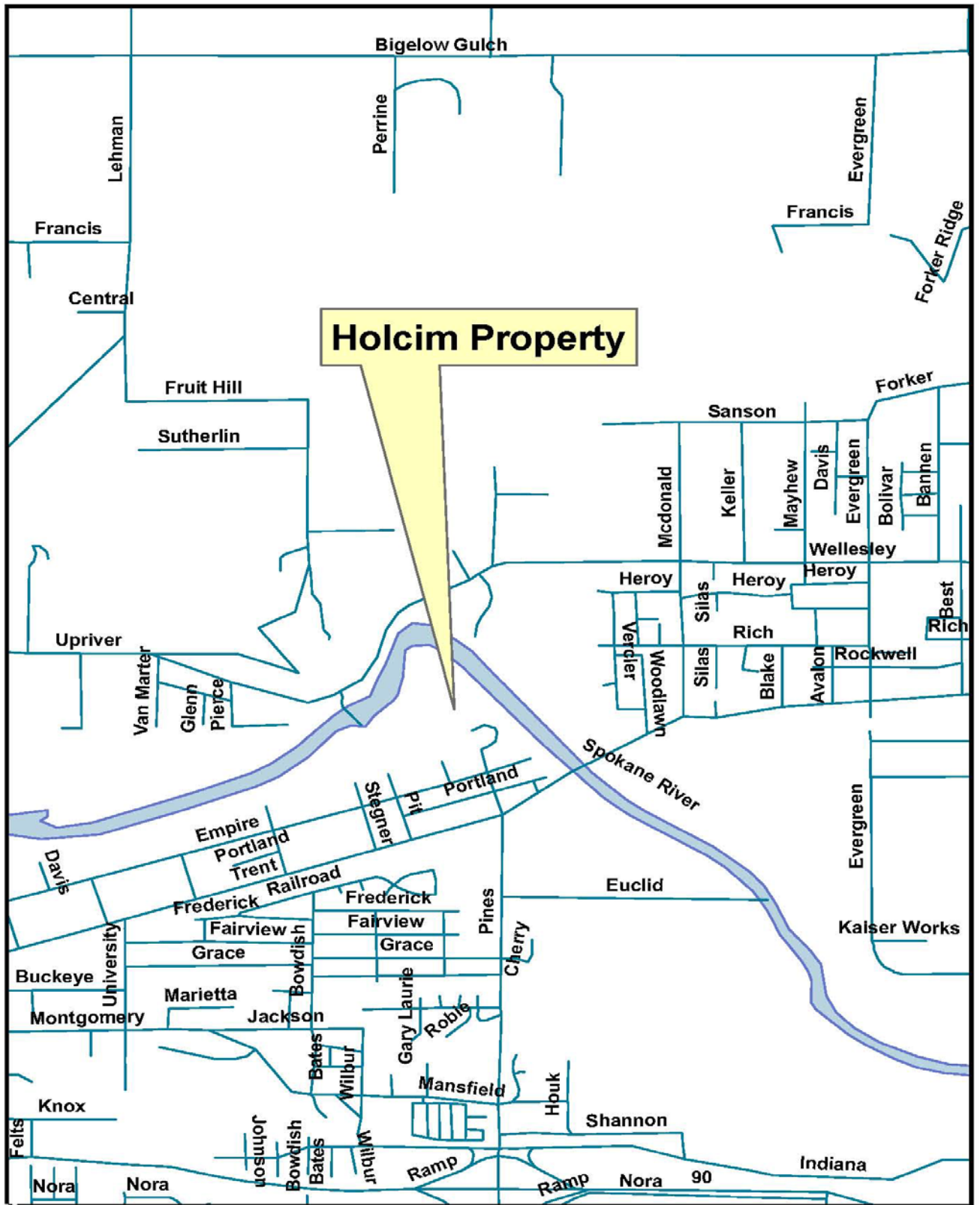
Answering Questions from the Public

Individuals may want to ask questions about the site, the cleanup process and how to get involved. A list of contacts is provided on page 4 of this Plan.

Public Participation Time Line

Document or Activity	Date
Draft Cleanup Action Plan, State Environmental Policy Act (SEPA), Determination of Non-Significance (DNS), and Consent Decree	45-Day Public Comment Period to be determined in 2015 along with a public meeting during the comment period
Responsiveness Summary for comments submitted about the RI/FS reports	March 20, 2014
Ecology Site Register notice about RI/FS public meeting held and extended comment period	February 20, 2014
Article in Spokesman Review about public meeting for RI/FS reports	February 13, 2014
Responded to requests for public meeting to discuss Remedial Investigation and Feasibility Study reports and extend the comment period an additional 30 days. Public meeting held at CenterPlace Regional Event Center.	February 13, 2014 Public Meeting February 28, 2014 Extended date of comment period
Press release issued regarding public meeting and extended comment period for RI/FS.	February 10, 2014
Ecology Site Register notice about public meeting and extended comment period for RI/FS	February 6, 2014
Display Ad in Spokesman Review announcing public meeting and extension of comment period for Remedial Investigation and Feasibility Study reports.	February 2, 2014
Fact Sheet for Remedial Investigation and Feasibility Study Reports	30-Day Public Comment Period December 30, 2013 through January 29, 2014
Ecology Site Register public notice regarding RI/FS reports	January 23, 2014
Met with representatives of The Spokane Riverkeepers and The Lands Council to answer their questions and address concerns about potential site cleanup.	January 17, 2013
Agreed Order, Scope of Work and Public Participation Plan documents and fact sheet	30-Day Public Comment Period July 21 through August 19, 2011
Notice in Ecology's Site Register announcing negotiations began between Ecology, Holcim (US) Inc. and the City of Spokane Valley for an Agreed Order to complete a Remedial Investigation and Feasibility Study (RI/FS)	April 7, 2011 April 21, 2011 May 5, 2011
Conducted community interviews for development of the Public Participation Plan	September 1, 2010

APPENDIX A
SITE MAP



APPENDIX B
MAILING LIST
(Made available upon request)

APPENDIX C GLOSSARY

Agreed Order: A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.

Applicable State and Federal Law: All legally applicable requirements and those requirements that Ecology determines are relevant and appropriate requirements.

Area Background: The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site.

Carcinogen: Any substance or agent that produces or tends to produce cancer in humans.

Chronic Toxicity: The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology will issue a final Cleanup Action Plan.

Cleanup Level: The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste sites.

Consent Decree: A legal document, approved and issued by a court which formalizes an agreement reached between the state and potentially liable persons (PLPs) on the actions needed at a site. A decree is subject to public comment. If a decree is substantially changed, an additional comment period is provided.

Containment: A container, vessel, barrier, or structure, whether natural or constructed, which confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Enforcement Order: A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

Environment: Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington.

Exposure: Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

Exposure Pathways: The path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from the site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the source exposure point differs from the source of the hazardous substance, exposure pathway also includes a transport/exposure medium.

Facility: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

Feasibility Study (FS): A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Sites List: A list of sites identified by Ecology that requires further remedial action. The sites are ranked from 1 to 5 to indicate their relative priority for further action.

Hazardous Substance: Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) (any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes; (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means,) and (6) (any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment), or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW: any hazardous substance as defined in RCW 70.105.010 (14) (any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter,) or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

Hazardous Waste Site: Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

Independent Cleanup Action: Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

Initial Investigation: An investigation to determine that a release or threatened release may have occurred that warrants further action.

Interim Action: Any remedial action that partially addresses the cleanup of a site.

Mixed Funding: Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

Model Toxics Control Act (MTCA): Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known is as Initiative 97. The implementing regulation is WAC 173-340.

Monitoring Wells: Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

Natural Background: The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

National Priorities List (NPL): EPA's list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund.

Owner or Operator: Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

Potentially Liable Person (PLP): Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

Remedial Investigation: A study to define the extent of problems at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a Remedial Investigation/Feasibility Study (RI/FS). In both cases, a comment period on the draft report is required.

Responsiveness Summary: A compilation of all questions and comments to a document open for public comment and their respective answers/replies by Ecology. The Responsiveness Summary is mailed, at a minimum, to those who provided comments and its availability is published in the Site Register.

Risk Assessment: The determination of the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

Sensitive Environment: An area of particular environmental value, where a release could pose a greater threat than in other areas including: wetlands; critical habitat for endangered or

threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

Site: See Facility.

Site Characterization Report: A written report describing the site and nature of a release from an underground storage tank, as described in WAC 173-340-450 (4) (b).

Site Hazard Assessment (SHA): An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

Surface Water: Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the state of Washington or under the jurisdiction of the state of Washington.

TCP: Toxics Cleanup Program at Ecology

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

Washington Ranking Method (WARM): Method used to rank sites placed on the hazardous sites list. A report describing this method is available from Ecology.

Exhibit E

After Recording Return
Original Signed Covenant to:
Jeremy Schmidt
Toxics Cleanup Program
Department of Ecology
4601 N Monroe St
Spokane, WA 99205-1295

Environmental Covenant

Grantor: Holcim (US), Inc.

Grantee: State of Washington, Department of Ecology

Brief Legal Description: Section 04, Township 25, Range 44, Tract "C" of Short Plat 96-1089, Auditor's File #4265349, Book 15, Pages 65 & 66.

Tax Parcel No.: 45046.9067

Cross Reference: NA

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 of a site commonly known as the Holcim Inc. Site, facility ID 52126416. The Property is legally described in Exhibit 1, and illustrated in Exhibit 2, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit 1 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 principal contaminants remain on the Property:

Medium	Principle Contaminants Present
Soil	Arsenic, Cadmium, Lead, High pH

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. This includes the following document:

- Cleanup Action Engineering Design Report, Dated X/X/2015.

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

Holcim (US), Inc., as Grantor and 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 cement kiln dust (CKD) under a cap consisting of two feet of topsoil, geotextile, one foot drainage material, and a geomembrane and located as illustrated in Exhibit C. The primary purposes of this cap is to minimize the potential for contact with contaminated soil; minimize leaching of contaminants to groundwater and surface water; prevent runoff from contacting contaminated soil; and to minimize the potential to release airborne contaminants from the underlying CKD and contaminated soil. As such, the following restrictions shall apply within the area illustrated and legally described in Exhibits 3 and 4, respectively:

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. 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 annually, or at another time as approved in writing by Ecology, inspect the cap and report within thirty (30) days of the inspection the condition of the cap and any changes to the cap that would impair its performance.

b. Stormwater facilities. To minimize the potential for mobilization of contaminants remaining under the cap, no stormwater infiltration facilities or ponds shall be constructed within 100 feet of the edge of the cap, as shown in Exhibit 3. All stormwater catch basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction.

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.

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 **in any part of the Property**, 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 X/X/2015 AND RECORDED WITH THE SPOKANE 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.

Joel Bolduc Holcim (US), Inc. Senior Environmental Specialist 1170 Transit Dr. Colorado Springs, CO 80903 855-719-6947	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000
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With a required copy to: Holcim (US) Inc. Legal Department 6211 N. Ann Arbor Rd. Dundee, MI 48131	
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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.

- a. 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.
- b. By signing this agreement, per RCW 64.70.100, the original signatories to this agreement, other than Ecology, agree to waive all rights to sign amendments to and termination of this Covenant.

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__.

Holcim (US), Inc.

[SIGNATURE] _____

[TITLE]

Dated: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

JAMES PENDOWSKI
Program Manager, Toxics Cleanup Program

Dated: _____

GRANTOR CORPORATE ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the corporation 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 said corporation.

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

Exhibit 1

LEGAL DESCRIPTION OF THE PROPERTY

Portions of platted and unplatted land in the Northeast Quarter of the Southeast Quarter (NE ¼ of SE ¼) and Government Lots Seven (7) and Eight (8) in Section Four (4), and in Government Lot Seven (7) in Section Three (3), Township Twenty-five (25) North, Range Forty-four (44) East, Willamette Meridian, described as follows: Beginning at the most northerly corner of Lot 1, Block 1 of Replat of Block 1, First Addition to Grandview Acres per plat recorded in Book 16 of Plats, Page 32, said point also being the intersection of the southwesterly line of the Northern Pacific Railroad Spur with the southerly line of the Spokane International Railroad Spur; thence South 73°37'50" West along the north line of said plat and along said southerly line, 212.49 feet to the most easterly corner of Lot 5 of said Block 1; thence along the boundary of said Lot 5 the following four (4) courses: (1) South 28°40'37" West 88.06 feet; (2) South 73°37'50" West 157.98 feet; (3) South 16°22'10" East 72.84 feet; (4) South 73°37'50" West 153.12 feet to the northwest corner of Lot 4 of said Block 1 and a point on the easterly line of Cement Lane, a private road; thence South 16°22'10" East along the westerly line of said Lot 4 and along said easterly line, 185.05 feet to the northerly line of Empire Way; thence South 73°37'50" along said northerly line, 40.00 feet to the westerly line of said Cement Lane and the southeasterly corner of Lot 1, Block 2, First Addition to Grandview Acres per plat recorded in Book "S" of Plats, Page 6; thence North 16°22'10" West, along said westerly line and the easterly line of said Lot 1 a distance of 286.11 feet to a point on the southerly line of the northerly 34.00 feet of said Lot 1; thence South 73°37'50" West, along said southerly line, 128.04 feet to a point on the westerly line of said Lot 1; thence North 16°22'10" West along said westerly line, 34.00 feet to the northeasterly corner of Lot 2 of said Block 2; thence South 73°37'50" West, along the northerly line of said Lot 2 a distance of 131.42 feet; thence North 35°06'04" West 178.21 feet; thence South 73°37'50" West 468.83 feet; thence North 16°22'10" West 47.14 feet to the point of curve of a non-tangent 880.00 feet radius curve to the left, the center of circle of which bears South 23°04'53" East; thence along the arc of said curve through a central angle of 12°57'20" 198.98 feet to the point of tangent; thence South 53°57'47" West, 388.06 feet to a point on the northerly line of the Spokane International Railroad Spur; thence South 73°37'50" West, along said northerly line, 190.24 feet to an existing concrete monument; thence North 53°53'09" East, 1095.31 feet to an existing concrete monument; thence North 16°20'50" West 754.28 feet; thence North 82°11'10" East 539.58 feet; thence South 45°59'20" East 803.51 feet to an existing concrete monument and a point on the east line of said Government Lot 7, Section 4, as monumented by Kenneth P. Noorie, in 1954; thence South 01°42'05" East, along said east line 14.23 feet to a point which bears North 01°42'05" West, 145.70 feet from the East ¼ corner of said Section 4, said point also being on the northeasterly line of the Northern Pacific Railroad Spur and the point of curve of a non-tangent 588.69 feet radius curve to the right, the center of circle of which bears South 27°31'51" West; thence along said northeasterly line the following two (2) courses: (1) along the arc of said curve, through a central angle of 16°58'55", 174.48 feet to the point of tangent; (2) South 45°28'14" East 222.10 feet to an existing concrete monument and a point on the northerly line of the Spokane International Railroad spur, thence South 00°24'30" West 41.78 feet to the point of beginning.

Exhibit 2

PROPERTY MAP



Exhibit 3

**MAP ILLUSTRATING PROPOSED LOCATION OF RESTRICTED AREA
(THIS MAP TO BE UPDATED AFTER CLEANUP ACTION PLAN IMPLEMENTATION)**



Exhibit 4

LEGAL DESCRIPTION OF RESTRICTED AREA

(TO BE DETERMINED AFTER CLEANUP ACTION PLAN IMPLEMENTATION)

Exhibit 5

SUBORDINATION AGREEMENT

KNOW ALL PERSONS, That _____, the owner and holder of that certain _____ (Instrument) bearing the date the _____ day of _____, 20____, executed by _____, _____, and recorded in the office of the County Auditor of _____ County, State of Washington, on the _____, 20____, under Auditor's File Number _____, does hereby agree that said Instrument shall be subordinate to the interest of the State of Washington, Department of Ecology, under the environmental (restrictive) covenant dated _____, 20____, executed by _____, and recorded in _____ County, Washington under Auditor's File Number _____.

Dated _____, 20____.

NAME

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20____, I certify that _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

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