



PERIODIC REVIEW

**Brewster School District
Facility/Site ID #: 2105796**

**1010 Sunset Drive
Brewster, Washington 98812**

Central Region Office

TOXICS CLEANUP PROGRAM

December 2009

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1.0 INTRODUCTION

This document is the Department of Ecology's review of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the Brewster School District (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 of the Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under the Voluntary Cleanup Program (VCP). The cleanup actions resulted in residual concentrations of lead and arsenic that exceed MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). The MTCA Method A cleanup levels for soil are established under WAC 173-340-740(2). WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a site every five years under the following conditions:

- (a) Whenever the department conducts a cleanup action
- (b) Whenever the department approves a cleanup action under an order, agreed order or consent decree
- (c) Or, as resources permit, whenever the department issues a no further action opinion
- (d) And one of the following conditions exists:
 - 1. Institutional controls or financial assurance are required as part of the cleanup
 - 2. Where the cleanup level is based on a practical quantitation limit
 - 3. Where, in the department's judgment, modifications to the default equations or assumptions using site-specific information would significantly increase the concentration of hazardous substances remaining at the site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

- (a) The effectiveness of ongoing or completed cleanup actions;
- (b) New scientific information for individual hazardous substances of mixtures present at the Site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected Site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The Brewster School District Site is located in the City of Brewster in Okanogan County, Washington. A vicinity map is available as Appendix 6.1 and a site plan is available as Appendix 6.2.

In 2003, the Brewster School District began to pursue development of two areas adjacent to existing school facilities. A new soccer field was proposed adjacent to the football field at the southwest portion of the facility. This area was known to be former fruit orchard property with potential pesticide contamination in soils in the form of lead and arsenic. The second area was adjacent to modular classrooms at the northeast end of the facility. This area was known to have been filled with soils from throughout the Site that may have been contaminated with lead and arsenic from previous orchard use.

An existing softball field on school district property was also known to contain lead and arsenic contamination. This area was addressed in a separate action in 2007, when additional funding became available.

Remedial actions were conducted in 2004, and again in 2006. Contaminated soils were capped with clean soil and an Environmental Covenant was recorded for the property to restrict digging in the capped areas.

2.2 Site Investigations

Soil samples were collected from the new soccer field site by Ecology in 2004. The samples contained arsenic at concentrations between 49 and 113 parts per million (ppm) and lead at concentrations between 303 and 1052 ppm. All samples exceeded MTCA Method A cleanup levels of 20 ppm for arsenic and 250 ppm for lead. Soil samples collected from the undeveloped field east of the Elementary School contained arsenic between 7 and 93 ppm and lead between 22 and 670 ppm.

Soil samples collected from the softball field in 2006 contained arsenic at concentrations up to 155 ppm and lead at concentrations up to 1091 ppm.

2.3 Remedial Actions

2.3.1 2004 Remedial Actions

The following cleanup action alternatives were considered for the Brewster School District Site:

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- Institutional controls that warns students and the public not to dig in the area and to wash hands thoroughly.
 - Covering contaminated soils with a clean cap and providing institutional controls to prevent unauthorized digging into contaminated soil.
 - Removal of the contaminated soil.

The alternative interim action of covering the contaminated soil was selected over institutional controls alone and over removal of contaminated soil for three main reasons. First, institutional controls alone are not as effective for decreasing risk to a student population as covering the contaminated soil. Second, the increased costs of removing all the contaminated soil far exceeded the increased reduction in risks when compared to covering the contaminated soils. Finally, the contaminated soil removal option would also have foreclosed reasonable alternatives from consideration in the site's Cleanup Action Plan.

Brewster School District conducted a final cleanup action at the site during summer 2004 with technical and engineering support from Ecology. Based on the technical assistance provided, the Brewster School District determined that a 6" clean soil cap with a 4.8 ounce geotextile fabric separating the contaminated existing soil from the clean soil would be adequate to prevent public exposures.

The final cap construction included installing the irrigation system, preparing the sub grade, laying the geotextile fabric, placing clean soil and sod. The clean cover soil was imported from a native, undisturbed soil source located at the Godbey Redi-Mix Pit Site, Route 97, outside Pateros, Washington. For quality control, three samples from the soil source were taken on August 5, 2004 to ensure that the soil met MTCA cleanup standards. All three samples were below MTCA Method A cleanup levels.

Confirmational monitoring of the installed cap consisted of taking depth measurements of the constructed cover and ensuring cover soil meets MTCA cleanup levels. The sample sites were selected using a predetermined grid sampling pattern based on sprinkler head spacing. Depth of soil to the geotextile barrier were taken on August 5, 2004 at each sprinkler head and averaged 7 inches.

2.3.2 2006 Remedial Actions

In 2006, a similar remedial action was conducted at the Brewster School District Softball Field, except that an irrigation system and level playing surface already existed. A geotextile membrane was used to cover the existing soil surface. The membrane was placed in rolls that were 15 feet wide and they were overlapped a minimum of 12 inches. It was secured with 6 inch long landscaping staples. The fabric was then covered with clean topsoil imported from the same source used in 2004. The imported topsoil was tested for the presence of lead and arsenic prior to import. Neither lead nor arsenic were detected above background concentrations in 10 samples taken from the import topsoil. Approximately 1000 yards of topsoil were imported onsite. Following topsoil import, the Site was hydroseeded and additional infield clay was imported for the softball field.

2.4 Operation and Maintenance Plan

An operations and maintenance protocol for the clean cover was incorporated into the Brewster School District facility and grounds maintenance plan. The protocol reads as follows:

The following areas are contaminated with lead/arsenic below the geotextile fabric:

New Soccer Field

Soccer Field Gravel Parking Area

New Elementary Playfields adjacent to modular classrooms

Softball Field

Any irrigation work or aeration of the lawn shall be conducted in such a manner to prevent exposure to the lead/arsenic contaminated soil. For example, irrigation system maintenance occurring below the black geotextile fabric requires segregation of the clean soil (above the fabric) from contaminated soil (below the fabric). The contaminated soil will be placed on a tarp and returned to below the geotextile black fabric or disposed of at the landfill. Lawn aeration of fields with underlying geotextile fabric is limited to a 6" tine depth.

Lawn aeration of contaminated soil (softball field) shall be conducted using the Aerway aerator which prevents soil plugs from being pulled to the surface of the field. Lawn aeration of the softball field is not depth limited and good grass cover is essential to minimizing lead/arsenic exposure. The dirt infield is not contaminated at the surface and should be maintained using 'clean' sands.

2.5 Environmental Covenants

An Environmental Covenant was recorded for the Site in 2004, and a second Environmental Covenant was recorded in 2007, following the additional remedial activities. The Environmental Covenants impose the following conditions:

1. The Property contains lead and arsenic contaminated soil located beneath a 6" clean soil cover and black geotextile fabric. The Owner shall not alter, modify, or remove the existing clean cap in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior approval from Ecology.
2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.
3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

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4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.
 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.
 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.
 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.
 8. The Owner of the Property reserves the right under WAC. 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

A copy of the Restrictive Covenant for the Site is available as Appendix 6.3.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The Site continues to be occupied by the Brewster School District. Turf at the soccer field, softball field, and elementary school play area are still in excellent condition. The clean soil cap continues to eliminate the human exposure pathways (ingestion, contact) to contaminated soils. Based upon the site visit conducted on October 28, 2009, no repair, maintenance or contingency actions have been required. A photo log is available as Appendix 6.4.

The Environmental Covenants for the Site were recorded and remain in place. These Environmental Covenants prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibit any use of the property that is inconsistent with the Covenants. The Environmental Covenants serve to assure the long term integrity of the surface cover.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new pertinent scientific information for the contaminants related to the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

There are no new relevant state or federal laws for the hazardous substances present at the Site.

3.4 Current and projected Site use

The Site is currently used as a primary and secondary school facility. There have been no changes in current or projected future site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous materials, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection well below MTCA Method A cleanup levels. The presence of improved analytical techniques would not effect decisions or recommendations made for the site.

4.0 CONCLUSIONS

- The cleanup actions completed at the Site are protective of human health and the environment.
- Soils cleanup levels have not been met at the Site; however, the cleanup action is determined to comply with cleanup standards at the time of the action, since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- The Environmental Covenants for the property are in place and will be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Environmental Covenants are being met. No additional remedial actions are required by the School District. It is the School District's responsibility to continue to inspect the site to ensure that the integrity of the cap is maintained.

4.1 Next Review

The next review for the site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

Ecology. *Interim Remedial Action Plan*. May 25, 2004.

Brewster School District. *New Soccer Fields – Cleanup Action Report*. August 10, 2004.

Ecology. *Restrictive Covenant*. September 28, 2004.

Ecology. *No Further Action Letter*. October 11, 2004.

Ecology. *Interim Action Report – Brewster School Softball Field*. September 12, 2007.

Ecology. *Site Visit*. October 28, 2009.

6.0 APPENDICES

6.1 Vicinity Map



0 0.35 0.7 1.4 Miles



6.2 Site Map



6.3 Environmental Covenant

2 OF 3

RESTRICTIVE COVENANT Brewster School District



This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by the Brewster School District, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document: Soccer Field, Cleanup Action Report, Brewster School District, August 1, 2004. This document is on file at Ecology's CRO.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of lead and arsenic which exceed the Model Toxics Control Act Method (Method A) Residential Cleanup Levels for soil established under WAC 173-340-700.

The undersigned, Brewster School District, is the fee owner of real property (hereafter "Property") in the County of Okanogan, State of Washington, that is subject to this Restrictive Covenant. **The Property is legally described AS FOLLOWS: The East half of the Southwest quarter of the Northeast quarter of the Southwest half, Section 14, Township 30 North, Range 24 East, W.M., less road**

The Brewster School District makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1. The Property contains lead and arsenic contaminated soil located beneath a 6" clean soil cover and black geotextile fabric. The Owner shall not alter, modify, or remove the existing clean cap in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior approval from Ecology.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

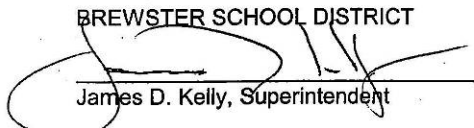
RESTRICTIVE COVENANT
Page 2

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

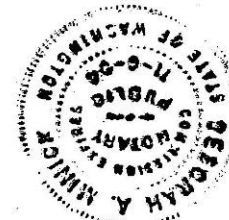
Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

BREWSTER SCHOOL DISTRICT


James D. Kelly, Superintendent

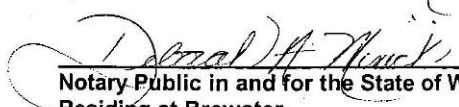
Aug 2-04 Aug 2-04
DATE SIGNED

STATE OF WASHINGTON)
COUNTY OF OKANOGAN)



On this day personally appeared before me James D. Kelly to me known to be the individual described in and who executed the within and foregoing instrument, and on oath stated that he was authorized to execute the instrument and acknowledged it as a RESTRICTIVE COVENANT on Brewster School District Property and to be the free and voluntary act of such party for the uses and purposes therein stated.

GIVEN under my hand and official seal this 2nd day of AUGUST, 2004.


Notary Public in and for the State of Washington
Residing at Brewster.

My Appointment expires: 11/6/08

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Covenants DEPT OF ECOLOGY
Okanogan County Washington

3129291



Restrictive Environmental Covenant

After Recording Return to:

Jeff Newschwander
Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902

Grantor: Brewster School District
Grantee: State of Washington, Department of Ecology
Legal: TAX 106 PT SE SW
Tax Parcel Nos.: 3024140106
Cross Reference: Addition to existing covenant # 3080156

Grantor, Brewster School District, hereby binds Grantor, its successors and assigns to the land use restrictions identified herein and grants such other rights under this environmental covenant (hereafter "Covenant") made this 5th day of November, 2007, in favor of the State of Washington Department of Ecology (Ecology). Ecology shall have full right of enforcement of the rights conveyed under this Covenant pursuant to the Model Toxics Control Act, RCW 70.105D.030(1)(g), and the Uniform Environmental Covenants Act, 2007 Wash. Laws ch. 104, sec. 12.

This Declaration of Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Brewster School District its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

A remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Covenant. The Remedial Action conducted at the property is described in the following document[s]:

1. Interim Action Report- Brewster School Softball Field, Washington State Department of Ecology, September 12, 2007

This document is available on file at Ecology's Central Region Office in Yakima, Washington.

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Covenants DEPT OF ECOLOGY
Okanogan County Washington

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This Covenant is required because the Remedial Action resulted in residual concentrations of lead and arsenic which exceed the Model Toxics Control Act Method A Cleanup Level(s) for soil established under WAC 173-340-440.

The undersigned, Brewster School District is the fee owner of real property (hereafter "Property") in the County of Okanogan, State of Washington, that is subject to this Covenant. The Property is legally described as follows: TAX 106 PT SE SW. Brewster School District makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas include: significant drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, bulldozing or earthwork. This restriction does not include minor maintenance activities including: repairing or replacing sprinkler heads, re-seeding or re-sodding portions of the fields, or minor repairs to the sprinkler system plumbing.

The Owner of the property must give thirty (30) days advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

The Owner must restrict leases to uses and activities consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Covenant. Ecology may approve any inconsistent use only after public notice and comment.

The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples,

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Okanogan County Washington

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to inspect remedial actions conducted at the property, to determine compliance with this Covenant, and to inspect records that are related to the Remedial Action.

The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

Brewster School District

[Name of Signatory]
[Title]

Dated: 12/18/07

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Donald W. Abbott
Section Manager
Toxics Cleanup Program
Central Regional Office

Dated: Feb 05 2008

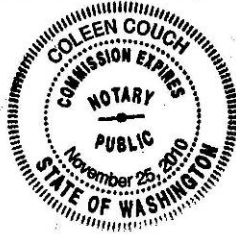
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Covenants DEPT OF ECOLOGY
Okanogan County Washington

3129291



STATE OF WA
COUNTY OF Okanogan

On this 18th day of December, 2007, I certify that Aaron Chavez personally appeared before me, acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute this instrument, and acknowledged it as the Superintendent [type of authority] of Brewster School District [name of party being represented] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.



Coleen Couch
Notary Public in and for the State of
Washington, residing at Omak.
My appointment expires 11-25-10.

6.4 Photo log

Photo 1: Soccer Field Parking Lot – from the east



Photo 2: New Soccer Field - from the east



Photo 3: Softball Field - from the north



Photo 4: Playfield Near Modular Buildings - from east

