



Second Periodic Review

Eastmont Junior High
Facility/Site ID #: 83426117
Cleanup Site ID #: 1904

905 8th Street NE
East Wenatchee, WA 98802

Prepared by:
Washington State Department of Ecology
Central Region Office
Toxics Cleanup Program

November 2015

1.0 INTRODUCTION.....	1
2.0 SUMMARY OF SITE CONDITIONS.....	3
2.1 Site History	3
2.2 Previous Site Investigations and Remedial Actions	3
2.3 Cleanup Levels and Point of Compliance.....	4
2.4 Remedial Actions.....	4
2.4.1 Remedial Action Plan	4
2.4.2 Remedial Activities	4
2.4.3 Confirmation Sampling	5
2.5 Restrictive Covenant.....	6
3.0 PERIODIC REVIEW.....	8
3.1 Effectiveness of completed cleanup actions	8
3.1.1 Direct Soil Contact	8
3.1.2 Institutional Controls	8
3.2 New scientific information for individual hazardous substances for mixtures present at the Site	8
3.3 New applicable state and federal laws for hazardous substances present at the Site	8
3.4 Current and projected Site use	8
3.5 Availability and practicability of higher preference technologies	8
3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels	9
4.0 CONCLUSIONS	10
4.1 Next Review.....	10
5.0 REFERENCES.....	11
6.0 APPENDICES	12
6.1 Vicinity Map	13
6.2 Site Map.....	14
6.3 Environmental Covenant	15
6.4 Photo log	19

1.0 INTRODUCTION

This document is the Department of Ecology's second review of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the Eastmont Junior High site (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 of the Washington Administrative Code (WAC). This is the second periodic review for the Site. The first periodic review was completed in September 2010. This review will evaluate the period from September 2010 through February 2016.

Cleanup activities at this Site were completed through the Voluntary Cleanup Program (VCP) under VCP No. CE0095. 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. Institutional controls were implemented at the Site in the form of a restrictive covenant (covenant) to prevent exposure and release of contaminated soils capped as part of the remedy for the Site. 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 Eastmont Junior High Site is located in the City of East Wenatchee in Douglas County, Washington. The subject property consists of a 36-acre rectangular parcel of land. The property is a former apple orchard located immediately west of North Iowa Avenue between 8th Street Northeast and 10th Street Northeast. Apple growing and harvesting occurred on the Site beginning in the early 1900s and continued through the year 2000. The trees were removed in spring 2001.

Lead arsenate and organochlorine pesticides were common agricultural chemicals utilized in apple orchard operations in Washington State; lead arsenate was used about the turn of the century through the 1940s, at which time organochlorine pesticides debuted. These chemicals were applied to the orchard that formerly occupied the school property to control pests that affect orchard productivity. In the early years of orchard operation, these chemicals were mixed on Site and reportedly distributed to all areas of the orchard through a subsurface piping system. The piping laterals were reportedly spaced about 250 feet apart. Chemical preparation took place at a mixing facility that was located on the center-west border of the property. In later years, mobile sprayers consisting of a tank with sprayer mounted on a wheeled trailer were used. These mobile sprayers were filled with water at a filling station in the north central portion of the Site.

Three residences and associated outbuildings were present on the Site. These buildings were removed from the Site prior to sampling and remedial activities.

A vicinity map is available as Appendix 6.1 and a Site plan is available as Appendix 6.2.

2.2 Previous Site Investigations and Remedial Actions

In 2001, Forsgren Associates collected 98 soil samples from 31 sampling locations at the Site. Samples were collected using a hand auger from 0.5, 1.5 and 3.0 feet below ground surface (bgs). Samples were analyzed for arsenic, lead, and dichlorodiphenyltrichloroethane (DDT). Samples were collected on a grid pattern across the entire Site.

Additional samples were collected from the former pesticide batch mixing area, from beneath a former pesticide distribution pipeline, and from the mobile sprayer filling station.

All surface soil samples collected from the Site contain measurable concentrations of arsenic and lead. Arsenic was detected at a maximum concentration of 405 milligrams per kilogram (mg/kg) and lead was detected at a maximum concentration of 2,200 mg/kg. Typically, samples with elevated concentrations of arsenic also had elevated levels of lead.

Higher arsenic and lead concentrations were detected in samples in the north central area of the Site and in the area near the former chemical mixing area. DDT was found distributed

throughout the Site. Comparatively high DDT concentrations were found in only two sample locations.

TCLP analysis of three samples resulted in arsenic concentrations of 0.62 mg/kg, 0.58 mg/kg and 0.25 mg/kg, respectively. Lead concentrations were not detected in any of the three samples at or above the practical quantitation limit of 0.1 mg/kg.

2.3 Cleanup Levels and Point of Compliance

WAC 173-340-704 states that MTCA Method A may be used to establish cleanup levels at sites that have few hazardous substances, are undergoing a routine cleanup action, and where numerical standards are available for all indicator hazardous substances in the media for which the Method A cleanup level is being used.

MTCA Method A cleanup levels for unrestricted land use were determined to be appropriate for contaminants at this Site. The cleanup actions conducted at the Site were determined to be 'routine', few hazardous substances were found at the Site, and numerical standards were available in the MTCA Method A table for each hazardous substance. The MTCA Method A cleanup level for arsenic is 20 mg/kg and the MTCA Method A cleanup level for lead is 250 mg/kg.

For soil, the point of compliance is the area where the soil cleanup levels must be attained. For this Site, the point of compliance is established as soils throughout the Site.

2.4 Remedial Actions

2.4.1 Remedial Action Plan

The following cleanup action alternatives were proposed in the Remedial Action Plan for the Site:

- Arsenic-, lead-, and DDT-contaminated soils were to be interred on-site and placed under either an impervious cap (in this case asphalt parking areas and driveways; tennis courts; and building foundations) or a suitable thickness of clean topsoil and/or a combination of borrow cap and clean top soil in areas where play fields and landscaping were to be developed.
- Drainage was to be controlled so that runoff from the Site would be directed away from and prevented from contacting contaminated materials.
- Institutional controls included asphalt and topsoil cap maintenance, property deed notice, and limitations on landscape irrigation.

2.4.2 Remedial Activities

Site soil was graded as appropriate for construction of the school building, driveways, and level parking areas, and as appropriate for landscaped grounds around the school facilities. In general, soil was relocated on Site to produce a series of level terraces consistent with the original northeast-to-southwest slope of the Site.

Grading of the north and west portions of the Site consisted of creating several level areas to accommodate sports fields. The southeast quarter of the Site was graded into a series of level tiers or slopes for placement of the school building as well as parking and driveway areas.

Excess Site soil was selectively placed in two topsoil disposal areas onsite. One is a rectangular area south of the school building oriented lengthwise along 8th Street. The second is a triangular area in the northwest corner of the property. Later in the project, with permission from the Department of Ecology, some of these soils were utilized as backfill under the floor slabs of the building.

Both cap and topsoil sources were tested for contamination and found to be clean for project purposes. Lawn, landscaped areas, topsoil disposal areas, and sports fields received a cap of 6 inches of uncontaminated, compacted fill followed by 6 inches of topsoil. The fill consists of graded material containing some angular rock that was compacted to a firm layer to prevent children and others from accidentally reaching the contaminated soils when digging by hand. This layer provides not only a physical barrier, but a visual and tactile warning to potential future excavation in these areas.

Material excavated for the placement of the building foundation, utility lines, and rockery structures were incorporated into the overall grading. Utility and irrigation system trenches were filled with clean bedding and backfill so that future utility work could be completed without concern about working in contaminated soils.

The Remedial Action Plan required soil testing in the area of the proposed storm water retention/infiltration basin. This testing was to ensure that the bottom of the basin was below the contaminated soil horizon. The bottom of the pond was excavated beyond the fine-grained soils and into the underlying gravel layer. This was then backfilled with clean soils that would support vegetation and landscaping.

2.4.3 Confirmation Sampling

In an effort to confirm the effectiveness of the remediation program at the Site, Forsgren Associates and Department of Ecology representatives visited the Site on April 16, 2003 to sample selected areas for lead and arsenic analysis. Ecology provided and operated a hand-held field x-ray fluorescence (XRF) instrument for on-site analysis of lead and arsenic. The instrument was a Niton XL700 Series detector. Ten tests were completed using the XRF instrument at locations.

All arsenic tests indicated concentrations below the detection limits for the XRF instrument. One half of the lead tests showed concentrations below instrument detection limits. Four samples showed concentrations above the detection limit but below the Washington State Method A cleanup level for lead of 250 mg/kg. The remaining sample was analyzed in the City of East Wenatchee right-of-way south of the Eastmont School property boundary. That sample showed a concentration of lead in the soil above the Method A cleanup level. The arsenic concentration in this sample was below the instrument detection limit. This area was addressed

as part of City of East Wenatchee 8th Street Improvements that were completed during school construction activities.

2.5 Restrictive Covenant

Institutional controls were required as part of the remedy for the Site to prevent future property uses that may disturb or expose capped contaminated soils. Institutional controls were implemented in the form of a restrictive covenant, which was recorded for the Site in 2005. The covenant imposes the following conditions:

1. The Property contains lead and arsenic contaminated soil located beneath a 6" clean soil cover and black geotextile fabric or a 12" clean cover soil. 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.
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

3.1.1 Direct Soil Contact

A Site visit was conducted on January 26, 2016. The Site remains occupied by the Eastmont Junior High. The capped field and play areas are used by children during recess, physical education, and after school activities. Site uses have not changed since the remedial actions were completed. The majority of the Site was covered by snow during this visit; however, visible areas appeared to be well maintained. The Site will be revisited later in the spring when snow has melted.

Regardless of turf condition, the clean soil cap continues to eliminate direct human and ecological exposure pathways (ingestion, contact) to contaminated soils. Maintenance and repair activities should be conducted where the clean soil cap has been exposed. A photo log is available as Appendix 6.4.

3.1.2 Institutional Controls

The restrictive covenant for the school was recorded and remains effective. There is no evidence that a new instrument has been recorded which limits the applicability or effectiveness of the covenant. The covenant 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 covenant. The covenant serve to protect the long term integrity of the surface cover by restricting property uses.

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 public 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.
- A restrictive covenant has been recorded for the Site that restricts activities that may expose contaminated soil and notifies future property owners of contamination remaining at the Site.
- 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.

Based on this periodic review, the Department of Ecology has determined that the requirements of the restrictive covenant are being followed. No additional remedial actions are required by the School District, but maintenance of the field should be continued. It is the School District's responsibility to continue to inspect and maintain 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

Forsgren Associates, Inc. *Site Assessment and Remedial Action Report*. June 2001.

Forsgren Associates, Inc. *Independent Cleanup Action Report*. April 8, 2005.

Eastmont School District. *Restrictive Covenant*. October 27, 2005.

Ecology. *No Further Action Letter*. November 30, 2005.

Ecology. *Periodic Review*. September 2010.

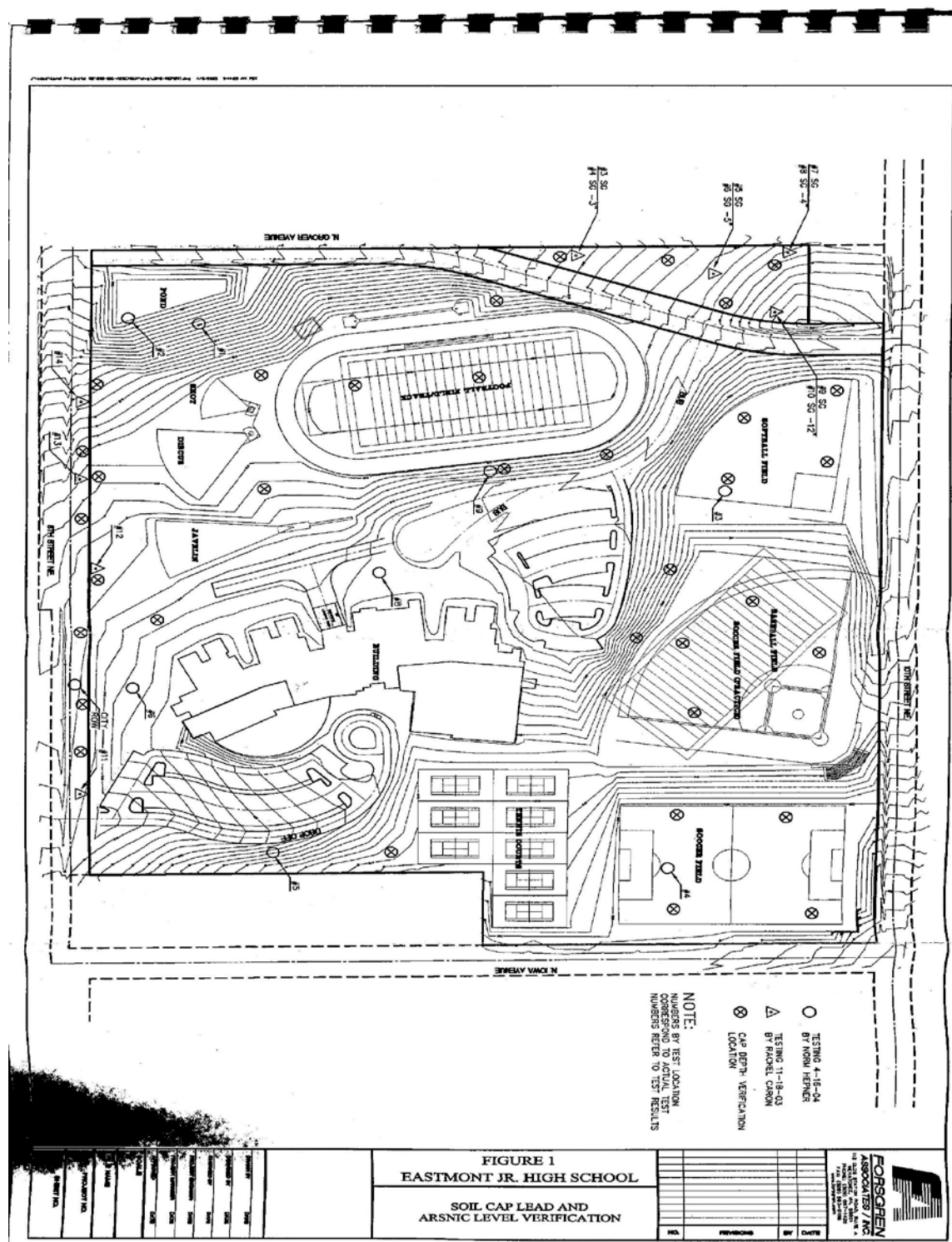
Ecology. *Site Visit*. January 26, 2016.

6.0 APPENDICES

6.1 Vicinity Map



6.2 Site Map



6.3 Environmental Covenant

DAVIS ARNEIL LAW FIRM, LLP
BOX 2136
WENATCHEE WA 98807
(509) 662 3551
Fax: (509) 662 9074



RESTRICTIVE COVENANT

Eastmont 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 Eastmont 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: Independent Cleanup Action Report: Eastmont Junior High Site, Forsgren Associates, April 8, 2005. 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.

F:\TFO\C-E\estm\d08.wpd
October 24, 2005

DAVIS ARNEIL LAW FIRM, LLP
P. O. BOX 2136
WENATCHEE WA 98807



The undersigned, Eastmont School District, is the fee owner of real property (hereafter "Property") in the County of Douglas, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described AS FOLLOWS:

The Northeast Quarter of the Northwest Quarter, except the North 150 feet of the West 150 feet of the Northwest Quarter of the Northeast Quarter of said Northwest Quarter of Section 12, Township 22 North, Range 20, E. W. M., Douglas County, Washington,

EXCEPT Right of Way for 10th Street NE,

EXCEPT the Easterly 140.5 feet of the Southeast Quarter of the Northeast Quarter of said Northwest Quarter and

EXCEPT the Right of Way for 8th Street NE

The Eastmont 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 or a 12" clean cover soil. 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.

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.

EASTMONT SCHOOL DISTRICT

By Harry Vanikiotis
Harry Vanikiotis, Superintendent

10/27/2005
[DATE SIGNED]

State of Washington
County of Douglas

I certify that I know or have satisfactory evidence that Harry Vanikiotis is the person who appeared before me and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Eastmont School District Superintendant of Eastmont School District to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.



Dated October 27, 2005

Signature Mary Ellen Sparman
Notary Public

My Appointment Expires 09/01/2008

FATFOC-Eestm\d08.wpd
October 24, 2005

DAVIS ARNER LAW FIRM, LLP
P. O. Box 2136
WENATCHEE WA 98807

6.4 Photo log

Photo 1: Eastmont Junior High Entrance – from the west



Photo 2: Track and Football Field - from the east



Photo 3: Restricted Use Sign - from the east



Photo 4: Upper Soccer Fields - from the east

