



## **Periodic Review**

Zur Hausen Orchard  
Facility/Site ID #: 5449470  
Cleanup Site ID #: 810  
50 29th Street NW  
East Wenatchee, Washington 98802

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

February 2015

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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 former Zur Hausen Orchard site (Site). The 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 through the Voluntary Cleanup Program under VCP Project No. CE0258. The cleanup actions resulted in residual concentrations of arsenic that exceed MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). As a result of residual contamination, institutional controls were required for the Site to be eligible for a no further action (NFA) determination. 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.

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## **2.0 SUMMARY OF SITE CONDITIONS**

### **2.1 Site History**

The former Zur Hausen Orchard Site is located at 50 29th Street Northwest in East Wenatchee, Washington. The Site consists of a former orchard property that has been developed with a senior housing facility. The Site covers approximately nine acres and is comprised of tax parcel #40600005501. Buildings and asphalt cover the majority of the Site, and the perimeter of the buildings are covered by grass and landscaping (bark, bushes, and shrubs).

The Site was occupied by a fruit tree orchard for at least 40 years prior to being developed as a senior housing facility. The orchard was removed prior to construction of the senior housing facility in 2007. A vicinity map is available as Appendix 6.1 and a Site plan is available as Appendix 6.2.

### **2.2 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 and lead is 20 parts per million (ppm) and 250 ppm, respectively.

For soil, the standard 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.

### **2.3 Site Investigations**

V Environmental completed a Phase I Environmental Site Assessment (ESA) of the Site in August 2005. The ESA identified three environmental concerns associated with the property: a diesel AST (above-ground storage tank), a pesticide rinse/mix area near an agricultural shed, and orchard soils which may contain residual pesticides, herbicides, and rodenticides historically associated with commercial orchards.

In September 2005, as a result of the findings of the ESA, V Environmental conducted a limited subsurface soil assessment by collecting soil samples from the Property in those areas identified as environmental concerns. Soil samples were collected near the dispensing hose for the AST (on the northeast corner of the Property), from the rinse/mix area near the shed (on the northeast corner of the Property), and eight soil samples within the orchard. The AST sample was analyzed for diesel-range petroleum hydrocarbons and the orchard and mix area samples were analyzed for lead, arsenic and organochlorides. Although some traces of

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dichlorodiphenyltrichloroethane (DDT) and its constituents were detected during the laboratory analysis in orchard soils, the concentrations were below current MTCA Method A Cleanup Levels (1 mg/kg). Diesel was not detected in Site soils near the AST. Arsenic was detected in the two orchard composite samples at 80 mg/kg and 84 mg/kg, concentrations greater than current MTCA Method A Cleanup Levels for Unrestricted Use (20 mg/kg). Lead was detected in the soil sample collected from the rinse/mix area at concentrations less than current MTCA Method A Cleanup Levels for Unrestricted Use (250 mg/kg). Arsenic was identified as the primary contaminant of concern at the Site.

## **2.4 Remedial Actions**

In the spring of 2007, Bonaventure Senior Living (Bonaventure) cleared the fruit trees from the Property. To meet design standards for the senior living facility, the Property needed to be graded to a relatively consistent grade across the Site. To achieve that grade, Bonaventure lowered the grade of the northeast corner of the Property approximately 25 feet and raised the southwest corner of the Property approximately six feet.

Bonaventure managed former orchard soils by creating two onsite repository stockpiles (estimated at 700 cubic feet). One large stockpile comprised surface soils as well as excavated soils generated during the grading activities to bring the northeast corner of the Property to grade. A second stockpile was created that was comprised of soils generated during the excavation of a deep sewer trench on the north and east side of Property near 29th Street NW. Other smaller stockpiles were created as utilities were installed, foundations poured and other fittings placed in the ground. No groundwater was encountered during excavation activities.

Between May 2008 and October 2008, Forsgren Associates collected 15 soil samples from the landscaped portions of the Site that were not covered by permanent impermeable surfaces. Site buildings had been constructed at this time and the driveway and parking areas paved. The soil samples were submitted for laboratory analysis for arsenic and lead.

Arsenic was detected at concentrations greater than the current MTCA Method A Cleanup Level at three locations including a small landscaped area on the northwest corner of the Property near the 29th Street NW entrance, a landscaped area on the southwest corner of the large Property structure, and in the landscaped area on east side of the south courtyard near the south entrance.

A six-inch layer of clean soil was placed atop the three areas with arsenic contamination. The total area on the Site that received a clean soil cap that totaled approximately 23,000 square feet. An estimated 450 cubic yards of clean fill was placed in these three areas and included the “clean” stockpiled soils and clean fill obtained from the Borrow Area Project in Entiat, Washington. Bonaventure estimated that approximately 100 cubic yards of top soil was imported from the Borrow Area Project and the remaining cubic yardage was obtained from clean stockpiled soils. Sod, low-growing shrubs, trees, and chipped bark were placed atop the clean cap to bring the grade up to the sidewalks and driveways.

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## 2.5 Institutional Controls

Because contamination was capped on the Site at concentrations exceeding MTCA Method A cleanup levels, institutional controls were required for the Site to be eligible for a NFA determination. Institutional controls in the form of an environmental covenant were recorded for the Site in February 2009 and a NFA determination was issued in March 2009. The conditions of the restrictive covenant are available below:

1. 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: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.
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 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 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, to determine compliance with this Covenant, 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 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 is available as appendix 6.3.

## **3.0 PERIODIC REVIEW**

### **3.1 Effectiveness of completed cleanup actions**

The Property is currently occupied by one large multi-story structure and detached cottages designed as a senior living/assisted living facility. An asphalt-paved driveway bisects the Property to provide access to covered parking for residents as well as access to the cottages. One large parking area is present on the north side of the large structure near the main entrance. A smaller courtyard and service entrance is present on the south side of the structure.

#### **3.1.1 Direct Soil Contact**

Approximately 90 percent of the Property is covered with asphalt (driveway or parking), concrete sidewalks and entryways, or with structures. The remaining ten percent of the Property is landscaped with sod and low-growing shrubs. Clean soil, building foundations, and asphalt continue to serve as a cap for the Site and eliminate human exposure pathways (ingestion, contact) to contaminated soils. Based upon the Site visit conducted on June 25, 2014, no repair, maintenance or contingency actions have been required. A photo log is available as Appendix 6.4.

#### **3.1.2 Institutional Controls**

The environmental covenant for the Site was recorded and remains active. There is no evidence a new instrument has been recorded which limits the effectiveness or applicability of the covenant. This covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits any use of the property that is inconsistent with the covenant. This covenant serves to assure the long-term integrity of the remedy and the Site 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**

Cleanup levels for arsenic, DDT, and lead have not changed since remedial actions were conducted at the Site. Contamination remains at the Site above MTCA Method A cleanup levels and the cleanup action is still protective of human health and the environment.

### **3.4 Current and projected Site use**

The Site is currently used for residential purposes. 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 substances 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.
- Soil cleanup levels have not been met at the Site; however, the cleanup action for the Property is determined to comply with cleanup standards under WAC 173-340-740(6) (f), since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- The environmental covenant for the property is in place and continues to 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, Ecology has determined that the requirements of the environmental covenant are being satisfactorily followed. No additional remedial actions are required by the property owner. It is the property owner's responsibility to continue to inspect the Site to assure 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

V Environmental. *Limited Subsurface Investigation Report*. September 26, 2005.

Ecology. *Further Action Determination Letter*. April 25, 2007.

V Environmental. *Former Zur Hausen Orchards Remedial Action Report*. January 7, 2008.

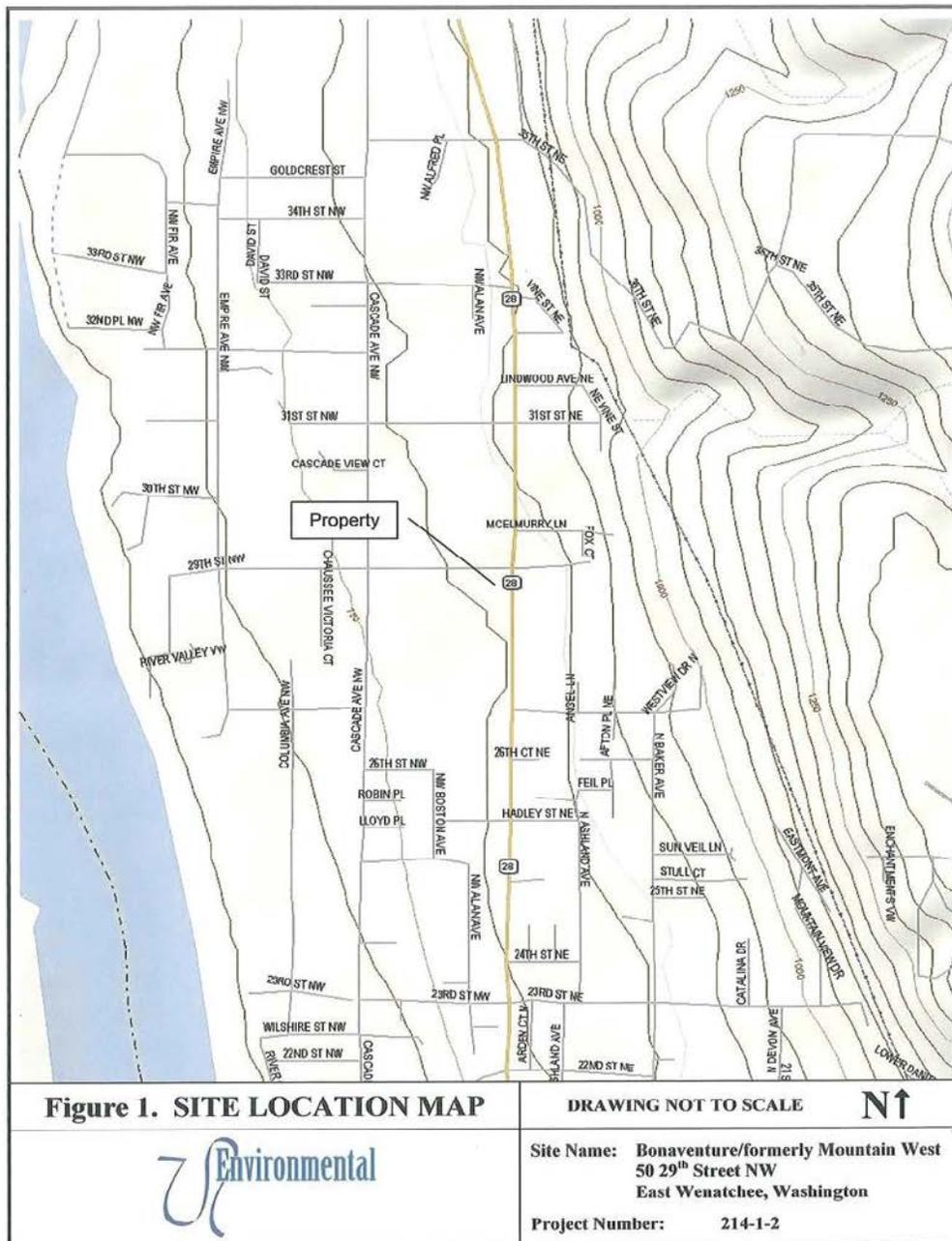
Ecology. *Restrictive Covenant*. February 7, 2009.

Ecology. *No Further Action Determination Letter*. March 30, 2009.

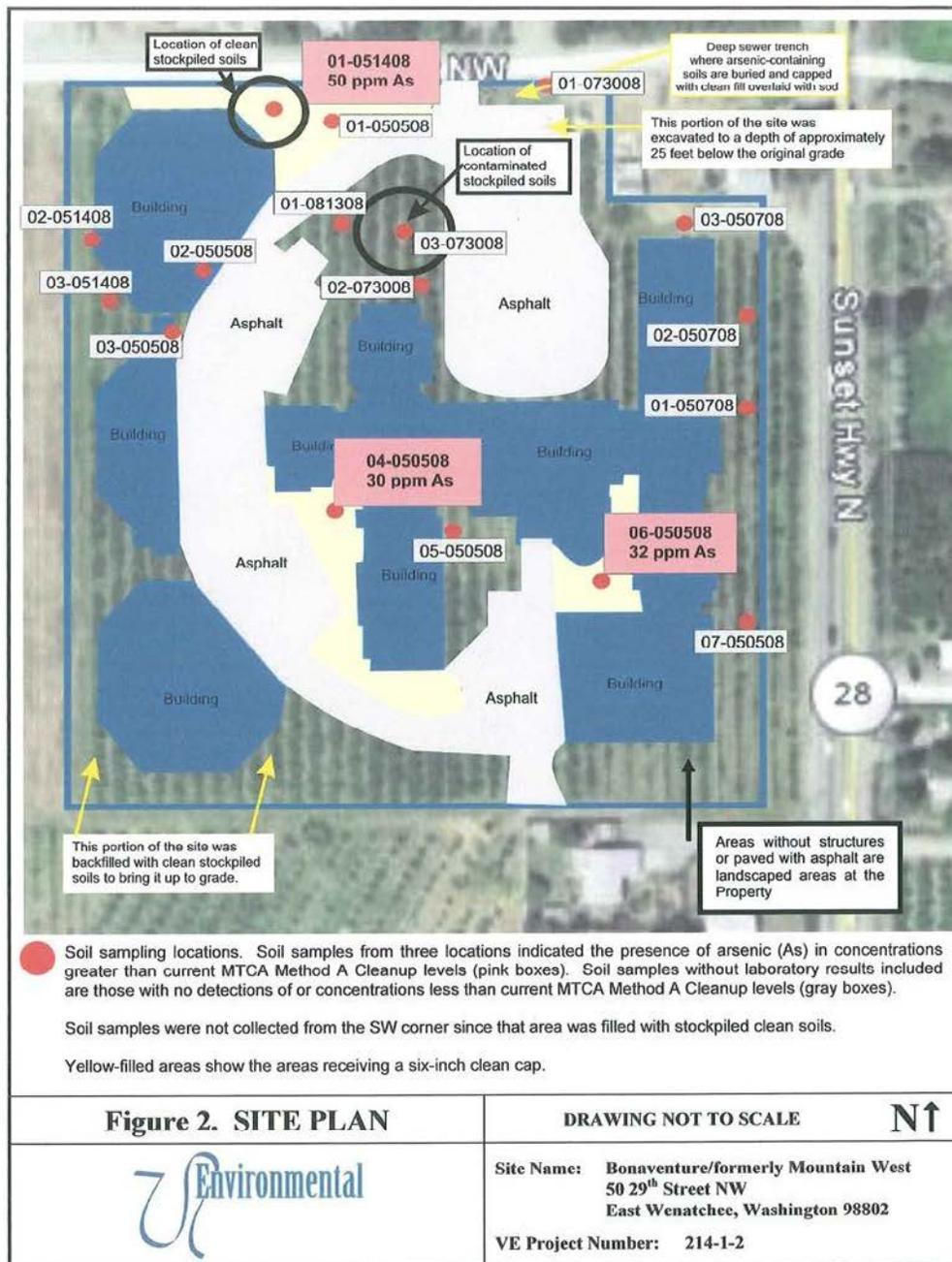
Ecology. *Site Visit*. June 25, 2014

## **6.0 APPENDICES**

## 6.1 Vicinity Map



## 6.2 Site Map



## 6.3 Environmental Covenant



### Model Restrictive (Environmental) Covenant

After Recording Return to:  
Jeff Newschwander  
Department of Ecology  
15 West Yakima Avenue, Suite 200  
Yakima, WA 98902

#### Environmental Covenant

**Grantor:** MWSH East Wenatchee LLC  
**Grantee:** State of Washington, Department of Ecology  
**Legal:** 50 20<sup>th</sup> St. NW; East Wenatchee, WA 98802  
**Tax Parcel Nos.:** 40600005501 **Cross Reference:** [if amendment, recording number of original covenant]

Grantor, MWSH East Wenatchee LLC, 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 day of February 19, 2009 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 MWSH East Wenatchee LLC, 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. *Cleanup Action Plan*, January 8, 2006
2. *Phase One Environmental Site Assessment*, August 24, 2005, V Environmental LLC
3. *Limited Subsurface Soil Investigation Report*, September 26, 2005, V Environmental LLC



4. *Former Zur Hausen Orchards, January 7, 2009, V Environmental LLC*

These documents are on file at Ecology's [Insert Office Location] Office.

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 173-340-900.

The undersigned, MWSH East Wenatchee LLC , is the fee owner of real property (hereafter "Property") in the County of Douglas, State of Washington, that is subject to this Covenant. The Property is legally described [AS FOLLOWS: 50 20<sup>th</sup> St. NW; East Wenatchee, WA 98802 ] -or- [IN ATTACHMENT A OF THIS COVENANT AND MADE A PART HEREOF BY REFERENCE (attach document containing legal description)].

MWSH East Wenatchee LLC 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. 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: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.

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.

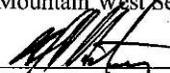
Section 5. The Owner must restrict leases to uses and activities consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

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 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, to determine compliance with this Covenant, 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 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.

MWSH East Wenatchee LLC  
Mountain West Senior Housing LLC, Manager

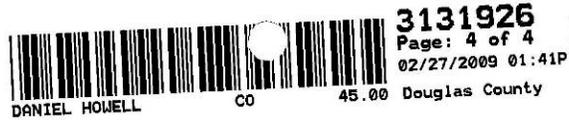
  
\_\_\_\_\_  
Kelley D. Hamilton  
CEO

Dated: 2/19/09

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

  
\_\_\_\_\_  
Donald Abbott  
Section Manager - CRD TCP

Dated: Feb 25 2009



[INDIVIDUAL ACKNOWLEDGMENT]

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 \_\_\_\_\_

[CORPORATE ACKNOWLEDGMENT]

STATE OF Oregon \_\_\_\_\_  
COUNTY OF Marion \_\_\_\_\_

On this 19<sup>th</sup> day of February, 2009, I certify that Kelley D. Hamilton personally  
appeared before me, acknowledged that he is the CEO 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 was  
authorized to execute said instrument for said corporation.

Lillian Busch  
\_\_\_\_\_  
Notary Public in and for the State of  
Oregon, residing at Salem.  
My appointment  
expires Jan 21, 2011



[REPRESENTATIVE ACKNOWLEDGEMENT]

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, I certify that \_\_\_\_\_  
\_\_\_\_\_ 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  
\_\_\_\_\_ [type of authority] of \_\_\_\_\_ [name of

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## 6.4 Photo log

**Photo 1: Parking Area Between Cottages and Main Building - from the north**



**Photo 2: North Side of Main Building - from the northwest**



**Photo 3: Typical Landscaping Near Courtyard- from the north**



**Photo 4: Landscaping and Retaining Wall Adjacent to 29th Street – from the east**

