



PERIODIC REVIEW

Everett Landfill and Tire Fire Site Facility Site ID#: 2696

**2900 36th Street
Everett, WA 98201**

Northwest Region Office

Toxics Cleanup Program

February 2014

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1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup Site conditions and monitoring data to ensure that human health and the environment are being protected at the Everett Landfill Tire Fire Site (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

The purpose of this periodic review is to determine whether the cleanup remedy at the Site continues to be protective of human health and the environment.

Cleanup activities at this Site were completed under Consent Decree 01 2 03640 6 between Ecology and the City of Everett (City) as executed in 2001, and amended in 2008. The cleanup actions were necessary because concentrations of lead, zinc, and bis(2-ethylhexyl) phthalate concentrations in groundwater exceeded MTCA cleanup levels. Following cleanup activities, lead, zinc, and bis(2-ethylhexyl) phthalate remain at the Site exceeding MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. The MTCA cleanup levels for groundwater are established under WAC 173-340-720.

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, 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; or
 - 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, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the Site;
- (b) New scientific information for individual hazardous substances or 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 Description and History

The Site is approximately 70 acres in size, triangular-shaped and is generally bounded by 36th Street to the north, Burlington Northern Sante Fe (BNSF) railroad tracks to the west and to the east. Wetlands and the Snohomish River are east of the Site.

After over 50 years of operation, the Everett Landfill stopped accepting waste in 1974 and was closed the following year under the then current regulations WAC 173-304. In 1977, a commercial recycling operation began storing and handling old rubber tires on portions of the Site. In 1983 and 1984, two separate fires occurred in the tire piles. In 1989, the Site was listed under MTCA and ranked 1 out of 5 on the priority list for cleanup, with a ranking of 1 being the highest priority for cleanup.

The City conducted interim cleanup actions in 1995 and 1997-1998. These actions re-graded the Site to allow the collection of surface water and to reduce the generation of leachate (groundwater within landfilled materials), installed the leachate collection system, prevented leachate seeps into surface water bodies, removed remaining tires, and disposed of and capped tire fire ash on-site.

Ecology and the City then entered into negotiation of a formal Cleanup Action Plan (CAP) and Consent Decree (CD) to finalize administrative requirements for cleanup. In 2001, a State Environmental Policy Act (SEPA) review was conducted and a final Determination of Non-Significance (DNS) was issued for the Site which required any future development to be constructed following the performance standards in the Cleanup Action Plan. Then a final Consent Decree was entered and filed in Snohomish County Superior Court for implementation of the Cleanup Action Plan.

The Consent Decree and Cleanup Action Plan required the City to conduct certain cleanup actions to prevent environmental exposure to contaminants under then-existing conditions at the Site. Those actions were:

- Installation of new landfill gas monitoring probes around the perimeter of the Site to detect possible off-site migration.
- Continued operation of the leachate collection system and maintenance of surface grading.
- Maintenance of the clean soil cover and site fencing to prevent unauthorized access.

-
- Development and implementation of a Stormwater Pollution Prevention Plan for the entire Site.
 - Compliance monitoring of groundwater, surface water, and direct contact.
 - Active gas control.

The City has conducted these actions, and some are ongoing, such as the operation and maintenance of the leachate and gas collection systems, continued monitoring of landfill gas and groundwater, and inspection and maintenance of the landfill cover.

In addition, the Consent Decree contemplated that the Site would be developed in the future, and established criteria that future development would need to meet under MTCA as well as a process for review of future development plans to ensure consistency with the Consent Decree. The cleanup actions selected for future conditions are:

- Placement of hydraulic barriers and other measures in future developed areas to prevent water from infiltrating into the landfill.
- One-time shallow aquifer (leachate) quality characterization to determine if restrictions are necessary on types of deep building foundations (pilings) allowed. If so, zones of piling-type restrictions would be created. This study has already been conducted by the City.
- Standards for developed area covers (pavement, building slabs, soil), restricted access to undeveloped areas, and cover penetration restrictions and contingency plans. Excavated refuse may be relocated on-site in pre-approved locations and quantities.
- Construction requirements including: dust and odor controls, erosion, and surface water controls, health and safety requirements for construction crews, construction dewatering procedures, and construction performance monitoring, inspection and contingency plans.
- Development and implementation of a Stormwater Pollution Prevention Plan for developed areas.
- Institutional controls prohibiting ground-level private residential living space, overnight camping, and withdrawal of groundwater for any purpose other than leachate collection or monitoring.
- Compliance monitoring, including full-time building gas monitors, regular hand-held gas monitoring in buildings and exterior areas (i.e., parking lots and landscaped areas), groundwater monitoring, surface water monitoring and regular site inspections.

The Consent Decree and Cleanup Action Plan provided that the entity conducting the development in the future could become a party to the Consent Decree.

In 2007, the City entered into agreements pursuant to which OliverMcMillan Everett, LLC (OM Everett) became the owner of the Site for purposes of developing the Site as part of a planned, mixed use development for the Site and adjacent properties.

The Consent Decree between Ecology and the City was amended to allow OM Everett to become a party to the Consent Decree for the limited purpose of conducting some of the cleanup actions specified for a brown-fields development. The City and OM Everett have agreed on an allocation of the cleanup actions in the Consent Decree and Cleanup Action Plan for future

conditions at the Site. The City and OM Everett will each follow the performance standards in the Cleanup Action Plan for their construction activities on the Site. They will each submit regular monitoring reports to Ecology, as required by the Cleanup Action Plan. The City will continue to operate the leachate collection system and groundwater monitoring wells.

Brown-Fields Development is planned for the Site and adjacent property. The Brown-Fields Development will include construction of a mixed- use commercial/residential development, shoreline and habitat restoration, and rehabilitation of a former, mostly industrial site, outside of the Site. The project includes the construction of up to 900,000 square feet of mixed commercial use; 200,000 square feet of hotel pace; and up to 1,400 residential units (multi- and single-family). The ultimate mix of uses constructed will be determined by market demand and the land use capacity of the site (type, location, and size of uses and structures, and infrastructure capacity). The proposal also included a rezone to Waterfront Commercial, and approval of a Planned Development Overlay Zone and Development Agreement (the Development Agreement) for the proposed project by the Planning Commission and City Council. The rezone, Planned Development Overlay Zone and Development Agreement were approved by City Council in March 2009. The proposal also includes: (1) the issuance of shoreline substantial development and other local, state and federal permits for construction of the project; (2) various real property and street vacation actions by the City; (3) public works and public amenities improvements and permits; and (4) related agreements and authorizations to implement the project.

2.2 Site Investigations and Sample Results

Bis(2-ethylhexyl)phthalate, arsenic, zinc, and lead have been detected above cleanup levels in groundwater at the Site. Currently no water quality cleanup levels are being exceeded. Currently landfill gas has been detected in one gas probe in exceedance of the lower explosive limit.

2.3 Cleanup Actions

The cleanup actions taken at this Site consisted of:

1. Piping the upper aquifer (leachate aquifer) to sewer.
2. Capping the landfill.
3. Collecting landfill gas.
4. Installation of a sheet pile wall.
5. Institutional controls.

2.4 Cleanup Levels

The contaminants detected at the Site and their cleanup levels are listed in the table below. It should be noted that the cleanup levels for iron, manganese and arsenic were determined based on results from a background study (HWA 2007).

Analyte	Cleanup Level (ug/L)
arsenic	25
chromium	50
copper	10
lead	10
manganese	4,040
nickel	10
iron	23,687
selenium	20
zinc	76.6

DDD	
DDT	
aroclor 1242 (PCB)	0.65
aroclor 1254 (PCB)	1
acetone	800
benzene	
butanone;2- (MEK)	4,800
chlorobenzene	100
chloroform	7
chloromethane	10
dichlorobenzene;1,2-	600
dichlorobenzene;1,4-	10
dichloroethane;1,1	5
dichloromethane	5
ethylbenzene	30
isopropylbenzene	640
toluene	40
trichlorobenzene	70
trichlorofluoromethane	2,400
vinyl chloride	10
m,p-xylene	20
o-xylene	20
acenaphthene	643
anthracene	4,800
benzoic acid	64,000
benzyl butyl phthalate	1,252
carbazole	10
diethylphthalate	12,800
dimethylphenol;2,4-	320
di-n-butylphthalate	1,600
fluoranthene	90
fluorene	640
naphthalene	320
n-nitrosodiphenylamine	10
phenols	9,600
pyrene	480

The cleanup level for landfill gas is the LEL (5 ppm in air) at the Site boundary.

2.5 Restrictive Covenant

Please see section 6.4 Environmental Covenant

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The Environmental Covenant (Restrictive Covenant) for the Site was recorded and is in place. It conforms to the requirements of the Uniform Environmental Covenants Act Chapter 64.70 RCW effective July 22, 2007. This Environmental Covenant prohibits activities that will result in the release of contaminants at the Site without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Environmental Covenant serves to ensure the long term integrity of the remedy.

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

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

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

The cleanup at the Site was governed by: Chapter 173-340 WAC (2001 ed.). WAC 173-340-702(12) (c) provides that,

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

WAC 173-340-710(7) (c) provides that,

“Solid waste landfill closure requirements. For solid waste landfills, the solid waste closure requirements in chapter 173-304 WAC shall be minimum requirements for cleanup actions conducted under this chapter. In addition, when the department determines that the closure requirements in chapters 173-351 or 173-303 WAC are legally applicable or relevant and appropriate requirements, the more stringent closure requirements under those laws shall also apply to cleanup actions conducted under this chapter.”

3.4 Current and projected Site use

The Site is currently in the first stages of commercial development. Further development will occur in the future. See section 2.

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 below selected Site cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

The following conclusions have been made as a result of this periodic review:

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soils cleanup levels have not been met at the standard point of compliance for the Site; however, the cleanup action has been determined to comply with cleanup standards since the long-term integrity of the containment system is ensured, and the requirements for containment technologies are being 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, the Department of Ecology has determined that the requirements of the Restrictive Covenant continue to be met. No additional cleanup 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 remedy 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

Chapter 173–304 WAC, Minimum Functional Standards for Solid Waste Handling

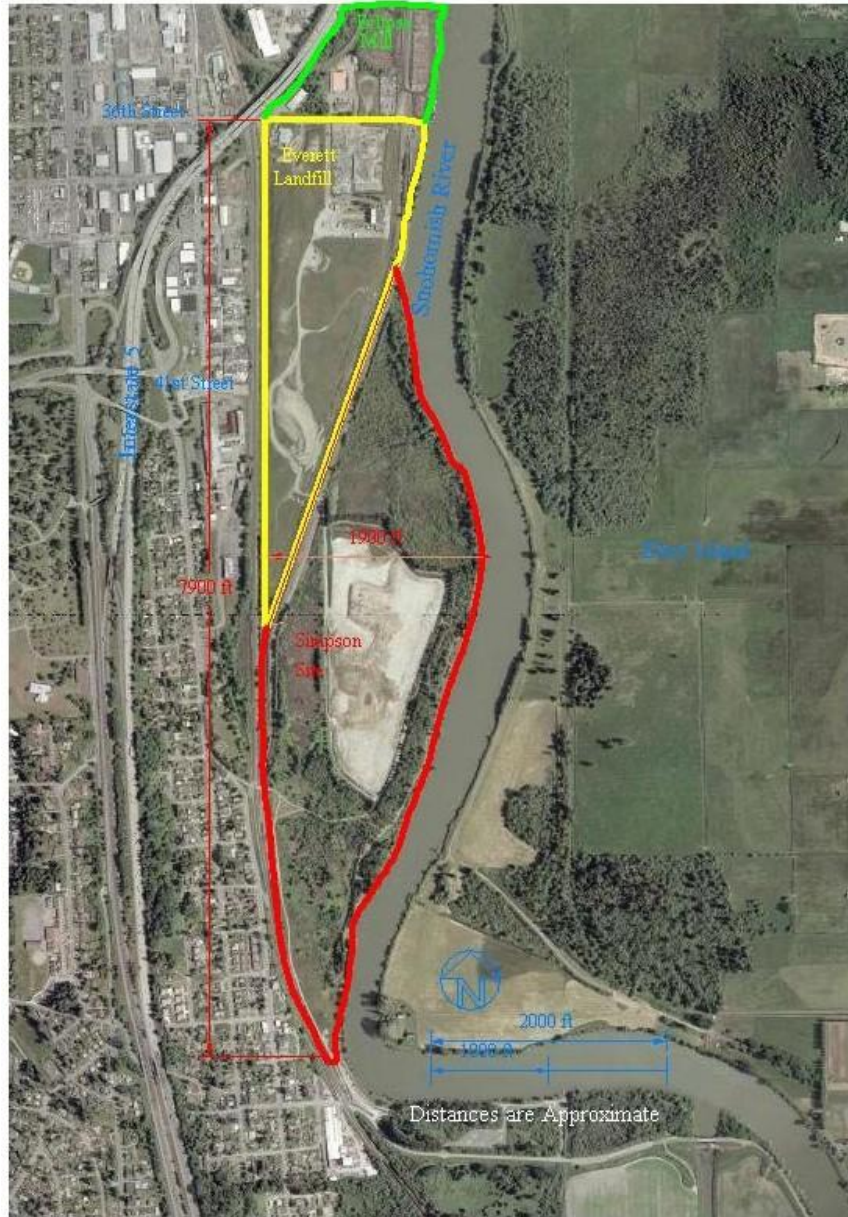
Existing Conditions and President Sites Memo, May 5, 1999, Floyd/Snider

Brownfield Feasibility Study Everett Tire Fire Site, March 2001, Floyd/Snider

Iron, Manganese & Arsenic Background Investigation, Everett Landfill/Tire Fire Site, Everett, Washington. February 6, 2007, HWA GeoSciences Inc.

6.0 APPENDICES

6.1 Vicinity Map





SI MW-1 ACTIVE MONITORING WELLS
Y < @ ACTIVE GAS PROBS
III MW-21 DECOMMISSIONED OR ABANDONED MONITORING WELLS

100' 200' 300' 600'
SOU: 1"=300'

1,1 LG36 DECOMMISSIONED OR ABANDONED GAS PROBS

1998 PROJECT SITE: n' b' CCFHGMW... 07-01-04 0000LY.10

HWAG&S INC.

EVERETT LANDFILL
EVERETT, WASHINGTON

SITE AND
EXPLORATION
PLAN

DESIGNED BY EFN	FIGURE NO. 1
CHECKED BY AS	PROJECT NO. 1998-155
DATE 08.05.08	TASK-600

6.3 Remediation Maps



North

Everett Riverfront Development
JIG Amrill**Mre**11-n.f.
Privat-O.WIOMit'it SitePl: n

6.4 Environmental Covenant

Amendment No. 1 to Consent Decree
Snohomish Superior Court Cause No.01-2-03640-6

EXHIBIT D

Amended Environmental Covenant

After recording Return To

OM Everett, Inc.
733 8th Avenue
San Diego, CA 92101

ENVIRONMENTAL COVENANT

Grantor: OM Everett, Inc.
Grantee: State of Washington, Department of Ecology
Legal: Lots 16, 21-29 of B/LA 08-004, a portion of Section 29 and Section 32,
Township 29 North, Range 5 East of the Willamette Meridian, Snohomish County,
Washington.
Full Legal Description attached as Exhibit B hereto.
Tax Parcel Nos 29053200101200, 29052900400500, 00576001300000, 00576001400000,
00576001700000, 00576001800000, 00576002700000, 00576002800000,
00576003100001, 00576003100002, 00576004000001, 00576004000002,
00576004200000
Cross Reference: None

OM EVERETT, INC hereby gives notice that the Property, which is legally described below, is the subject of the following environmental covenant ("Environmental Covenant"). This Declaration of Environmental Covenants hereby supersedes the Declaration of Restictive Covenants recorded in Snohomish County on February 11, 2002 (Snohomish County Assessor's Office Recording No. 200202110589).

The Property, which is the subject of this Environmental Covenant ("the Property"), is a portion of the former Everett Landfill, as shown and legally described in Exhibits A and B to this Covenant, respectively.

The Property that is the subject of this Environmental Covenant has been the subject of remedial actions under the Washington State Model Toxics Control Act ("MICA"), Chapter 70.105D RCW. This Environmental Covenant is required by WAC 173-340-440 to assure the continued implementation of this remedial action and the Uniform Environmental Covenants Act,

2007 Wash. Laws ch. J04. The remedial actions required to clean up the Property (hereinafter the "Cleanup Action") are described in a Consent Decree and Amendment No. 1 to the Consent Decree, filed with and approved by the Superior Court of the State of Washington in and for Snohomish County, Cause No. 01-2-03640-6.

The Remedial Action conducted at the property and described in the Consent Decree, Amendment and supporting documentation are part of an administrative record on file with the Department of Ecology at the Northwest Regional Office located at 3190 - 160th Ave. SE, Bellevue, WA 98008-5452

The purpose of this Environmental Covenant is to provide Ecology the right to ensure that the Property will not be used in a manner inconsistent with the restrictions stated herein or in a manner that would pose a threat to human health or the environment. It is further the purpose of this Environmental Covenant to provide Ecology the right to determine whether and to what extent the deed restrictions set forth below may be removed from all or any portion of the Property, consistent with the Consent Decree and Amendment No. 1 to the Consent Decree.

Subject to exceptions and reservations of record, OM Everett, Inc is the owner of the Property. OM Everett, Inc. makes the following declarations as to limitations, restrictions and uses to which the Property may be put. OM Everett, Inc. specifies that such declarations shall constitute covenants to run with the land, as provided by law, and shall be binding on the OM Everett, Inc. and its successors or assigns:

Section 1: Uses of the ground floor in residential units on the Property, if any, shall be restricted to garage, storage, and laundry. Overnight camping shall not be permitted. The owner must notify and obtain approval from Ecology, or from a successor agency, prior to any use of the Property that is inconsistent with this Section. Ecology or its successor agency may approve such a use only after public notice and comment.

Section 2: The owner shall not consummate any conveyance of title, easement, lease or other interest in the Property without adequate and complete provision for the continued operation, maintenance and monitoring of the Cleanup Action undertaken pursuant to the Consent Decree and Amendment No. 1 to the Consent Decree. The owner shall restrict leases to uses and activities consistent with the Consent Decree and notify all lessees of the restrictions on the use of the Property.

Section 3: During the Effective Period of the Consent Decree, the owner shall notify Ecology of its intent to convey any fee ownership interest in the Property.

Section 4: Ecology or any Ecology authorized representatives shall have the authority to enter and freely move about the Property at all reasonable times for the purposes of evaluating compliance with the terms of this Declaration of Restrictive Covenants.

Section 5: No groundwater may be withdrawn from the Property for any purpose except groundwater monitoring or leachate collection.

Section 2: Workers temporarily penetrating landfill cover materials on the Property must comply with OSHA and WSHA health and safety regulations. Uncontrolled penetration of landfill cover materials without notification of CAP requirements is prohibited

Section 7: The owner of the Property reserves the right under WAC 173-330-440 to record an instrument which provides that this Environmental 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 with the consent of Ecology, or a successor agency. Ecology or a successor agency may consent to the recording of such an instrument only after public notice and comment

Section 8: OM Everett, Inc transfers unto itself, its successors or assigns, all rights and privileges in and to the use of the Property that are not incompatible with the restrictions and rights granted herein

Executed this day of February 2008.

OM EVERETT, INC

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STATE OF WASHINGTON

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James J Pendowski
Program Manager, Toxics Cleanup Program

6.5 Photo log

Photo 1: Sheet pile crane



Photo 2: Bridge and Sheet Pile Wall



Photo 3: North End of Landfill

