



PERIODIC REVIEW

**Chuck Olson Chevrolet
Facility Site ID#: 61872531**

**17037 Aurora Avenue North
Seattle, Washington 98133**

Northwest Region Office

TOXICS CLEANUP PROGRAM

February 2009

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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 Chuck Olson Chevrolet Property (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under the Voluntary Cleanup Program. The cleanup actions resulted in concentrations of total petroleum hydrocarbons (TPH) exceeding site specific cleanup levels remaining at the Site. 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, 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 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 Chuck Olson Chevrolet facility is located in the City of Shoreline in King County, Washington (Vicinity Map - Appendix 6.1). Following remedial activities, a restrictive covenant was recorded for the property in 1999 and the Site received a 'No Further Action' determination. Chuck Olson Chevrolet is currently an operating automobile dealership and service center (Site Plan – Appendix 6.2).

2.2 Site Investigations and Cleanup

Two phases of site investigation activities were conducted at the Site prior to the initiation of remedial activities. The initial phase consisted of Geoprobe soil borings installed at the Site in April and May of 1997. This work was conducted to evaluate potential environmental impacts at the Site from past site activities. During this initial exploration phase, soil impacted with TPH and volatile organic compounds (VOCs) was noted around the hydraulic cylinder equipment vaults in the main service shop area. A second phase of hollow-stem auger soil borings was conducted in October 1998. The primary purpose of this second exploratory phase was to further define the extent of TPH-impacted soils around the hydraulic vaults, and to evaluate site-specific TPH cleanup standards.

The remediation phase of work began on December 14, 1998 and concluded on January 20, 1999. Pre-remediation excavation site work included decommissioning all existing hydraulic equipment, and then rinsing, cleaning and demolishing the hydraulic equipment vaults. The concrete floor slab above areas where impacted soil was present was also removed at this time.

Soil remediation was accomplished by excavation and subsequent off-site treatment by thermal desorption. A total of 1,213 tons of impacted soil was excavated from nine of the former hydraulic equipment vault areas. The soil was loaded directly into trucks and transported to CSR Associated in Everett, Washington for thermal desorption. Excavation of impacted soil was limited in some areas by the maximum practical depth of excavation, and/or the proximity of the excavation to structural members of the building such as footings or load-bearing walls. No saturated soil or ground water was encountered during excavation activities.

2.3 Sample Results

A total of 81 confirmation soil samples were collected from the floor and sidewalls of the remedial excavation and submitted for laboratory analysis. The confirmation sample results indicate that excavation was effective at removing the majority of TPH-impacted soil, with TPH concentrations above the calculated site-specific (see section 2.4) cleanup level of 7,000 milligrams/kilogram (mg/kg). Three areas of impacted soil with TPH concentrations above the site-specific cleanup level remain in areas where additional excavation was impractical. The

estimated cumulative volume of remaining impacted soil with TPH concentrations above 7,000 mg/kg is 195 cubic yards. The vertical separation between TPH-impacted soil and ground water at the Site based on the lowest vertical extent of TPH impacts noted is in excess of 100 feet.

2.4 Cleanup Levels

A site specific cleanup level was calculated for the Site. For the Extractable Petroleum Hydrocarbon/Volatile Petroleum Hydrocarbon (EPH/VPH) method, the calculated maximum allowable residential TPH concentration ranged from 7,980 mg/kg to 15,625 mg/kg. For the Northwest TPH-Diesel Extended (NWTPH-Dx) Method, the calculated maximum allowable residential TPH concentration ranged from 7,355 mg/kg to 33,250 mg/kg. The calculated maximum allowable residential NWTPH-Dx concentration of 33,250 mg/kg is not considered valid. This very high allowable NWTPH-Dx concentration resulted from an abnormally low ratio of TPH (by Method EPH/VPH) to TPH (by Method NWTPH-Dx) that was likely caused by heterogeneity within the soil sample.

The range of calculated maximum allowable residential soil TPH concentrations indicates general agreement between both the EPH/VPH and NWTPH-Dx analytical methods. The most conservative calculated maximum allowable TPH concentration using either method is 7,355 mg/kg by Method NWTPH-Dx. Rounding downward results in a conservative, site-specific concentration of 7,000 mg/kg for the maximum allowable residential NWTPH-Dx concentration.

2.5 Restrictive Covenant

Based on the site use, surface cover and calculated cleanup levels, it was determined that the Site was eligible for a 'No Further Action' determination if a Restrictive Covenant was recorded for the property. A Restrictive Covenant was recorded for the Site in 1998 which imposed the following limitations:

1. The three zones containing residual contamination shall not be disturbed.
2. Any activity that may interfere with the integrity of the Remedial Action is prohibited.
3. Any activity that may result in the release or exposure of hazardous materials that remain on the site as the result of the Remedial Action is prohibited.
4. The owner or successor owner of the Site must give written notice of intent to convey any interest in the Site.
5. The owner must restrict leases to uses and activities consistent with the Restrictive Covenant.
6. The owner must obtain approval from Ecology prior to any use of the property that is inconsistent with the terms of the covenant.
7. The owner or successor owner shall grant Ecology the right to enter the site at reasonable times.
8. The owner or successor owner reserves the right to remove this Covenant with Ecology's approval.

The Restrictive Covenant is available as Appendix 6.4.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

Based upon the site visit conducted on January 28, 2009, the building and asphalt cover at the Site continue to eliminate exposure to contaminated soils by ingestion and contact. The asphalt appears in satisfactory condition and no repair, maintenance, or contingency actions have been required. The Site is still operating as an automotive dealership and service center. A photo log is available as Appendix 6.5.

The Restrictive Covenant for the Site was recorded and is in place. This Restrictive 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 Restrictive Covenant serves to ensure the long term integrity of the cap.

Soils with TPH concentrations higher than the site specific cleanup level are still present at the Site. However, the Site structures and asphalt surface prevent human exposure to this contamination by ingestion and direct contact with soils. The Restrictive Covenant for the property will ensure that the cap will be protected through maintaining the current use of the Site.

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

There is no new relevant 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 (1996 ed.). WAC 173-340-702(12) (c) [2001 ed.] 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.”

Although cleanup levels changed for petroleum hydrocarbon compounds as a result of modifications to MTCA in 2001, contamination remains at the site above the site specific cleanup levels.

3.4 Current and projected site use

The site is currently used for commercial and industrial 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 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 isolation or containment system is ensured, and the requirements for isolation or containment technologies are being met.
- The Restrictive 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 surface cover 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

AGRA Earth and Environmental. Independent Remedial Action Report. July 1994.

AGRA Earth and Environmental. Hydraulic Hoist Removal and Over-excavation. July 1995.

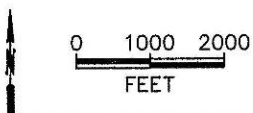
Associated Earth Sciences. Remedial Action Report. April 1999.

Ecology, 1999, Restrictive Covenant.

Ecology, 2009, Site Visit.

6.0 APPENDICES

6.1 Vicinity Map



AS ASSOCIATED
EARTH
SCIENCES, INC

Site Vicinity Map
Former Chuck Olson Chevrolet
Shoreline, Washington

FIGURE

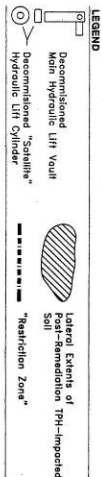
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6.2 Site Plan

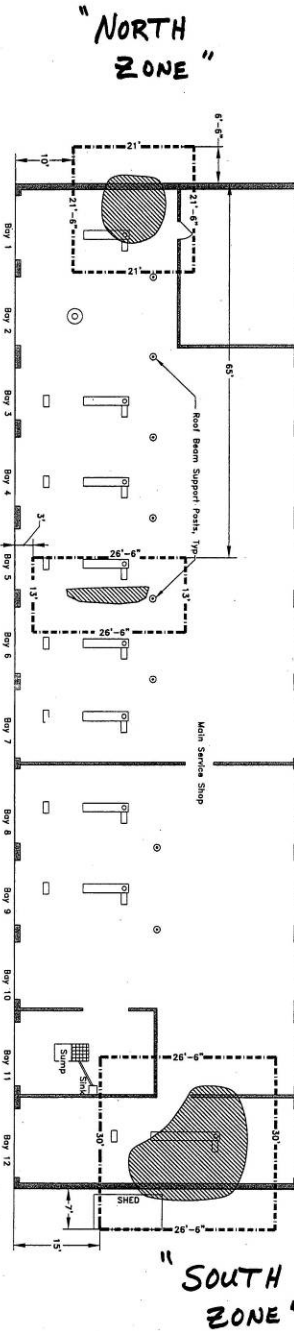
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ASSOCIATED
BARTH
SCIENCES, INC.

"Restriction Zones" for TPH Impacted Soils
Former Chuck Olson Chevrolet Facility
Shoreline, Washington

EXHIBIT
A



APPROXIMATE SCALE: 1/16" = 1'-0"



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6.3 Environmental Covenant

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RESTRICTIVE COVENANT

Michael S. Curtis

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

An independent remedial action (hereafter referred to as "Remedial Action") occurred at the property that is the subject of this restrictive covenant (hereafter referred to as "Restrictive Covenant"). The Remedial Action conducted at the property is described in the following documents:

1. Remedial Action Report, Former Chuck Olson Chevrolet Facility, 17545 Aurora Avenue North, Shoreline (Seattle), WA., April 26, 1999, prepared by Associated Earth Sciences, Inc. (AEI).
2. Ground Water Occurrence in the Vicinity of the Former Chuck Olson Chevrolet Facility, 17545 Aurora Avenue North, Shoreline (Seattle), WA., April 26, 1999, Prepared by AEI.
3. Summary of Preliminary Results - Environmental Site Investigation Activities, Former Chuck Olson Chevrolet Facility, 17545 Aurora Avenue North, Shoreline (Seattle), WA., November 30, 1998, Prepared by AEI.



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4. Preliminary Report of Phase II Environmental Site Assessment Activities, Former Chuck Olson Chevrolet Facility, 17545 Aurora Avenue North, Shoreline (Seattle), WA., June 27, 1997, Prepared by AEI.

These documents are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because the property contains petroleum and halogenated chemicals in soils which may require remediation if such contaminated areas are disturbed. Also, during the course of making certain capital improvements and conducting the Remedial Action, as provided for in Chapter 173-340 WAC, it was determined that certain permanent improvements and structures could not be altered or removed without disturbing contaminated soil that is present.

The undersigned, Michael S. Curtis, is the fee owner of the real property in the County of King, State of Washington (hereafter referred to as "Property"), that is subject to this Restrictive Covenant. The Property is legally described as follows:

That portion of the north two-thirds of the south three-quarters of the southeast quarter of the northwest quarter of section 7, township 26 north, range 4 east, W.M., in King County, Washington, lying west of State Highway No. 1 (Aurora Avenue) as established by deed recorded under recording no. 2173653 and lying east of Linden Avenue as established by deeds recorded under nos. 2566915 and 2566916; except the north 30 feet



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therefore; except the south 100 feet of the east 175 feet thereof; except the west 250 feet of the south 616 feet thereof.

Michael S. Curtis, 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 referred to as "Owner").

Section 1. During the course of making certain capital improvements and conducting Remedial Action, it was determined that three areas (hereafter referred to as "Restricted Zones") listed below, and described in Exhibit "A" of this Restrictive Covenant and made a part hereof by reference, shall not be disturbed because soil within these Restricted Zones are affected by confirmed or suspected contamination:

1. North Zone: 451.5 square feet
2. Central Zone: 344.5 square feet
3. South Zone: 795 square feet

These Restriction Zones must be maintained as a permanent capital improvement and shall not be altered. Any activity which disrupts or alters capital improvements within these Restriction Zones and causes any exposure of contaminated material and/or soils is strictly prohibited. The Owner shall guarantee the



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preservation of the Restriction Zones at the Property. In the event any material or soils at these Restriction Zones be disturbed, through removal, repair, renovation, or any other action which may, might or could expose the materials and soils, the Department of Ecology shall be notified within thirty (30) days and appropriate action will be required as may be determined by the appropriate regulatory body or agency.

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



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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.

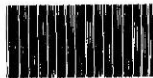
Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public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

By

Michael S. Curtis
Michael S. Curtis, Owner

Date

August 2, 1999



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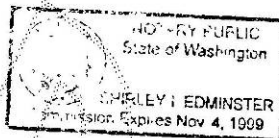
STATE OF WASHINGTON)

) ss.

COUNTY OF KING)

I certify that I know or have satisfactory evidence that
Michael S. Curtis is the person who appeared before me,
and said person acknowledged that he signed this instrument and
acknowledged it to be his free and voluntary act for the uses and
purposes stated therein.

Dated August 2, 1999.



Shirley I. Edminster
Printed Name: Shirley I. Edminster

NOTARY PUBLIC, State of Washington
My appointment expires 11-4-99



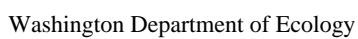
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6.4 Photo log

Photo 1: Former Hoist Area



Photo 2: Former Hoist Area

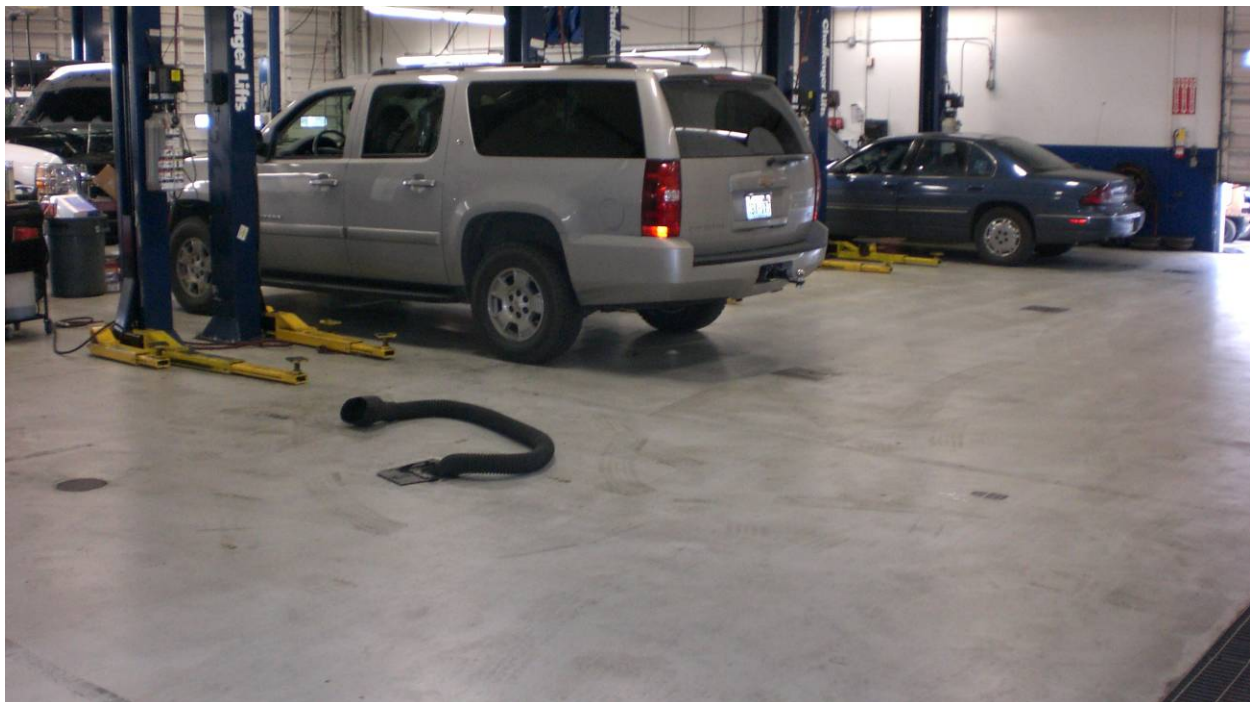


Photo 3: Service Building – from the south



Photo 4: South Side of the Building – from the south

