PERIODIC REVIEW

BMW Seattle
Facility Site ID#: 33641566

714 East Pike Street
Seattle, Washington 98122

Northwest Region Office

TOXICS CLEANUP PROGRAM

November 2008

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 BMW Seattle 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 petroleum hydrocarbons, lead and cadmium exceeding MTCA Method A and B cleanup levels remaining at the Site. The MTCA Method A cleanup levels for soil are established under WAC 173-340-740(2). The MTCA Method A cleanup levels for groundwater are established under WAC 173-340-720(3). 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
    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 BMW Seattle facility is located on Capitol Hill in the City of Seattle in King County, Washington (Vicinity Map - Appendix 6.1). Following remedial activities, a restrictive covenant was recorded for the property in 1998 and the Site received a 'No Further Action' determination.

BMW Seattle is currently an operating automobile dealership and service center (Site Plan – Appendix 6.2). The buildings were constructed in the early 1900s to house auto part sales and manufacturing. Though the buildings making up the BMW Seattle business were constructed independently, their current arrangement is one building with partitions between the sales and service areas.

The sales building was occupied by Laher Auto Spring Company between the early 1900s and 1981. The building was renovated and put into use as a BMW sales operation in 1986. The service building was occupied by 2nd Hand Auto Parts from the early 1900s until at least 1950. The Laher Auto Spring Company expanded into this building in 1966.

The surrounding buildings are occupied by auto-service garages, retail stores and restaurants.

2.2 Site Investigations and Cleanup

Hart Crowser in 1989 conducted an Environmental Site Assessment (ESA) at the Site. Three areas were identified with potential environmental impacts. They included a recessed waste-oil tank formerly located between the service and sales buildings, an abandoned underground storage tank (UST) located in the northeast corner of the sales building, and metal shavings associated with previous industrial site activities. Six soil samples were collected as part of the ESA and analyzed for total petroleum hydrocarbons (TPH) and metals.

Hazcon, Inc. in July 1995 conducted an additional sampling event that focused on three areas inside the current sales building. Soil samples were collected around the waste-oil tank and adjacent to two exposed structural columns. Hazcon, Inc. in August 1995 conducted additional sampling in the north end of the sales building. Fifty-nine samples were collected from 16 soil borings. Samples were collected to a maximum depth of 32 feet below ground surface (bgs) and analyzed for TPH and metals.

ContraCon Northwest in 1996 collected 25 additional samples which were analyzed for TPH, lead, and cadmium.

RETEC in 1997 conducted four additional soil borings were advanced to collect soil samples for the purpose of analyzing TPH-fraction data. Samples collected from the boring were submitted for fractionation analysis by the volatile petroleum hydrocarbon/extractable petroleum

hydrocarbon (VPH/EPH) method. Results indicated the presence of diesel and oil-range hydrocarbons.

Groundwater was not encountered during any of these environmental investigations, which were conducted to a maximum depth of 40 feet bgs. Wells in the vicinity of the Site indicate a likely groundwater table between 60 and 140 feet bgs. Soil vapors were not analyzed at the Site due to the impermeable surface throughout the area, the lack of basements or other subsurface structures, and the lack of volatile contaminants.

2.3 Sample Results

Petroleum hydrocarbon contamination as diesel and motor oil (TPH-Dx), petroleum hydrocarbon contamination as diesel (TPH-D), lead, and cadmium were all detected above MTCA Method A cleanup levels in soils at the Site.

TPH-Dx concentrations above MTCA Method A cleanup levels at several points across the Site. They were detected in shallow soils under the northeast corner of the BMW sales building near the former recessed waste-oil tank at concentrations up to 24,000 parts per million (ppm), near the abandoned UST in the northwest corner of the sales building at concentrations up to 6,500 ppm, and under the north end of the sales building at concentrations up to 5,600 ppm. The contamination decreased significantly with depth, though one sample in the vicinity of the UST had a concentration of 3,200 ppm at 20 feet bgs. A map of TPH-Dx surface concentrations is available as Appendix 6.3.

TPH-D concentrations were found to be distributed similarly to TPH-Dx concentrations, with the exception of the samples collected from the vicinity of the waste-oil tank. Samples near the waste-oil tank indicated the presence of TPH-Dx, but not TPH-D, suggesting that the waste-oil associated with the tank was more characteristic of motor oil than diesel.

Lead was found in 7 of 19 surface samples at the Site, and in 6 of 45 samples collected from depths greater than 2 feet. In general, lead concentrations appeared to decrease with depth. Similar patterns were found with cadmium, though many of the samples collected for metals analysis did not detect the presence of cadmium.

2.4 Cleanup Levels

MTCA Method B and C cleanup levels were calculated for the Site to evaluate the risk presented by the human direct contact pathway. The acceptable risk level for TPH exposure is a hazard index of 1.0. All samples were below the commercial hazard index for the Site, and only one sample exceeded the residential hazard index for the Site. This sample was collected from 8 feet bgs under the BMW Seattle building, therefore residential exposure is impossible.

The soil leaching to groundwater pathway was evaluated using Ecology's Interim Guidance. Protection of groundwater criteria was 1 mg/L TPH for potable water supplies. For the Site, leachable concentrations were calculated from 0.0015 to 0.29 mg/L, which are lower than the

allowable concentration of 1.0 mg/L. These results indicated that the type and concentration of TPH present at the Site did not pose a threat to groundwater.

Lead and cadmium concentrations exceeded the criteria for human direct contact and protection of groundwater. However, site conditions mitigate both risks. The BMW building and surrounding surface material effectively prevents direct human contact to contaminated soils. These surface materials also act as an infiltration barrier preventing the infiltration of precipitation to the subsurface. This helps to prevent the leaching of contaminants from soil to groundwater. In addition, no drinking water wells exist in the vicinity of Capitol Hill or downtown Seattle.

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. If the building is ever removed from the Site, remaining contamination under the foundation must be remediated at that time.
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 or successor owner shall grant Ecology the right to enter the site at reasonable times.
7. 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

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.

Based upon the site visit conducted on October 2, 2008, 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 a tire service and automotive repair business. A photo log is available as Appendix 6.5.

Soils with TPH and metals concentrations higher than MTCA Method A and B cleanup levels 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 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 new MTCA Method A and B cleanup levels. Even so, the cleanup action is still protective of human health and the environment. A table comparing MTCA cleanup levels from 1991 to 2001 is available below.

Analyte	1991 MTCA Method A Soil Cleanup Level (ppm)	2001 MTCA Method A Soil Cleanup Level (ppm)	1991 MTCA Method A Groundwater Cleanup level (ppb)	2001 MTCA Method A Groundwater Cleanup Level (ppb)
Cadmium	2	2	5	5
Lead	250	250	5	15
TPH	NL	NL	1000	NL
TPH-Gas	100	100/30	NL	1000/800
TPH-Diesel	200	2000	NL	500
TPH-Oil	200	2000	NL	500
NL = None listed				

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 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 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

RZA AGRA, Inc. Underground Storage Tank Removal Report. March 1994.

Hazcon, Inc. BMW Seattle Interim Report Subsurface Investigation. August 1995.

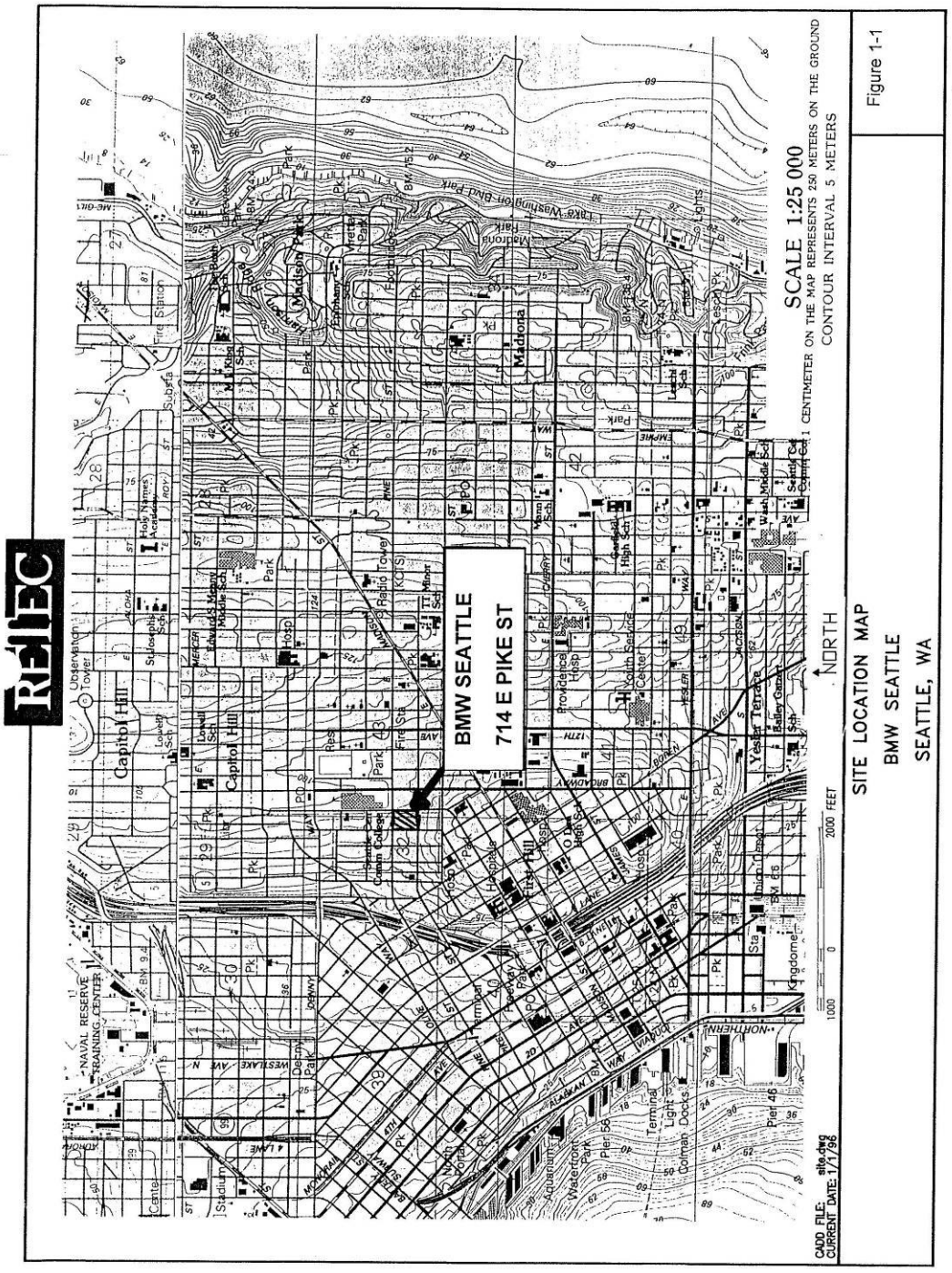
RETEC. Site Risk Assessment and Request for No-Further-Action Approval. August 1998.

Ecology, 1998, Restrictive Covenant.

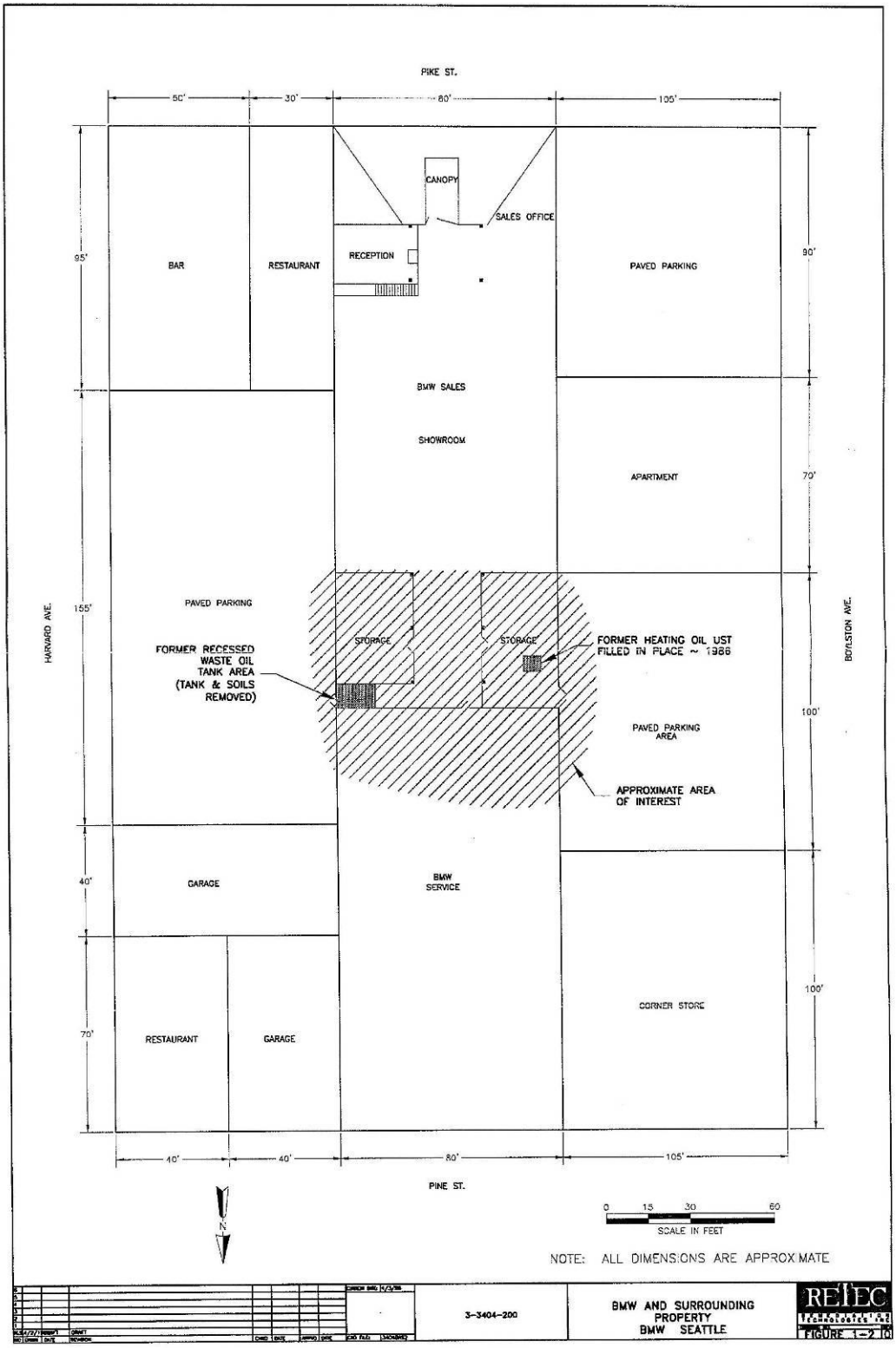
Ecology, 2008, Site Visit.

6.0 APPENDICES

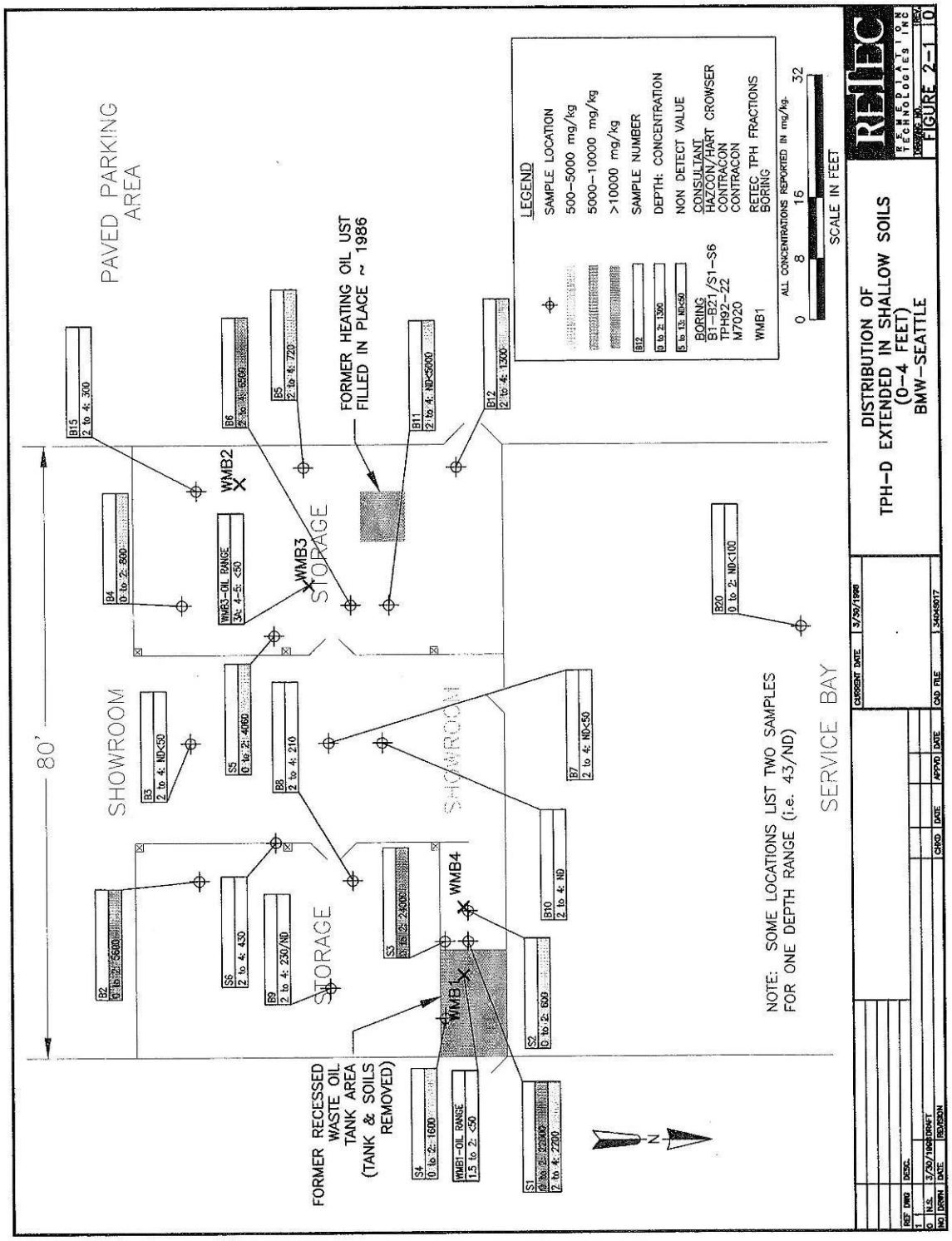
6.1 Vicinity Map



6.2 Site Plan


PIKE ST.
50'
30'
80'
105'
95'
90'
70'
155'
100'
40'
70'
100'
BAR
RESTAURANT
CANOPY
SALES OFFICE
RECEPTION
PAVED PARKING
BMW SALES
SHOWROOM
APARTMENT
PAVED PARKING
HARVARD AVE.
BOYLSTON AVE.
STORAGE
STORAGE
FORMER RECESSED WASTE OIL TANK AREA (TANK & SOILS REMOVED)
FORMER HEATING OIL UST FILLED IN PLACE ~ 1986
PAVED PARKING AREA
APPROXIMATE AREA OF INTEREST
GARAGE
BMW SERVICE
CORNER STORE
RESTAURANT
GARAGE
40'
40'
80'
105'
PINE ST.
N
0 15 30 60
SCALE IN FEET
NOTE: ALL DIMENSIONS ARE APPROXIMATE
3-3404-200
BMW AND SURROUNDING PROPERTY
BMW SEATTLE
RETEC
FIGURE 1-2

6.3 TPH-Dx Concentration Map



6.4 Environmental Covenant

AMENDED RESTRICTIVE COVENANT
Norman Enterprises, Inc., 714 E. Pike and 715 E. Pine.

This Declaration of Amended Restrictive Covenant (hereafter "Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and WAC 173-340-440 by Norman Enterprises, Inc., 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 Risk Assessment (ReTec April 1998) and Remedial Action letter both of which are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of total petroleum hydrocarbons, lead and cadmium which exceed the Model Toxics Control Act Method METHOD A Cleanup Level for soil established under WAC 173-340-740.

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

Parcel A:

Lots 8 and 9 and the south half of lots 10 and 11, Block 4, Supplementary Plat of Union Addition to the City of Seattle, according to the plat thereof recorded in Volume 9 of Plats, page 12, records of King County, Washington.

Parcel B:

The north half of lots 10 and 11 and all of lots 12 and 13, Block 4, Supplementary Plat of Union Addition to the City of Seattle, according to the plat thereof recorded in Volume 9 of Plats, page 12, records of King County, Washington.

Norman Enterprises, Inc. makes the following declarations 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").

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Section 1. A portion of the Property contains total petroleum hydrocarbons (diesel), lead, and cadmium contaminated soil. The contaminated soil is located under the northern portion of parcel A and the southern portion of parcel B, that is, the portions contiguous to each other and the center of the buildings now existing on the two parcels. The Owner shall not alter, modify, or remove the existing structure 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 written 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 this 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.

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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.

DATED this 30th day of December, 1998.

NORMAN ENTERPRISES, INC.

By _____
Stephen F. Norman, President

STATE OF WASHINGTON)
) ss
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Stephen F. Norman 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 President of Norman Enterprises, Inc. to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

GIVEN under my hand and official seal hereto affixed the date and year in this certificate first above written.

_____
Signature of Notary Public

Anne M. Norman
Typed Name of Notary Public
Residing at Seattle, WA
My Commission Expires: 3/14/99
SIGNATURE AND SEAL MUST BE COMPLETELY WITHIN THE BORDERS OF THIS DOCUMENT

ANNE M. NORMAN NOTARY PUBLIC 3-14-99 STATE OF WASHINGTON

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6.5 Photo log

Photo 1: Former Tank Location Between Buildings - from the west

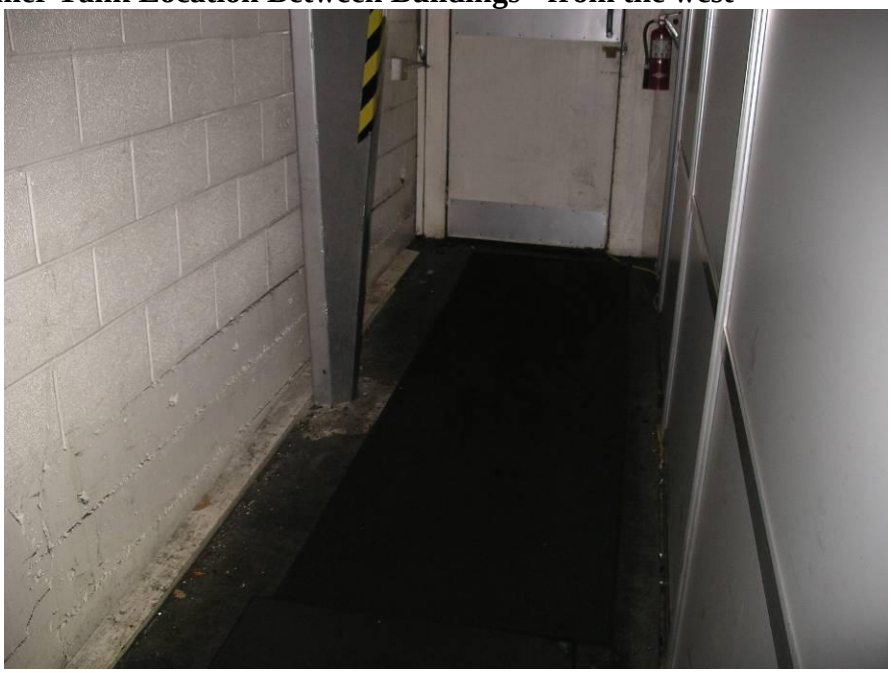

Photo 2: Service Bay - from the south

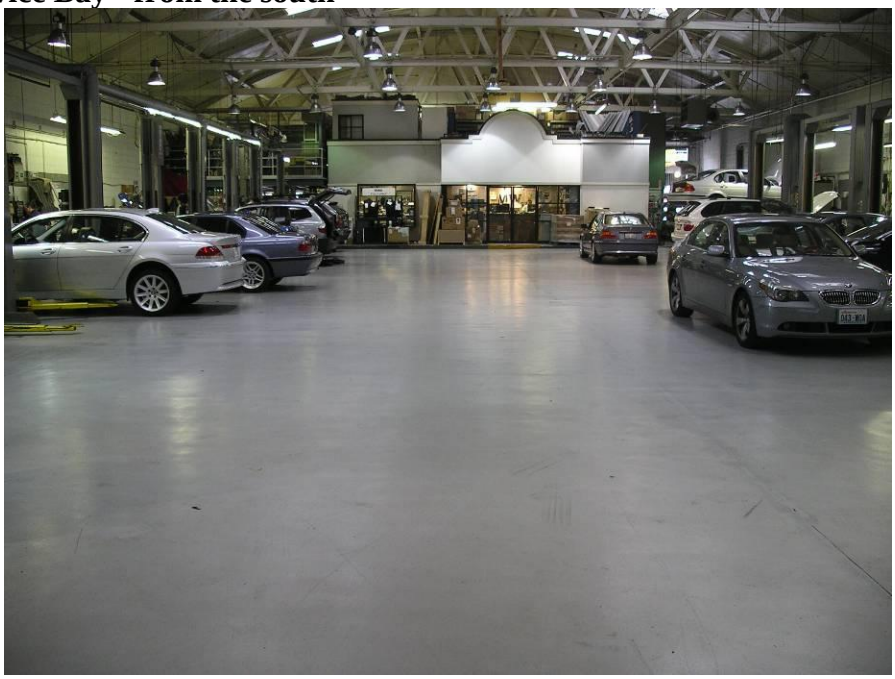

Photo 3: Sales Building - from the north

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