



PERIODIC REVIEW

**Bullard Property
Facility Site ID#: 95777**

**6832 34th Avenue NE
Seattle, WA**

Northwest Region Office

Toxics Cleanup Program

September 2012

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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 Bullard 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 Ecology's Voluntary Cleanup Program (VCP). VCP identification number for the Site was NW 1482. Following cleanup actions, diesel-range petroleum hydrocarbons (DRPH) remain in soil at the Site at concentrations exceeding MTCA Method A cleanup level. As a result, institutional controls were implemented at the Site as part of the cleanup action to ensure that the remaining DRPH contaminated soils are contained appropriately. 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; 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 comprises a leaking underground heating oil tank, located on a residential property at 6832 34th Avenue NE, Seattle, Washington in King County (the Property, see Vicinity Map - Appendix 6.1).

A single family home has occupied the Property since 1942. The area around the Site is residential, and has been since it was developed sometime in the 1940s. A few commercial businesses are present along 35th Avenue NE, one block east of the Site.

The Site and surrounding area are on the gently sloping eastern side of a broad north-south trending topographic ridge. The soils underlying the Property consist of a thin layer of sandy till overlying sandy glacial outwash. The outwash extends to a depth of over 55 feet below ground surface (bgs), the maximum depth explored at the Site. Groundwater was not encountered within the depth explored. However data from a nearby exploration indicated that the water table occurs at about 55 feet bgs.

2.2 Regulatory Summary

The Site entered VCP in July 2005. Ecology issued a No Further Action (NFA) determination letter on August 27, 2007. The NFA determination is contingent upon on satisfying the requirements of an Environmental Covenant, which was filed on July 20, 2007. An Environmental Covenant was required because DRPH contaminated soil exceeding cleanup level still remains on the Property following excavation activities as described in Section 2.4.

2.3 Site Investigations

Several site investigations were conducted by different consulting firms in 2004 and 2005. Heating oil had been apparently released into surrounding soils over a long period from the underground heating oil tank located outside the southwest corner of the home. Soil contamination had extended over an area of about 500 square feet to a maximum depth of 20 - 25 feet. Areas outside the house and beneath the basement floor slab had been impacted. Results from soil sampling indicated that the contamination was limited within the Property boundary. The approximate extent of the Site is shown on Appendix 6.2.

A 55 feet deep boring was drilled near the center of the fuel spill. DRPH was not detected in soil samples from depths of 28, 33, and 53 feet bgs. Soil samples obtained from depths of 37, 42, and 47 feet also showed no physical evidence of fuel impact. Therefore, it is unlikely that groundwater has been impacted.

2.4 Remedial Activities

The underground heating oil tank was removed in January 2004. A total of 119 tons of contaminated soil were subsequently removed from August through December in 2005. The excavation was 10 to 16 feet deep in the yard. Soils beneath the southwestern corner of the basement floor were also removed to a depth of 4 feet. The excavated contaminated soils were transported and treated off-site. Following excavation, DRPH remains in soil at the Site as shown on Figure 2 and as described below:

- Concentrations of up to 17,000 ppm fuel oil remain at the base of the excavation in the yard. Sidewall samples at depths of 12-14 feet bgs show that fuel oil also extends outward from the excavation at concentrations ranging from 2,700 ppm to 11,000 ppm.
- Below the southwest corner of the basement, fuel oil remains in soil at concentrations ranging from 170 ppm to 9900 ppm. The highest concentrations remain below 3 to 4 feet in the extreme southwest corner, and beneath the south basement wall.

After excavation, the following work was completed at the Site:

- The excavation outside and below the southwest corner of the house was backfilled with controlled density fill (CDF).
- A vapor collection system was installed beneath the southwest corner of the basement floor to mitigate any possible intrusion of vapors. An electrical fan exhausts vapors. A vapor barrier was placed over the pea gravel, and a new basement floor slab poured over the whole area.

2.5 Cleanup Standards

Cleanup standards consist of cleanup levels and points of compliance, which must be established for each site. Cleanup levels determine at what level a particular hazardous substance does not threaten human health or the environment. Points of compliance designate the location on the site where the cleanup levels must be met.

a) Cleanup Levels

Soil

Because the cleanup at this Site was relatively straight forward and involved few hazardous substances, the MTCA Method A cleanup levels for unrestricted land use were deemed applicable and appropriate.

b) Points of Compliance

Soil

Soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance was established in the soils throughout the Site from the ground surface to fifteen feet below the ground surface. Soil cleanup levels based on protection of groundwater, the point of compliance is in soil throughout the Site.

2.6 Restrictive Covenant

Based on the Site use, surface cover and cleanup levels, it was determined that the Site was eligible for a 'No Further Action' determination if an Environmental Covenant was recorded for the Property. An Environmental Covenant was recorded for the Site in 2007 which imposed the following limitations:

- Section 1. A portion of the Property is underlain by soil contaminated with diesel-range petroleum hydrocarbons. The contaminated soil has been capped as part of the Remedial Action. See Figures 2, 3, 3A and 3B attached hereto. The Owner shall not alter, modify, or remove the existing structure, basement floor, or controlled density fill (CDF) 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. 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 without prior Ecology approval.
- 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) days 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 including, but not limited to, the soil vapor collection system.
- Section 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.
- Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action, to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

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

Section 9. The Owner shall maintain roof downspouts and surface water drainage to ensure that they drain away from the area where impacted soils remain at depth.

The Environmental Covenant is available in Appendix 6.3.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

Ecology conducted a site visit on August 21, 2012. The Property continues to be occupied by a single family home. A photo log is available in Appendix 6.4. Based on the Site visit, the residential house and pavement (cap) at the Property appears in satisfactory condition and no repair, maintenance, or contingency actions have been required. Although it is likely that soils with DRPH concentrations higher than MTCA cleanup levels are still present at the Property, the presence of the cap will continue to provide an adequate barrier to prevent human exposure through ingestion and direct contact with contaminated soils. Also the electrical fan can exhaust vapors if present.

The Environmental Covenant for the Property prohibits any 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 Environmental Covenant serves to assure the long-term integrity of the cap.

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 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."

3.4 Current and projected Site use

The Site is currently used as a warehouse/retail business stores. 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

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:

- Soil cleanup level for DRPH may still 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 will be effective in protecting public health and the environment from exposure to contamination and protecting the integrity of the cleanup action.
- The cleanup actions completed at the Site appear to be protective of human health and the environment.

Based on this review, Ecology has determined that the requirements of the Environmental Covenant are being met. 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

August 2012. Site Visit, Ecology.

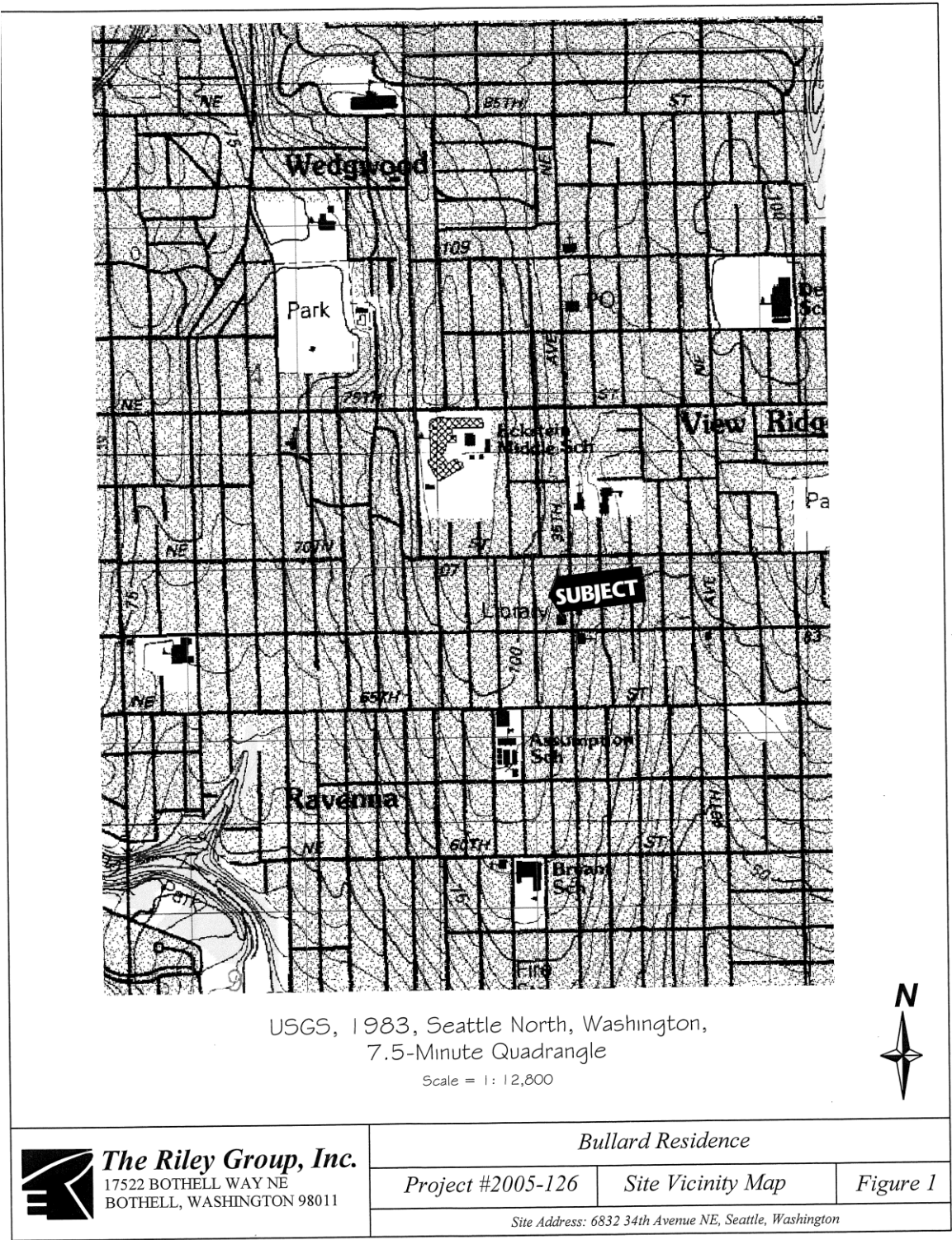
August 27, 2007. No Further Action Determination for the Bullard Property, Ecology.

July 20, 2007. Environmental Covenant, recorded at King County Recorder's Office.

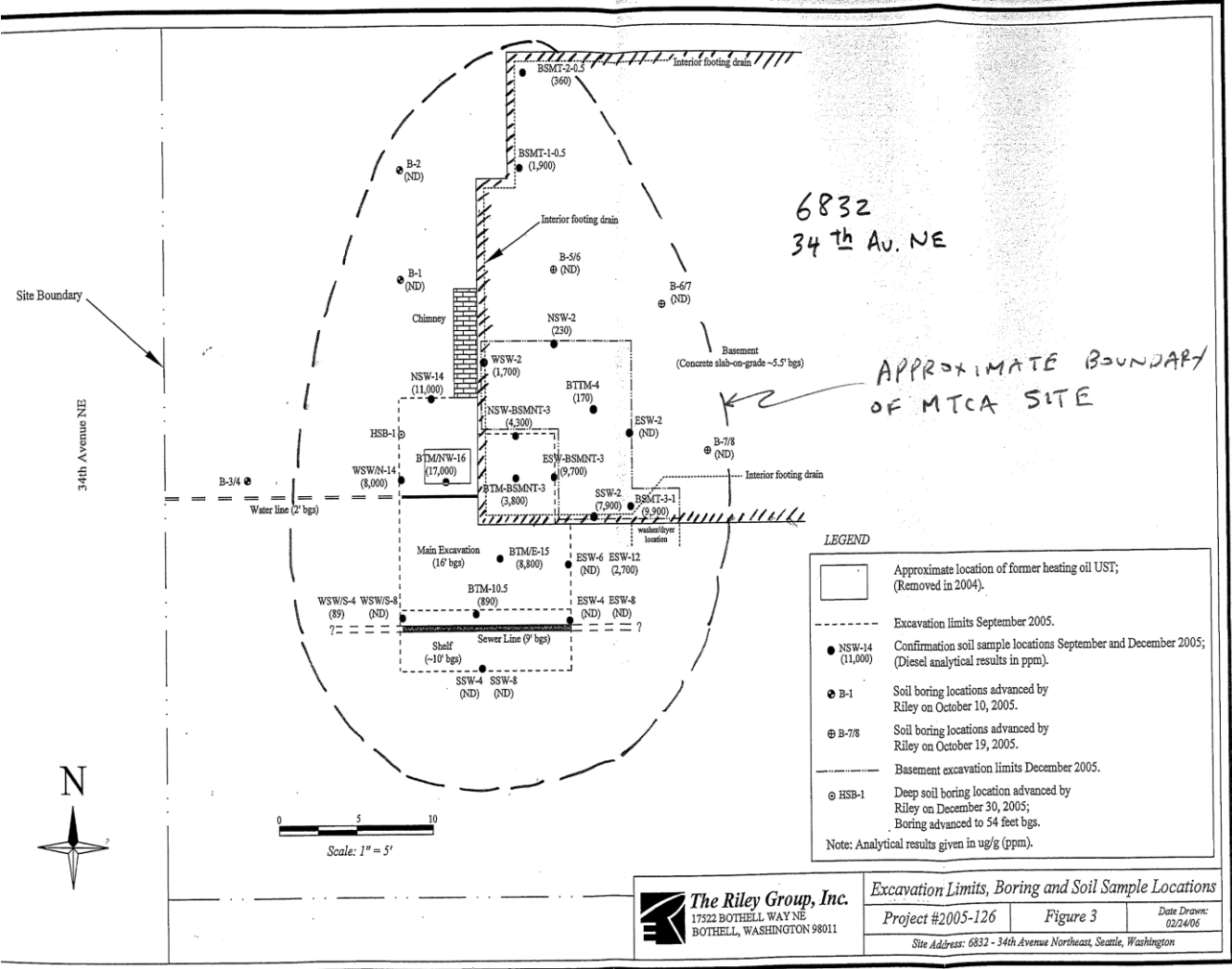
November 20, 2006. Independent Remedial Action Letter Report, Underground Heating Oil Storage Tank Release, 6832 34th Avenue NE, Seattle, Washington, The Riley Group Inc.

6.0 APPENDICES

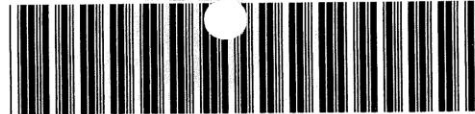
6.1 Vicinity Map



6.2 Site Map



6.3 Environmental Covenant



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J & A PS COV 93.00
PAGE 001 OF 012
07/20/2007 14:21
KING COUNTY, WA

Return Address:

Department of Ecology
Northwest Regional Office
Attn: Mark Adams, Toxics Cleanup Program
3190 160th Avenue S.E.
Bellevue, WA 98008-5452

Please print or type information **WASHINGTON STATE RECORDER'S Cover Sheet (RCW 65.04)**

Document Title(s) (or transactions contained therein): (all areas applicable to your document must be filled in)

1. Environmental Covenant 2. _____
3. _____ 4. _____

Reference Number(s) of Documents assigned or released:

Additional reference #'s on page _____ of document

Grantor(s) (Last name, first name, initials)

1. James Bullard, Molly Bullard James
2. State of WA, Dept. of Ecology - Bullard, Molly

Additional names on page _____ of document.

Grantee(s) (Last name first, then first name and initials)

1. State of WA, Dept. of Ecology, _____
2. _____, _____

Additional names on page _____ of document.

Legal description (abbreviated: i.e. lot, block, plat or section, township, range)

North 37 feet of Lot 15, South 10 ft. of Lot 16, Block 1,
Roosevelt Heights Second Addition

Additional legal is on page _____ of document.

Assessor's Property Tax Parcel/Account Number

741020 0075

☐ Assessor Tax # not yet assigned

The Auditor/Recorder will rely on the information provided on the form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.

Ashley Pedersen

Signature of Requesting Party

After Recording Return to:

Department of Ecology
Northwest Regional Office
Attn: Mark Adams, Toxics Cleanup Program
3190 160th Avenue S.E.
Bellevue, WA 98008-5452

Environmental Covenant

Grantors: James Bullard and Molly Bullard, husband and wife

Grantee: State of Washington, Department of Ecology

Address: 6832 34th Avenue N.E., Seattle, WA 98115

Legal: The North 37 feet of Lot 15, and the south 10 feet of Lot 16, Block 1, Roosevelt Heights Second Addition to the City of Seattle, according to the plat thereof recorded in Volume 33 of Plats, page(s) 37, in King County, Washington.

Tax Parcel Nos.: 741020 0075

Cross Reference: N/A

Grantors, James Bullard and Molly Bullard, husband and wife, hereby bind Grantors, their successors and assigns to the land use restrictions identified herein and grants such other rights under this environmental covenant (hereafter "Restrictive Covenant") made this 20th day of July, 2007 in favor of the State of Washington Department of Ecology ("Ecology") and its successors and assigns. 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)(f) and (g), WAC 173-340-440, and the Uniform Environmental Covenants Act, 2007 Wash. Laws ch. 104, sec. 12.

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document[s]:

- 1) March 27, 2006, Independent Remedial Action Letter, prepared by The Riley Group; and
- 2) November 20, 2006, Independent Remedial Action Letter Report, prepared by The Riley Group.

These documents are on file at Ecology's Northwest Regional Office located at 3190 160th Avenue S.E., Bellevue, WA 98008.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of diesel-range total petroleum hydrocarbons (TPH) remaining on the property, which exceed the Model Toxics Control Act Method A Residential Cleanup Level for soil

established under WAC 173-340-740.

Grantors are the fee owners 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: The North 37 feet of Lot 15, and the south 10 feet of Lot 16, Block 1, Roosevelt Heights Second Addition to the City of Seattle, according to the plat thereof recorded in Volume 33 of Plats, page(s) 37, in King County, Washington.

Grantors make 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. A portion of the Property is underlain by soil contaminated with diesel-range petroleum hydrocarbons. The contaminated soil has been capped as part of the Remedial Action. See Figures 2, 3, 3A and 3B attached hereto. The Owner shall not alter, modify, or remove the existing structure, basement floor, or controlled density fill (CDF) 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. 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 without prior Ecology approval. 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. Should the Owner wish to conduct remodeling or other work in the basement area where the Remedial Action was performed and those activities will involve the disturbance of the concrete basement floor, the Owner shall seek prior written approval from Ecology prior to conducting planned work in that area of the basement. The Owner shall also notify any maintenance workers or contractors of the requirements of this Restrictive Covenant for any work planned or conducted in the area where the Remedial Action was performed. NOTE: these restrictions DO NOT apply in the existing yard area outside of the shaded area shown on Figure 3A attached to this Restrictive Covenant. They also do not apply to near surface gardening or landscaping activities in the existing yard area that occur within the top five feet of the existing land surface.

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. Figures 2, 3, 3A, 3B, 4 and 5 attached to this Restrictive Covenant reflect the area where the Remedial Action occurred on the Property.

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) days 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 including, but not limited to, the soil vapor collection system.

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


Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action, to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

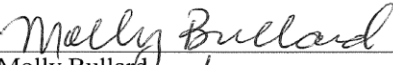
Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public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

Section 9: The Owner shall maintain roof downspouts and surface water drainage to ensure that they drain away from the area where impacted soils remain at depth.

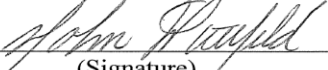
JAMES BULLARD


James Bullard
Dated: 7/20/07

MOLLY BULLARD


Molly Bullard
Dated: 7/20/07

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

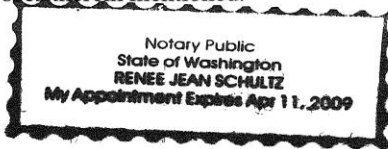

(Signature)
By: For John Wietfeld
For Steve Alexander

Its: _____
Section Manager, Toxics Cleanup
Program, Northwest Regional Office

Dated: July 16, 2007

STATE OF WASHINGTON)
) ss
COUNTY OF KING)

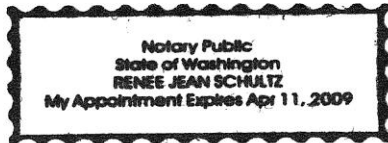
On this 20th day of July, 2007, I certify that James Bullard personally appeared before me, and acknowledged that he is the individual described herein and who executed the within and foregoing instrument and signed the same as his free and voluntary act and deed for the uses and purposes therein mentioned.



Renee Jean Schultz
Notary Public in and for the State of wa
Washington, residing at Seattle.
My appointment expires 4-11-09.

STATE OF WASHINGTON)
) ss
COUNTY OF KING)

On this 20th day of July, 2007, I certify that Molly Bullard personally appeared before me, and acknowledged that she is the individual described herein and who executed the within and foregoing instrument and signed the same as her free and voluntary act and deed for the uses and purposes therein mentioned.

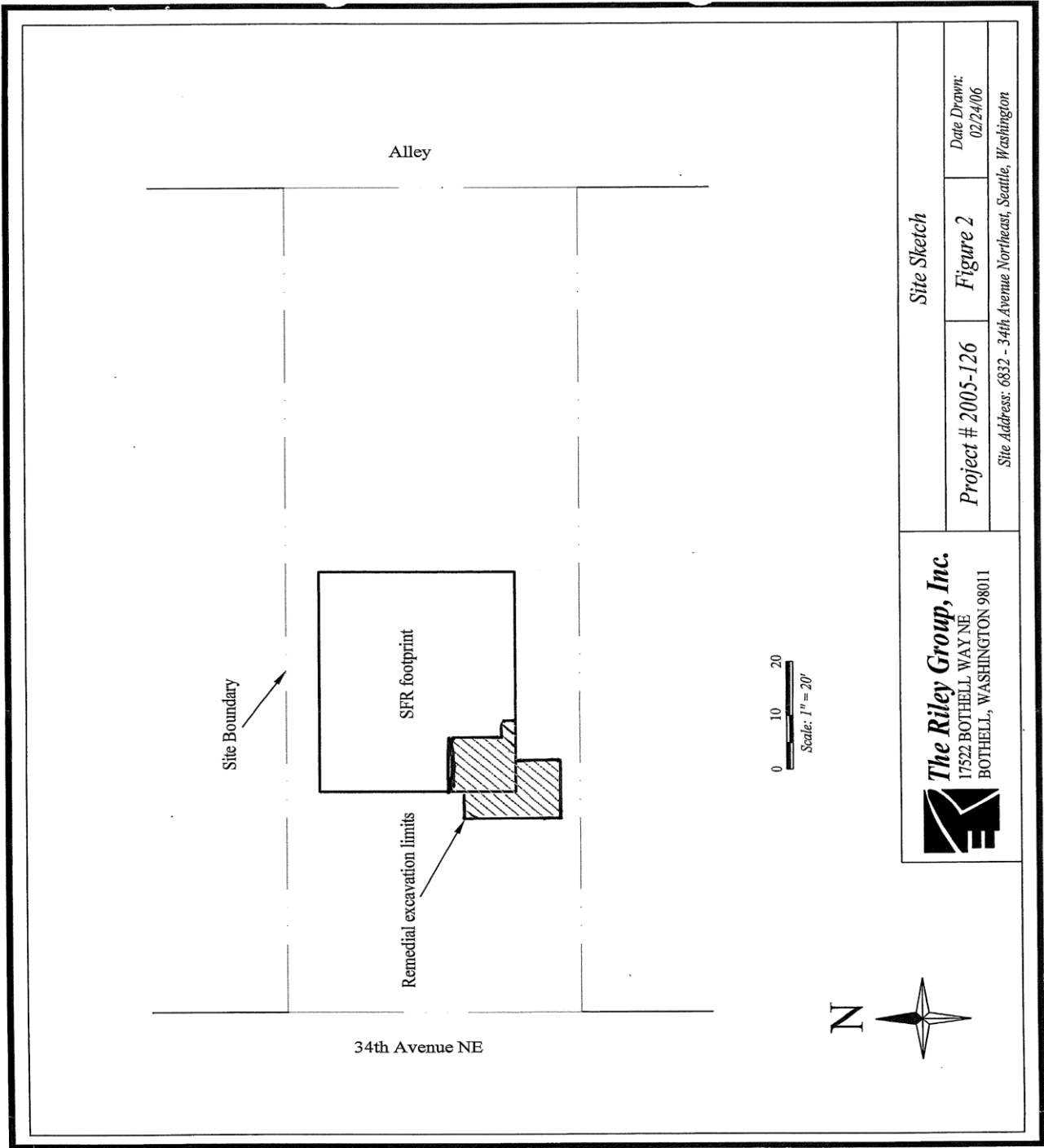


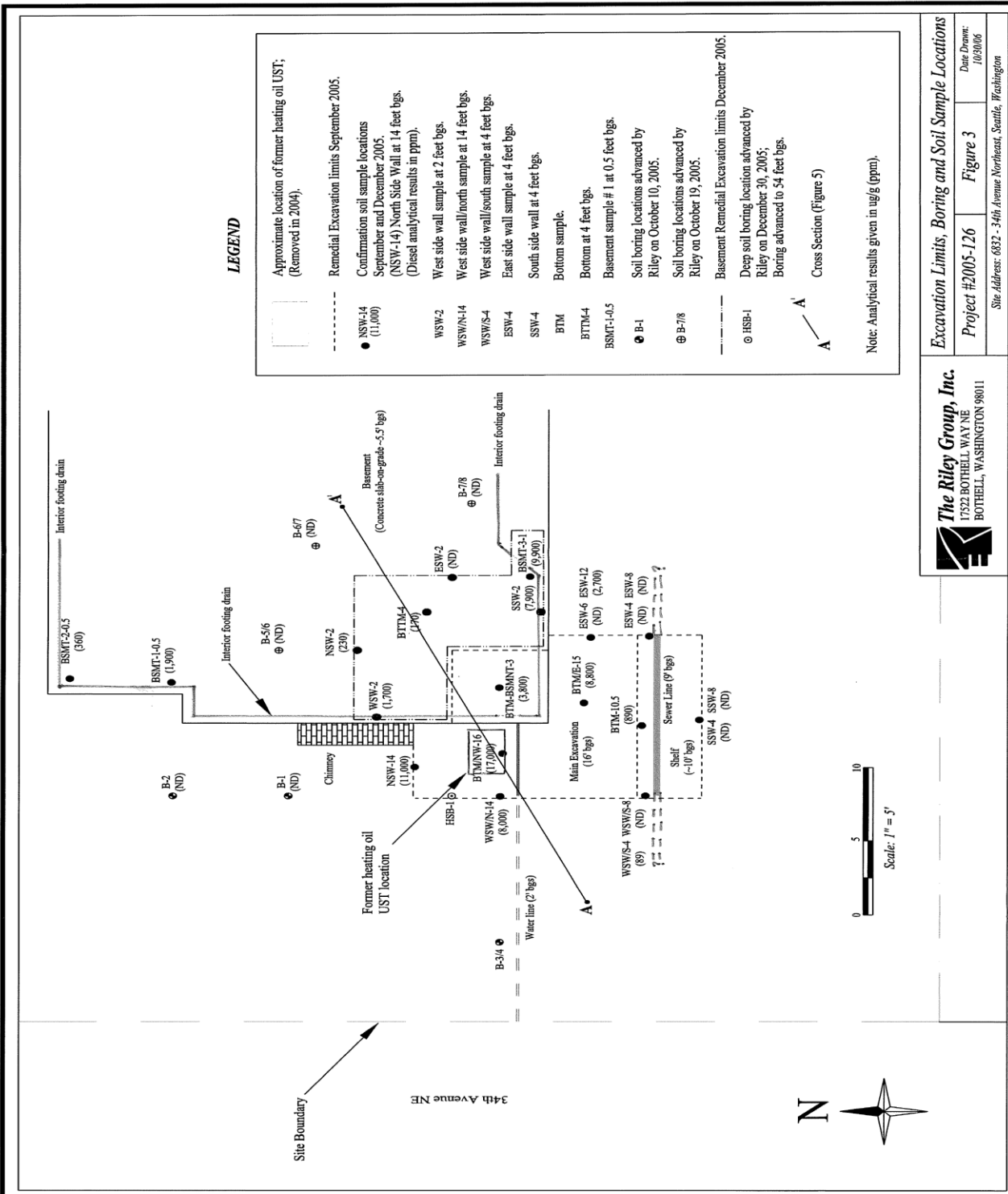
Renee Jean Schultz
Notary Public in and for the State of wa
Washington, residing at Seattle.
My appointment expires 4-11-09.

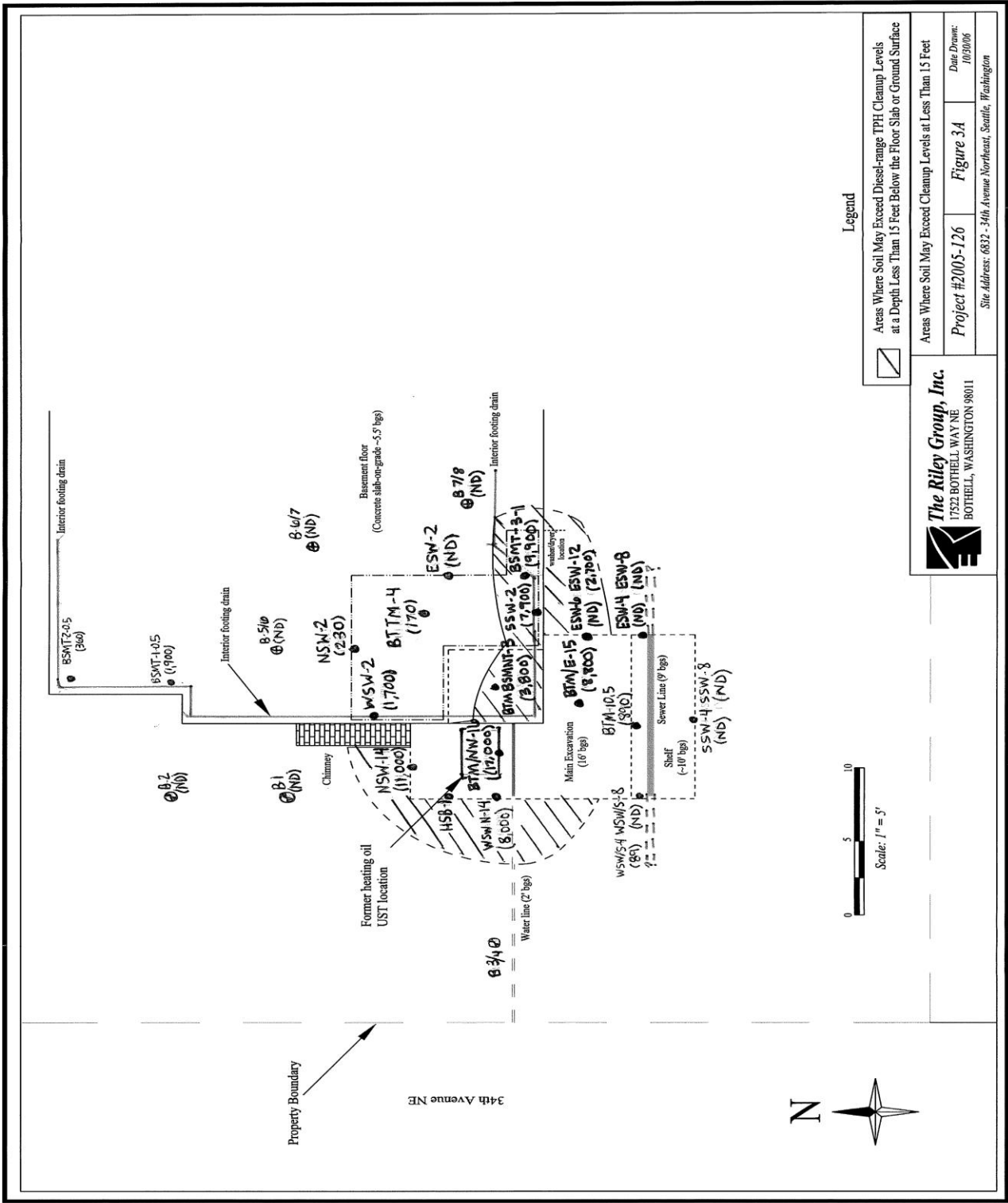
Exhibit A
Legal Description

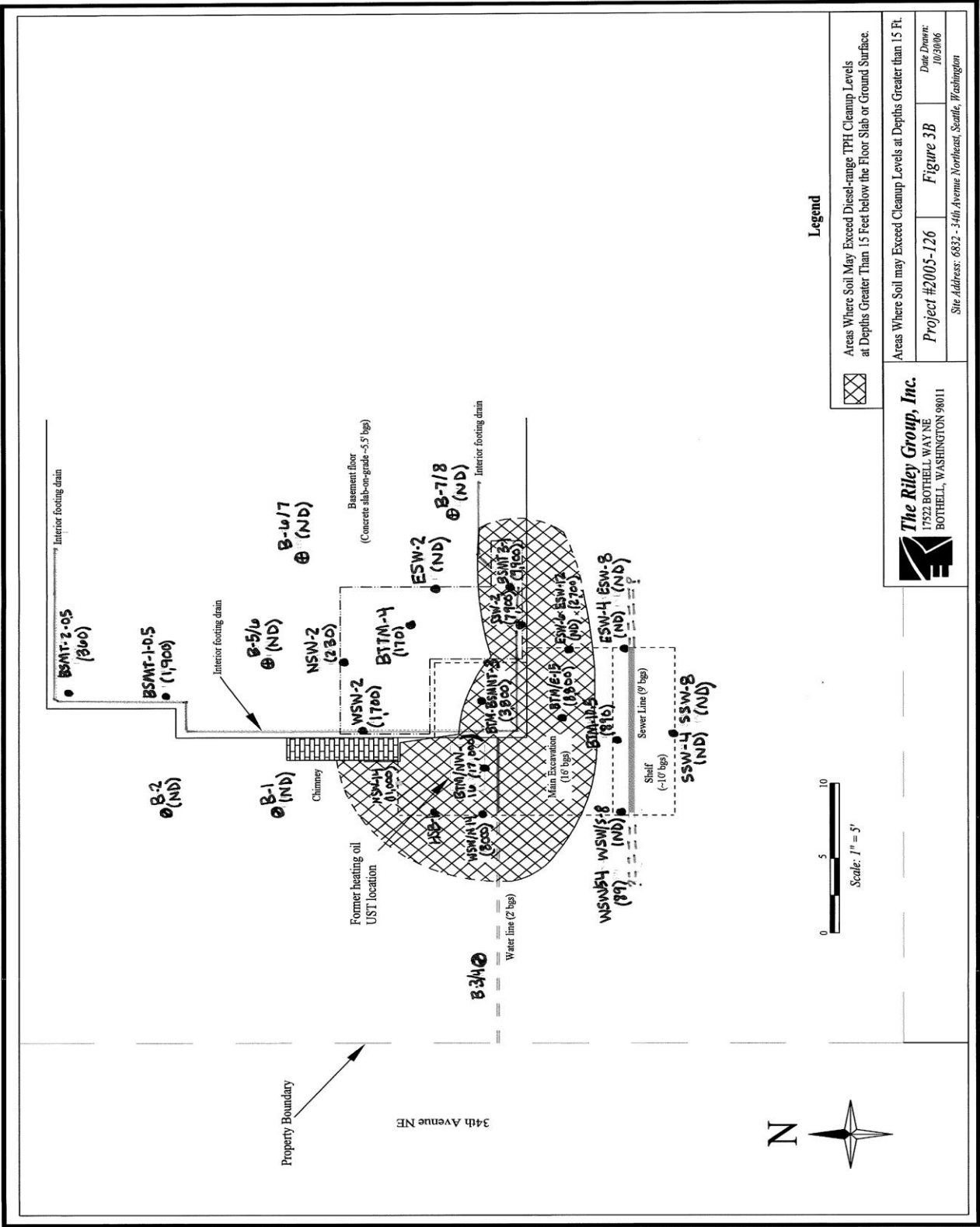
RECORDS OF KING COUNTY, WASHINGTON
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON

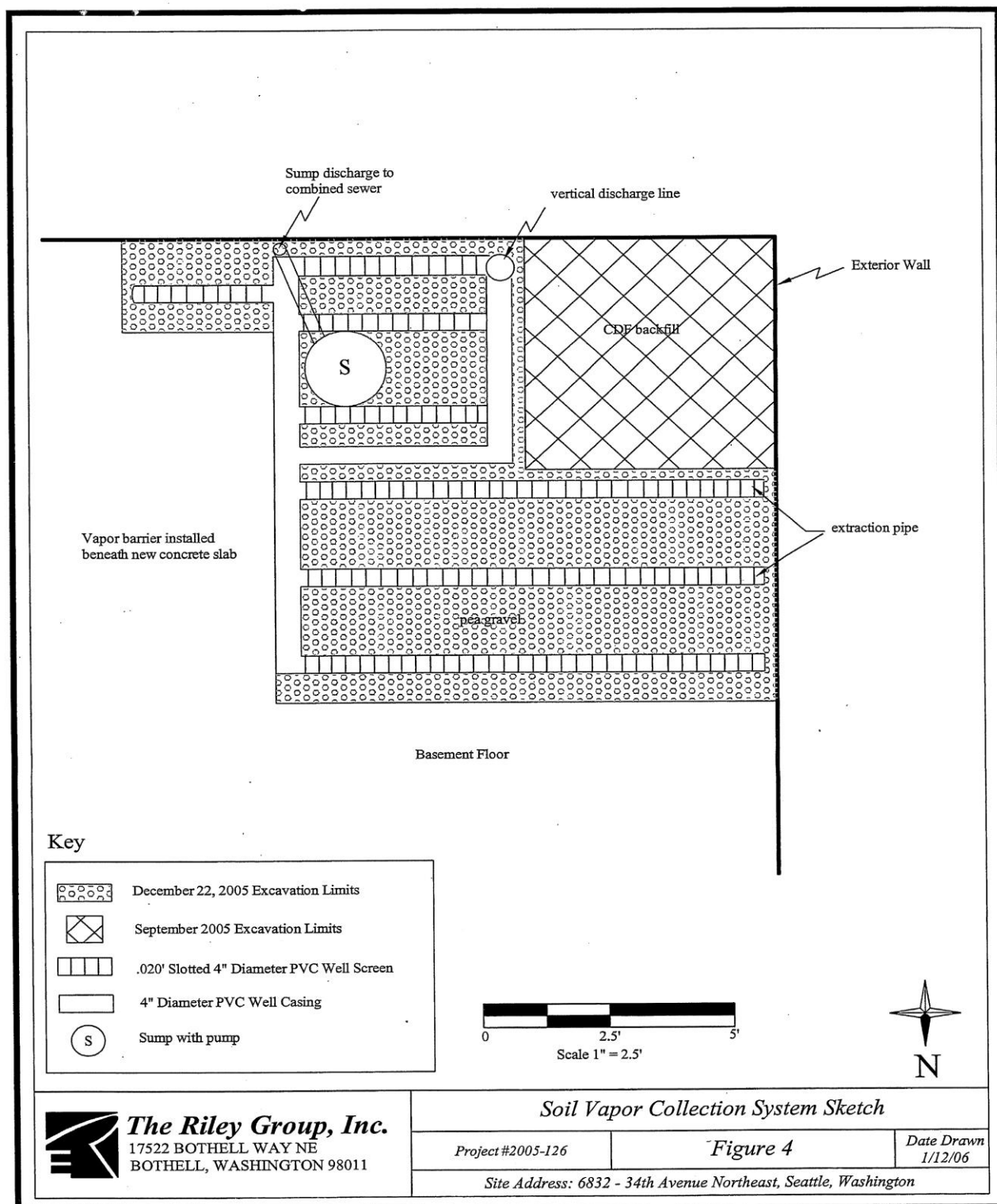
The North 37 feet of Lot 15, and the south 10 feet of Lot 16, Block 1, Roosevelt Heights Second Addition to the City of Seattle, according to the plat thereof recorded in Volume 33 of Plats, page(s) 37, in King County, Washington.

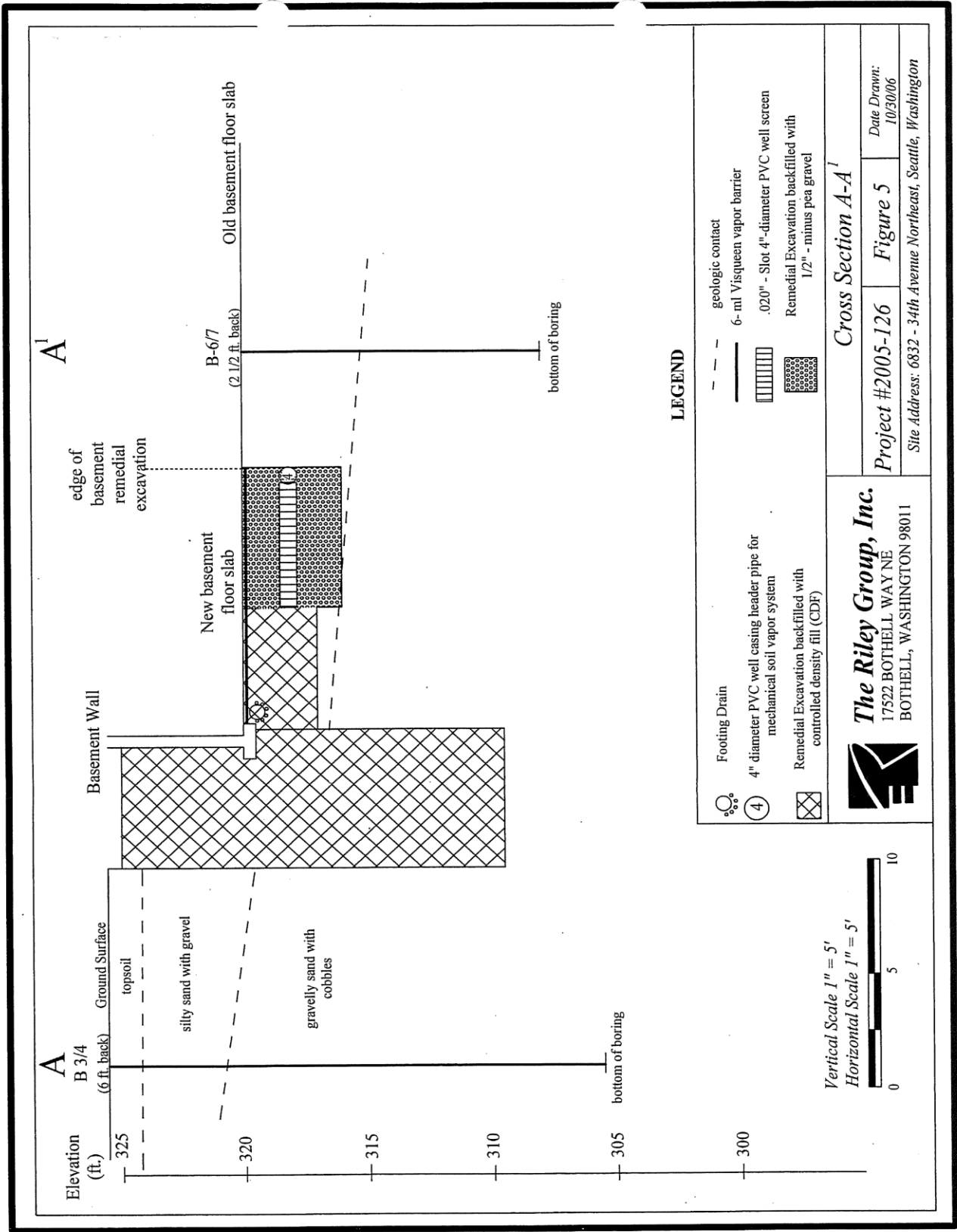












6.4 Photo Log

Photo1: The west side of the house abutting 34th Ave NE. – from the west



Photo2: The southwest corner of the basement and the sump



Photo 3: The fan inside the basement

