



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

December 17, 2009

Mr. David Copenhaver
Gramor Development, Inc.
19767 SW 72nd Avenue, Suite 100
Tualatin, OR 97062

Re: No Further Action at the following Site:

- **Site Name:** Astro Western Station #607
- **Site Address:** 13117 NE Highway 99, Vancouver
- **Facility/Site No.:** 69431927
- **VCP Project No.:** SW0821

Dear Mr. Copenhaver:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the former Astro Western Station #607 facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Gasoline-range petroleum hydrocarbons (TPH-G) into the Soil and Groundwater.

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Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Environmental Covenant for Clark County Tax Parcel #186742-000. Filed with Clark County on 10/8/09 under Recording #4609176.
2. Sampling and Analysis Plan, Center Square South, Former Astro No. 607, 13117 NE Highway 99, Vancouver, Washington, dated August 4, 2009 by Kleinfelder.
3. Letter to Mr. David Copenhaver (Gramor Development, Inc.) from Mr. Scott Rose (Ecology), RE: Opinion on Proposed Cleanup. Dated June 18, 2009.
4. First Quarter 2009 Groundwater Monitoring Report, Mears Gramor - Center Square - South, NE 20th Avenue and NE Highway 99, Astro #607 – Trail Mart, Vancouver, Washington, dated April 27, 2009 by Kleinfelder.
5. Letter from Mr. Peter L. Stroud (Kleinfelder) to Mr. Scott Rose (Ecology), RE: Follow-up Comments on April 16, 2009 Meeting, dated May 13, 2009.
6. Feasibility Study and Disproportionate Cost Analysis, Center Square South, Former Astro No. 607, 13117 NE Highway 99, Vancouver, Washington, dated February 23, 2009 by Kleinfelder.
7. Supplemental Site Characterization Report, Gramor – Center Square, NE 20th Avenue and NE Highway 99, Lil' Colonel Drive-In – Ecology Site #50743515, Astro #607 – Trail Mart – Ecology Facility #5995, Vancouver, Washington, dated May 12, 2005 by Kleinfelder.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

Investigations conducted at the Site between 1996 and 2009 have characterized the extent of residual contamination, which consists of an isolated pocket of TPH-G in soil and groundwater identified in boring KAB-01. Samples collected to date have been analyzed in accordance with MTCA Table 830-1. Based on the available data from surrounding monitoring wells, the groundwater gradient beneath the Site is fairly flat and the residual contamination appears to be stable and not migrating beyond the property boundaries. Concentrations of TPH-G identified at this location include 76.1 milligrams per kilogram (mg/kg) in soil at about 20 feet below ground surface (bgs), and 6,890 micrograms per liter ($\mu\text{g/L}$) in a grab groundwater sample. The location of this boring was through the former tank nest, which is now covered by a newly constructed building. TPH-G has not been identified in groundwater in former and current monitoring wells located downgradient of this boring.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

MTCA Method A cleanup levels for unrestricted land use were used at the Site.

Standard points of compliance have been established for the Site. The point of compliance for protection of groundwater will be established in the soils throughout the Site. For 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 shall be established in the soils throughout the Site from the ground surface to 15 feet bgs.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

Cleanup actions conducted to date have included a combination source removal via dig and haul of impacted soil, in-situ bioremediation, monitored natural attenuation, and the capping of residual impacted soil in place under an environmental covenant.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site. This determination is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

Refer to **Enclosure A** for details on cleanup actions conducted at the Site.

Post-Cleanup Controls and Monitoring

Post-cleanup controls and monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

1. Compliance with institutional controls.

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional controls are necessary at the Site:

- Restrictions on land and ground water use.
- Long-term monitoring of the groundwater.

To implement those controls, an Environmental Covenant has been recorded on the following parcel of real property in Clark County:

- 186742-000.

Ecology approved the recorded Covenant. A copy of the Covenant is included in **Enclosure B**.

2. Performance of confirmational monitoring.

Confirmational monitoring is necessary at the Site to confirm the long-term effectiveness of the cleanup. The monitoring data will be used by Ecology during periodic reviews of post-cleanup conditions. Ecology has approved the monitoring plan you submitted. A copy of the plan is included in **Enclosure B** as an attachment to the Covenant.

Periodic Review of Post-Cleanup Conditions

Ecology will conduct periodic reviews of post-cleanup conditions at the Site to ensure that they remain protective of human health and the environment. If Ecology determines, based on a periodic review, that further remedial action is necessary at the Site, then Ecology will withdraw this opinion.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List and Leaking Underground Storage Tank List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you

Mr. David Copenhaver
December 17, 2009
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performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW0821).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (360) 407-6347 or e-mail at sros461@ecy.wa.gov.

Sincerely,



Scott Rose, L.G.
Acting Unit Manager
SWRO Toxics Cleanup Program

SIR/ksc: Astro Western 607 Site NFA

Enclosures (2): A – Description and Diagrams of the Site
B – Environmental Covenants for Institutional Controls and Confirmational Monitoring Plan

By certified mail: (7009 1410 0002 4420 0334)

cc: Peter Stroud - Kleinfelder, Inc.,
Bryan DeDoncker – Environmental Health Specialist, Clark County Health Department,
Paul Turner – Ecology
Dolores Mitchell – Ecology (w/o enclosures)

Enclosure A

Description and Diagrams of the Site

Site Description

The former Astro Western Station #607 is located at 13117 NE Highway 99 in Vancouver, Clark County, Washington. The site is located in a commercial district of Vancouver, and is bounded to the north by the Lil Colonel Drive In site (VCP# SW0820), to the southwest by Highway 99, and to the east by NE 20th Avenue. The site currently consists of various new retail outlets constructed where the former Trail Mart convenience store building was located.

Native soils encountered during site exploration generally consisted of unconsolidated clay, silt, and fine sand below fill materials to the maximum depth explored of 28 feet below ground surface (bgs). Groundwater occurs beneath the site at about 18 to 21 feet bgs, and the direction of groundwater flow fluctuates from the north to the northeast.

Site History

Reportedly, since the mid-1970s, the site was formerly occupied by a service station and convenience store. WSCO Petroleum Corporation (WSCO) assumed ownership of the site in 1985. Other parties reportedly owned and operated the site for at least 10 years prior to WSCO. In February 1996, three underground storage tanks (USTs) were excavated and removed from the site. According to the Ecology database, these USTs consisted of two 6,000-gallon and one 10,000-gallon USTs all containing gasoline. These USTs were replaced with one 15,000-gallon UST and one 8,000-gallon UST, also containing gasoline. Both USTs were removed in 2004.

During UST commissioning activities in 1996, gasoline-impacted soil was determined to exist beneath the fuel dispenser and one of the USTs. While excavating contaminated soil at the site, groundwater was encountered and determined to also be impacted. A majority of the contaminated soil was hauled off site for thermal treatment; however, residual contaminated soil still existed. At the time, four monitoring wells (MW-1 through MW-4) were installed to further assess groundwater quality.

Initial laboratory results collected from the monitoring wells in February 1996 indicated that gasoline-range petroleum hydrocarbons (TPH-G), lead, 1,2-dichloroethane (EDC), 1,2-dibromoethane (EDB), and benzene, toluene, ethylbenzene, and xylene (BTEX) compounds were present in groundwater beneath the site above MTCA Method A cleanup levels. Quarterly groundwater monitoring continued through May 1998 and only EDC continued to be detected above MTCA Method A cleanup levels.

In July 1999, in-situ biodegradation of EDC in groundwater was attempted at the site. Oxygen-releasing compound (ORC) in the form of a sock containing magnesium peroxide was installed in MW-1. Because no measurable effect was observed during the February 2000 sampling event, use of ORC at the site was discontinued. Reportedly, the site has been undergoing natural attenuation since February 2000.

In April 2005, a Supplemental Site Characterization was conducted by Kleinfelder for Gramor Development, Inc., the current owner of the site. The investigation included the former Astro Western Station site and the former Lil Colonel Drive In site to the north. A total of nine soil borings were advanced throughout both sites. Five of the soil borings were completed as monitoring wells (KMW-01 through KMW-05). Two of the soil borings (KAB-01 and KAB-02) and two of the monitoring wells (KMW-01 and KMW-02) were installed on the Astro Western Station site. Existing monitoring wells,

MW-1 through MW-3, were identified during the investigation; however, MW-4 was not noted. KMW-2 was installed in the vicinity of the former location of MW-4.

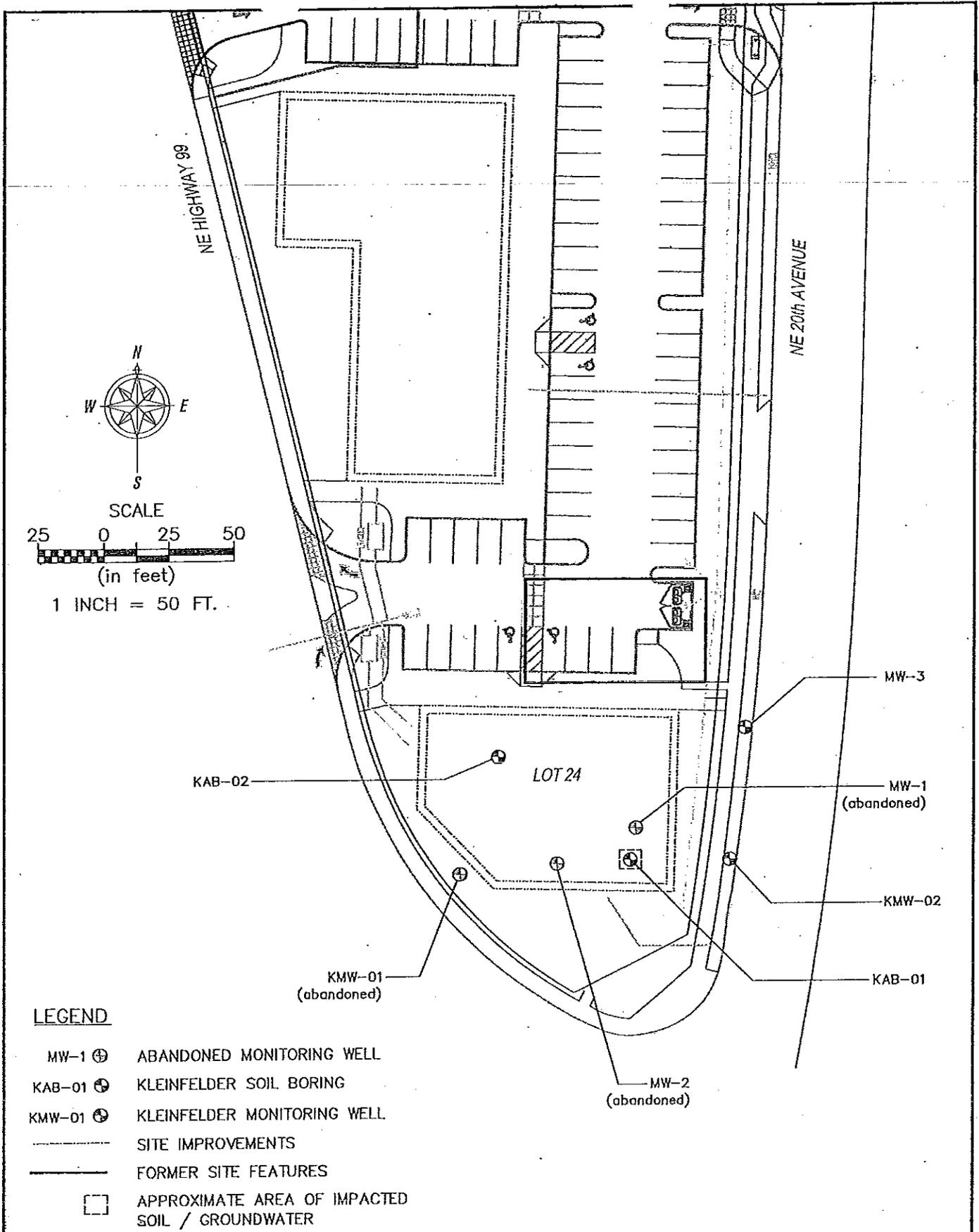
All soil samples were analyzed for hydrocarbon identification (HCID). Gasoline was detected in one soil sample (KAB-01-20'), and the sample was further analyzed for TPH-G by Ecology Method NWTPH-Gx. TPH-G was present in the sample at 76.1 milligrams per kilogram (mg/kg). The soil samples were not analyzed for any other contaminants.

Groundwater samples collected from the monitoring wells and soil borings were analyzed for TPH-G by Ecology Method NWTPH-Gx, volatile organic compounds (VOCs) by EPA Method 8260B, and selected samples for total lead by EPA Method 6010A/6020. Analytical results indicated the presence of TPH-G and lead in groundwater above MTCA Method A cleanup levels. EDC was detected but below cleanup levels. TPH-G was detected in KAB-01 at 6,809 micrograms per liter ($\mu\text{g/L}$), and lead was detected in KAB-01, KMW-01, and KMW-02 at 47.1 $\mu\text{g/L}$, 438 $\mu\text{g/L}$, and 234 $\mu\text{g/L}$, respectively. Kleinfelder reported that the elevated lead concentrations were likely due to high turbidity noted in the samples submitted for analysis.

In November 2005, monitoring wells KMW-01, KMW-02, MW-1, and MW-3 were sampled and analyzed for TPH-G, VOCs, and total and dissolved lead. MW-2 was not sampled. Prior to sampling, wells KMW-01 and KMW-02 were redeveloped to reduce the turbidity in the samples. Total lead results for these wells decreased significantly to 0.317 $\mu\text{g/L}$ and 0.53 $\mu\text{g/L}$, respectively. Total lead was detected in MW-3 at 18.3 $\mu\text{g/L}$, which exceeds the MTCA Method A cleanup level of 15 $\mu\text{g/L}$. No other contaminants were detected above MTCA Method A cleanup levels.

At some point, monitoring wells KMW-01 and MW-1 were destroyed during site redevelopment; however, monitoring continued for wells KMW-02 and MW-3. Seven additional rounds of monitoring were conducted between February 2007 and February 2009. Samples were analyzed for TPH-G, VOCs, and total and dissolved lead. No contaminants were detected in the samples above MTCA Method A cleanup levels.





| | | | |
|-------------------------|--------------------|--|--------------------|
| | PROJECT NO. 102657 | SITE PLAN WITH WELL LOCATIONS | FIGURE 2 |
| | DRAWN: 09/09 | | |
| | DRAWN BY: TLK | GRAMOR CENTER SQUARE NE 20th AVENUE & NE HIGHWAY 99 VANCOUNVER, WASHINGTON | |
| | CHECKED BY: CW | | |
| FILE NAME: 102657F2.dwg | | | |

Enclosure B

**Environmental Covenants
for Institutional Controls
and
Confirmational Monitoring Plan**





October 8, 2009

RECEIVED

OCT 15 2009

DEPARTMENT OF ECOLOGY

Scott Rose
Acting Unit Manager
SWRO Toxics Cleanup Program
Department of Ecology
PO Box 47775
Olympia, WA 98504-7775

RE: Mears Gramor LLC

Enclosed please find one (1) copy of the Environmental Covenant regarding above referenced location. Please have this document fully executed and return a copy to the Gramor office.

Sincerely,
Gramor Development Inc.

Ryan Cain
Ryan Cain
Project Manager

RC:ls.



4609176 LOV

RecFee - \$72.00 Pages: 11 - MEARS GRAMOR LLC
Clark County, WA 10/08/2009 11:09



RECEIVED

OCT 15 2009

DEPARTMENT OF ECOLOGY

After Recording Return to:
Scott Rose
Acting Unit Manager
SWRO Toxics Cleanup Program
Department of Ecology
PO Box 47775
Olympia, WA 98504-7775

Environmental Covenant

Grantor: Mears Gramor LLC
Grantee: State of Washington, Department of Ecology
Legal: #251 SEC 26 T3NR1EWM 2.32A
Tax Parcel No.: 186742-000
Cross Reference:

Grantor, Mears Gramor LLC, hereby binds Grantor, its successors and assigns to the land use restrictions identified herein and grants such other rights under this environmental covenant (hereafter "Covenant") made this 10th day of September, 2009 in favor of the State of Washington Department of Ecology (Ecology). Ecology shall have full right of enforcement of the rights conveyed under this Covenant pursuant to the Model Toxics Control Act, RCW 70.105D.030(1)(g), and the Uniform Environmental Covenants Act, 2007 Wash. Laws ch. 104, sec. 12.

This Declaration of Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Mears Gramor LLC, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

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



1. Supplemental Site Characterization Report, May 12, 2005, prepared by Kleinfelder.
2. Feasibility Study and Disproportionate Cost Analysis, February 23, 2009, prepared by Kleinfelder.
3. First Quarter 2009 Groundwater Monitoring Report, April 27, 2009, prepared by Kleinfelder.

These documents are on file at Ecology's Olympia Office.

This Covenant is required because the Remedial Action resulted in residual concentrations of gasoline-range petroleum hydrocarbons that exceed the Model Toxics Control Act Method A Cleanup Level for soil established under WAC 173-340-900. As such, a conditional point of compliance has been established for groundwater at the site.

The undersigned, Mears Gramor LLC, is the fee owner of real property (hereafter "Property") in the County of Clark, State of Washington, that is subject to this Covenant. The Property is legally described in Exhibit A.

Mears Gramor LLC makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1.

1. No groundwater may be taken for any use from the Property.
2. A portion of the Property contains gasoline-contaminated soil located under the eastern portion of the southernmost building on the site. The Owner shall not alter, modify, or remove the existing structure[s] 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. As part of this Covenant, long-term monitoring of the groundwater at conditional points of compliance is required to ensure that the residual contaminated soil does not impact groundwater over time. The groundwater shall be monitored at a frequency of every 18 months to account for seasonal variations. The Sampling and Analysis Plan detailing monitoring requirements is included as Exhibit B.



Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

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

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

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

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

Mears Gramor LLC, Washington limited liability company
By: Gramor MBV LLC, a Washington limited liability company
By: Gramor Investments, Inc., an Oregon corporation

By: 
Barry A. Cain, President

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Rebecca S. Lawson

Rebecca S. Lawson, P.E., LHG

Section Manager

Toxics Cleanup Program

Southwest Regional Office

Dated: 9/30/2009



[INDIVIDUAL ACKNOWLEDGMENT]

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20____, I certify that _____ personally appeared before me, and acknowledged that he/she is the individual described herein and who executed the within and foregoing instrument and signed the same at his/her free and voluntary act and deed for the uses and purposes therein mentioned.

Notary Public in and for the State of
Washington, residing at _____
My appointment expires _____

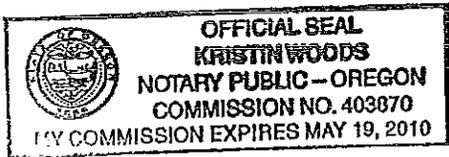
[CORPORATE ACKNOWLEDGMENT]

STATE OF OREGON
COUNTY OF WASHINGTON

On this 10th day of September, 2009, I certify that BARRY A. CAIN personally appeared before me, acknowledged that he is the PRESIDENT of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument for said corporation.

Kristin Woods

Notary Public in and for the State of
Oregon Washington, residing at
Portland
My appointment
expires May 19, 2010.



OFFICE OF THE
ATTORNEY GENERAL
SAN JUAN, P.R.
JAN 15 1968

EXHIBIT "A"
LEGAL DESCRIPTION
"CENTER SQUARE"

A parcel of property situated in the Northwest quarter of Section 26, Township 3 North, Range 1 East of the Willamette Meridian in Clark County, Washington, described as follows:

COMMENCING at the Northeast corner of the Northwest quarter of said Section 26;

THENCE South $01^{\circ} 38' 18''$ West along the East line of said Northwest quarter a distance of 1383.00 feet;

THENCE North $88^{\circ} 21' 42''$ West a distance of 248.81 feet to the most Northerly point of that parcel vacated and conveyed to The Holland, Inc. by document recorded under Auditor's File No. 3983895, Clark County Deed Records and the TRUE POINT OF BEGINNING.

THENCE South $41^{\circ} 54' 24''$ West along the West line of said vacated parcel a distance of 75.72 feet to a point on a 469.00 foot radius curve to the left with a tangent bearing of South $06^{\circ} 24' 47''$ East into the curve at this point;

THENCE continuing along said West line around said 469.00 foot radius curve to the left a distance of 60.20 feet;

THENCE South $13^{\circ} 46' 02''$ East along said West line a distance of 367.91 feet to a point on a 169.00 foot radius curve to the left;

THENCE continuing along said West line around said 169.00 foot radius curve to the left a distance of 137.19 feet to the most Southerly point of said road vacation;

THENCE North $63^{\circ} 30' 16''$ East along the South line of said road vacation and the Easterly extension thereof a distance of 49.23 feet to the Westerly right-of-way line of N.E. 20th Avenue, said point being 50.00 feet from, when measured at right angles to the centerline thereof, as described in Exhibit "B" of that document recorded under Auditor's File No. 3972148, Clark County Deed Records, said point being on a 1350.00 foot radius curve to the left with a tangent bearing of North $08^{\circ} 57' 30''$ East into the curve at this point;

THENCE along said Westerly right-of-way line around said 1350.00 foot radius curve to the left a distance of 172.47 feet;

THENCE North $01^{\circ} 38' 18''$ East continuing along said Westerly right-of-way line a distance of 336.09 feet to a point on a 25.00 foot radius curve to the left;

THENCE continuing along said Westerly right-of-way line around said 25.00 foot radius curve to the left a distance of 37.98 feet to a point on the North line of that parcel conveyed to The Holland, Inc. as described in Exhibit "A"1 recorded under Auditor's File No. 3972148, Clark County Deed Records;

THENCE North $85^{\circ} 23' 50''$ West along the North line of said The Holland, Inc. parcel a distance of 125.56 feet to an angle point;

THENCE North $73^{\circ} 54' 17''$ West continuing along said North line and the Easterly extension thereof a distance of 51.34 feet to the TRUE POINT OF BEGINNING.



TRUE POINT OF BEGINNING

N.E. 134th ST.

S 06°24'47" E
TANGENT BRG.

S 41°54'24" W
75.72

N 85°23'50" W 125.56'

$\Delta=87^{\circ}02'08''$
R=25.00'
L=37.98'

N 73°54'17" W
51.34'

$\Delta=07^{\circ}21'16''$
R=469.00'
L=60.20'

N.E. HIGHWAY 99

S 13°46'02" E 367.91'

N 01°38'18" E 336.09'

N.E. 20th AVENUE

$\Delta=07^{\circ}19'11''$
R=1350.00'
L=172.47'

$\Delta=46^{\circ}30'43''$
R=169.00'
L=137.19'

N 63°30'16" E
49.23'

TANGENT BRG.
N 08°57'30" E



NOT TO SCALE





9200 SW Nimbus Avenue, Suite A
Beaverton, OR
97008-4322

p| 503.644.9447
f| 503.643.1905
kleinfelder.com

August 4, 2009

Kleinfelder Project No.: 102657

Scott Rose, L.G.
Acting Unit Manager
Washington Department of Ecology
Toxics Cleanup Program
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Subject: **SAMPLING AND ANALYSIS PLAN
CENTER SQUARE SOUTH:
FORMER ASTRO NO. 607
13117 NE HIGHWAY 99
VANCOUVER, WASHINGTON
FACILITY/SITE NO. 6943927
VCP FILE NO. SW0821**

Dear Mr. Rose:

The following letter represents the proposed long term sampling and analysis plan prepared for the above aforementioned site, which is owned by Mears Gramor, LLC. This plan has been prepared based on comments received in the Washington Department of Ecology (Ecology) opinion letter dated June 18, 2009. The plan is being submitted in conjunction with the environmental covenant which is intended to restrict groundwater use at the site.

SAMPLING PLAN

The purpose of groundwater sampling at the site is to provide continued monitoring of compliance points which are two wells that are downgradient of a pocket of groundwater contamination at the site. The monitoring will confirm that potential contamination at the site remains isolated on the property. Samples will be collected from wells KMW-02 and MW-3 every 18 months in order to account for seasonal variations. The first sampling event will occur in August of 2009. The second sampling event will occur in



February 2011.

SITE ASSESSMENT METHODS

WATER LEVEL MEASUREMENTS

Water level measurements will be referenced to the surveyed elevation at the top of each monitoring well casing. For each monitoring event, the static water level will be measured in each monitoring well to an accuracy of 0.01 foot using an electronic water level indicator. The instrument emits a steady tone when the probe encounters water. The probe will be lowered into the well until the instrument detects water.

MONITORING WELL SAMPLING

Kleinfelder personnel will sample each groundwater monitoring well in accordance with the following protocol:

- The height of the water column within the well will be calculated by subtracting the depth to water from the total depth of the well. The volume of this water column will be calculated using the relationship $V = 3.142r^2h$, where V is the volume of water in cubic feet, r is the radius of the well in feet, and h is the height of the water column in feet.
- Prior to collecting groundwater samples, the monitoring wells will be purged using one or a combination of the following equipment: 1) a non-dedicated, disposable polyethylene bailer for each well, or 2) a PVC, submersible electric pump fitted with new, disposable PVC tubing replaced at each well location. At least three casing volumes of groundwater will be removed, unless the wells are purged dry, and then they will be allowed to recover, prior to collecting groundwater samples. Temperature, pH, and specific conductivity will be monitored during well purging. Standards of known pH will be used to calibrate the field meter prior to use.
- The contract laboratory will prepare sample containers to conform to EPA-recommended preservation techniques for the analyte of concern.
- Groundwater samples will be collected with new, clean, disposable polyethylene bailers from each well (the same bailer used to purge the well, if applicable). Sample containers will only be open as long as necessary to collect the samples.
- Each sample container will be labeled with a unique sample number, date, time, and project number, and stored in an ice-chilled cooler for shipment to the analytical laboratory. Chain-of-custody procedures will be used for documenting sample handling.
- To reduce the potential for cross-contamination, non-disposable developing and sampling equipment will be washed in a trisodium phosphate solution and rinsed with distilled water. New, disposable nitrile gloves will be worn and replaced at each well location, and changed as often as necessary.





SAMPLE ANALYSIS

Groundwater samples will be submitted for laboratory analysis for:

- Gasoline, by Northwest Method Total Petroleum Hydrocarbons (NWTPH-Gx).

CONTINGENCY PLAN

If analytical results indicate that impacts to groundwater were detected which exceed Model Toxics Control Act (MTCA) Method A cleanup levels, then additional remedial action may be necessary. If impacts to groundwater are detected that exceed MTCA Method A cleanup levels, groundwater monitoring will be conducted on a quarterly frequency. Due to the varying site characteristics, remedial approaches will be assessed at the time an exceedance of the MTCA Method A cleanup level is detected. A possible remedial approach may be the use of dual-phase extraction to pump groundwater out of the effected area.

REPORTING

A letter report will be prepared following each sampling event. The report will present the data collected along with conclusions and recommendations. A copy of the monitoring report will be submitted to Ecology.

DURATION

Mears Gramor, LLC, requests that Ecology conduct a 5-year review in 2014 to assess if the monitoring frequency can be reduced or discontinued based on the groundwater data.

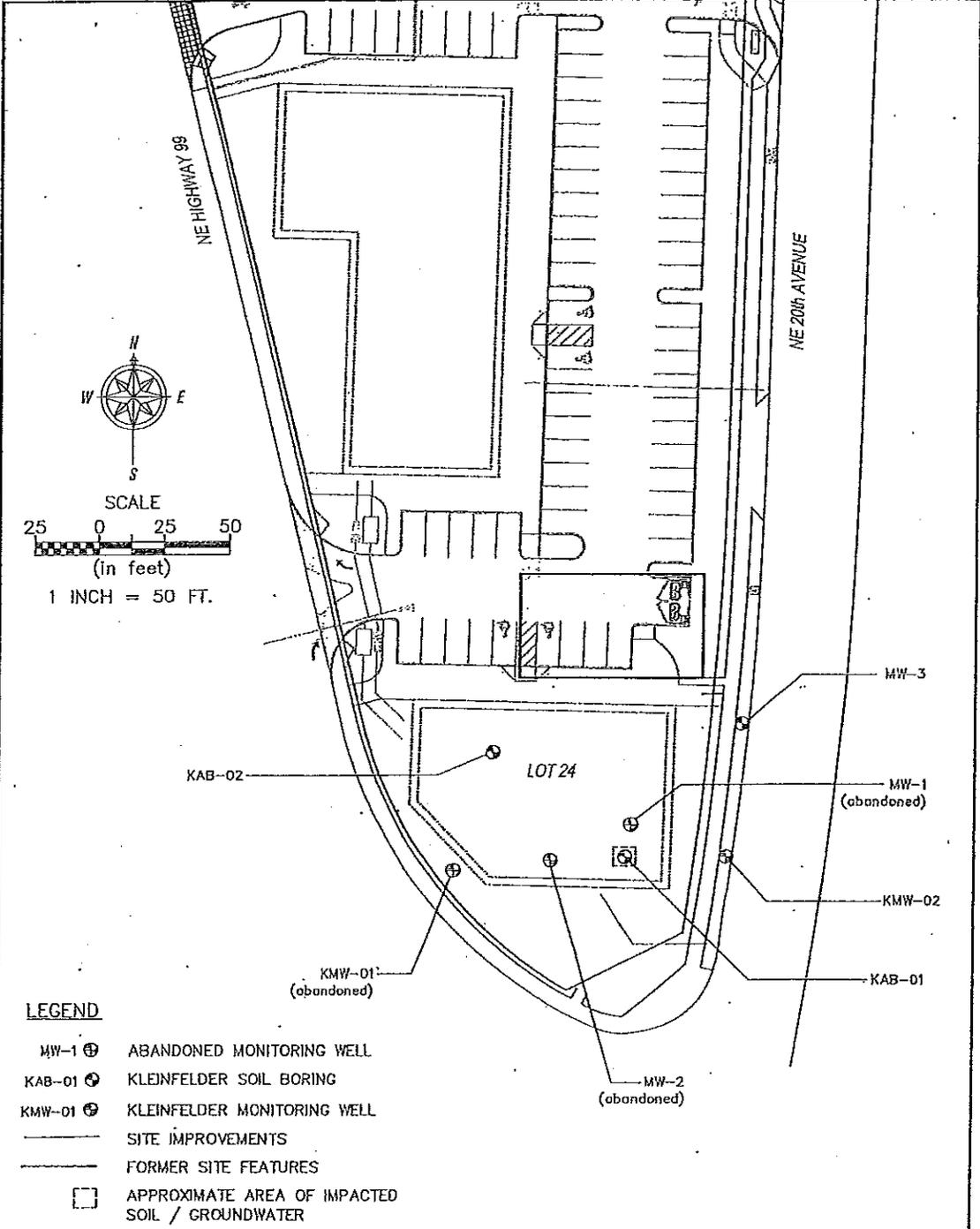
CLOSING

The groundwater monitoring described in this workplan will be conducted to support the Environmental Covenant recorded for the property.

Sincerely,
Kleinfelder West, Inc.

Peter L. Stroud, L.E.G.
Principal Engineering Geologist





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|-------------------------|--------------------|--|------------------------|
| | PROJECT NO. 102657 | SITE PLAN WITH WELL LOCATIONS GRAMOR CENTER SQUARE NE 20th AVENUE & NE HIGHWAY 99 VANCOURNER, WASHINGTON | FIGURE 2 |
| | DRAWN: 09/09 | | |
| | DRAWN BY: TLK | | |
| | CHECKED BY: CW | | |
| FILE NAME: 102657F2.dwg | | | |

