

CONSTRUCTION COMPLETION REPORT

Hill Park Apartments
110 SW Arthur Street
Portland, Oregon

For
1st and Arthur Limited Partnership
c/o Central City Concern
January 3, 2018

GeoDesign Project: Gerding-187-11

January 3, 2018

1st and Arthur Limited Partnership
c/o Central City Concern
232 NW Sixth Avenue
Portland, OR 97209

Attention: David Daterman, Gerding Edlen, on behalf of Central City Concern

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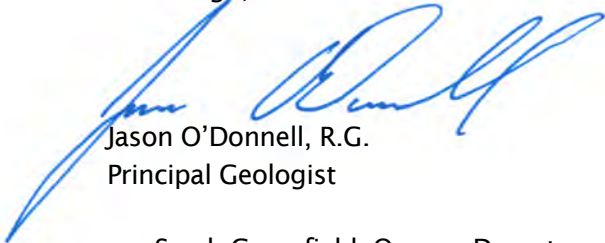
GeoDesign, Inc. is pleased to submit this Construction Completion Report for the Hill Park Apartments site located at 110 SW Arthur Street in Portland, Oregon. This report summarizes work completed within the context of previously documented impacts to soil and groundwater and related conditions set forth in the partial No Further Action (NFA) issued for the project site by the Oregon Department of Environmental Quality (DEQ) in October 2015 and the conditional NFA issued for the project site by DEQ in March 2017. This report also summarizes site development activities completed in accordance with the Prospective Purchaser Agreement entered into between DEQ and 1st and Arthur Limited Partnership under a Consent Judgement in January 2016. Specifically, this report details the measures employed for the handling and management of impacted soil at the project site and documents implementation of mitigative components of construction to address the potential for vapor migration into indoor residential spaces.

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We appreciate the opportunity to provide this information. Please call if you have questions regarding this report.

Sincerely,

GeoDesign, Inc.



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Principal Geologist

cc: Sarah Greenfield, Oregon Department of Environmental Quality (two copies)
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Attachments

One copy submitted (via email only)

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1.0 INTRODUCTION

This Construction Completion Report has been prepared by GeoDesign, Inc. on behalf of 1st and Arthur Limited Partnership, c/o Central City Concern for portions of the redevelopment at the property located at 110 SW Arthur Street in Portland, Oregon (project site). Specifically, this report documents the mitigative components of the construction activities that have been implemented to address the potential for vapor migration into indoor residential spaces at the project site in accordance with the scope of work provided in the Prospective Purchaser Agreement (PPA). The PPA was executed between the Oregon Department of Environmental Quality (DEQ) and 1st and Arthur Limited Partnership under a Consent Judgement by the Multnomah County circuit court of the State of Oregon in January 2016. The scope of work was provided as Exhibit C of the Consent Judgement. The vapor mitigation system was installed as an engineering control imposed by an Equitable and Easement Servitude (EES; Exhibit D of the Consent Judgement) that has been recorded in the real property records of Multnomah County. The EES also required protocol for post-construction vapor sampling and prohibited certain property uses and underground injection control (UIC) systems. The passive vapor mitigation system was also installed as required by building code to address potential radon intrusion.

The project site is shown relative to surrounding physical features on Figure 1. The layout of the project site is shown on Figure 2. Acronyms and abbreviations used herein are defined at the end of the document.

2.0 PROJECT SITE DESCRIPTION AND HISTORY

GeoDesign conducted a Phase I Environmental Site Assessment for the project site in April 2016. The project site is 0.37-acre in size and currently owned by CCC-Acquisition, LLC. The project site includes Tax Lot 3000 of Multnomah County Tax Map 1S1E10BB and is located in the northwest quarter of the northwest quarter of Section 10, Township 1 South, Range 1 East of the Willamette Meridian. The properties immediately adjacent to the project site are used primarily for residential and commercial purposes. The project site is bordered to the north by SW Arthur Street, to the east by SW 1st Avenue, to the south by a single-family residence, and to the west by an office building (Figure 2).

According to historical records obtained by GeoDesign, the project site was occupied by a wagon shed, a warehouse, a commercial store, and residential buildings by 1889. Between at least 1950 and 1955, a glazing facility and machine shop were located on the northwestern portion of the project site. The project site was developed as the former Union Oil Company of California (Union Oil) service station No. 5664 in 1966 and operated as an automotive service station between 1966 and 2001. The service station was equipped with aboveground fueling facilities and a 550-gallon heating oil underground storage tank (UST), a 550-gallon waste oil UST, two 12,000-gallon gasoline USTs, and associated product piping. The approximate locations of the former USTs and dispenser islands are shown on Figure 3. In February 1996 DEQ was notified of a fuel release and the project site was assigned Leaking Underground Storage Tank (LUST) Facility I.D. Number 26-96-0095. Union Oil operated a service station at the project site until 1997, when Tosco Corporation acquired the property. Tosco Corporation operated the project site as a retail gas station until it was decommissioned in October 2001. Underground and

aboveground service station equipment was removed during the October 2001 decommissioning. In 2001, ConocoPhillips acquired Tosco and took ownership of the project site. SunCor Holdings acquired the project site from ConocoPhillips in December 2005 and subsequently sold the project site to Apache Park LLC in December 2008. CCC-Acquisition, LLC purchased the project site in 2015 and redeveloped the project site as a three-story residential building (Hill Park Apartments).

3.0 BACKGROUND

3.1 PREVIOUS ENVIRONMENTAL ACTIVITIES

The following sections briefly summarize the findings of previous environmental actions completed at the project site. The previous environmental actions summarized in the sections below are based on our review of the following reports:

- *Phase I Environmental Site Assessment; 110 SW Arthur Street Site; Portland, Oregon*, prepared by GeoDesign, Inc., dated April 21, 2016
- *Memorandum, Re: 110 SW Arthur Street Site, Supplemental Soil Characterization*, prepared by GeoDesign, Inc., dated October 9, 2015
- *Revised Corrective Action Plan and Closure Request Report; Chevron Facility No. 351454; Former Union Oil Site No. 5664; 110 SW Arthur Street; Portland, Oregon; DEQ LUST File No. 26-96-0095*, prepared by Arcadis, dated August 30, 2016
- *Contaminated Media Management Plan; Chevron Facility No. 351454; Former Union Oil Site No. 5664; 110 SW Arthur Street; Portland, Oregon; DEQ LUST File No. 26-96-0095*, prepared by Arcadis, dated September 23, 2015
- *Work Plan; Lead-Impacted Soil Removal Activities; 110 SW Arthur Street Site; Portland, Oregon*, prepared by GeoDesign, Inc., dated May 31, 2016
- *Report of Lead-Impacted Soil Removal and Confirmation Soil Sampling Results; 110 SW Arthur Street Site; Portland, Oregon*, prepared by GeoDesign, Inc., dated July 27, 2016
- *Soil Characterization Report; 110 SW Arthur Street Site; SW 1st Avenue ROW; Portland, Oregon*, prepared by GeoDesign, Inc., dated September 14, 2016

3.1.1 Fuel System Upgrades & UST Removal (1996)

In February 1996 Omega Services (Omega) upgraded the fuel system at the project site. During the upgrading activities, petroleum-impacted soil was observed near product piping and dispenser islands. Omega advanced eight hand-augered soil borings (SB1 through SB8) in the vicinity of the product piping and dispenser islands (Figure 3). Chemical analytical results indicated the presence of gasoline-range hydrocarbons and associated volatile organic compounds (VOCs), which ultimately resulted in DEQ listing the project site as LUST File No. 26-96-0095. The fueling systems were subsequently upgraded, at which time approximately 50 cubic yards of petroleum-impacted soil were removed from the vicinity of the former dispenser islands and product piping.

In March 1996 Omega decommissioned the 550-gallon heating oil UST and the 550-gallon waste oil UST by removal and collected soil samples from the base of each excavation. Chemical analytical results indicated the presence of gasoline-, diesel-, and oil-range hydrocarbons in the

base of the heating oil and waste oil UST excavations. Some contaminated soil was left in place due to the possibility of causing structural damaged if removed. The locations of the former USTs and dispenser islands are shown on Figure 3.

3.1.2 Environmental Explorations (1996 and 2001)

In October 1996 GeoEngineers advanced four borings in the vicinity of the former heating oil and waste oil USTs (P-1 through P-4) and four borings in the vicinity of the dispenser island and associated piping (P-5 through P-8). The locations of the 1996 soil borings are shown on Figure 3. Gasoline- and diesel-range hydrocarbons were detected in the vicinity of the former heating oil and waste oil USTs and in the vicinity of the dispenser islands and associated piping.

In April 2001 SECOR advanced 10 borings (B-1 and B-3 through B-11), 6 of which were completed as monitoring wells (MW-1 through MW-6). The 2001 soil borings and monitoring well locations are shown on Figure 3. Soil samples were collected from the borings located in the vicinity of the dispenser island and associated piping and from the borings located in the vicinity of the former heating oil and waste oil USTs. Gasoline- and oil-range hydrocarbons and benzene were detected in soil samples collected from borings in the vicinity of the dispenser islands, associated piping, and UST pit. Oil-range hydrocarbons were detected in a soil sample collected from a boring in the vicinity of the former waste oil UST. "Free-phase petroleum product" was observed on the water table in the wells near the northeast portion of the project site.

3.1.3 Service Station Decommissioning (2001)

In October 2001 SECOR observed the removal of the two 12,000-gallon, fiberglass gasoline USTs; two dispenser islands; and associated product piping. In addition, two hydraulic hoists were removed from inside the former service station building. During decommissioning activities, petroleum-contaminated soil was observed beneath the dispenser islands and associated product piping and the on the northeast sidewall of the gasoline UST excavation. A total of approximately 642 tons of petroleum-impacted soil were excavated to 12 feet below ground surface (BGS) in the vicinity of the USTs and product piping, to 8 feet BGS in the vicinity of the northern dispenser island, to 13 feet BGS in the vicinity of the southern dispenser island, to 9 feet BGS in the vicinity of each former hydraulic hoist, and to 12 feet BGS in the area between the former waste oil UST excavation and the former service station building. Confirmation soil samples were collected from the limits of the excavations. SECOR also excavated three test pits in selected areas of the project site based on results of previous investigations. The limits of the 2001 excavations and test pits are shown on Figure 3.

Gasoline-, diesel-, and/or heavy oil-range hydrocarbons were detected in confirmation soil samples collected from the limits of the excavations in the vicinity of the former gasoline USTs, dispenser islands, and product piping. Gasoline-, diesel-, and oil-range hydrocarbons were also detected in one or more soil samples collected from each test pit location. In addition, several VOCs, polycyclic aromatic hydrocarbons (PAHs), and lead were also detected in one or more confirmation soil samples collected from the limits of the excavations and test pits.

3.1.4 Environmental Explorations (2002)

In June 2002 SECOR advanced two on-site soil borings (B-13 and B-14) and one off-site monitoring well (MW-7) to further evaluate subsurface conditions. The locations of the 2002

borings and off-site monitoring well are shown on Figure 3 and Figure 4, respectively. Soil samples were collected from each of both soil borings and the monitoring well boring. Gasoline-range hydrocarbons and benzene, toluene, ethylbenzene and xylenes (BTEX) were detected in a sample collected from boring B-14, and heavy oil-range hydrocarbons, toluene, ethylbenzene, total xylenes, and PAHs were detected in one or more soil samples collected from boring B-13. Petroleum hydrocarbons were not detected at concentrations above the laboratory method reporting limits (MRLs) in the soil samples collected from MW-7.

3.1.5 Remedial Actions (2002 through 2013)

In June 2002 SECOR installed five air sparge (AS) wells (AS-1 through AS-5) and five soil vapor extraction (SVE) wells (VE-1 through VE-5) as part of an AS/SVE remediation system. The locations of the AS/SVE remediation wells are shown on Figure 3. The SVE system operated from approximately 2003 through 2006. The AS system operated from approximately 2004 through 2006. During operation, the AS/SVE system removed a total of approximately 9,224 pounds of hydrocarbons.

In 2007 Delta installed three ozone sparge wells (OSWs) (OSW-1, OSW-2, and OSW-4) and connected them to a portable ozone sparge remediation system. The locations of the 2007 ozone remediation wells are shown on Figure 3. The ozone sparge system operated from approximately 2007 through 2009, at which time it was transitioned to an AS system. The AS and former SVE system components were decommissioned in 2010, and the ozone sparge system components were decommissioned in 2013.

3.1.6 Environmental Explorations (2004 through 2010)

In June 2004 Delta advanced one off-site monitoring well boring (MW-8) to further assess groundwater quality downgradient (relative to the direction of inferred groundwater flow) of the project site (Figure 4). One soil sample was submitted for analysis. Petroleum hydrocarbons were not detected at concentrations above the laboratory MRLs in the soil sample collected from boring MW-8.

In January 2007 Delta advanced one off-site monitoring well boring (MW-9) to further assess groundwater quality downgradient (relative to the direction of inferred groundwater flow) of the project site (Figure 4). Toluene was detected in the soil samples submitted for analysis. However, the detected toluene concentrations were suspected to be a result of cross contamination during the field sampling or laboratory procedures, as toluene was also detected in the trip blank.

In March 2009 Stantec abandoned off-site monitoring well MW-7 and replaced it by installing monitoring well MW-7A (Figure 4). Gasoline-range hydrocarbons, ethylbenzene, and xylenes were detected in one or more soil samples collected from boring MW-7A.

In July 2010 Stantec advanced 12 soil borings (B-1 through B-12) to assess post-remediation soil conditions (Figure 3). Concentrations of benzene, ethylbenzene, naphthalene, and 1,3,5-trimethylbenzene (TMB) were detected in the soil samples at concentrations that exceeded DEQ

Vapor Intrusion to Indoor Air and *Volatilization to Outdoor Air* risk-based concentrations (RBCs). The exceedances ranged in depth between 2.8 and 35 feet BGS, with most of the exceedances between approximately 20 and 35 feet BGS.

3.1.7 Soil Vapor Assessment (2012 through 2014)

Between 2012 and 2014 Arcadis collected 25 soil gas samples from nine sample locations (dual-nested vapor probes SV-1S/SV-1D, SV-6S/SV-6D, SV-7S/SV-7D, SV-8S/SV-8D, and SV-9S/SV-9D) and two single-level vapor probes (SV-2 through SV-5) to assess soil vapor conditions near the central and eastern portions of the project site. The locations of the vapor probes are shown on Figure 3. Gasoline- and diesel-range hydrocarbons, benzene, ethylbenzene, and, 1,2,4-TMB were detected at concentrations that exceeded DEQ *Vapor Intrusion Into Buildings* RBCs for residential and occupational receptors during one or more of the sampling events. The highest concentrations were detected on the northeast and southern portions of the project site.

3.1.8 Groundwater Monitoring and Sampling (2001 through 2014)

Groundwater monitoring and sampling was performed on an approximately quarterly basis on the six on-site groundwater monitoring wells (MW-1 through MW-6), three off-site groundwater monitoring wells (MW-7/MW-7A through MW-9), and one vapor extraction well (VE-5) from May 2001 through March 2014. In general, dissolved concentrations of petroleum hydrocarbons and related constituents decreased over time. Gasoline-range hydrocarbons and benzene were routinely detected at concentrations exceeding DEQ *Vapor Intrusion into Buildings* RBCs for urban residential receptors in the groundwater samples collected from monitoring well MW-4 between 2011 and 2014. Gasoline-range hydrocarbons and VOCs were routinely detected at concentrations less than the DEQ *Vapor Intrusion into Buildings* RBCs for urban residential receptors in the groundwater samples collected from vapor extraction well VE-5 and off-site monitoring well MW-7A between 2011 and 2014. Since 2010 petroleum hydrocarbons and related constituents have not been detected above the laboratory MRLs in the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, and MW-9.

3.1.9 Environmental Explorations (2014 through 2016)

In September 2014 five AS wells (AS-1 through AS-5), nine monitoring wells (MW-1 through MW-6, MW-7A, MW-8, and MW-9), three ozone sparge wells (OSW-1, OSW-2 and OSW-4), and five vapor extraction wells (VE-1 through VE-5) were decommissioned in accordance with DEQ and the Oregon Water Resources Department rules and regulations.

In November 2014 GeoDesign conducted a limited subsurface investigation that included advancing one direct-push boring (DP-1) in the vicinity of the former waste oil UST and two direct-push borings (DP-2 and DP-3) on the northeastern portion of the project site near the former machine shop and glazing facility (Figure 3). An apparent slag-like material was observed in the upper 2.5 feet of borings DP-2 and DP-3. A limited pocket of gray sand containing lead at concentrations that exceeded DEQ *Soil Ingestion, Dermal Contact, and Inhalation* RBCs for urban residential, occupational, construction worker, and excavation worker receptors was observed within the upper 2.5 feet of soil in the vicinity of the former glazing facility. Toxicity Characteristic Leaching Procedure lead was detected at concentrations less than the 5 milligrams per liter threshold, which indicated that the soil was suitable for disposal as non-hazardous waste. Diesel- and oil-range hydrocarbons, VOCs, and polychlorinated biphenyls were either not

detected at concentrations greater than the laboratory MRLs or were detected at concentrations less than DEQ *Soil Ingestion, Dermal Contact, and Inhalation; Volatilization to Outdoor Air; and Vapor Intrusion into Buildings* RBCs for the urban residential, occupational, construction worker, and excavation worker receptors.

In addition, groundwater samples were collected from borings DP-1 and DP-3. The groundwater samples were submitted for analysis of VOCs. VOCs were either not detected at concentrations greater than the laboratory MRLs or were detected at concentrations less than the DEQ *Volatilization to Outdoor Air* and *Vapor Intrusion into Buildings* RBCs for urban residential and occupational receptors and the DEQ *Groundwater in Excavation* RBCs for construction worker and excavation worker receptors.

In September 2015 GeoDesign conducted a supplemental soil characterization in the vicinity of the former glazing facility to further evaluate the extent of lead-impacted soil. GeoDesign advanced eight hand-augured borings (HA-1 through HA-8) to depths ranging between 2.5 and 3.5 feet BGS (Figure 3). Based on the results of the supplemental characterization activities, lead impacts appeared to be limited to the upper 3 feet of soil and confined to an approximately 1,200- to 1,300-square-foot area (Figure 3). The analytical results indicated that the soil was suitable for disposal as non-hazardous waste at a Resource Conservation and Recovery Act Subtitle D Landfill.

In August 2016 GeoDesign advanced three direct-push borings (B-1 through B-3) to a depth of 10.0 feet BGS along SW 1st Avenue (located immediately east of the project site) to evaluate the soil conditions in areas that would require excavation and disposal during the City of Portland's water pipe replacement project. GeoDesign's services were completed in accordance with the Sampling and Analysis Plan prepared by the City of Portland Bureau of Environmental Services dated July 15, 2016. The City's Sampling and Analysis Plan is presented in Appendix A of GeoDesign's Soil Characterization Report, dated September 14, 2016. The locations of the 2016 off-site borings are shown on Figure 4. Gasoline- and diesel-range hydrocarbons were not detected above the laboratory MRLs. Total metals were not detected above the laboratory MRLs or were detected at concentrations less than the DEQ *Soil Ingestion, Dermal Contact, and Inhalation* RBCs for construction worker and excavation worker receptors. The analytical results for the metals were also screened against DEQ's Clean Fill Screening Levels (CFSLS) to evaluate whether the metals-impacted soil requiring excavation could be disposed of off site without restrictions. The analytical results indicated the detected metals did not exceed the DEQ CFSLS, with the exception of lead from one composite sample collected from boring B-1 at depths between 0 and 5 feet BGS. However, DEQ recommends the use of statistical analysis when characterizing solid waste for disposal purposes. The mean average of total lead detected in this boring (calculated as the sum of the detected concentrations, divided by the number of samples) is 24 milligrams per kilogram (mg/kg), which is less than the corresponding DEQ CFSL (28 mg/kg). Also, the mean average of total lead detected in the composite and discrete soil samples analyzed during this assessment is 21 mg/kg, which is also less than the corresponding DEQ CFSL. Soil generated during the water pipe replacement project was disposed of by the City of Portland.

4.0 REGULATORY STATUS (2015)

DEQ issued a partial No Further Action (NFA) determination for LUST File No. 26-96-0095 on October 28, 2015. The partial NFA was issued to help facilitate the timely construction of the project site structure, but required that the future property owner execute an EES with DEQ that would require (1) an approved Contaminated Media Management Plan (CMMP) for soil management at the project site, (2) the installation of an engineering control (a vapor mitigation system), and (3) implementation of institutional controls (prohibiting the installation of UIC systems). The partial NFA determination noted that DEQ determined that remedial actions to address environmental contamination at the project site are complete (subject to the institutional and engineering controls described above and below) and that no further action is required. DEQ based this determination on the following:

- *The Subject Property was used for fueling between 1966 and 1996, when the fueling station was decommissioned. Approximately 650 tons of soil was removed at the time of decommissioning. (GeoDesign notes that a total of approximately 690 tons of soil were removed during the 1996 fueling system upgrades and the 2001 decommissioning activities. The fueling station was decommissioned in 2001, not 1996.)*
- *Multiple sources of gasoline, diesel, and heavy oil were noted in soil and groundwater. Soil gas was later determined to be impacted. During earlier investigations, non-aqueous phase liquid (gasoline) was observed in groundwater in the northeastern portion of the project site.*
- *An air sparging and vapor extraction system was installed and operated from 2003 through 2006. In 2007, the sparging system was converted into an ozone sparging system, which operated from 2007 to 2011. Following remedial activities, significant contamination remained in soil, groundwater, and soil gas at the Subject Property. (GeoDesign notes that the ozone sparge system operated until 2009, at which time it was converted to an AS system. The AS/SVE system components were decommissioned in 2010 and the ozone sparge system components were decommissioned in 2013).*
- *A preliminary Conceptual Site Model, dated April 3, 2006, identified unacceptable risks for vapor intrusion for occupational receptors and direct contact for occupational and construction/excavation worker receptors. Based on the zoning documentation, single-family residential and multi-family residential use is allowed at the project site, which is consistent with current land use to the south. As a result, both residential and urban residential receptor scenarios are applicable.*
- *DEQ determined that potential risks to future residential or commercial occupants at the project site can be effectively managed through an EES that shall require a DEQ-approved vapor mitigation system. The EES shall also require a DEQ-approved CMMP and prohibit the installation of UIC systems.*

Based on the information available to DEQ at the time of the partial NFA determination, DEQ noted that existing conditions at the project site were protective of public health and the environment, subject to the implementation of the CMMP and EES.

5.0 CMMP (2015)

Prior to the initiation of earthwork activities associated with redevelopment, Arcadis prepared a CMMP, dated September 23, 2015, to address the risk associated with residual petroleum hydrocarbon impacts in soil at the project that could be encountered during redevelopment. The CMMP was subsequently approved by DEQ and met one of the requirements for the EES. The CMMP provided recommended procedures for evaluating and managing soil containing petroleum hydrocarbon constituents or elevated lead concentrations that could be encountered during redevelopment.

6.0 REGULATORY STATUS (2016)

On January 20, 2016 1st and Arthur Limited Partnership entered into a PPA with DEQ under a Consent Judgement. The Consent Judgement is subject to completion of the following scope of work:

- Development and implementation of a DEQ-approved CMMP. A copy of the CMMP must be conveyed to future owners for implementation. As noted in Section 5.0, DEQ approved the CMMP prepared by Arcadis, dated September 23, 2015.
- Investigation, evaluation, and completion of remedial actions as determined necessary by DEQ related to lead at the project site (described in Section 8.0). A work plan should be submitted to DEQ for review and approval prior to completing remedial actions (described in Section 7.0).
- Implementation of an EES with DEQ that provides for proper management of soil and groundwater contamination remaining at the project site. The EES shall require administrative and engineering controls such as a DEQ-approved vapor mitigation system (described in Section 12.3), requirements for post-construction vapor sampling (described in Section 14.0), and prohibition of UIC systems at the project site.

7.0 WORK PLAN (2016)

Prior to removing the shallow lead-impacted soil from the project site, GeoDesign prepared a Work Plan, dated May 31, 2016, presenting a scope of work to:

- remove the shallow lead-impacted soil that was identified in the western portion of the project site and properly dispose of the excavated soil,
- collect confirmation soil samples from the limits of the excavation, and
- establish protocol to evaluate whether additional soil removal would be necessary based on the results of confirmation sampling.

The Work Plan was subsequently approved by DEQ.

8.0 REMEDIAL ACTIONS (2016)

On June 7 and 8, 2016 GeoDesign observed the removal of shallow lead-impacted soil from the western portion of the project site in accordance with the DEQ-approved Work Plan and CMMP.

The excavations were advanced to a depth of 3 feet BGS in the approximate highlighted area shown on Figure 3. A total of 286.92 tons of lead-impacted shallow soil were removed from the project site and transported to Waste Management's Hillsboro landfill for disposal. The corresponding soil disposal summary sheet provided by Waste Management is presented in Appendix A. Results are discussed in detail in GeoDesign's Report of Lead-Impacted Soil Removal and Confirmation Soil Sampling Results, dated July 27, 2016.

Following the excavation activities, GeoDesign collected discrete confirmation soil samples from the limits of the excavation. The discrete soil samples were collected from the excavation using a stainless steel trowel that was decontaminated prior to each use. Confirmation sample locations were selected to represent areas that had not been characterized during previous exploration activities. Specifically, GeoDesign collected seven confirmation soil samples (Figure 3) as described below:

- Two discrete soil samples [SS-2(3.0) and SS-3(3.0)] were collected at the base of the remedial excavation.
- Two discrete soil samples [SS-1(1.5-2.5) and SS-7(1.5-2.5)] were collected at the eastern sidewall of the remedial excavation.
- Three discrete soil samples [SS-4(1.5-2.5), SS-5(1.5-2.5), and SS-6(1.5-2.5)] were collected at the northern sidewall of the remedial excavation.

The confirmation soil samples were submitted for analysis of total lead by U.S. Environmental Protection Agency (EPA) Method 6020. Total lead was detected in each of the seven confirmation soil samples at concentrations less than the DEQ *Soil Ingestion, Dermal Contact, and Inhalation* RBC for all receptors.

9.0 UPDATED CSM AND CLOSURE REPORT (2016)

In August 2016 Arcadis completed an updated Conceptual Site Model (CSM) as part of their Revised Corrective Action Plan and Closure Request Report. The updated CSM indicated that the current and reasonably anticipated future land use at the project site and surrounding area is urban residential, residential, and commercial (consistent with the land use identified by DEQ in their October 28, 2005 partial NFA determination). Contaminants of potential concern (COPCs) in each impacted media were defined as follows:

- Soil: gasoline-, diesel-, and heavy oil-range hydrocarbons; BTEX; dibromomethane (EDB); naphthalene; isopropylbenzene; n-propylbenzene; 1,2,4-TMB; 1,3,5-TMB; PAHs; and lead
- Groundwater: gasoline-range hydrocarbons, BTEX, EDB, dichloroethane, naphthalene, isopropylbenzene, n-propylbenzene, 1,2,4-TMB, and 1,3,5-TMB
- Soil Gas: gasoline- and diesel-range hydrocarbons, BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB

Based on their review of the historical site data collected from soil, groundwater, and soil gas and the results of their screening level risk evaluation, Arcadis concluded that residual impacts to soil and soil vapor with concentrations higher than applicable DEQ RBCs are isolated to the northern half of the project site in the vicinity of the former USTs, dispenser islands, and product piping

and near the former waste oil UST in the southern portion of the project site. Arcadis also concluded that the project site may pose potential unacceptable risk to future on-site construction workers and future on-site residential and occupational receptors. Specifically, historical concentrations of COPCs in soil and soil vapor indicated that remaining impacts at the project site may pose a potential unacceptable risk for vapor intrusion into future on-site residential buildings. Historical soil data also indicated that remaining soil impacts may pose a potential unacceptable risk to construction workers that come into direct contact with impacted soil during future excavations at the project site.

Based on the potentially complete exposure routes and the results of their screening level risk evaluation, Arcadis also prepared a Corrective Action Plan (CAP) that was presented in their August 30, 2016 Revised Corrective Action Plan and Closure Request Report. The primary objectives of the CAP were to protect the on-site construction and excavation workers from direct contact exposure to petroleum-impacted soils remaining at the project site and to protect the on-site residents from potential soil vapor exposures in indoor air.

As stipulated in the CAP (and noted as a condition for the 2015 partial NFA determination), potential risks to residents and construction and excavation workers at the project site were mitigated with institutional controls in the form of an EES and CMMP registered with the property deed. In addition to implementation of the CMMP, the EES included property deed restrictions requiring a building design that eliminated the vapor intrusion pathway for the current building constructed at the project site.

Arcadis submitted the Revised Corrective Action Plan and Closure Request Report to DEQ for review and approval in August 2016.

10.0 REGULATORY STATUS (2017)

On March 15, 2017 DEQ's LUST program issued a conditional NFA determination for LUST File No. 26-96-0095 to facilitate property transfer. The conditional NFA was issued following DEQ's approval of the August 30, 2016 CAP and Closure Report. This closure request was related to petroleum impacts at the project site and did not apply to actions related to lead-impacted soil, which were managed under the PPA and are discussed in Section 8.0. The conditional NFA determination also notes that the EES between DEQ and 1st and Arthur Limited Partnership was recorded with Multnomah County on May 20, 2016.

11.0 PROJECT SITE PRE-DEVELOPMENT CONDITIONS

11.1 PRE-DEVELOPMENT SOIL CONDITIONS

Our understanding of pre-development subsurface conditions is based on our review of the previous investigations conducted at the project site between 1996 and 2016 (discussed in Sections 3.1.1 through 3.1.9). The project site subsurface conditions generally consist of approximately 3 to 10 feet of fill material that occasionally includes brick, cinder, glass, and wood. The fill material is underlain by clayey silt with trace sand or gravel to depths of approximately 15 to 20 feet BGS. Silty sand was generally encountered below 20 feet BGS to the total depths explored. As noted in Section 6.0, residual impacts to soil and soil vapor with

concentrations higher than applicable DEQ RBCs are isolated to the northern half of the project site in the vicinity of the former USTs, dispenser islands, and product piping and near the former waste oil UST in the southern portion of the project site. As noted in Section 8.0, lead-impacted soil that was previously characterized at concentrations greater than the DEQ *Soil Ingestion, Dermal Contact, and Inhalation* RBCs for construction worker and excavation worker receptors was successfully removed and transported off site for disposal.

11.2 PRE-DEVELOPMENT GROUNDWATER CONDITIONS

Based on our review of historical groundwater monitoring data, groundwater has been measured at depths between approximately 25 to 30 feet BGS and is inferred to flow to the northeast. Groundwater was not encountered during redevelopment activities. As noted in Section 3.1.8, gasoline-range hydrocarbons and benzene were routinely detected at concentrations exceeding the DEQ *Vapor Intrusion into Buildings* RBCs for urban residential receptors in the groundwater samples collected from monitoring well MW-4 between 2011 and 2014. Gasoline-range hydrocarbons and VOCs were routinely detected at concentrations less than the DEQ *Vapor Intrusion into Buildings* RBCs for urban residential receptors in the groundwater samples collected from vapor extraction well VE-5 and off-site monitoring well MW-7A between 2011 and 2014. Since 2010 petroleum hydrocarbons and related constituents have not been detected above the laboratory MRLs in the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-8, and MW-9. Historical groundwater data indicated that the groundwater plume had stabilized, and the wells were decommissioned in September 2014 (Section 3.1.9).

12.0 PROJECT SITE REDEVELOPMENT

The project site redevelopment included construction of a three-story, multi-family residential building consisting of 39 total units. The building footprint encompasses approximately 8,540 square feet. The layout of the building footprint is shown on Figure 2. The remainder of the project site consists of paved parking and landscaped areas.

12.1 EARTHWORK ACTIVITIES

Earthwork activities were primarily completed between June 9 and August 29, 2016, with some finish grading and utility excavations continuing through July 2017. The earthwork activities included completion of numerous aggregate piers primarily within the footprint of the building to maximum depths of 20 feet. The piers were drilled using a track-mounted backhoe equipped with a 24-inch-diameter continuous-flight auger. Earthwork activities also included excavation and removal of soil to accommodate various utilities, footings, and the elevator shaft, as well as grading activities associated with the building pad, landscape, areas, and parking areas. Since groundwater was not encountered during the earthwork activities, excavation dewatering was not necessary. All earthwork activities were conducted in general conformance with the CMMP.

12.2 SOIL DISPOSAL

All soil generated during the earthwork activities (a total of 2,752.26 tons) at the project site was transported to Waste Management's Resource Conservation and Recovery Act Subtitle D (non-

hazardous waste) landfill in Hillsboro, Oregon, under Waste Management Permit No. 1213900R. The corresponding soil disposal summary sheet provided by Waste Management is presented in Appendix A.

12.3 CONSTRUCTION OF ENGINEERING CONTROLS

The engineering controls for the building included installing a sub-slab passive venting system overlain with a low-permeable membrane beneath the slab of the building. The design included a gravel blanket for the installation of the sub-slab passive venting system, which consisted of a minimum 4-inch-thick layer of clean aggregate that passed through a 2-inch sieve and was retained on a ¼-inch sieve. The sub-slab venting system was installed according to the *Specifications for the Sub-Slab Passive Venting System and Spray-On Flexible Membrane* document prepared by GeoDesign, dated April 2016.

12.3.1 Vapor Mitigation design

In accordance with the EES, the project design included a vapor barrier and passive mechanical venting system beneath the footprint of the residential tenant spaces on the lower level of the building. The vapor barrier and passive venting system was designed to satisfy State of Oregon radon mitigation requirements and provided a design to mitigate potential petroleum-related vapors that could accumulate below the foundation slab. This design included placement of two sub-slab monitoring points within the residential space footprint, which provides sampling access to verify protectiveness of the venting system. A discussion of the vapor barrier/passive venting system installation is described in the following sections.

12.3.1.1 Sub-Slab Vent Pipes and Vent Risers

As constructed, the sub-slab passive venting system consists of 3-inch, perforated ADS® flex pipes that were installed horizontally in a grid-like fashion beneath the entire footprint of the building, as shown on Figure 5. The ventilation pipe is connected to four vertical polyvinyl chloride (PVC) vent risers (VR-1 through VR-4) that exit through the roof (Figure 6). As originally constructed, each vent riser was equipped with rotary turbine caps. The rotary turbine caps passively discharged vapors to the atmosphere at least 12 inches above the roof line. The location of the rotary turbine cap associated with vent riser VR-2 was moved northwest of the location where it exits the roof using horizontal piping. The location of the rotary turbine cap associated with vent riser VR-4 was moved south of the location where it exits the roof using horizontal piping. Photographs documenting the installation of the sub-slab vent risers are presented in Appendix B.

The vapor mitigation system as originally constructed constituted a “passive” system. On October 25, 2017 Cascade Radon, Inc. of Portland, Oregon, upgraded the passive system to an “active” system due to radon concerns, rather than risks related to project site contamination. The system was upgraded by retro-fitting two of the four vent riser pipes with in-line electric fans to induce vacuum pressure within the sub-slab ventilation pipes. The vent riser pipes equipped with rotary turbine caps and the in-line fans are shown on Figure 6. The vapor mitigation system, as originally and currently constructed, is in compliance with Section 1812 (Radon Mitigation, R-2 and R-3) of the 2010 State of Oregon Structural Specialty Code. It was necessary to upgrade the system from passive status to active status to mitigate elevated radon levels that were detected in two first floor residential units (units A104 and A108). The EPA action level for

radon is 4.0 picoCuries per liter (pCi/L). Baseline radon testing conducted in August 2017 (prior to system activation) indicated radon in first floor residential units A104 and A108 at average levels of 4.0 pCi/L and 4.6 pCi/L, respectively. All other first floor residential units and office areas tested during the baseline sampling event indicated radon was either not detected at levels greater than the laboratory's reporting limits (0.3 pCi/L) or was detected at levels less than 1.0 pCi/L. Subsequent radon testing conducted in September 2017 (prior to system activation) in first floor residential units A104 and A108 indicated radon at average levels of 5.3 pCi/L and 5.7 pCi/L, respectively. Post-system activation radon testing conducted in late October 2017 in first floor residential units A104 and A108 indicated radon at average levels of 0.1 pCi/L in both units. The results of the post-system activation radon testing indicate that the "active" mitigation system is effectively mitigating radon intrusion. Additional radon testing will be conducted in the future to ensure that the active mitigation system remains effective at mitigating radon intrusion.

As described in GeoDesign's draft memorandum dated August 11, 2017 the results of the baseline sub-slab vapor sampling event conducted at the project site on July 17, 2017 (prior to upgrading the system from passive to active) indicated that gasoline-range hydrocarbons and VOCs (including naphthalene) were either not detected at concentrations greater than the laboratories reported detection limits/MRLs, or were detected at concentrations less than the established applicable DEQ RBCs for urban residential receptors. Based on the baseline sub-slab vapor analytical results, GeoDesign anticipates the system upgrade will only enhance the effectiveness of the ventilation system to mitigate sub-slab vapor intrusion.

12.3.1.2 Low-Permeable Membrane

Membrane application began on July 15, 2016 and was completed on September 22, 2016. The low-permeable membrane installed beneath the floor slab is a Liquid Boot® spray-applied flexible membrane manufactured by CETCO of Santa Ana, California. The Liquid Boot® membrane was applied by ASI of Portland, Oregon. ASI is a qualified installer as certified by the manufacturer. Prior to applying the low-permeable membrane, the building subgrade was prepared with base rock meeting the geotechnical recommendations. The gravel blanket consisted of an aggregate that met the specifications discussed in Section 12.1. To protect the Liquid Boot®, a protective layer of Thrace-LINQ® 180EX non-woven geotextile fabric was laid beneath the carrier fabric (BASEFABRIC™ T-60 non-woven geotextile fabric). The fabric seams overlapped a minimum of 6 inches. The Liquid Boot® membrane was spray-applied over the carrier fabric in a continuous layer, which is sealed at edges, joints, and penetrations. Details are shown on Figure 7. Each continuous Liquid Boot® membrane application was smoke-tested using a smoke machine and an air blower. Areas where smoke was observed penetrating the membrane were sealed by spraying Liquid Boot® over the leak areas until smoke was not observed. GeoDesign was on site to observe the layout of the carrier fabric, the application of the membrane, and the smoke tests conducted on the Liquid Boot® membrane in general accordance with the specifications. Periodic thickness tests were conducted by GeoDesign to confirm the membrane thickness met the specifications. Coupon samples were cut from the cured Liquid Boot® membrane and measured to confirm thickness in the field using a caliper. Areas not meeting the thickness specification were re-sprayed with Liquid Boot®. A total of 16 coupon samples were collected by GeoDesign at a frequency of approximately one sample per 500 square feet. Based on the coupon testing

results and on-site observations, the membrane appeared to meet the minimum specified thickness of 60 dry mils. All coupon sample locations were repaired according to the procedures set forth in the specifications.

After the membrane was allowed to cure for a minimum of 24 hours, the low-permeable membrane on the horizontal surfaces was covered with Liquid Boot® Ultrashield P-150 protective sheeting, which has a thickness of 15 millimeters. Photographs documenting the membrane application are presented in Appendix B.

12.3.1.3 Sub-Slab Monitoring Probes

As part of the design, two sub-slab monitoring probes were installed beneath the non-permeable membrane to assist in evaluating the effectiveness of the engineering controls. These sub-slab monitoring probes (SV-1 and SV-2) are used to monitor effectiveness of the passive vapor barrier/ventilation system and could also be used to evaluate the effectiveness of an active fan system in the future, if necessary. Monitoring probe locations are shown on Figure 5. GeoDesign personnel were on site to observe the installation of the sub-slab monitoring probes. The monitoring probes were installed in general accordance with the design specifications and DEQ guidance and are intended to facilitate routine monitoring for VOCs and pressure/vacuum directly beneath the existing slab.

Each sub-slab monitoring probe consists of a ½-inch-diameter PVC pipe and intake assembly installed horizontally through the footing wall and terminated in the sub-slab aggregate base material. Currently, access to each probe is facilitated by a flush-mount valve box located within the landscaped areas between the sidewalk and the building on the ground floor surface. The probes are fitted with a threaded sample port to facilitate sampling and measurements. Each monitoring point assembly is sealed to inhibit ambient air intrusion into the intake zone. Sub-slab monitoring probe details are shown on Figure 7.

The eastern sub-slab probe installed beneath the building foundation (SV-1) was completed with the screened portion of the probe extending approximately 14.5 feet south, followed by a 10-foot PVC blank section, then screened for an additional 2.5 feet (for a total of 17 feet of screened section). The western sub-slab probe installed beneath the building foundation (SV-2) was completed with the screened portion of the probe extending 11 feet south beneath the building slab. Photographs of the sub-slab monitoring probe pipes and sampling ports are presented in Appendix B.

13.0 FINAL COVER

13.1 HARDCAPES

Hardscape cover comprises approximately 85 percent of the redeveloped portion of the project site and includes the following:

- Asphalt areas
- Building footprint and other concrete structures

13.2 SOFTSCAPES

Softscape cover comprises approximately 15 percent of the redeveloped portion of the project site and includes various landscaped areas. The newly established vegetated areas at the project site were constructed using imported topsoil.

14.0 CONCLUSIONS

The evaluation and management of media generated during site redevelopment activities has been completed in general accordance with the PPA executed between DEQ and 1st and Arthur Limited Partnership under a Consent Judgement by the Multnomah County circuit court of the State of Oregon in January 2016. In accordance with the scope of work provided as Exhibit C of the Consent Judgement, the following action items have been completed:

1. Development and implementation of a DEQ-approved CMMP.
2. Investigation, evaluation, and completion of remedial actions as determined necessary by DEQ related to lead contamination in soil at the project site. A work plan was submitted to DEQ for review and approval prior to completing the remedial actions.
3. Implementation of an EES with DEQ that provides for proper management of soil and groundwater contamination remaining at the project site. The EES requires administrative and engineering controls such as a DEQ-approved vapor mitigation system, requirements for post-construction vapor sampling, and prohibition of UIC systems at the project site.

The completion of each of the above-noted action items are summarized below. The completion of these action items will serve as the basis for requesting a Certification of Completion from DEQ (pending the results of forthcoming performance vapor monitoring events, also described below).

Item No. 1

As documented in this report, Arcadis prepared a CMMP dated September 23, 2015 to address the risk associated with residual petroleum hydrocarbon impacts in soil at the project that could be encountered during redevelopment. DEQ subsequently approved the CMMP. Earthwork activities described in this report (Section 12.1) were conducted in general conformance with the CMMP. Soil generated during earthwork activities (a total of 2,752.26 tons) was transported to Waste Management's Resource Conservation and Recovery Act (RCRA) Subtitle D (non-hazardous waste) landfill in Hillsboro, Oregon. Since groundwater was not encountered during the earthwork activities, excavation dewatering was not necessary.

Item No. 2

As documented in this report, GeoDesign prepared a Work Plan dated May 31, 2016 presenting a scope of work to address the removal of shallow lead-impacted soil from the western portion of the project site. DEQ subsequently approved the Work Plan. In June 2016 GeoDesign observed the removal of a total of 286.92 tons of lead-impacted soil from the project site. The lead-impacted soil was transported to Waste Management's RCRA Subtitle D (non-hazardous waste)

landfill in Hillsboro, Oregon. Total lead was detected in each of the seven confirmation soil samples at concentrations less than the DEQ *Soil Ingestion, Dermal Contact, and Inhalation* RBCs for all receptors.

Item No. 3

As documented in this report, the EES (provided as Exhibit D in the PPA) was recorded in the real property records of Multnomah County on May 20, 2016. The EES prohibits the use of the property for “residential, urban residential, or occupational (commercial) use of any type, unless further evaluation or cleanup is conducted and it is demonstrated there is no unacceptable risk for vapor intrusion into buildings, or DEQ approves engineering controls to mitigate any potential vapor intrusion risk.” The EES also prohibits the use of UIC systems.

The vapor mitigation system was installed as an engineering control to mitigate any potential vapor intrusion risk. The vapor mitigation system, consisting of a non-permeable membrane (vapor barrier) overlying a sub-slab ventilation system, was originally installed as a “passive” system that was subsequently upgraded to an “active” system due to radon concerns (not due to risks associated with project site contamination). Two sub-slab monitoring probes were installed beneath the vapor barrier to assist in evaluating the effectiveness of the engineering control. Surface caps (asphalt and concrete) installed as part of the site redevelopment are also expected to reduce the potential for worker and resident exposures to potentially impacted media remaining beneath the project site.

Successful implementation and operation of the vapor mitigation system will be demonstrated through an Operations, Maintenance, and Monitoring Plan (OMMP). The OMMP has been prepared by GeoDesign in a document dated August 11, 2017 and was submitted to DEQ for review. The OMMP describes procedures and schedules for collection and evaluation of sub-slab verification samples (beneath the vapor barrier system) to demonstrate effective operation of the venting system. DEQ reviewed and approved the OMMP in their letter dated September 1, 2017.

A baseline monitoring event was completed at the project site on July 17, 2017 in accordance with a scope of work that was electronically mailed (email) to Sarah Greenfield of DEQ on July 14, 2017. It was necessary to provide the scope to Ms. Greenfield via email in order to ensure the baseline monitoring event could be completed prior to building occupancy and before submitting the OMMP. Ms. Greenfield approved the scope of work via email on July 14, 2017. The results of the baseline monitoring and sampling event indicate that current soil vapor conditions beneath the building at the project site do not present unacceptable risk to receptors inside the building. The results of the baseline monitoring event are presented in our memorandum dated August 11, 2017, also submitted to DEQ. Based on the results of the baseline monitoring and sampling event conducted in July 2017, it was our opinion that the ventilation system could have continued to operate as a “passive” system. DEQ reviewed the results of the baseline monitoring event and approved continued operation of the sub-slab ventilation system as a “passive” system in their letter dated September 1, 2017. In our opinion, completion of the system upgrade activities will only enhance the effectiveness of the vapor mitigation system.

In accordance with the DEQ-approved OMMP, performance monitoring of the vapor mitigation system will occur on a semi-annual basis for the first year of system operation. DEQ will review the first round of performance monitoring results anticipated in January 2018 in determining whether future monitoring is required, but has indicated that they expect both rounds of first year monitoring to be completed to fully demonstrate system performance consistent with the monitoring requirements established for other sites with engineered vapor barriers. Should the performance monitoring results demonstrate that the vapor mitigation system effectively mitigates unacceptable risk to occupants via vapor intrusion, a Certification of Completion from DEQ will be requested.

♦ ♦ ♦

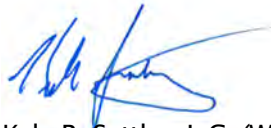
We appreciate the opportunity to provide this information. Please call if you have questions regarding this report.

Sincerely,

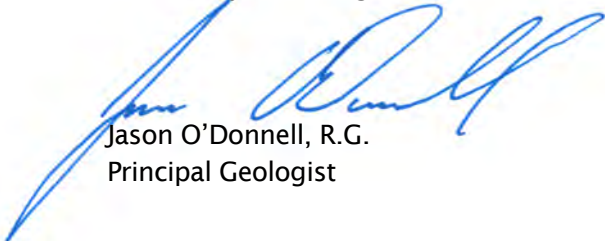
GeoDesign, Inc.



Kyle Haggart
Environmental Staff



Kyle R. Sattler, L.G. (Washington)
Senior Project Geologist



Jason O'Donnell, R.G.
Principal Geologist



Expires 06/01/2018

FIGURES



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 Wilsonville OR 97070
 503.968.8787 www.geodesigninc.com

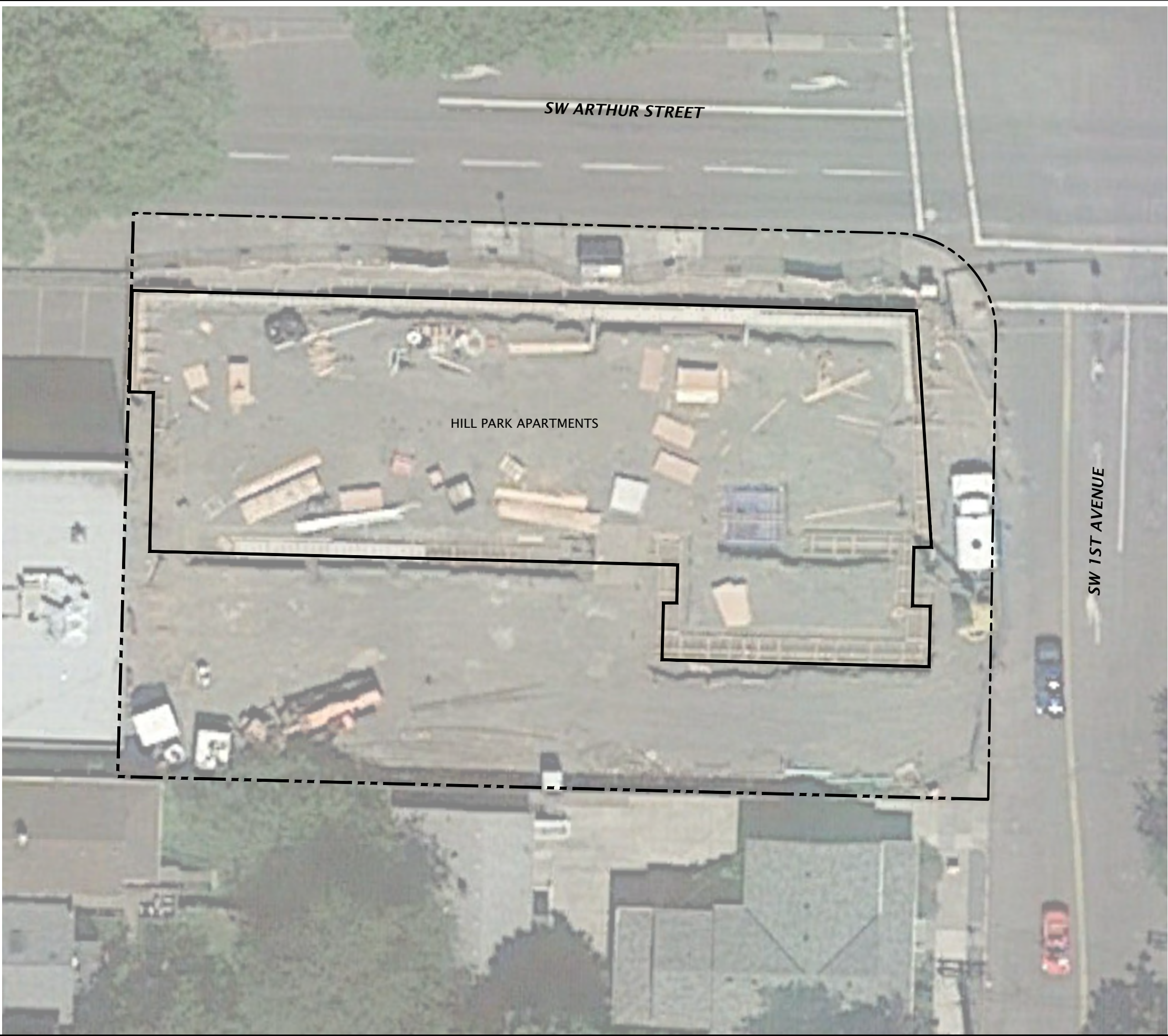
GERDING-187-11

JANUARY 2018

VICINITY MAP

HILL PARK APARTMENTS
 PORTLAND, OR

FIGURE 1



LEGEND:

--- APPROXIMATE PROJECT SITE BOUNDARY

— BUILDING FOOTPRINT

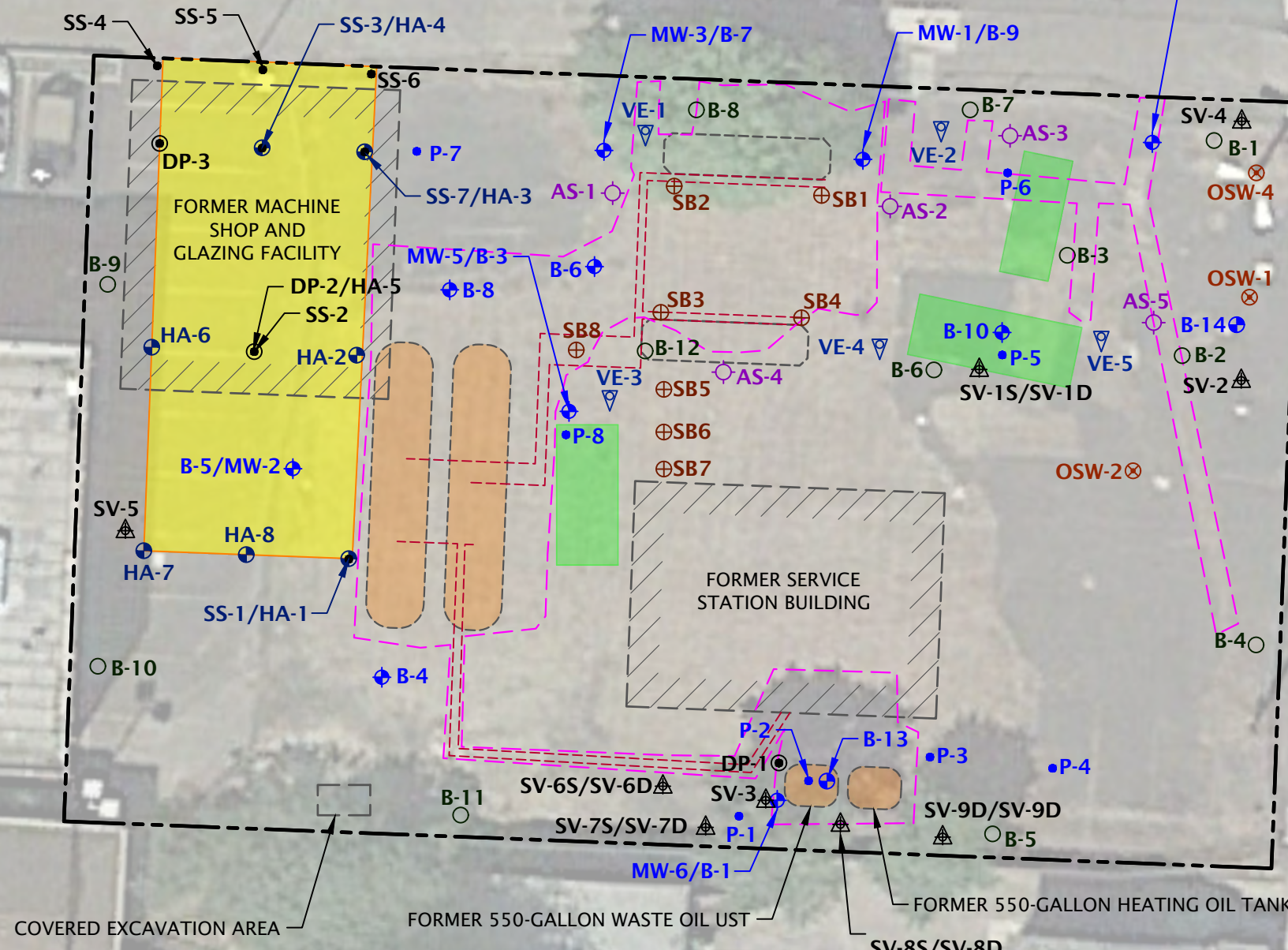
N

0 20 40

(SCALE IN FEET)

SITE PLAN BASED ON AERIAL PHOTOGRAPH
OBTAINED FROM GOOGLE EARTH PRO®,
AUGUST 8, 2017

<div>GeoDESIGN_{LLC}</div> <div>9450 SW Commerce Circle - Suite 300 Wilsonville OR 97070 503.968.8787 www.geodesigninc.com</div>	GERDING-187-11	SITE PLAN	
	JANUARY 2018	HILL PARK APARTMENTS PORTLAND, OR	
	FIGURE 2		



PROJECT SITE BOUNDARY (TAX LOT 3000 OF
MULTNOMAH CO. TAX MAP 1S1E10BB)
LUST FILE NO. 26-96-0095

SB1 ⊕ SOIL BORING (OMEGA SERVICES, 1996)

— — — — — EXCAVATION AREA
(OMEGA, 1996 AND SECOR, 2001)

B-1/MW-1 SOIL BORING/GROUNDWATER MONITORING WELL (SECOR, 2001, DECOMMISSIONED IN 2014)

TEST PIT (SECOR, 2001)

== == == == == FORMER PIPING (REMOVED IN 2001)

 FORMER DISPENSER ISLAND
(REMOVED IN 2001)

 FORMER UST (REMOVED IN 2001)

B-13 SOIL BORING (SECOR, 2002)


AS-1  AS WELLS (SECOR, 2002)

VE-1  SVE WELLS (SECOR, 2002)

OSW-1  OZONE SPARGE WELLS (DELTA, 2007)

B-1 ○ SOIL BORING (STANTEC, 2010)

SV-1S/SV-1D **DUAL-NESTED SOIL VAPOR PROBE**
(ARCADIS, 2012-2014)

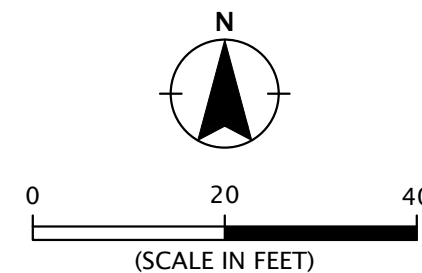
SV-2  SINGLE-LEVEL SOIL VAPOR PROBE
(ARCADIS, 2012-2014)

DP-1 DIRECT-PUSH BORING (GEODESIGN, 2014)

HA-1 **HAND-AUGERED BORING**
(GEODESIGN, 2015)

SS-1 • CONFIRMATION SOIL SAMPLE
(GEODESIGN, 2016)

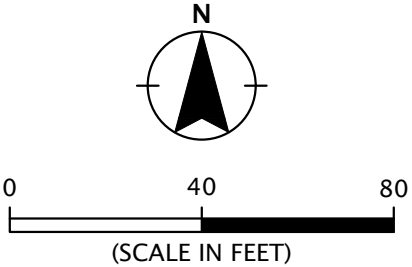
 APPROXIMATE EXCAVATION AREA
(GEODESIGN, 2016)



SITE PLAN BASED ON AERIAL PHOTOGRAPH
OBTAINED FROM GOOGLE EARTH PRO®,
OCTOBER 20, 2014



- LEGEND:**
- B-1 DIRECT-PUSH BORINGS (GEODESIGN, 2016)
 - MW-7A MONITORING WELL (DELTA, 2004 AND 2007, DECOMMISSIONED IN 2014)
 - MW-7 MONITORING WELL (SECOR, 2002, DECOMMISSIONED IN 2009)
 - B-5 APPROXIMATE LOCATION OF CITY OF PORTLAND BORING
 - MW-7A MONITORING WELL (STANTEC, 2009, DECOMMISSIONED IN 2014)



SITE PLAN BASED ON AERIAL PHOTOGRAPH
OBTAINED FROM GOOGLE EARTH PRO®,
OCTOBER 20, 2014

GERDING-187-11	SITE PLAN DETAIL - OFF-SITE EXPLORATIONS	
	HILL PARK APARTMENTS	FIGURE 4
JANUARY 2018	PORTLAND, OR	

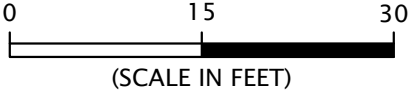
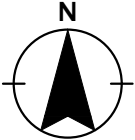
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File Name: J:\E-L\Gerding\Gerding-187\Gerding-187-11\Figures\CAD\Construction Completion Rprt\Gerding-187-11-SP-vapor-mon-probe.dwg | Layout: FIGURE 5

SW ARTHUR STREET

SW 1ST AVENUE

LEGEND:

- BUILDING FOOTPRINT
- 3-INCH PERFORATED ADS FLEX PIPE WITH SOCK
- 4-INCH SCHEDULE 40 RISER
- FLEX PIPE JOINED WITH TEE
- 4-INCH-I.D. FOOTING SLEEVE
- SUB-SLAB MONITORING PROBE

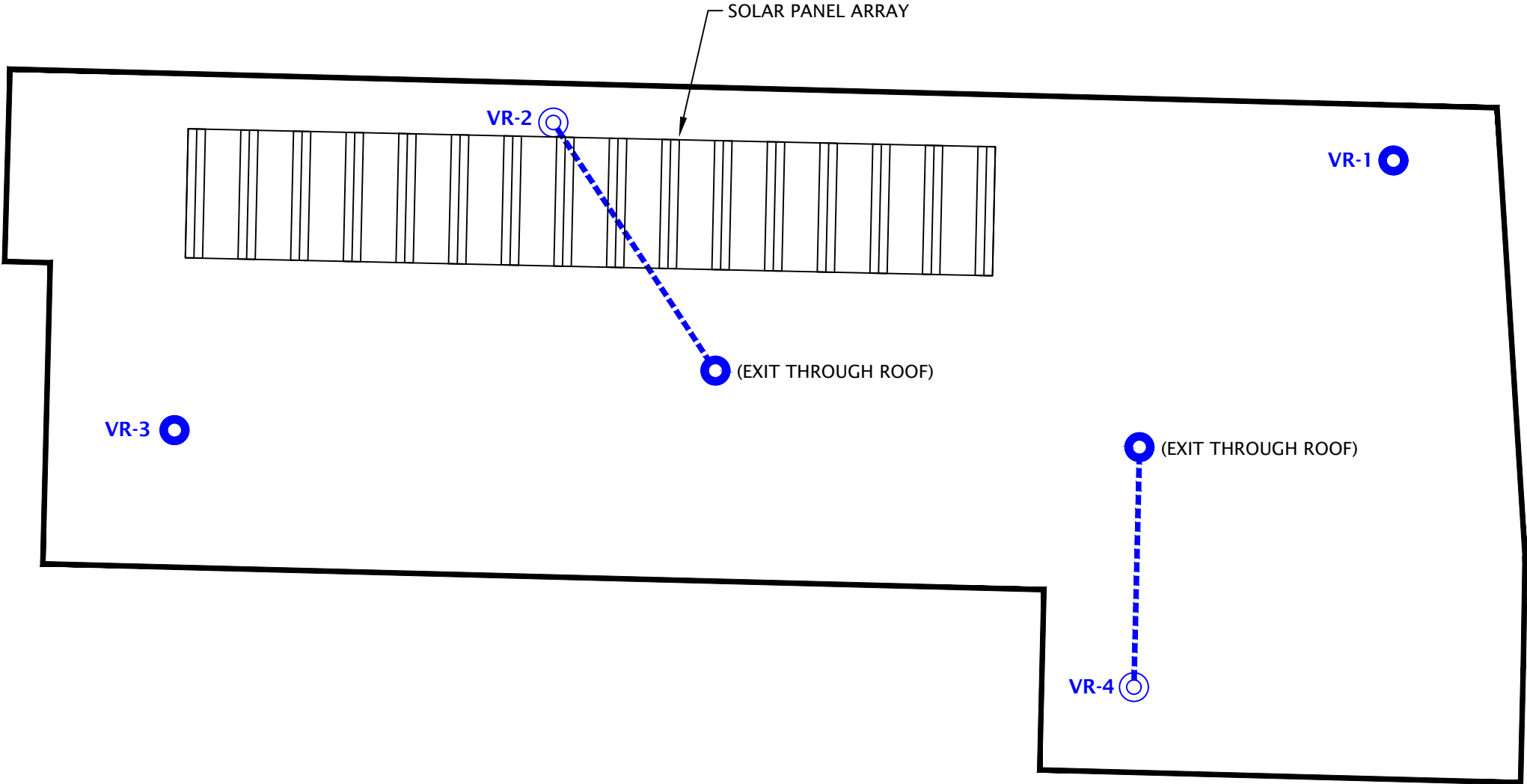


SITE PLAN BASED ON OBSERVATIONS AND
FIELD MEASUREMENTS BY GEODESIGN STAFF

GERDING-187-11	SITE PLAN - VENT PIPES AND MONITORING PROBES	
	HILL PARK APARTMENTS	FIGURE 5
PORTLAND, OR		





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File Name: J:\E-L\Gerding\Gerding-187\Gerding-187-11\Figures\CAD\Construction Completion Rprt\Gerding-187-11-SP03.dwg | Layout: FIGURE 6

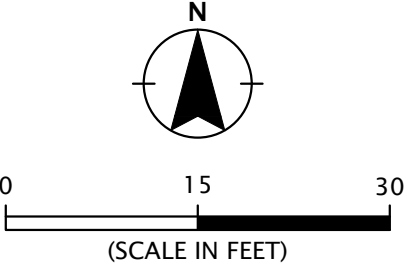
SW ARTHUR STREET




SW 1ST AVENUE

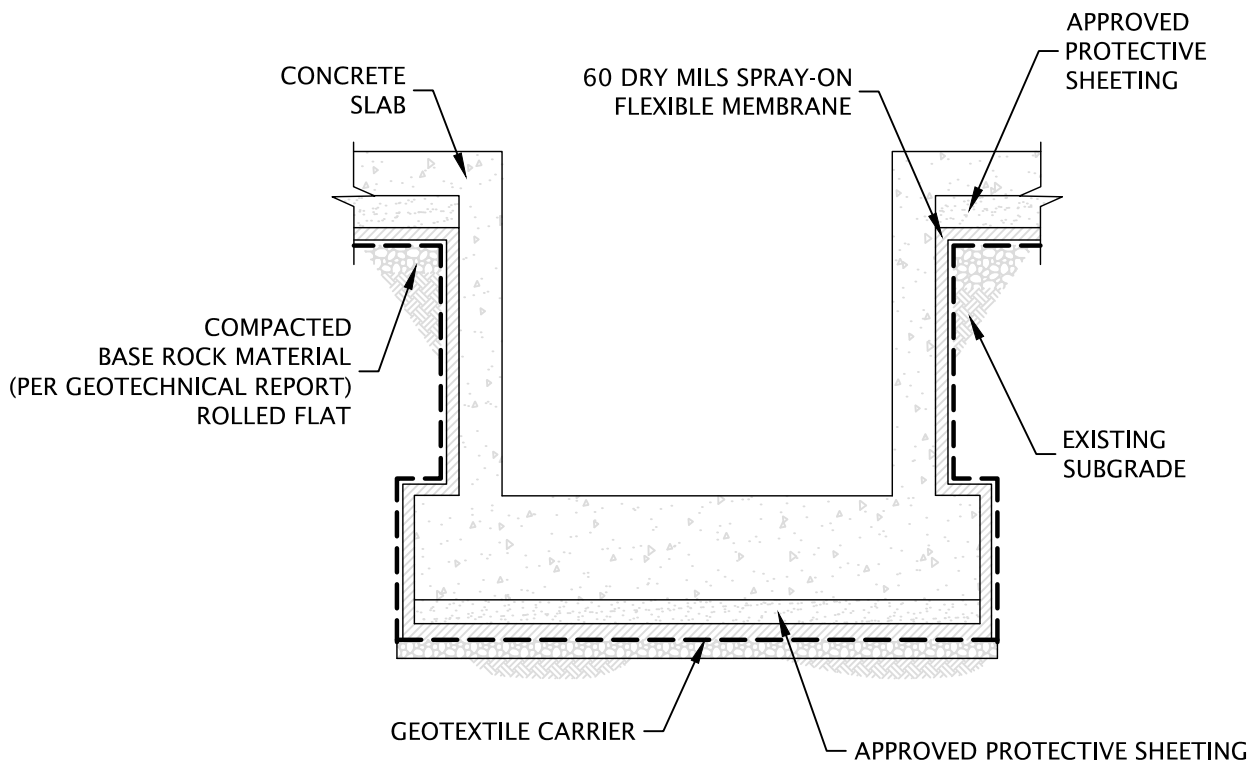
LEGEND:

-  BUILDING FOOTPRINT
-  4-INCH ABS PIPE EXTENSION
-  VR-1 4-INCH SCHEDULE 40 RISER EQUIPPED WITH TURBINE CAP
-  VR-2 4-INCH SCHEDULE 40 RISER EQUIPPED WITH ELECTRIC RADON FAN



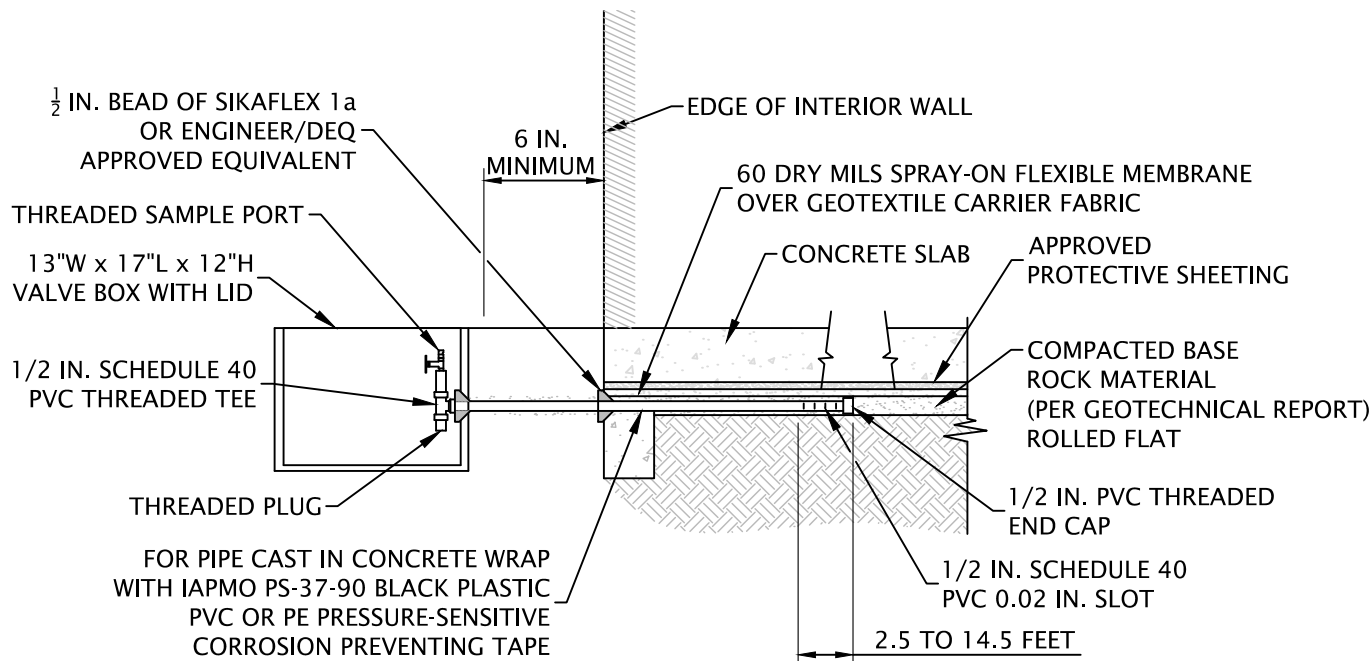
SITE PLAN BASED ON OBSERVATIONS AND
FIELD MEASUREMENTS BY GEODESIGN STAFF

 9450 SW Commerce Circle - Suite 300 Wilsonville, OR 97070 503.968.8787 www.geodesigninc.com	GERDING-187-11	SITE PLAN - VENT RISERS	
	JANUARY 2018	HILL PARK APARTMENTS PORTLAND, OR	
		FIGURE 6	



NOTE:
TWO LAYERS OF MEMBRANE SHALL BE INSTALLED BELOW SLABS AND FOOTINGS OF ELEVATOR PITS AND SUMP PITS.

1 TYPICAL ELEVATOR/SUMP PIT DETAIL (TYP.)
NOT TO SCALE



2 SUB-SLAB MONITORING PROBES (TYPICAL)
NOT TO SCALE

APPENDIX A

MM Daily Tonnage Report - Detail

Hillsboro Landfill - S03305 (USA) 06/01/2016 12:00 AM - 06/10/2016 11:59 PM Operation Type: All

Customer: KONELL CONSTRUCTION AND DEMOLITION (KONELL CONSTRUCTION AND DEMOLITION) - Ticket Type: All - Customer Type: All - PMT Category: All

Ticket Date	Time	Operator	Ticket	Customer	Carrier	Vehicle	Material	Tons
6/7/2016	2:03:23 PM	jprime1	1407871	KONELL CONSTRUCTION AND DEMOLITION	Konnell	4760	Cont Soil Pet-RGC-Tons	14.53
6/7/2016	2:07:53 PM	jprime1	1407873	KONELL CONSTRUCTION AND DEMOLITION	KONELL	4751	Cont Soil Pet-RGC-Tons	13.09
6/8/2016	8:23:26 AM	jprime1	1407904	KONELL CONSTRUCTION AND DEMOLITION	SITE PRO	59	Cont Soil Pet-RGC-Tons	14.53
6/8/2016	8:25:38 AM	jprime1	1407905	KONELL CONSTRUCTION AND DEMOLITION	Daileys	D-8	Cont Soil Pet-RGC-Tons	12.88
6/8/2016	8:28:52 AM	jprime1	1407906	KONELL CONSTRUCTION AND DEMOLITION	Xtra	1	Cont Soil Pet-RGC-Tons	12.01
6/8/2016	8:42:03 AM	jprime1	1407910	KONELL CONSTRUCTION AND DEMOLITION	KONELL	4757	Cont Soil Pet-RGC-Tons	14.65
6/8/2016	10:09:04 AM	jprime1	1407933	KONELL CONSTRUCTION AND DEMOLITION	SITE PRO	59	Cont Soil Pet-RGC-Tons	16.99
6/8/2016	10:24:43 AM	jprime1	1407936	KONELL CONSTRUCTION AND DEMOLITION	Daileys	T8	Cont Soil Pet-RGC-Tons	14.36
6/8/2016	10:26:56 AM	jprime1	1407938	KONELL CONSTRUCTION AND DEMOLITION	Xtra	1	Cont Soil Pet-RGC-Tons	12.59
6/8/2016	10:31:43 AM	jprime1	1407941	KONELL CONSTRUCTION AND DEMOLITION	KONELL	4757	Cont Soil Pet-RGC-Tons	16.24
6/8/2016	11:41:52 AM	jprime1	1407951	KONELL CONSTRUCTION AND DEMOLITION	SITE PRO	59	Cont Soil Pet-RGC-Tons	15.70
6/8/2016	11:55:13 AM	jprime1	1407954	KONELL CONSTRUCTION AND DEMOLITION	Daileys	d8	Cont Soil Pet-RGC-Tons	13.74
6/8/2016	11:56:53 AM	jprime1	1407956	KONELL CONSTRUCTION AND DEMOLITION	Xtra	1	Cont Soil Pet-RGC-Tons	12.73
6/8/2016	12:10:26 PM	jprime1	1407961	KONELL CONSTRUCTION AND DEMOLITION	KONELL	4757	Cont Soil Pet-RGC-Tons	14.14
6/8/2016	1:34:05 PM	jprime1	1407972	KONELL CONSTRUCTION AND DEMOLITION	SITE PRO	59	Cont Soil Pet-RGC-Tons	17.12
6/8/2016	1:35:17 PM	jprime1	1407974	KONELL CONSTRUCTION AND DEMOLITION	Daileys	d8	Cont Soil Pet-RGC-Tons	13.38
6/8/2016	1:41:17 PM	jprime1	1407976	KONELL CONSTRUCTION AND DEMOLITION	Xtra	1	Cont Soil Pet-RGC-Tons	12.84
6/8/2016	1:47:14 PM	jprime1	1407979	KONELL CONSTRUCTION AND DEMOLITION	KONELL	4757	Cont Soil Pet-RGC-Tons	17.50
6/8/2016	3:19:19 PM	jprime1	1407989	KONELL CONSTRUCTION AND DEMOLITION	SITE PRO	59	Cont Soil Pet-RGC-Tons	16.75
6/8/2016	3:47:22 PM	jprime1	1407991	KONELL CONSTRUCTION AND DEMOLITION	Daileys	d8	Cont Soil Pet-RGC-Tons	11.15

Hill Park Apartments Project Lead Impacted Soil Total: 286.92 Tons



Customer Summary Report

Hillsboro Landfill - S03305 (USA) 06/01/2016 12:00 AM - 08/25/2017 11:59 PM Operation Type: All

Customer: All - Ticket Type: All - Customer Type: All - PMT Category: All - Profile: 1213900R

Ticket Date	Ticket ID	Customer	Generator	Profile	Truck	Material	Tons
6/9/2016	1408006	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4757	Cont Soil Pet-RGC-Tons	16.48
6/9/2016	1408007	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	1	Cont Soil Pet-RGC-Tons	15.18
6/9/2016	1408038	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	1	Cont Soil Pet-RGC-Tons	16.86
6/9/2016	1408040	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4757	Cont Soil Pet-RGC-Tons	15.61
6/9/2016	1408064	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	1	Cont Soil Pet-RGC-Tons	14.52
6/9/2016	1408077	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	1	Cont Soil Pet-RGC-Tons	14.08
6/10/2016	1408126	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	D-20	Cont Soil Pet-RGC-Tons	15.35
6/10/2016	1408153	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	D-20	Cont Soil Pet-RGC-Tons	14.36
6/10/2016	1408159	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	D6	Cont Soil Pet-RGC-Tons	14.06
6/10/2016	1408170	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	D-20	Cont Soil Pet-RGC-Tons	13.59
6/13/2016	1408212	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4755	Cont Soil Pet-RGC-Tons	14.37
6/13/2016	1408217	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	2759	Cont Soil Pet-RGC-Tons	14.91
6/13/2016	1408226	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4755	Cont Soil Pet-RGC-Tons	15.33
6/13/2016	1408231	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4759	Cont Soil Pet-RGC-Tons	15.07
6/13/2016	1408240	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4756	Cont Soil Pet-RGC-Tons	14.46
6/13/2016	1408243	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4755	Cont Soil Pet-RGC-Tons	13.86
6/13/2016	1408247	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4759	Cont Soil Pet-RGC-Tons	14.74
6/13/2016	1408250	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4756	Cont Soil Pet-RGC-Tons	17.02
6/13/2016	1408253	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4755	Cont Soil Pet-RGC-Tons	14.54
6/13/2016	1408255	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4759	Cont Soil Pet-RGC-Tons	16.05
6/13/2016	1408262	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4756	Cont Soil Pet-RGC-Tons	14.88
6/13/2016	1408265	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	1213900R	4755	Cont Soil Pet-RGC-Tons	14.50

6/14/2016	1408307	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	13.61
6/14/2016	1408311	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D11	Cont Soil Pet-RGC-Tons	15.16
6/14/2016	1408318	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	15.59
6/14/2016	1408346	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	15.47
6/14/2016	1408354	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D11	Cont Soil Pet-RGC-Tons	14.31
6/14/2016	1408365	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	11.69
6/14/2016	1408366	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.53
6/14/2016	1408384	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	15.49
6/14/2016	1408389	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d11	Cont Soil Pet-RGC-Tons	14.32
6/14/2016	1408397	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	13.19
6/15/2016	1408471	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	14.36
6/15/2016	1408473	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	14.79
6/15/2016	1408480	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	15.39
6/15/2016	1408520	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	15.51
6/15/2016	1408522	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	15.71
6/15/2016	1408523	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	16.64
6/15/2016	1408539	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	15.62
6/15/2016	1408546	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	15.78
6/15/2016	1408547	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	16.39
6/15/2016	1408560	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	13.94
6/15/2016	1408568	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	14.92
6/15/2016	1408572	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	13.46
6/15/2016	1408575	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	17.35
6/16/2016	1408607	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	17.60
6/16/2016	1408613	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D18	Cont Soil Pet-RGC-Tons	17.45
6/16/2016	1408620	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	18.02
6/16/2016	1408628	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	15.73

6/16/2016	1408634	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d18	Cont Soil Pet-RGC-Tons	17.67
6/16/2016	1408645	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.59
6/16/2016	1408649	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	17.85
6/16/2016	1408657	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	16.00
6/16/2016	1408675	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	15.34
6/16/2016	1408678	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	7460	Cont Soil Pet-RGC-Tons	10.20
6/17/2016	1408721	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	14.08
6/17/2016	1408723	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	W2	Cont Soil Pet-RGC-Tons	13.53
6/17/2016	1408780	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	w2	Cont Soil Pet-RGC-Tons	11.79
6/17/2016	1408800	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	11.36
6/17/2016	1408802	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	W2	Cont Soil Pet-RGC-Tons	15.46
6/20/2016	1408859	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.94
6/20/2016	1408863	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	7	Cont Soil Pet-RGC-Tons	16.60
6/20/2016	1408891	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.33
6/20/2016	1408901	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	7	Cont Soil Pet-RGC-Tons	15.81
6/20/2016	1408917	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.47
6/20/2016	1408935	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	7	Cont Soil Pet-RGC-Tons	14.21
6/20/2016	1408945	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	12.46
6/21/2016	1409016	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	W2	Cont Soil Pet-RGC-Tons	12.54
6/21/2016	1409025	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	14.29
6/21/2016	1409051	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	w2	Cont Soil Pet-RGC-Tons	14.06
6/21/2016	1409063	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	MG1	Cont Soil Pet-RGC-Tons	11.13
6/23/2016	1409287	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	13.94
6/23/2016	1409304	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	15.14
6/23/2016	1409317	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	16.53
6/24/2016	1409345	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	13.57
6/24/2016	1409349	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	14	Cont Soil Pet-RGC-Tons	12.34

6/24/2016	1409354	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	17.04
6/24/2016	1409360	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	14.20
6/24/2016	1409367	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	15.50
6/24/2016	1409373	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.62
6/24/2016	1409377	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d14	Cont Soil Pet-RGC-Tons	11.85
6/24/2016	1409380	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	13.30
6/24/2016	1409390	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	16.13
6/24/2016	1409396	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	14.37
6/24/2016	1409403	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	11.20
6/24/2016	1409405	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D17	Cont Soil Pet-RGC-Tons	13.34
6/24/2016	1409416	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	14.75
6/24/2016	1409418	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.64
6/24/2016	1409421	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	12.03
6/24/2016	1409422	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	15.95
6/27/2016	1409461	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	15.70
6/27/2016	1409463	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	16.15
6/27/2016	1409470	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d14	Cont Soil Pet-RGC-Tons	11.24
6/27/2016	1409482	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.80
6/27/2016	1409491	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	14.80
6/27/2016	1409494	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	12.56
6/27/2016	1409501	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d-14	Cont Soil Pet-RGC-Tons	8.87
6/27/2016	1409506	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d14	Cont Soil Pet-RGC-Tons	11.52
6/27/2016	1409518	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	13.28
6/27/2016	1409540	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D-14	Cont Soil Pet-RGC-Tons	12.79
6/27/2016	1409541	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	15.93
6/27/2016	1409556	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	13.41
6/27/2016	1409558	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d17	Cont Soil Pet-RGC-Tons	14.19

6/27/2016	1409559	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	12.66
6/28/2016	1409614	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.07
6/28/2016	1409620	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	15.42
6/28/2016	1409648	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	14.91
6/28/2016	1409658	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	14.19
6/28/2016	1409693	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	13.36
6/28/2016	1409700	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.95
6/28/2016	1409715	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	13.74
6/29/2016	1409836	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.55
6/29/2016	1409858	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	15.60
6/29/2016	1409892	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.63
7/5/2016	1410326	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	12.76
7/5/2016	1410354	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	D14	Cont Soil Pet-RGC-Tons	11.82
7/6/2016	1410469	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.57
7/6/2016	1410492	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.48
7/7/2016	1410605	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	17.70
7/8/2016	1410661	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	15.78
7/8/2016	1410677	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.82
7/8/2016	1410697	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.69
7/8/2016	1410708	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.50
7/8/2016	1410729	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.91
7/11/2016	1410817	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.04
7/11/2016	1410835	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	16.93
7/11/2016	1410854	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.93
7/11/2016	1410863	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	18.84
7/11/2016	1410875	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	14.43
7/11/2016	1410878	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.53

7/12/2016	1410929	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	15.31
7/13/2016	1411046	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	12.10
7/14/2016	1411212	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	16.14
7/14/2016	1411236	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	12.17
7/14/2016	1411245	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	13.55
7/14/2016	1411266	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	12.14
7/14/2016	1411289	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	12.12
7/15/2016	1411348	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	14.03
7/18/2016	1411568	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	13.07
7/18/2016	1411592	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	13.36
7/19/2016	1411648	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	15.75
7/19/2016	1411669	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	8	Cont Soil Pet-RGC-Tons	13.66
7/19/2016	1411680	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	16.47
7/19/2016	1411697	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	8	Cont Soil Pet-RGC-Tons	14.97
7/19/2016	1411706	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	15.53
7/19/2016	1411724	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	8	Cont Soil Pet-RGC-Tons	16.22
7/19/2016	1411729	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	14.97
7/20/2016	1411828	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	13.02
7/20/2016	1411850	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	12.81
7/20/2016	1411870	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	8.78
7/25/2016	1412222	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	13.45
7/25/2016	1412282	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	4.93
7/26/2016	1412447	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	15.66
7/29/2016	1412967	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	19.18
8/2/2016	1413193	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.14
8/2/2016	1413219	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	14.87
8/8/2016	1413818	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	12.64

8/10/2016	1414218	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	7.42
8/18/2016	1415248	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	14.65
8/18/2016	1415257	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	15.36
8/18/2016	1415302	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	17.31
8/18/2016	1415343	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.92
8/18/2016	1415380	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	9.73
8/19/2016	1415451	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	14.84
8/19/2016	1415489	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.32
8/19/2016	1415514	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	16.16
8/19/2016	1415548	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	16.94
8/26/2016	1416604	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.36
8/26/2016	1416659	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	14.72
8/26/2016	1416691	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4760	Cont Soil Pet-RGC-Tons	12.89
8/29/2016	1416763	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	18.05
8/29/2016	1416784	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	14.91
8/29/2016	1416827	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4756	Cont Soil Pet-RGC-Tons	15.13
8/29/2016	1416831	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.50
8/29/2016	1416877	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.86
9/8/2016	1418354	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	18.40
9/8/2016	1418411	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4759	Cont Soil Pet-RGC-Tons	16.43
1/30/2017	1432826	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	17.45
1/31/2017	1432902	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	13.77
2/16/2017	1434469	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	15.61
6/21/2017	1448475	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	14.74
6/21/2017	1448508	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	12.00
6/22/2017	1448654	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	19.72
6/22/2017	1448694	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	10.10

7/5/2017	1449952	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	15.27
7/5/2017	1449968	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4757	Cont Soil Pet-RGC-Tons	9.94
7/10/2017	1450382	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	d8	Cont Soil Pet-RGC-Tons	11.75
7/31/2017	1452796	KONELL CONSTRUCTION AND DEMOLITION	OR-1ST AND ARTHUR LIMITED	121390OR	4755	Cont Soil Pet-RGC-Tons	13.93
TOTALS:	188 loads					Total Tons	2,725.26

APPENDIX B



PRE-CONSTRUCTION VIEW OF THE PROJECT SITE IN OCTOBER 2014. PHOTOGRAPH TAKEN FACING SOUTH.



EXCAVATION OF LEAD-IMPACTED SOIL IN JUNE 2016. PHOTOGRAPH TAKEN FACING NORTH.



EXCAVATION OF LEAD-IMPACTED SOIL IN JUNE 2016. PHOTOGRAPH TAKEN FACING NORTH.



FINAL LIMITS OF LEAD-IMPACTED REMEDIAL EXCAVATION COMPLETED IN JUNE 2016. PHOTOGRAPH TAKEN FACING SOUTH.



LIQUID BOOT® BEING APPLIED TO THE ELEVATOR SHAFT IN JULY 2016.



ELEVATOR SHAFT AFTER THE INSTALLATION OF THE LIQUID BOOT® ULTRASHIELD P-150 PROTECTIVE SHEETING COMPLETED IN JULY 2016.



WESTERN PORTION OF THE SUB-SLAB PIPING INSTALLED IN SEPTEMBER 2016.
PHOTOGRAPH TAKEN FACING NORTHWEST.



EASTERN PORTION OF THE SUB-SLAB PIPING INSTALLED IN SEPTEMBER 2016.
PHOTOGRAPH TAKEN FACING EAST.



SUB-SLAB MONITORING PROBE PIPING INSTALLED IN SEPTEMBER 2016.



SUB-SLAB MONITORING PROBE INSTALLED IN SEPTEMBER 2016. PHOTOGRAPH TAKEN FACING SOUTH.



INSTALLATION OF THRACE-LINQ® 180EX NON-WOVEN GEOTEXTILE FABRIC AND BASEFABRIC™ T-60 IN SEPTEMBER 2016. PHOTOGRAPH TAKEN FACING SOUTHWEST.



INSTALLATION OF THRACE-LINQ® 180EX NON-WOVEN GEOTEXTILE FABRIC AND BASEFABRIC™ T-60 IN SEPTEMBER 2016. PHOTOGRAPH TAKEN FACING NORTHEAST.



COMPLETED INSTALLATION OF THRACE-LINQ® 180EX NON-WOVEN GEOTEXTILE FABRIC AND BASEFABRIC™ T-60 IN SEPTEMBER 2016. PHOTOGRAPH TAKEN FACING NORTHWEST.



INSTALLATION OF LIQUID BOOT® ON TOP OF BASEFABRIC® T-60 IN SEPTEMBER 2016. PHOTOGRAPH TAKEN FACING WEST.



SMOKE TESTING THE LIQUID BOOT® IN SEPTEMBER 2016.



COMPLETED INSTALLATION OF LIQUID BOOT® ULTRASHIELD P-150 PROTECTION SHEETING IN SEPTEMBER 2016. PHOTOGRAPH TAKEN FACING EAST.



VENT RISE (VR-2) LOCATED ON THE ROOF.
PHOTOGRAPH TAKEN FACING SOUTHEAST IN
JULY 2017.

ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

AS	air sparge
BGS	below ground surface
BTEX	benzene, toluene, ethylbenzene and xylenes
CAP	Corrective Action Plan
CFSL	Clean Fill Screening Level
CMMP	Contaminated Media Management Plan
COPC	contaminant of potential concern
CSM	Conceptual Site Model
DEQ	Oregon Department of Environmental Quality
EDB	dibromomethane
EES	Equitable and Easement Servitude
EPA	U.S. Environmental Protection Agency
LUST	Leaking Underground Storage Tank
mg/kg	milligrams per kilogram
MRL	method reporting limit
NFA	No Further Action
OMMP	Operations, Maintenance, and Monitoring Plan
OSW	ozone sparge well
PAH	polycyclic aromatic hydrocarbon
pCi/L	picoCuries per liter
PPA	Prospective Purchaser Agreement
PVC	polyvinyl chloride
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
SVE	soil vapor extraction
TMB	trimethylbenzene
UIC	underground injection control
UST	underground storage tank
VOC	volatile organic compound

