PERIODIC REVIEW REPORT
FINAL

Hidden Valley Landfill
Facility Site ID#: 1272

17925 Meridian East
Puyallup, Washington 98373

Prepared by
Washington State Department of Ecology
Southwest Region Office
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1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup site conditions and monitoring data at the Hidden Valley Landfill site (Site). The Washington State Department of Ecology (Ecology) is the lead agency for cleanup of the Site as stipulated by an agreement with Region 10 of the Environmental Protection Agency (EPA). Accordingly, cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

The purpose of this periodic review is to determine whether the cleanup remedy at Site continues to be protective of human health and the environment.

Cleanup activities at this Site were completed under Cleanup Action Plan Consent Decree No. 03-2-14687-6 between Ecology and the defendants which include Pierce County Recycling, Composting and Disposal LLC dba LRI (LRI); and Pierce County, as executed in 2004. The remedy involved the containment of hazardous substances, which by definition includes solid waste decomposition products from municipal solid waste landfills. Contaminants remaining at the Site exceed MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. The MTCA cleanup levels for groundwater are established under WAC 173-340-720. As a result of residual contamination, institutional controls were required as part of the final remedy for the Site.

WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a site every five years under the following conditions:

(a) Whenever the department conducts a cleanup action.
(b) Whenever the department approves a cleanup action under an order, agreed order or consent decree.
(c) Or, as resources permit, whenever the department issues a no further action opinion.
(d) one of the following conditions exists:
    1. Institutional controls or financial assurance are required as part of the cleanup.
    2. Where the cleanup level is based on a practical quantitation limit.
    3. Where, in the department's judgment, modifications to the default equations or assumptions using site-specific information would significantly increase the concentration of hazardous substances remaining at the site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

(a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the Site.

(b) New scientific information for individual hazardous substances of mixtures present at the Site.
(c) New applicable state and federal laws for hazardous substances present at the Site.
(d) Current and projected Site use.
(e) Availability and practicability of higher preference technologies.
(f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site Operational History

The Hidden Valley Landfill is a closed municipal solid waste landfill located 17925 Meridian East near the City of Puyallup, Pierce County, Washington. The landfill property is approximately 92 acres in size. The landfill includes approximately 56 acres of closed, unlined fill, a closed 30-acre lined cell, a leachate pre-treatment facility, and a gas-to-energy facility. A vicinity map is available as Appendix 6.1 and a Site plan is available as Appendix 6.2.

Hidden Valley Landfill began operation in the mid-1960s and accepted waste until December 31, 1998. Waste disposed of at the landfill included municipal solid waste, demolition wastes, commercial waste, industrial wastes, and small quantities of bulk liquids and sludges. Pierce County operated the facility as a landfill from approximately 1965 to 1977. LRI acquired the facility in 1977, and operated it as an active landfill from then until December 31, 1998, when disposal activities ended.

2.2 Regulatory History

The results of environmental studies conducted from 1981 through 1985 were used by the U.S. Environmental Protection Agency (EPA) to prepare a preliminary assessment and a hazard ranking scoring (HRS) of the Site in 1985. As a result of the HRS, Hidden Valley Landfill was placed on the Nation Priorities List (NPL) in April 1989.

During its operational period, the Site was regulated by the Tacoma-Pierce County Health Department (Health Department) through annual operating permits. In addition, in September 1986, LRI and the Health Department executed a memorandum of agreement (MOA) governing interim and final closure of the active portions of the landfill, construction of a gas collection and migration control system, evaluation of leachate collection, and further Site development consistent with WAC Chapter 173-304, Minimum Functional Standards for Solid Waste Handling (MFS).

In 1987, LRI and Ecology executed Consent Order No. DE 86-S173 (Consent Order). The Consent Order required LRI to conduct a remedial investigation and feasibility study, and to comply with the Health Department MOA provisions regarding operation and closure of the existing landfill footprint.

2.3 Project History

2.3.1 Site Characterization

Three aquifers have been identified beneath Hidden Valley Landfill: the shallow perched aquifer, the upper regional aquifer, and the lower regional aquifer. The upper regional aquifer and the lower regional aquifer are separated by a thick section (55 to >130 feet) of low permeability deposits referred to as the Salmon Springs aquitard.

Depth to groundwater at the landfill is dependent on topography, Depth to water ranges from about 11 to 15 feet below ground surface (bgs) in winter and spring months, to about 25 feet bgs in late fall in the lower elevations (southern area) of the Site, and generally ranges from approximately 120 to 145 feet bgs in the areas of higher elevations (northern area). Groundwater flow direction, water level gradients, and seasonal water level fluctuations in the shallow perched and upper regional aquifers are similar. Groundwater flow in both aquifers is to the northwest.

A draft remedial investigation (RI) report was submitted to Ecology on September 15, 1990. Following revisions, the RI report was submitted as final on March 14, 1992. A baseline risk assessment (RA) was submitted to Ecology February 15, 1991. The RA evaluated existing and potential (future) exposure scenarios for soils, surface water, landfill gas, and groundwater. The feasibility study (FS) report was submitted to Ecology on May 26, 1992.

2.3.2 Nature and Extent of Contamination

Investigations performed at Hidden Valley Landfill indicate that groundwater quality has been affected by the release of leachate and landfill gas from the landfill. Landfill gas containing methane and low levels of volatile organic compounds (VOCs) is present at the Site. Groundwater quality in the shallow perched aquifer, and to a lesser extent the upper regional aquifer, has been affected by the landfill. No water quality impacts related to landfill operations have been identified in the lower regional aquifer. No surface water, other than seasonal ponded water, exists on or near the Site.

Water quality data from the shallow perched and upper regional aquifers downgradient (northwest) of the landfill display elevated specific conductance and elevated concentrations of constituents typical of municipal solid waste landfills including ammonia, nitrate, dissolved iron and manganese, chloride, and sulfate, as well as low intermittent levels of VOCs including chlorobenzene, and 1,4-dichlorobenzene, and historical detections of benzene, 1,1-dichloroethane, and vinyl chloride.

Leaching is a primary contaminant release mechanism from the landfill to groundwater. The infiltration of precipitation was the major source of leachate production prior to closure; however, data from Site investigations indicate that seasonal groundwater inundation of waste may be a continuing release mechanism. When groundwater elevations in the shallow perched aquifer exceed approximately 430 feet (top of the well casing elevation; which typically occurs in the late winter and early spring), the base of the refuse becomes locally saturated and leachate is generated.

Groundwater quality data are largely in compliance with federal primary drinking water standards (MCLs); however, nitrate levels in the shallow perched, and to a lesser extent, the upper regional aquifer sporadically exceed the MCL of 10 milligrams per liter (mg/L). These exceedances historically occurred concurrent with periods of groundwater recharge, with the highest nitrate concentrations reported when the water table has risen rapidly. Fluctuations in the nitrate-nitrogen/ammonia-nitrogen concentrations in the shallow perched aquifer are interpreted to result from changes in the oxidation/reduction potential of the groundwater. Nitrogen in the leachate is nearly all in the form of ammonia. During periods of aquifer recharge, the aquifer

receives oxygenated water and the water table rises. Under these conditions, ammonia-nitrogen concentrations in the groundwater are oxidized to nitrate. During non-recharge periods, nitrogen concentrations are reduced to ammonia due to the anaerobic conditions in the vicinity of the landfill, and nitrate levels are typically very low to non-detect.

2.3.3 Landfill Closure

The lined cell, referred to as the East Lined Area, was constructed in two stages in 1991 and 1993. The 1991 construction consisted of the 13-acre bottom liner over native soils and the lower portion of the side slope liner over refuse. The 1993 construction consisted of the remaining portion of the side slope liner. Placement of refuse in the East Lined Area (over bottom liner) began in the spring of 1992. Leachate is collected from the East Lined Area and pretreated on-Site prior to discharge to the Pierce County sewer system.

Closure of the unlined portion of the landfill occurred in phases during the summer seasons of 1989 (North Closure - 13 acres), 1992 (Southwest Closure – 26 acres) and 1993 (remaining closure of unlined area – 17 acres). Closure of the East Lined Area began in the summer of 1998, with approximately 11 acres receiving final closure. The remaining 22 acres of the East Lined Area underwent final closure in 1999 and 2000. Closure of the unlined landfill was in accordance with WAC 173-304. Closure of the East Lined Area was in accordance with WAC 173-351, Criteria for Municipal Solid Waste Landfills. Closure activities included the installation of an engineered geomembrane cap (unlined area consistent with WAC 173-304) or a composite geomembrane cap (lined area consistent with WAC 173-351), a landfill gas recovery system, and storm water controls. A figure showing the lined and unlined areas of the Landfill is included in Appendix 6.2.

2.4 Ground Water Cleanup Levels and Point of Compliance

WAC 173-340-720 requires that cleanup levels for groundwater be established based on the highest beneficial use of the affected groundwater and the maximum reasonable exposure expected to occur under current and potential future Site use conditions. The highest beneficial use of groundwater at the Site is for drinking water. Therefore, cleanup levels are established based on exposure to hazardous substances through ingestion of drinking water, which represents the reasonable maximum exposure at the Site.

Cleanup levels for the Site were established using MTCA Method B (WAC 173-340-720(3)). This process considers Applicable or Relevant and Appropriate Requirements (ARARs) including Maximum Contaminant Levels (MCLs) established under the Safe Drinking Water Act (40 C.F.R. 141), and Secondary MCLs established under the Safe Drinking Water Act (40 C.F.R. 141). It also provides a method to calculate a cleanup level for hazardous substances for which sufficiently protective health-based standards have not been established under state and federal law. The table below presents ARARs, Method B formula values, and the Site Cleanup Levels, which in this case are the most stringent of the three alternatives.

Table 1
GROUNDWATER CLEANUP LEVELS

Parameter	MCL Primary	MCL Secondary	Method B Formula Value	Cleanup Level
Nitrate	10 mg/L	NA	25.6 mg/L	**10 mg/L**
1,4-Dichlorobenzene	75 µg/L	NA	1.82 µg/L	**1.82 µg/L**
Iron	NA	300 µg/L	NA	**300 µg/L**
Manganese	NA	50 µg/L	2240 µg/L	**50 µg/L**
Total Dissolved Solids	NA	500 mg/L	NA	**500 mg/L**
Chloride	NA	250 mg/L	NA	**250 mg/L**
Sulfate	NA	250 mg/L	NA	**250 mg/L**
Specific Conductance	NA	700 µmhos/cm	NA	**700 µmhos/cm**

NA -Not Available
mg/L = milligrams per liter
ug/L = micrograms per liter

2.4.1 Ground Water Point of Compliance

Pursuant to WAC 173-340-720(6), when a hazardous substance will remain on Site as part of a cleanup action, a conditional point of compliance may be set as close as practicable to the source of hazardous substances, not to exceed the property boundary, provided that all practicable methods of treatment are utilized at the Site. It was determined that all practicable methods of treatment were utilized at the Site; therefore, the point of compliance for the Site is a conditional point of compliance comprised of the existing LRI property boundary, except where the limits of waste exceed that boundary (central northern area of the Site owned by Pierce County), where the point of compliance will be the south boundary of 176th Street.

2.5 Final Remedial Action

Ten remedial alternatives were evaluated in the Hidden Valley Landfill FS. Remedial action alternatives evaluated in the Hidden Valley Landfill FS included assemblages of several components including: leachate control (capping), physical groundwater control (barrier wall), hydraulic groundwater control (pump and treat), waste removal, landfill gas control/recovery, surface water and erosion control, environmental monitoring, and the provision of a public water supply.

After evaluating the ten alternatives presented in the FS report, the preferred remedial alternative was final landfill closure with post closure requirements outlined in Chapters 173-304 and 173-351 WAC, and compliance monitoring and institutional controls as approved by Ecology.

Leachate control (capping), landfill gas control/recovery, and surface water and erosion control are corrective actions that were implemented as part of landfill closure. These actions prevent human and animal contact with the waste, minimize the lateral and vertical migration of leachate

contaminated groundwater by reducing the volume of leachate generated, and prevent the migration of landfill gas. In addition LRI and Pierce County did the following:

- Updated the *Landfill Gas Management Plan* and continued operation of the landfill gas control and destruction system and monitor landfill gas in accordance with the updated plan.
- Updated the *East Lined Area Closure Plan* to address the entire facility and maintain the final cover system and surface water control systems in accordance with the updated plan.
- Completed a *Groundwater Compliance Monitoring Plan* and continue monitoring groundwater in accordance with the approved final plan.
- Implemented institutional controls, including filing deed restrictions approved by Ecology and included as Exhibit F of the Consent Decree.

2.6 Current Ground Water Conditions

Groundwater monitoring has been conducted at the Hidden Valley Landfill on at least a quarterly basis since mid-1985. The most recent groundwater monitoring data available to Ecology was from the 2013 Hidden Valley Landfill Annual Report by SCS Engineers (SCS). According to the SCS report, in 2013 groundwater samples were collected from 21 wells in January (annual monitoring), 11 wells in April (quarterly monitoring), 17 wells in July (semi-annual monitoring), and 12 wells in October (quarterly monitoring). Summaries of groundwater quality data versus cleanup levels and groundwater statistics are available as Appendix 6.3 and 6.4 respectively.

2.6.1 Upgradient /Background Water Quality

Background water quality at the Hidden Valley Landfill is monitored using wells MW-l0S (shallow perched aquifer) and MW-10D (upper regional aquifer). These wells have been monitored on a quarterly basis since 1985.

In 2013, concentrations of inorganic parameters in samples from the background wells were low and consistent with previous results. No detections of dissolved iron, manganese, or arsenic were reported above the laboratory method detection limits. No VOCs were detected at concentrations above the MRL (0.5 µg/L) for these compounds in the background wells in 2013.

2.6.2 Downgradient Water Quality

In general, water quality testing results from monitoring wells located downgradient of the landfill continued to display consistent trends of decreasing concentrations of parameters such as conductivity, ammonia, manganese, and iron. Time series plots were prepared for wells located close to and downgradient of the landfill (MW 11S&D (2), MW 13S&D, MW 14S&D, and MW 17S). These time series plots for dissolved iron, dissolved manganese, and nitrate are available as Appendix 6.3.

Shallow perched aquifer water quality results that exceeded cleanup levels on one or more occasions in 2013 include nitrate (MW-11S, MW-12S, MW-17S, MW-18S, and FM-2), dissolved manganese (MW-12S, MW-14S, MW-15S, MW-17S, and FM-2) and dissolved iron (MW-14S). Upper regional aquifer water quality results that exceeded cleanup levels on one or

more occasions in 2013 include dissolved iron (MW-14D) and dissolved manganese (MW-14D, and MW-15D). Lower regional aquifer water quality results that exceeded cleanup levels in 2013 are dissolved iron (MW-26R) and dissolved manganese (MW-14R and MW-26R); however, these lower aquifer results are interpreted to result from background water quality. The presence of dissolved iron and manganese in the lower regional aquifer does not appear to be related to the Hidden Valley Landfill. This interpretation is based on an overall assessment of the groundwater quality data, which include low concentrations of inorganic parameters and an absence of VOCs.

2.6.3 Water Supply Wells

There are two drinking water wells in the vicinity of Hidden Valley Landfill. Corliss Sand and Gravel has production well to the south of the Site and the Paul Bunyan Rifle Range has a production well to the southwest of the Site. Both wells are sampled in January, April, July, and October in 2013. Water quality results for the two water supply wells in 2013 were generally typical of previous results. Low concentrations of total metals and inorganic parameters were reported.

The 2013 water quality test results for the Corliss and Paul Bunyan water supply wells do not indicate impacts from the Hidden Valley Landfill. Water Supply Well sample results are available as Appendix 6.5.

2.7 Current Landfill Gas Conditions

Landfill gas probes were monitored monthly during 2013. Parameters measured at the gas probes included carbon dioxide, oxygen, and combustible gas (measured as methane). A portion of the gas extraction system on the south slope of the landfill was shut down in September 2009 in response to a suspected area of subsurface oxidation related to the sink hole (discussed in Section 2.8). This area of the gas extraction system remained offline throughout 2010, 2011, 2012, and 2013 (gas wells N42, N43, N60, N61, N62, and N54).

Perimeter gas probe readings were less than 5 percent methane by volume except in gas probe GP-13A. After obtaining readings greater that 5 percent methane by volume in GP-13A, the TPCHD was notified and the vacuum on the adjacent well field was adjusted by LRI staff to recapture the landfill gas. Additional monitoring was subsequently performed by LRI staff until methane concentrations decreased to less than 5 percent by volume. In addition, LFG systems repairs were completed in July and September to increase the vacuum to extraction wells N-64A, B, and C located near gas probe GP-13A. Landfill perimeter gas sampling locations and results are available as Appendix 6.6.

Gas monitoring of building interiors was performed on February 24, May 24, September 21, and December 20. The main office, maintenance building, scale house/pay booth, leachate treatment building, recycling building, security building, cogeneration building, and transfer station were monitored. No detectable concentrations of combustible gas were found in any structure.

2.8 Site Maintenance and Repair

Maintenance inspections of the landfill cover system and the landfill gas condensate recirculation system are performed on a quarterly basis. Maintenance inspections are also performed on an ongoing basis by LRI staff, as well as during monthly and quarterly monitoring events.

With the exception of a sinkhole area on the south slope of the landfill (described below), the inspections found minor areas for maintenance on the cover system, and no significant issues with the condensate recirculation system.

A sinkhole, indicative of subsurface combustion due to the presence of oxygen, began forming on the south slope of the landfill during the summer of 2008. The sinkhole was located near the south perimeter of the landfill in an area that does not include a bottom liner. This area has been repaired to correct differential settlement on two previous occasions; the last time in September 2006. The appearance of the sinkhole in 2008 coincided with off-Site excavation which exposed the slope just south of the property boundary at the Corliss Resources Puyallup Plant. The oxidation may have been ongoing for a number of years; however, excavation activity south of the property boundary in 2008 appears to have allowed additional oxygen intrusion which accelerated the subsurface activity.

In 2009 and during the First Quarter of 2010, the sinkhole was observed to slowly increase in size. On March 30, 2010 a second sinkhole rapidly formed on the south slope of the landfill. Both sinkholes were filled with soil and covered with plastic sheeting. The temporary repairs were conducted between March 31 and April 3, 2010.

During the first week of July 2010, the exposed soil slope south of the landfill was repaired by Corliss Resources, Inc. The repair activity consisted of removing approximately 2 feet of soil from the bank and replacing it with approximately 2 feet of silty clay soil. The landfill perimeter fence was temporarily removed to allow soil placement at the top of the slope. The slope was hydroseeded with a mulch/grass seed mixture in September 2010.

In May 2014, Glacier Construction Services, Inc. was retained by LRI to perform repairs to the cover system. Northwest Linings, Inc. was subcontracted by Glacier to perform repairs to the geomembrane liner and to install a geonet composite for stormwater drainage. The repair work was completed in accordance with the HVL Cover Repair Work Plan, dated September 16, 2013. The repair was substantially complete on June 3, 2014.

2.9 Restrictive Covenant

A Restrictive Covenant (RC) also known as Environmental Covenant (EC) was recorded for the Site in September 2007. It was determined that contamination at the Site posed a limited threat to human health and the environment that could be mitigated by the use of institutional controls in the form of a RC. The covenant imposes the following limitations:

1. The Property shall be used only for industrial or commercial uses, as described in WAC 173-340-740(1)(c) and defined in and allowed under Pierce County's zoning regulations codified in Development Regulations- Zoning for Pierce County, Washington, Title 18A, as of the date of this RC. Further, future use is restricted to only those uses which may be allowed in agreements pertaining to the properties adjacent to the Pierce County Airport. These agreements, if and when executed, will be filed with Ecology and the Pierce county Auditor.

2. Existing fencing shall not be removed and shall be maintained in a condition that limits access to the property.

3. No groundwater shall be taken for any use from the Property, with the exception of routine monitoring required by the Consent Decree.

4. Any activity on the property, including, but not limited to construction, development and related earthwork; that may result in the release or exposure to the environment of hazardous substances that remain on the Property, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

5. Any activity on the Property that may interfere with the integrity of the Cleanup Action and continued protection of human health and the environment is prohibited. Post-closure use of the property shall not disturb the integrity of the final cover, liners, or any other component of the containment system unless necessary to comply with requirements of Ecology.

6. The Owner of the property must give thirty day advanced 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 continuing monitoring, operation, and maintenance of the Cleanup Action.

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

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

9. The owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Cleanup Action, to take samples, to inspect remedial actions conducted at the Property, and to inspect records that related to the Cleanup Action.

10. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this RC 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.

The EC is available as Appendix 6.8.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

3.1.1 Soil and Direct Contact

Based upon the Site visit conducted on March 5, 2014, the landfill cover appears in good condition, with the exception of the sinkhole on the south side. As noted in Section 2.8, the cover system was repaired in May and June of 2014. The cover system needs routine inspections and appropriate repairs to assure the cap's integrity and proper functionality. In addition, repairs to the landfill cover system shall be made in a timely manner as per the requirements of the Consent Decree to prevent any groundwater degradation through infiltration over the unlined area of the landfill.

Site personnel regularly perform well-head maintenance, vegetation control on the cap surface, fence maintenance and Site security control.

The landfill cap continues to eliminate direct exposure pathways (ingestion, contact) to contaminated soils. The sinkhole is being monitored closely. Since 2006, several repair and maintenance activities have been conducted in the vicinity of the sink hole. There is no indication that the sink hole has resulted in release or exposure of hazardous substances to human health or the environment. Efforts should be continued to minimize storm water infiltration in this area. The sink hole should be permanently repaired as soon as subsurface conditions indicate that the presence of a subsurface fire is no longer likely.

During the Site visit, Ecology noticed that approximately 600 feet of the fencing has been removed along the southern perimeter of the landfill. This fencing needs to be replaced as a part of the sinkhole landfill cap repair project. In addition, Ecology also noticed that most of the eastern fencing also has been removed from the landfill parcel. However, Ecology recognizes that the LRI owns the adjacent 20-acre parcel of land directly east of the landfill, which comprises the Composting Facility that is entirely, fenced limiting the access to the property. A photo log is available as Appendix 6.9.

The RC for the Site was recorded and remains active. The RC prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits any use of the property that is inconsistent with the covenant. The covenant also requires fencing to restrict public access to the Site and restricts groundwater for any use other than compliance monitoring. The RC serves to assure the long term property use and integrity of the property surface.

3.1.2 Ground Water

In general, water quality testing results from monitoring wells located downgradient of the landfill continue to display consistent trends of decreasing concentrations of parameters such as conductivity, ammonia, manganese, and iron. Simple linear regression in the time series plots in Appendix 6.7 provides evidence of these decreasing trends.

SCS presented statistical analysis of groundwater monitoring data in their 2013 summary report. Quarterly data were evaluated between January 2009 and October 2013 and a 95% upper confidence limit (UCL 95) was presented on the mean for each parameter in each well. In the upper regional aquifer, the UCL 95 for iron and manganese exceeded cleanup levels in five of nine wells. In the shallow perched aquifer, the UCL 95 for iron and manganese, as well as nitrate and specific conductance, also exceeded cleanup levels in seven of twelve wells. However, in the lower regional aquifer, the UCL 95 for dissolved iron and manganese exceeded cleanup levels in one of three wells. Nonetheless, the presence of dissolved iron and manganese in the lower regional aquifer does not appear to be related to the Hidden Valley Landfill. This interpretation is based on an overall assessment of the groundwater quality data, which include low concentrations of inorganic parameters and an absence of VOCs. A summary of groundwater statistics is available as Appendix 4.

3.1.3 Summary

The remedy at the Hidden Valley Landfill can be considered protective of human health and the environment with respect to refuse encapsulation, landfill gas control, leachate capture, and ground water quality protection.

The presence of engineered controls in the form of fencing and a landfill cap, combined with institutional controls in the form of a restrictive covenant serves to protect human health and the environment from soil or ground water contamination remaining at the Site at concentrations exceeding regulatory standards.

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

Cleanup levels at the Site were based on regulatory standards rather than calculated risk for chemicals and/or media. These standards were sufficient to be protective of Site-specific conditions.

3.3 New applicable state and federal laws for hazardous substances present at the Site

As discussed in section 2.2.3, the East Lined Area of the Landfill was closed as per the requirements of WAC 173-351. WAC 173-351 is identified as applicable, or relevant and appropriate requirements (ARAR) in the cleanup action plan for the Site. WAC 173-351 was amended in November 2012. In response to changes in the regulation, and after several meetings between LRI, the TPCHD, and Ecology, the HVL Groundwater Monitoring Plan was amended to include testing of 15 total metals listed in Appendix I and a number of geochemical indicator parameters listed in Appendix II. The updated Groundwater Monitoring Plan is dated August 8, 2014.

3.4 Current and projected Site use

The Site is currently occupied by the closed Hidden Valley Landfill. There are no proposed changes in land use for the Site. The current use is not likely to have a negative impact on the risk posed by hazardous substances contained at the Site.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

The cleanup actions completed at the Site appear to be protective of human health and the environment. Specific components of the remedy are summarized below.

- **Groundwater -** Cleanup levels have not been met at the point of compliance; however, under WAC 173-340-740(6) (d), the cleanup action is determined to comply with cleanup standards, since the long-term integrity of the containment system is ensured and the requirements for containment technologies in WAC 173-340-360(8) have been met.

    - **Upper Shallow Groundwater** - The review of the data since 2008 shows the trend for concentration for every parameter is stabilized/downward, the risk to human health and environment from the shallow aquifer has been eliminated and there are no indications of landfill leachate in the groundwater.

    - **Deep Groundwater -** The review of the data since 2008 shows the trend for concentration for every parameter is stabilized and downward, the risk to human health and environment from the deep aquifer has been eliminated and there are no indications of landfill leachate in the groundwater.

    - **Threat to Drinking Water –**The 2013 water quality test results for the Corliss and Paul Bunyan water supply wells do not indicate impacts from the Hidden Valley Landfill. Additionally, data from the upper regional aquifer do not indicate that the Landfill poses a threat to drinking water.

The information collected as per the requirements of newly adopted amendments to the WAC 173-351 regulation in November 2012 will also be considered in evaluating the protectiveness of the Site during the next five year review.

- **Landfill Gas** – The landfill gas production is stable and shrinking based on decreasing methane concentrations and landfill gas recovery rates being extracted by the gas collection and control system. The landfill gas monitoring will continue to be monitored on a monthly basis

- **Institutional Controls** – The RC for the property is in place and will be effective in protecting public health from exposure to hazardous substances and protecting the integrity of the cleanup action. Based on this review, the Department of Ecology has determined that the restrictions in the RC are being satisfactorily followed and no additional remedial actions are required at the Site at this time. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the cap is maintained.

4.1 Next Review

The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

Ecology. Consent Decree No. 03-2-14687-6. January 2, 2004.

Land Recovery Incorporated. Restrictive Covenant. September 26, 2007.

SCS Engineers. Hidden Valley Landfill Annual Report for 2011. March 23, 2012.

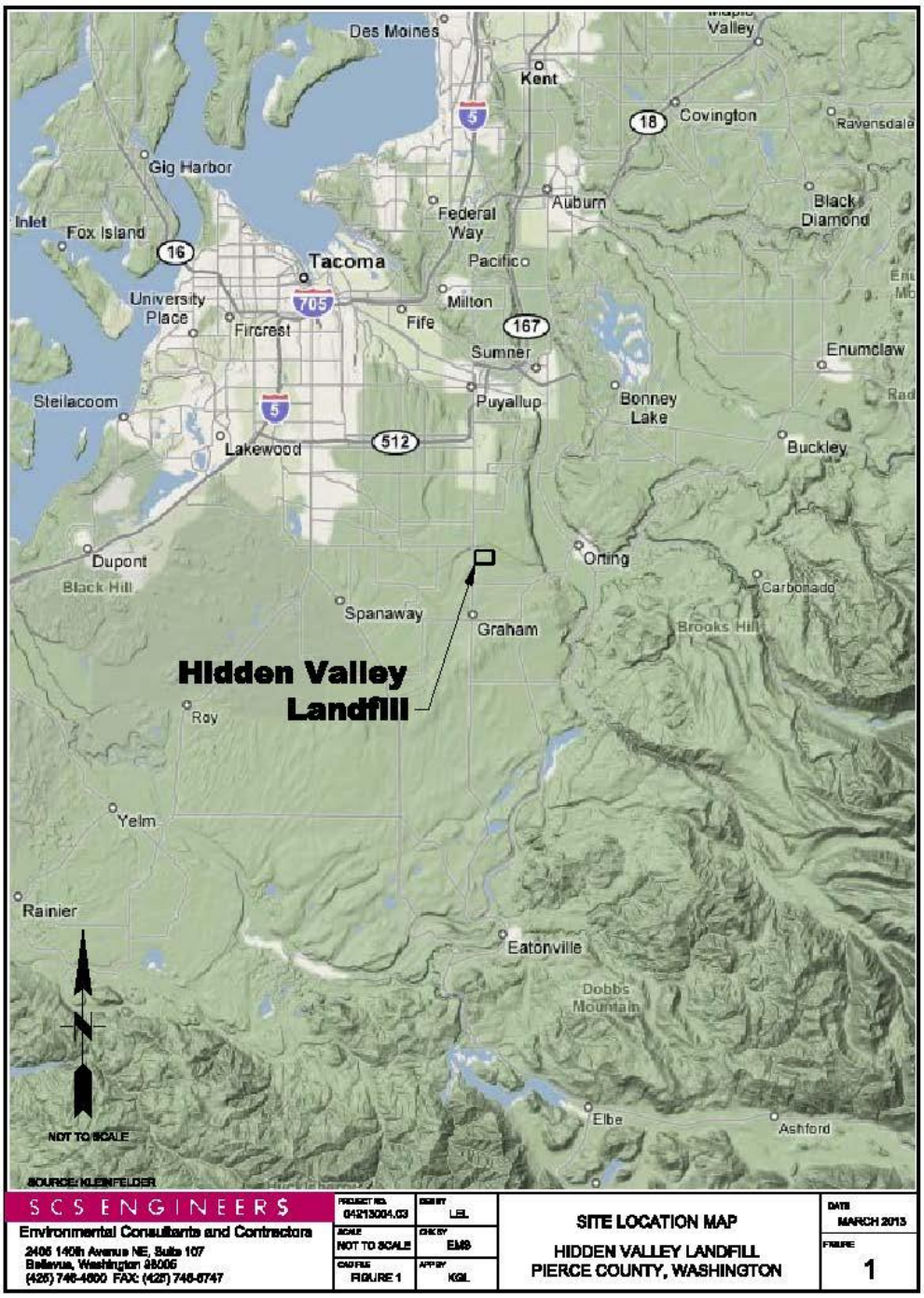
SCS Engineers. Third Quarter 2012 Monitoring, Hidden Valley Landfill. December 6, 2012.

Ecology. Site Visit. March 5, 2014.

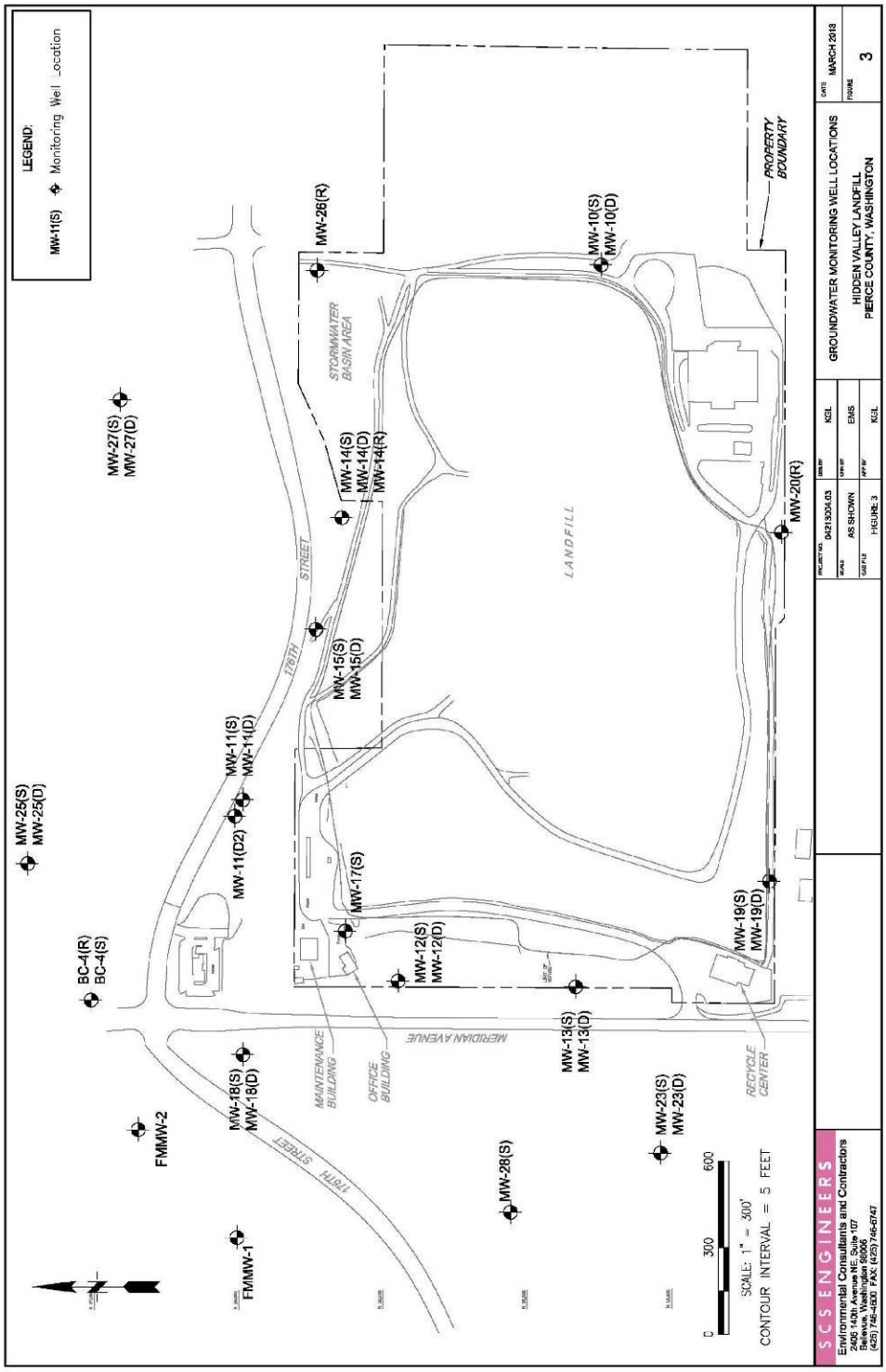
SCS Engineers. Hidden Valley Landfill Annual Report for2012. March 26, 2013.

6.0 APPENDICES

6.1 Vicinity Map



6.2 Site Plan


LEGEND:
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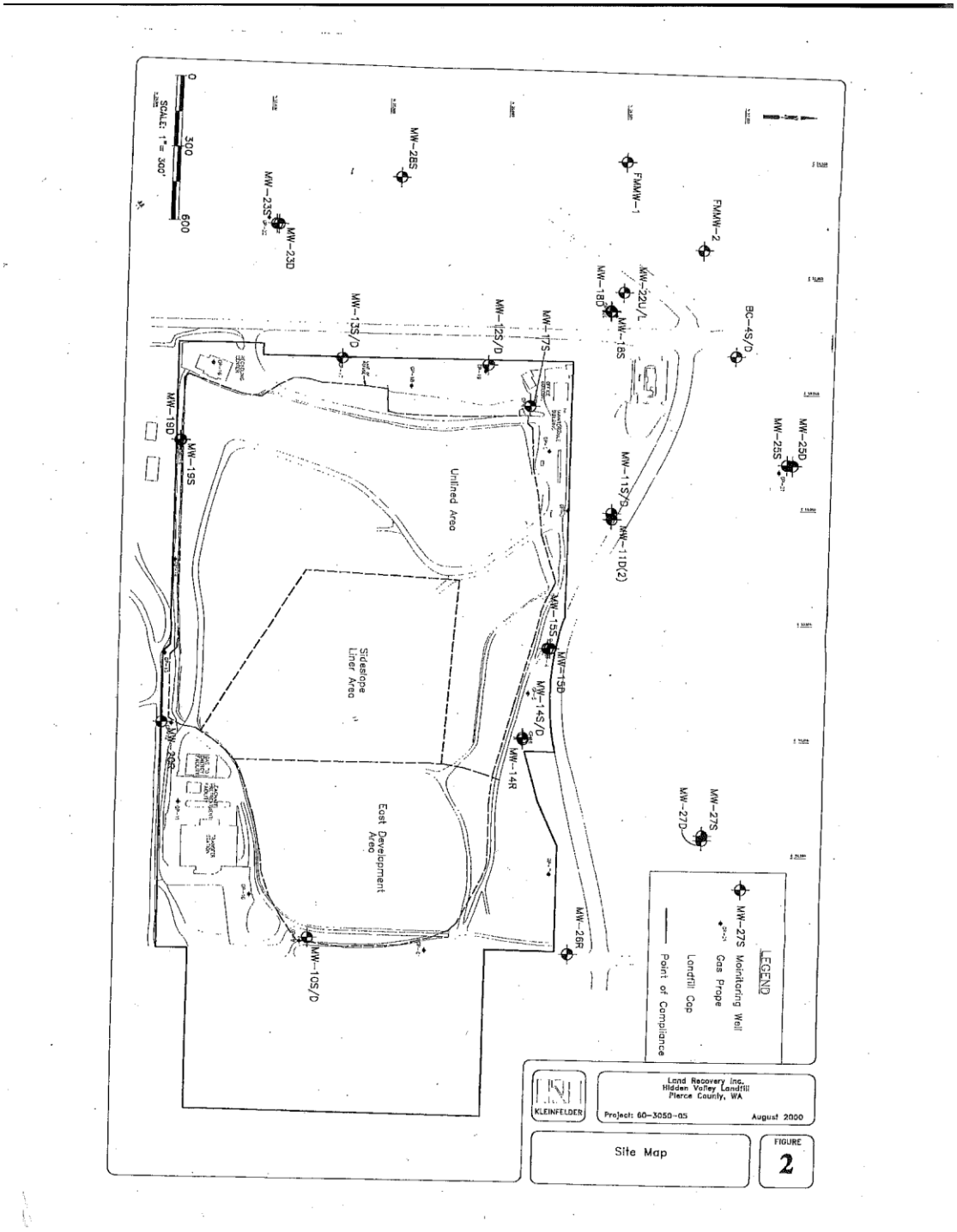
MW-25(S)
MW-25(D)
BC-4(R)
BC-4(S)
MW-27(S)
MW-27(D)
MW-11(S)
MW-11(D)
MW-11(D2)
FMMW-2
FMMW-1
MW-18(S)
MW-18(D)
MW-26(R)
MW-14(S)
MW-14(D)
MW-14(R)
MW-15(S)
MW-15(D)
MW-17(S)
MW-12(S)
MW-12(D)
MW-28(S)
MW-13(S)
MW-13(D)
MW-23(S)
MW-23(D)
MW-10(S)
MW-10(D)
MW-20(R)
MW-19(S)
MW-19(D)
PROPERTY BOUNDARY
STORMWATER BASIN AREA
LANDFILL
17TH STREET
MERIDIAN AVENUE
MAINTENANCE BUILDING
OFFICE BUILDING
RECYCLE CENTER
SCALE: 1" = 300'
CONTOUR INTERVAL = 5 FEET
0
300
600
SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4530 FAX (425) 746-6747
PROJECT NO. 0421S204.03
SCALE AS SHOWN
GRAPHIC HIGURE 3
DRAWN BY KGL
CHECKED BY EMS
APPROVED BY KGL
GROUNDWATER MONITORING WELL LOCATIONS
HIDDEN VALLEY LANDFILL
PIERCE COUNTY, WASHINGTON
DATE MARCH 2013
FIGURE 3


0
SCALE: 1"= 300'
300
600
MW-28S
MW-23S
MW-23D
FMMW-1
FMMW-2
MW-18D
MW-22U/L
MW-18S
BG-4S/D
MW-13S/D
MW-12S/D
MW-17S
MW-19D
MW-19S
MW-25D
MW-25S
MW-11S/D
MW-11D(2)
Unlined Area
MW-15S
MW-15D
Sideslope Liner Area
MW-14S/D
MW-14R
MW-26S
East Development Area
MW-27S
MW-27D
MW-26R
MW-10S/D
LEGEND
MW-27S Monitoring Well
Gas Probe
Landfill Cap
Point of Compliance
KLEINFELDER
Land Recovery Inc.
Hidden Valley Landfill
Pierce County, WA
Project: 60-3050-05
August 2000
Site Map
FIGURE
2

6.3 Summary of Groundwater Quality Data and Cleanup Levels

Table 4. Summary of 2012 Groundwater Quality Data versus Cleanup Levels

	Cleanup Level	MW-10S Background	MW-11S	MW-12S	MW-13S	MW-14S	MW-15S	MW-17S	MW-18S	MW-23S	MW-25S	MW-28S	FM-1	FM-2
Shallow Perched Aquifer														
Inorganics (mg/L)														
Chloride	250	—	—	—	—	—	—	—	—	—	—	—	—	—
Sulfate	250	—	—	—	—	—	—	—	—	—	—	—	—	—
Nitrate	10	—	—	Q1	—	—	—	Q1,2	Q1	—	—	—	—	Q1,2
Specific Conductance	700	—	—	—	—	—	—	—	—	—	—	—	—	—
TDS	500	—	—	—	—	—	—	—	—	—	—	—	—	—
Metals (mg/L)														
Iron	0.30	—	—	—	—	—	—	—	—	—	—	Q2	—	—
Manganese	0.05	—	—	Q1,3	—	Q2,4	Q1,3	Q1,2,3,4	—	—	—	—	—	Q1,2,3,4
VOCs (µg/L)														
1,4-Dichlorobenzene	1.8	—	—	—	—	—	—	—	—	—	—	—	—	—
Upper Regional Aquifer									**Lower Regional Aquifer**					
	Cleanup Level	MW-10D Background	MW-11D[2]	MW-12D	MW-13D	MW-14D	MW-15D	MW-18D	MW-14R	MW-20R	MW-26R			
Inorganics (mg/L)														
Chloride	250	—	—	—	—	—	—	—	—	—	—			
Sulfate	250	—	—	—	—	—	—	—	—	—	—			
Nitrate	10	—	—	—	—	—	—	—	—	—	—			
Specific Conductance	700	—	—	—	—	—	—	—	—	—	—			
TDS	500	—	—	—	—	—	—	—	—	—	—			
Metals (mg/L)														
Iron	0.30	—	—	—	Q3	Q1,2,3,4	—	—	—	—	Q1			
Manganese	0.05	—	—	—	Q4	Q1,2,3,4	Q1	—	Q1	—	Q1			
VOCs (g/L)														
1,4-Dichlorobenzene	1.8	—	—	—	—	—	—	—	—	—	—			

Notes:

Evaluated data are from 2012
(—) indicates results were less than cleanup level
(Q) indicates results were greater than cleanup level
(1, 2, 3, 4) indicates quarter in which results were greater than cleanup levels

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6.4 Summary of Groundwater Statistics

Hidden Valley Landfill Annual Report for 2012

SCS ENGINEERS

Table 5. Summary of Groundwater Statistics

Shallow Perched Aquifer

	Cleanup Level	MCL / SMCL	MW-10S	MW-11S	MW-12S	MW-13S	MW-14S	MW-15S	MW-17S	MW-18S	MW-23S	MW-25S	MW-26S	PM-1	PM-2
Inorganics (mg/L)															
Chloride	250	250	21.1 (M)	33.4 (M)	17.6	18.1	12.3	18.3	20.0	20.0 (M)	13.9	10.7	12.5	17.3	17.7
Sulfate	250	250	9.9	19.1	14.7	19.6	12.6 (M)	11.9	8.5	11.7	18 (M)	7.4 (M)	14.4	18.7 (M)	13.3
Nitrate	10	10	1.2	**20.6**	**43.0 (M)**	6.0 (M)	2.5 (M)	**22.2 (M)**	**56.7 (M)**	**20.7 (M)**	1.4 (M)	3.1 (M)	4.6	**20.0 (M)**	**15.9**
Specific Conductance	700	700	148	656.2 (M)	466 (M)	349	165	527 (M)	**1329 (M)**	381	231	301 (M)	209	554 (M)	**951 (M)**
TDS	500	500	99	190	292	221	111	202	329	276 (M)	142	177	143	340 (M)	273
Alkalinity	-	-	57	71	160 (M)	132	55	100 (M)	193	143	74	135 (M)	142 (M)	447 (M)	150
Ammonia	-	-	NC	NC	1.27	0.24 (M)	1.08	3.3	5.6	NC	NC	NC	NC	NC	NC
TOC	-	-	1.2	1.4	3.3	1.5	1.9	2.4	3.2	2.4 (M)	1.0 (M)	6.9 (M)	1.2 (M)	1.8 (M)	2.2
Metals (mg/L)															
Iron	0.30	0.30	NC	NC	NC	NC	NC	NC	NC	NC	0.282 (M)	NC	NC	NC	NC
Manganese	0.05	0.05	NC	NC	**0.45**	**0.495 (M)**	**1.18 (M)**	**0.82**	1.1	NC	**0.06**	NC	NC	NC	**0.986 (M)**
VOCs (ug/L)															
1,4-Dichlorobenzene	1.8	75	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Upper Regional Aquifer

Lower Regional Aquifer

	Cleanup Level	MCL / SMCL	MW-10D	MW-11D(2)	MW-12D	MW-13D	MW-14D	MW-15D	MW-18D	MW-14R	MW-20R	MW-26R
Inorganics (mg/L)												
Chloride	250	250	11.7 (M)	10.1 (M)	16.1	17.8	14.6 (M)	16.1	14.9 (M)	1.8	2.6	3.7
Sulfate	250	250	9	6.5 (M)	5.4 (M)	18.2	11.1	10.4 (M)	8.3 (M)	3.8 (M)	4.1	8 (M)
Nitrate	10	10	1.1	2.1 (M)	1.2	1.9	NC	0.61 (M)	1.7	NC	NC	NC
Specific Conductance	700	700	196	447.9 (M)	392 (M)	336	207	653 (M)	340 (M)	130	259 (M)	163
TDS	500	500	131	158	248 (M)	231	190 (M)	218	208	112	94	112 (M)
Alkalinity	-	-	94	110 (M)	176	146	81	187 (M)	147 (M)	49 (M)	53	62 (M)
Ammonia	-	-	NC	NC	NC	NC	4.2	NC	NC	NC	NC	NC
TOC	-	-	NC	NC	1.6 (M)	1.6	2.2	2.4	NC	NC	NC	NC
Metals (mg/L)												
Iron	0.30	0.30	NC	NC	NC	NC	**3.98 (M)**	NC	NC	NC	NC	**0.72**
Manganese	0.05	0.05	NC	NC	NC	**0.653 (M)**	**0.9**	**0.43 (M)**	NC	0.13	NC	**0.29**
VOCs (ug/L)												
1,4-Dichlorobenzene	1.8	75	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Notes:
Evaluated data are from January 2008 through October 2012.
Values shown are the upper confidence limit on the mean (UCL 95)
Bold indicates greater than Cleanup Levels
(NC) indicates not calculated (see Section 5.4) due to less than 50 percent detection frequency or historically no detections.
(M) indicates default to maximum value for UCL 95
MCL = Maximum contaminant level
SMCL = secondary MCL

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6.5 Water Supply Wells Monitoring Data

Table 3. Water Supply Well Data Summary

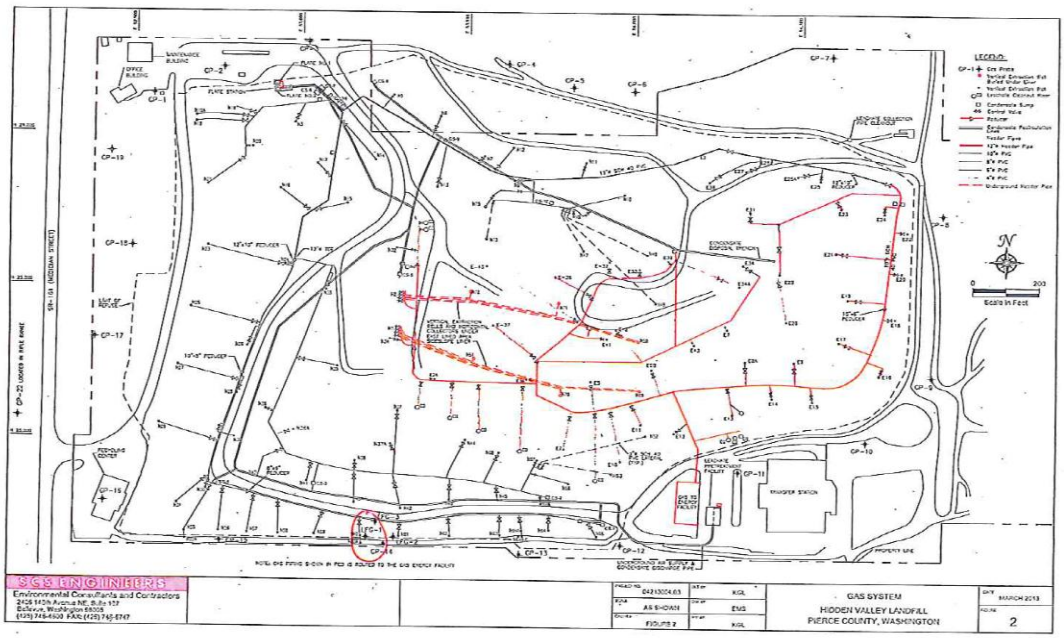
		Coliss				Paul Bunyan			
	MRL	January-12	April-12	July-12	October-12	January-12	April-12	July-12	October-12
Volatile Organics (ug/L)									
Acetone	6	*	*	*	*	46	*	*	*
2-Butanone	10	*	*	*	*	110	*	*	*
Methylene Chloride	2.0	*	3.7 B	*	*	*	3.1 B	*	*
Total Metals (mg/L)									
Arsenic	0.005	*	*	*	*	*	*	*	*
Iron	0.200	*	*	0.490	*	*	*	*	0.44
Manganese	0.001	0.003	0.003	0.028	0.010	0.019	0.002	0.006	0.002
Zinc	0.010	0.013	0.023	0.056	0.026	0.020	0.027	0.120	0.066
Inorganic Parameters (mg/L)									
Chloride	0.2-4.0	8.0	5.6	5.5	5.6	4.4	4.4	4.3	4.6
Ammonia as Nitrogen	0.10	*	*	*	*	*	*	*	*
Nitrate as Nitrogen	0.50	1.8	1.3	1.1	1.2 H	1.8	1.8	1.9	1.8 H
Nitrite as Nitrogen	0.50	*	*	*	*	*	*	*	*
Sulfate	0.5	12.4	9.4	9.6	9.4	9.3	9.7	9.9	9.6
Chemical Oxygen Demand	5.0	6.3	*	*	*	24.0	5.1	*	*
Total Organic Carbon	1.0	*	*	*	*	3.4	1.3	*	*
Color	5.0	*	*	*	*	*	*	*	*
Field Parameters									
pH		7.17	5.93	6.12	6.91	7.26	6.85	6.52	6.79
Conductance (uS)		222	185	231	179	245	242	255	301
Temperature (°C)		7.0	12.8	25.0	14.0	6.4	12.3	17.5	11.8

Notes:
Analyses performed by TestAmerica, Arvada, Colorado
VOCs not listed if concentrations in all samples were less than the method reporting limit
ug/L = micrograms per liter
mg/L = milligrams per liter
(#) = not reported at or above the MRL
(-) = analysis not performed

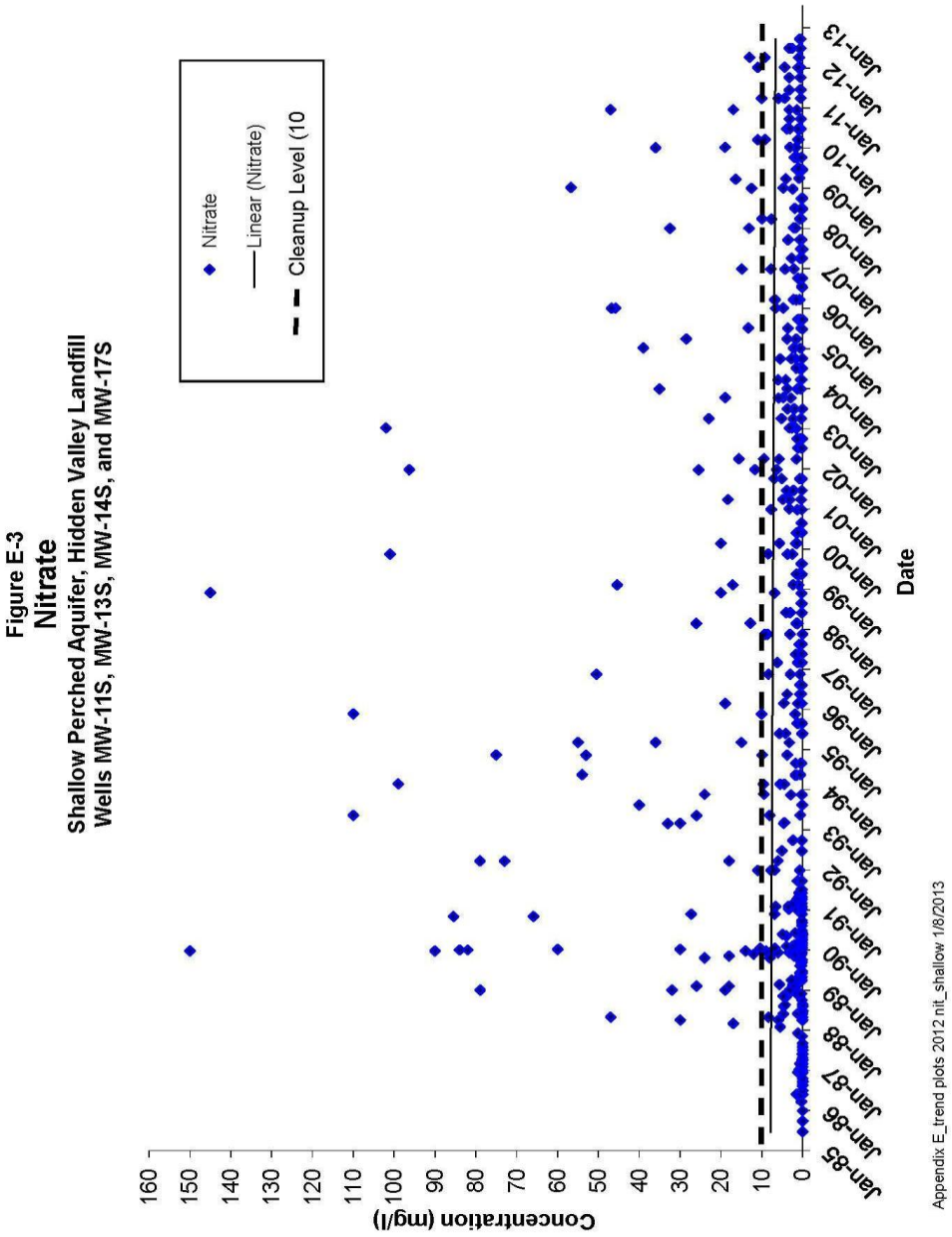
6.6 Landfill Gas Monitoring Locations and Results

Table 1. 2012 Landfill Gas Data

2012 Landfill Gas Data Perimeter Probe Readings Greater than 5 Percent Methane by Volume Hidden Valley Landfill, Pierce County, Washington		
Month	**Gas Probe**	**Methane Reading (%)**
February	GP-13A	10.8
March	GP-13A	8.5
May 11	GP-13A	11.3
May 22	GP-13A	8.3
June	GP-13A	12.0
July	GP-13A	5.1
December	GP-13A	5.6



6.7 Time Series Data Plots



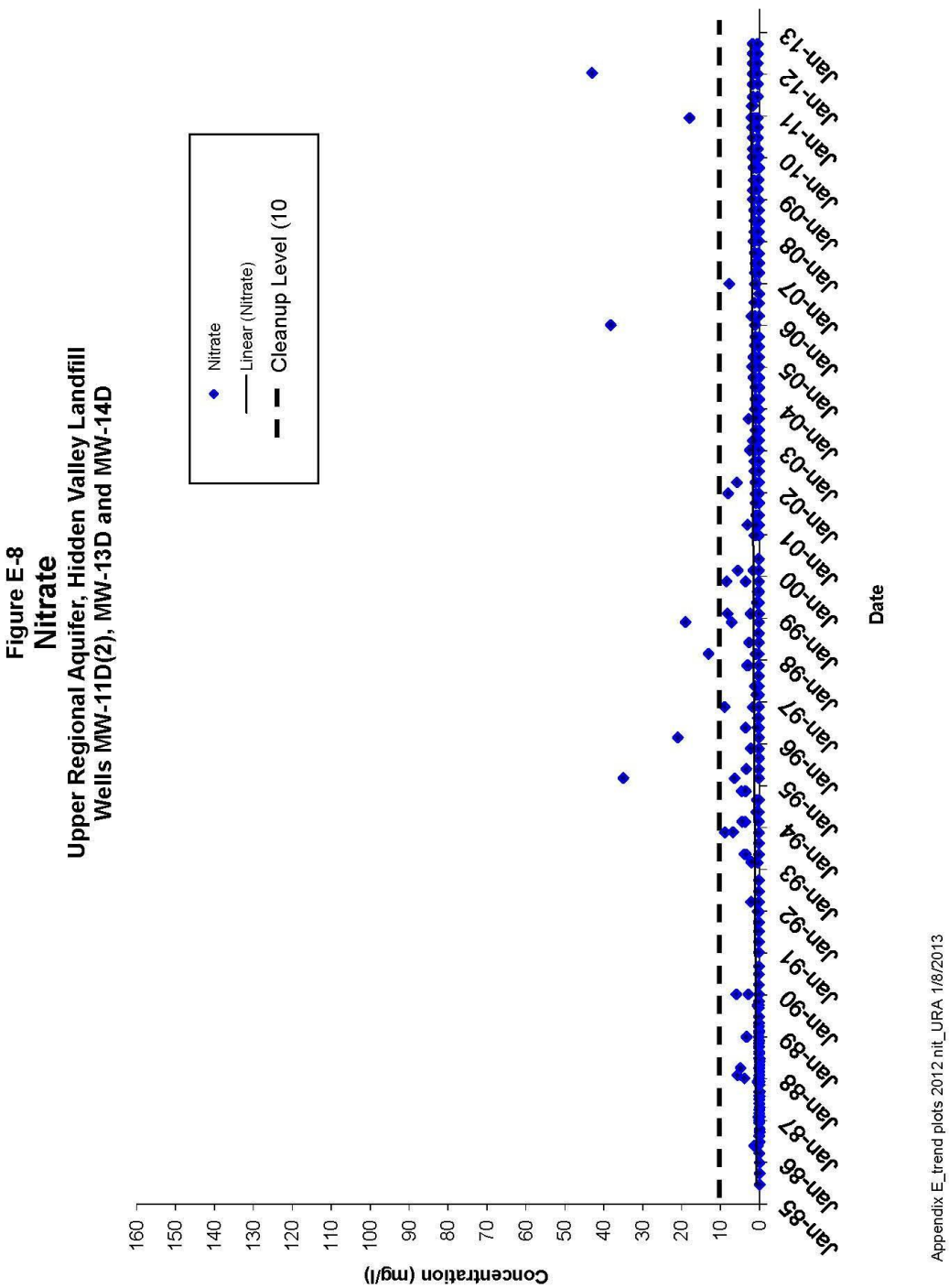


Figure E-8
Nitrate
Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-13D and MW-14D
Nitrate
Linear (Nitrate)
Cleanup Level (10
Concentration (mg/l)
Date
Appendix E_trend plots 2012 nit_URA 1/8/2013

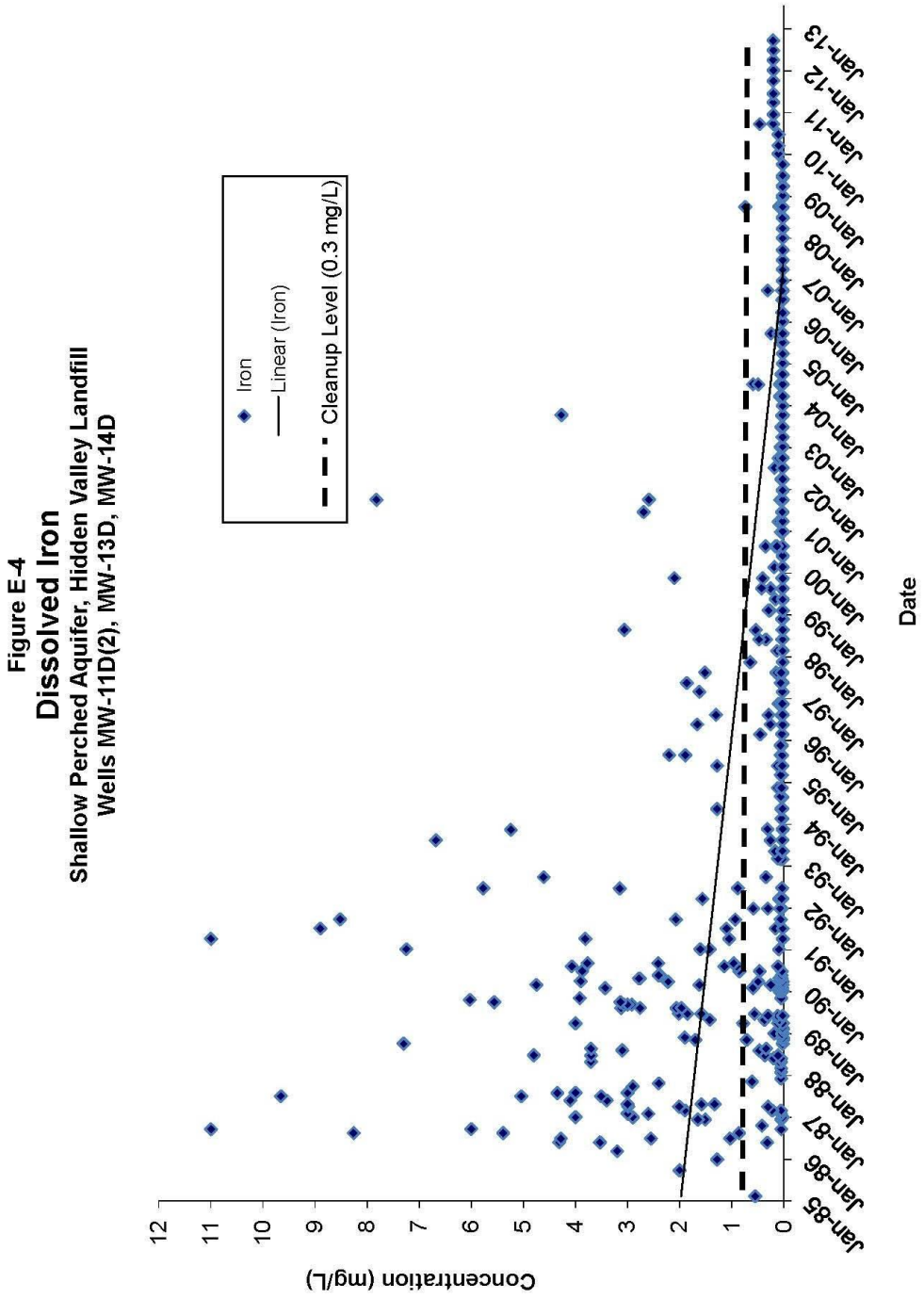


Figure E-4
Dissolved Iron
Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-13D, MW-14D
Iron
Linear (Iron)
Cleanup Level (0.3 mg/L)
Concentration (mg/L)
Date
0
1
2
3
4
5
6
7
8
9
10
11
12
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
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Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13

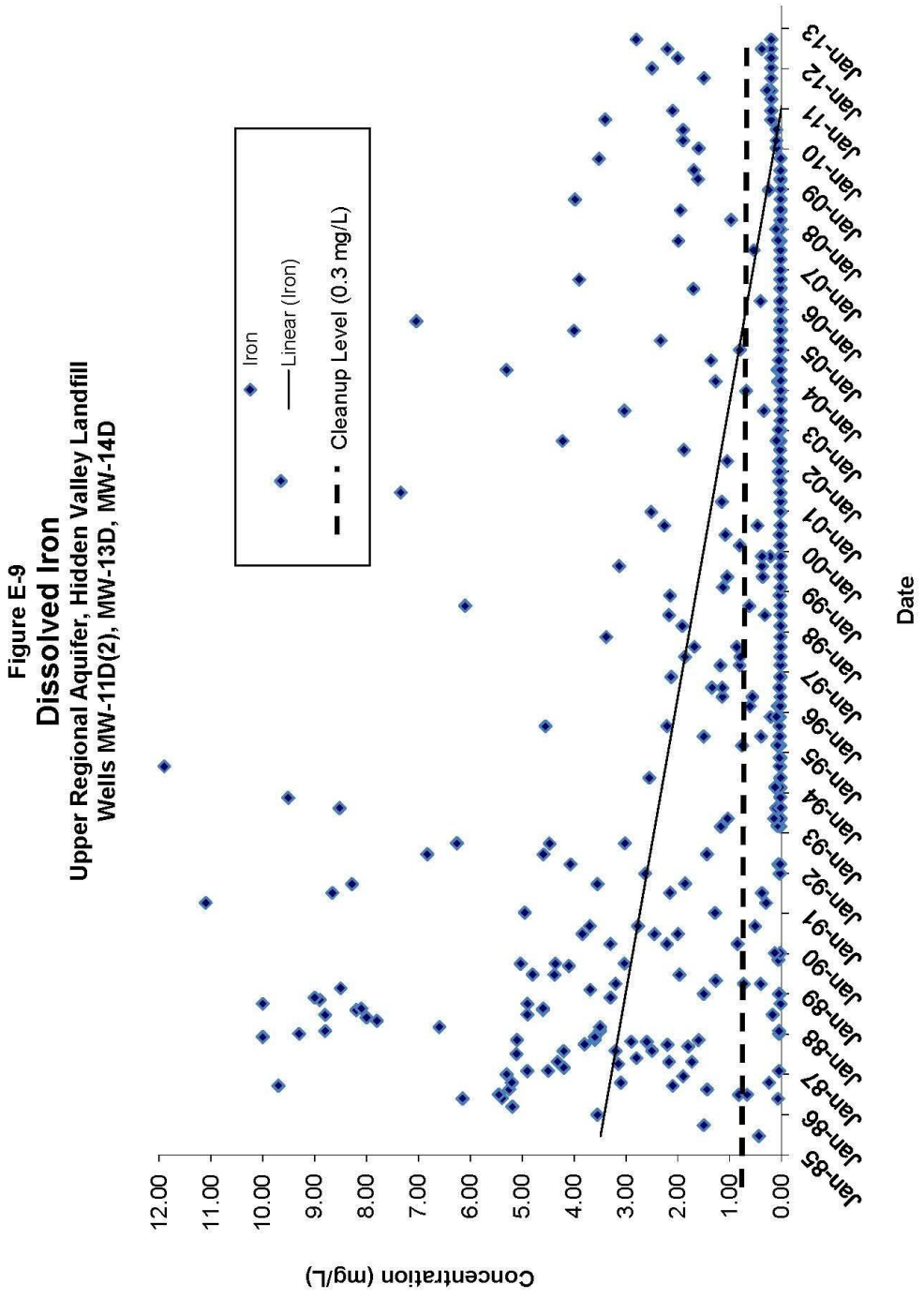
Figure E-9
Dissolved Iron
Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-13D, MW-14D
Iron
Linear (Iron)
Cleanup Level (0.3 mg/L)
Concentration (mg/L)
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
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Jan-12
Jan-13
Date

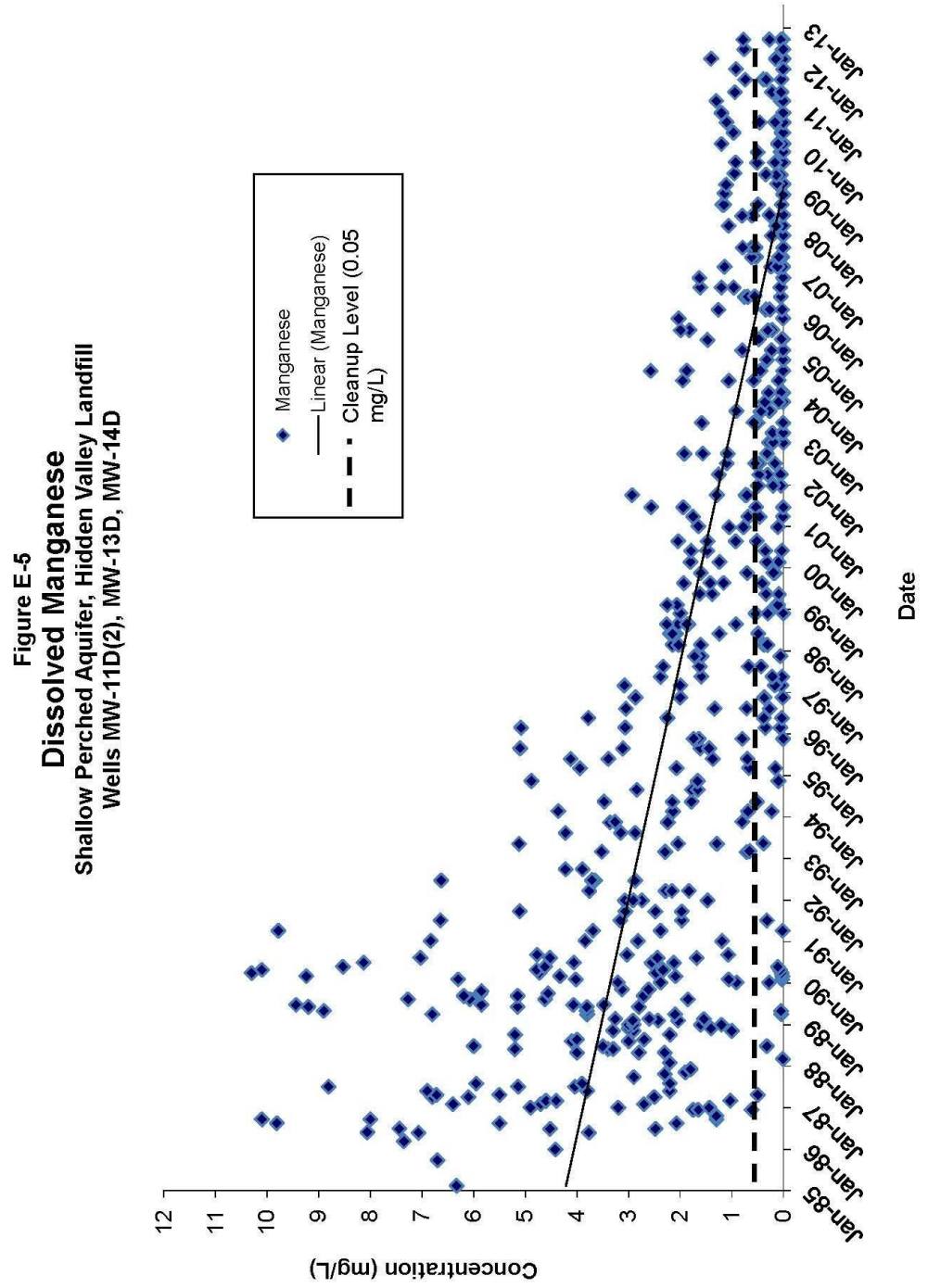
Figure E-5
Dissolved Manganese
Shallow Perched Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-13D, MW-14D
Manganese
Linear (Manganese)
Cleanup Level (0.05 mg/L)
Concentration (mg/L)
0
1
2
3
4
5
6
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8
9
10
11
12
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
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Jan-11
Jan-12
Jan-13
Date

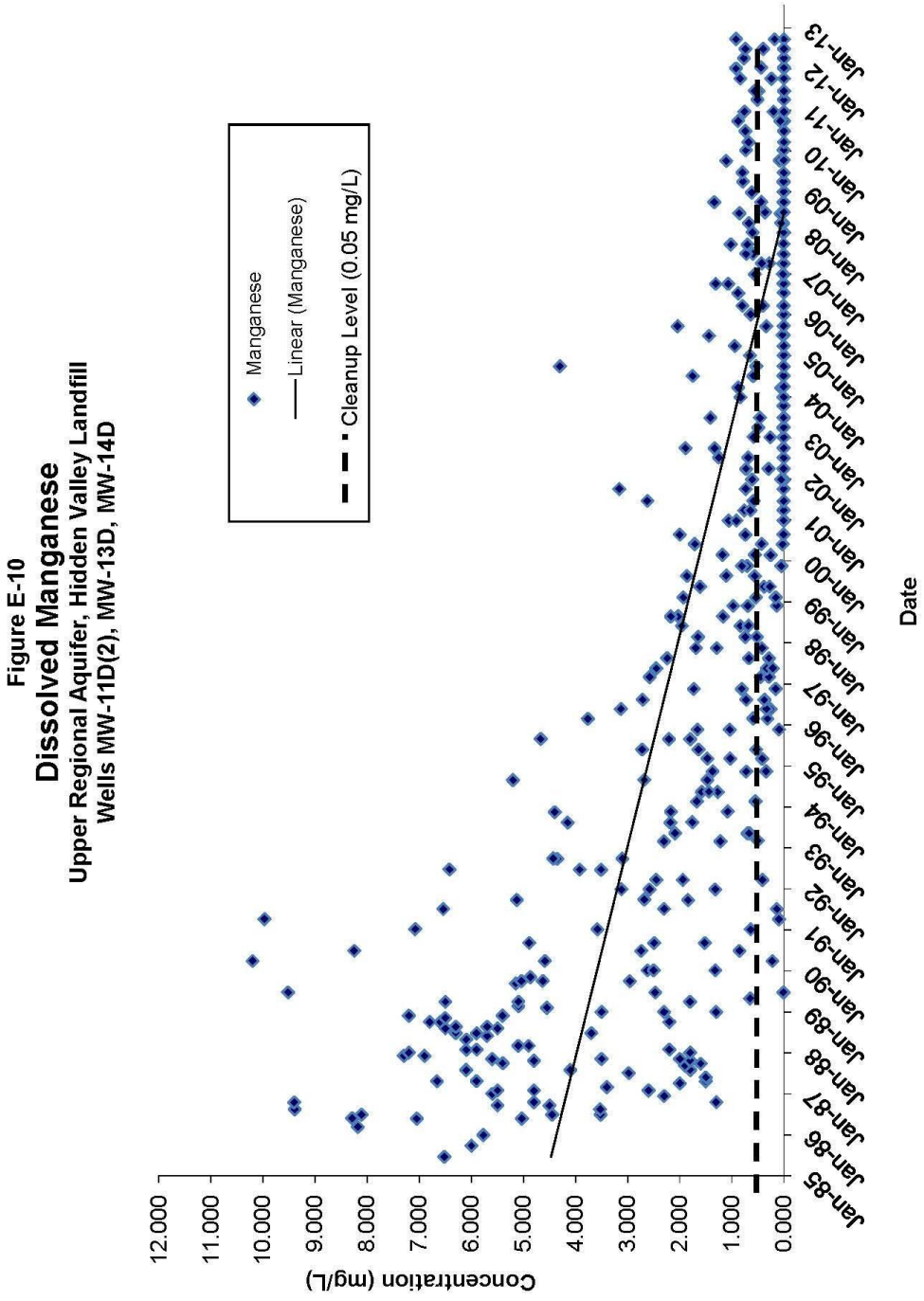
Figure E-10
Dissolved Manganese
Upper Regional Aquifer, Hidden Valley Landfill
Wells MW-11D(2), MW-13D, MW-14D
Manganese
Linear (Manganese)
Cleanup Level (0.05 mg/L)
Concentration (mg/L)
12.000
11.000
10.000
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
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Jan-11
Jan-12
Jan-13
Date

6.8 Environmental Covenant

Unofficial Document

200709260064 7 PGS
09/26/2007 9:45am $46.00
PIERCE COUNTY, WASHINGTON

For reference only, not for re-sale.

Name & Return Address:

Jody Snyder
17925 Meridian St E
Puyallup Wa 98375

Please print legibly or type information.

Document Title(s)

Restrictive Covenant: Pierce County Recycling Comp. & Disposal

Grantor(s)

Pierce County Recycling Composting and Disposal, LLC dba LRI
Land Recovery Inc.
Pierce County

1 Additional Names on Page 1 of Document

Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section township/range and quarter/quarter section)

S34, T19N, R4E, WM Pierce County, Wa

Complete Legal Description on Page 5,6 of Document

Auditor's Reference Number(s)

Unofficial Document

For reference only, not for re-sale.

RESTRICTIVE COVENANT
Land Recovery Incorporated

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Pierce County Recycling, Composting and Disposal, dba LRI, f/k/a Land Recovery Incorporated, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

The work that will be done to clean up the property and conduct long-term operation and maintenance (hereafter the "Cleanup Action") is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Pierce County Land Recovery Incorporated and Pierce County*, Pierce County Superior Court Cause No. 03-2-14687-6, and in attachments to the Decree and in documents referenced in the Decree.

This Restrictive Covenant is required because the Cleanup Action resulted in residual concentrations of hazardous substances which exceed the Model Toxics Control Act Method B Residential Cleanup Level(s) for groundwater established under WAC 173-340-720. The undersigned, Pierce County Recycling, Composting and Disposal, d/b/a LRI, f/k/a Land Recovery Inc., is a fee owner of real property (hereafter "Property") in the County of Pierce, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described in attachment A of this Restrictive Covenant and made a part hereof by reference.

Pierce County Recycling, Composting and Disposal, d/b/a LRI, f/k/a Land Recovery Inc. 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. The Property shall be used only for industrial or commercial uses, as described in WAC 173-340-740(1)(c) and defined in and allowed under Pierce County's zoning regulations codified in *Development Regulations — Zoning, for Pierce County*,

1

Unofficial Document

Washington, Title 18A, as of the date of this Restrictive Covenant. Further, future use is restricted to only those uses which may be allowed in agreements pertaining to the properties adjacent to the Pierce County Airport. These agreements, if and when executed, will be filed with Ecology and the Pierce County Auditor.

Section 2. Existing fencing shall not be removed and shall be maintained in a condition that limits access to the property.

Section 3. No groundwater may be taken for any use from the Property, with the exception of routine monitoring required by the Consent Decree.

Section 4. Any activity on the Property, including but not limited to construction, development and related earthwork, that may result in the release or exposure to the environment of hazardous substances that remain on the Property, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 5. Any activity on the Property that may interfere with the integrity of the Cleanup Action and continued protection of human health and the environment is prohibited. Post-closure use of the property shall not disturb the integrity of the final cover, liners, or any other component of the containment system unless necessary to comply with requirements of Ecology.

Section 6. The Owner of the property must give thirty (30) days' advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Cleanup Action.

Section 7. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 8. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve an inconsistent use only after public notice and comment.

For reference only, not for re-sale.

Unofficial Document

Section 9. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Cleanup Action, to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Cleanup Action.

Section 10. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

PIERCE COUNTY RECYCLING, COMPOSTING AND DISPOSAL LLC, DBA LRI, F/K/A LAND RECOVERY INC.

RON MITTELSTAEDT
President, Pierce County Recycling, Composting and Disposal LLC, DBA LRI, f/k/a Land Recovery Inc.

Dated _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF SACRAMENTO)

On this day personally appeared before me _____, to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that she/he signed the same as his/her free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this _____ day of _____, _____.

_____
Print name: _____
NOTARY PUBLIC in and for the State of CALIFORNIA
residing at _____
My appointment expires _____

3

For reference only, not for re-sale.

Unofficial Document

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of Sacramento } ss.

On September 7, 2007 before me, C. Randolph, Notary Public
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Ronald J. Hillestadt
Name(s) of Signer(s)

☒ personally known to me
~~☐ proved to me on the basis of satisfactory evidence~~

to be the person(s) whose name(s) ~~is/are~~ subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(~~ies~~), and that by ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

C. RANDOLPH
Commission # 1621947
Notary Public - California
Sacramento County
My Comm. Expires Nov 14, 2009

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Restrictive Covenant

Document Date: Undated Number of Pages:

Signer(s) Other Than Named Above: None

Capacity(ies) Claimed by Signer

Signer's Name: ~~Resident~~ President of Ron Hillestadt

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

☐ Individual
☒ ~~Corporate Officer~~ — Title(s): President
☐ Partner — ☐ Limited ☐ General
☐ Attorney-in-Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other:

Signer Is Representing: Pierce County Recycling Composting and Disposal dba LRI, fka Land Recovery Inc.

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Unofficial Document

HIDDEN VALLEY LANDFILL
LEGAL DESCRIPTION

A portion of Parcels "A" and "D", Pierce County Declaration of Boundary Line Revision No. 9111070509 described as follows:
That part of the North Half of the Northwest Quarter and the North Half of the Northeast Quarter of Section 34, Township 19 North, Range 4 East, Willamette Meridian, Pierce County, Washington, lying west of the east line of 110th Ave E vacated by Pierce County Ordinance No.91-85 recorded under Pierce County Auditor No.9109100073,
AND,
that part of the North Half of the North Half of the Northwest Quarter of Section 34, Township 19 North, Range 4 East, Willamette Meridian, Pierce County, Washington lying east of the east line of 110th Ave E vacated by Pierce County Ordinance 91-85 recorded under Pierce County Auditor No. 9109100073,
AND,
that part of Northwest Quarter and of the Northeast Quarter of Section 34, Township 19 North, Range 4 East, Willamette Meridian, and a portion of 110th Ave East vacated by Pierce County Ordinance No.91-85 recorded under Pierce County Auditor No. 9109100073, Pierce County Washington, described as follows: Beginning at the intersection of the north line of the South Half of said Northwest Quarter with the east right-of-way line of SR 161 said right-of-way line being parallel with and 75 feet east of the west line of said Northwest Quarter; thence South 00°27'39"West (bearing meridian is Pierce County Record of Survey 8803210291) along said right-of-way line 30.00 feet; thence South 89°49'25" East, 1305.00 feet parallel with said north line of the South Half; thence South 44°49'24" East, 42.43 feet; thence South 89°49'25" East, 1275.99 feet; to a line parallel with and 30 feet east of the east line of said Northwest Quarter; thence North 00°49'54" East, 506.52 feet along said parallel line to the easterly line of said vacated 110th Ave East; thence westerly and southerly along said easterly line of vacated 110th Ave East to said north line of the South Half, thence North 89°49'25" West, 2032.37 feet to the Point of Beginning,
AND,
the South 300 feet of the West 950 feet of the Southwest Quarter of Section 27, Township 19 north, Range 4 East, Willamette Meridian, Pierce County, Washington, EXCEPT that portion conveyed to the State of Washington by instrument dated March 25, 1958 and recorded April 23, 1958 under Auditor's Fee No. 1815798 together with access thereto on permanent right-of-way or easement,
AND,
that part of the Southwest Quarter of Section 27, Township 19 North Range 4 East, Willamette Meridian, Pierce County, Washington, and 110th Ave East vacated by Pierce County Ordinance 91-85 and recorded under Pierce County Auditor No. 9109100073, described as follows:
Beginning at the southeast comer of said Southwest Quarter; thence North 89°46'38" West (bearing meridian from the west line of Section 34 as shown on Pierce County Record of Survey 8602210358) 860.02 feet along the south line of said subdivision to the east line of that tract of land conveyed to Pierce County described in Exhibit One of Statutory Warranty Deed recorded under No. 8010140264, records of the Pierce County Auditor; thence North 00°35'37" East, 143.63 feet along said east line to intersect the arc of a curve to the left having a

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Unofficial Document

Hidden Valley (cont'd)

radius point which bears North 10°56'18" West, 1250 feet; thence Northeasterly along the arc of said curve to the left through a central angle of 14°29'59" a distance of 316.34 feet to a point of tangency; thence North 64°33'44" East, 115.92 feet; thence South 89°46'38" East, 457.19 feet parallel with the south line of said Southwest Quarter to the east line of said subdivision; thence South 00°36'29" West, 293.47 feet to the Point of Beginning.
Subject to Easements.
(Containing 92.17 acres, more or less)

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6.9 Photo log

Photo 1: Landfill Sink Hole Area – from the southwest

Photo 2: Cap Surface with Gas Collection System – from the east

Photo 3: Gas Collection Flare - from the east

Photo 4: North Slope of Landfill and Airport – from the south