



# 2012 Annual Report Ground Water Monitoring and Interim Action Performance Monitoring

## Pasco Landfill Site Pasco, Washington

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## TABLE OF CONTENTS

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 Site Location.....	1
1.2 Background .....	2
<b>2.0 OBJECTIVES .....</b>	<b>2</b>
2.1 Contaminants of Potential Concern.....	3
2.2 Draft Cleanup Levels.....	3
2.3 Methodology.....	4
2.3.1 Ground Water Monitoring .....	4
2.3.2 Residential Well Monitoring .....	6
2.3.3 SVE Performance Monitoring .....	6
2.4 Findings.....	8
2.4.1 Ground Water Elevation Data.....	8
2.4.1.1 Horizontal Hydraulic Gradients .....	8
2.4.1.2 Vertical Hydraulic Gradients .....	9
2.4.2 Ground Water Quality .....	9
2.4.2.1 Evaluation by Well Grouping .....	10
2.4.2.1.1 MSW Landfill Wells .....	10
2.4.2.1.2 Performance Monitoring Wells .....	11
2.4.2.1.3 Sentinel Wells.....	14
2.4.2.1.4 Property Boundary Wells.....	15
2.4.2.1.5 Downgradient Wells .....	16
2.4.2.1.6 Upgradient Wells .....	16
2.4.2.1.7 Residential Wells.....	16
2.4.2.2 Contaminant Distribution .....	17
2.4.3 Well Stabilization, Natural Attenuation, and Landfill Parameters.....	20
2.4.4 SVE Performance Monitoring .....	21
2.4.4.1 SVE System Performance .....	21
2.4.4.2 Ground Water Quality Trends.....	22
2.5 Waste Handling .....	24
2.6 Repair Reporting .....	25
2.6.1 SVE System.....	25
2.7 Zone A Landfill Cap.....	25

**3.0 SUMMARY.....27**  
**4.0 REFERENCES.....29**

**TABLES**

Table 1 – Wells Sampled and Analyses Performed  
Table 2 – Ground Water Elevation Data  
Table 3 – Evaluation of Vertical Gradients – Zone A Well Clusters  
Table 4 – Evaluation of Vertical Gradients – Off-Property Well Pairs  
Table 5 – Volatile Organic Compounds in Ground Water  
Table 6 – Residential Well VOCs  
Table 7 – Monthly Ground Water Monitoring  
Table 8 – Semi-Volatile Organic Compounds in Ground Water  
Table 9 – Chlorinated Herbicides in Ground Water  
Table 10 – Priority Pollutant Metals in Ground Water  
Table 11 – Chromium in Ground Water  
Table 12 – Polychlorinated Biphenyls in Ground Water  
Table 13 – Well Stabilization Parameters  
Table 14 – Natural Attenuation Parameters in Ground Water  
Table 15 – Landfill Parameters in Ground Water  
Table 16 – Individual SVE Well Vapor Through March 5, 2012  
Table 17 – SVE Combined Vapor Through March 5, 2012  
Table 18 – SVE Removal Rate Summary Through March 5, 2012  
Table 19 – SVE System Parameter Measurements Through March 5, 2012  
Table 20 – SVE System Operating Parameters  
Table 21 – SVE System Analytical Data  
Table 22 – Zone A Subsidence Measurements  
Table 23 - Average Zone A Subsidence  
Table 24 – Waste Disposal

**FIGURES**

Figure 1 – Location Map  
Figure 2 – PSL Property Representation  
Figure 3 – New Ground Water Monitoring Well Location  
Figure 4 – Shallow Ground Water Elevations January 2012  
Figure 5 – Shallow Ground Water Elevations April 2012  
Figure 6 – Shallow Ground Water Elevations July 2012  
Figure 7 – Shallow Ground Water Elevations October 2012  
Figure 8 – Intermediate Ground Water Elevations January 2012  
Figure 9 – Intermediate Ground Water Elevations April 2012

- Figure 10 – Intermediate Ground Water Elevations July 2012
- Figure 11 – Intermediate Ground Water Elevations October 2012
- Figure 12 – Deep Ground Water Elevations January 2012
- Figure 13 – Deep Ground Water Elevations April 2012
- Figure 14 – Deep Ground Water Elevations July 2012
- Figure 15 – Deep Ground Water Elevations October 2012
- Figure 16 – Isoconcentration Map of Tetrachloroethene in Shallow Ground Water January 2012
- Figure 17 – Isoconcentration Map of Tetrachloroethene in Shallow Ground Water April 2012
- Figure 18 – Isoconcentration Map of Tetrachloroethene in Shallow Ground Water July 2012
- Figure 19 – Isoconcentration Map of Tetrachloroethene in Shallow Ground Water October 2012
- Figure 20 – Isoconcentration Map of Trichloroethene in Shallow Ground Water January 2012
- Figure 21 – Isoconcentration Map of Trichloroethene in Shallow Ground Water April 2012
- Figure 22 – Isoconcentration Map of Trichloroethene in Shallow Ground Water July 2012
- Figure 23 – Isoconcentration Map of Trichloroethene in Shallow Ground Water October 2012
- Figure 24 – Isoconcentration Map of Trichloroethene in Intermediate Ground Water January 2012
- Figure 25 – Isoconcentration Map of Trichloroethene in Intermediate Ground Water April 2012
- Figure 26 – Isoconcentration Map of Trichloroethene in Intermediate Ground Water July 2012
- Figure 27 – Isoconcentration Map of Trichloroethene in Intermediate Ground Water October 2012
- Figure 28 – Isoconcentration Map of 1,1-Dichloroethene in Shallow Ground Water January 2012
- Figure 29 – Isoconcentration Map of 1,1-Dichloroethene in Shallow Ground Water April 2012
- Figure 30 – Isoconcentration Map of 1,1-Dichloroethene in Shallow Ground Water July 2012
- Figure 31 – Isoconcentration Map of 1,1-Dichloroethene in Shallow Ground Water October 2012
- Figure 32 – Isoconcentration Map of 1,2-Dichloroethane in Shallow Ground Water January 2012
- Figure 33 – Isoconcentration Map of 1,2-Dichloroethane in Shallow Ground Water April 2012
- Figure 34 – Isoconcentration Map of 1,2-Dichloroethane in Shallow Ground Water July 2012
- Figure 35 – Isoconcentration Map of 1,2-Dichloroethane in Shallow Ground Water October 2012
- Figure 36 – Locations of Soil Vapor Extraction (SVE) System Wells
- Figure 37 – Cumulative Mass Removed by SVE System Since May 7, 1997
- Figure 38 – SVE System Removal Rates
- Figure 39 – Groundwater Concentration Trends MW-52S
- Figure 40 – Groundwater Concentration Trends MW-53S
- Figure 41 – Groundwater Concentration Trends MW-50S
- Figure 42 – Groundwater Concentration Trends MW-47S
- Figure 43 – Groundwater Concentration Trends NVM-01
- Figure 44 – Groundwater Concentration Trends MW-12S
- Figure 45 – Locations of Zone A Subsidence Benchmarks and Settlement Plates
- Figure 46 – Zone A Subsidence Measurements
- Figure 47 – Zone A Subsidence Rates

## **ATTACHMENTS**

Attachment A – *Data Validation Report Pasco Sanitary Landfill Groundwater Monitoring October 2012 Sampling* prepared by Pyron Environmental, Inc.

Attachment B – MW-55S Borelog

Attachment C – Annual Reports on Institutional Controls

- *2012 - East Pasco Plume Area - Well Location Survey* prepared by the City of Pasco
- *2012 Annual Institutional Controls Report* prepared by the Franklin County Planning and Building Department

Attachment D – Waste Handling

- Laboratory Analytical Data
- Hazardous Waste Manifests

Attachment E – 2012 SVE System Shutdown and Restart History

Attachment F – Performance Monitoring - Monthly Industrial Waste Area Cover, Detention/Evaporation Basin and Fence Inspection Checklists

Attachment G – Electronic Data Deliverable (available on compact disc)

## 1.0 INTRODUCTION

Environmental Partners, Inc. (EPI) has prepared this 2012 Annual Report for Ground Water Monitoring and Interim Action Performance Monitoring (2012 Annual Report) on behalf of the Industrial Waste Area Generators Group III (IWAG) for the Pasco Sanitary Landfill (PSL) site in Pasco, Washington (Site).

This Report is being submitted to the Washington State Department of Ecology (Ecology) in support of the ongoing obligations of the IWAG under Agreed Order No. DE 9240 (Order). This 2012 Annual Report summarizes the results of the ground water monitoring and interim action performance monitoring activities conducted in 2012 and discusses the effectiveness of the various interim actions implemented at the Site.

This 2012 Annual Report contains the following enclosures:

- Attachment A contains the *Data Validation Report Pasco Sanitary Landfill Groundwater Monitoring October 2012 Sampling* prepared by Pyron Environmental, Inc.
- Attachment B contains the borelog for ground water monitoring well MW-55S, which was drilled during April 2012.
- Attachment C contains the *2012 East Pasco Plume Area Well Location Survey* prepared by the City of Pasco and the *2012 Annual Institutional Controls Report* for the Site prepared by the Franklin County Planning and Building Department.
- Attachment D contains laboratory analytical data for condensate generated, treated, and disposed of during the fourth quarter of 2012, and associated hazardous waste manifests.
- Attachment E contains the SVE system shutdown and restart history for 2012.
- Attachment F contains the documents satisfying the annual reporting requirements of the Order for the maintenance and inspection of the Industrial Waste Area covers, detention/evaporation basins and fences for Zones A, C/D, and E.
- Attachment G contains an electronic data deliverable, on compact disk, with Site data generated during the fourth quarter 2012 sampling event. The file PLF\_Report\_4Q12.xls contains multiple worksheets, each containing a subset of the Site data (volatile organic compounds [VOCs], semi-volatile organic compounds [SVOCs], chromium, natural attenuation parameters, landfill parameters, stabilization parameters, and water level data).

### 1.1 Site Location

The general location of the PSL Site is depicted on Figure 1. The PSL is located approximately 1.5 miles northeast of the City of Pasco, in the southwest quarter of Section 15, the northeast quarter of Section 21, and the northwest quarter of Section 22, Township 9 North, Range 30 East, Willamette Meridian, located in Franklin County, Washington.

The PSL property occupies a 200-acre area consisting of gently rolling hills surrounded by irrigated cropland. The former municipal solid waste landfill (MSW Landfill), Industrial Waste Area (IWA), and the New Waste, Inc. (NWI) landfill are located within the PSL property. Figure 2 shows the locations of each area at the Site. Reporting requirements under the Order for the MSW are met by the Landfill

Group under separate cover. The NWI landfill is a modern and fully lined solid waste landfill located to the north of the MSW Landfill that opened on May 31, 1993 and closed in 2002. The NWI landfill is not included under the Order and is not considered further in this report.

The formal definition of the PSL Site is presented in the Order. The Site boundaries, as defined by the Order, encompass the following three distinct areas: the IWA, Former MSW Landfill Area, and the Ground Water Plume Area (GPA).

## 1.2 Background

The operational history and cleanup history of the PSL have been documented extensively in numerous prior reports including the *Draft Focused Feasibility Study (FFS) Work Plan* dated December 2012. A brief summary of site history is presented in Table X.

On October 31, 2012 a new Agreed Order (No. DE 9240) was finalized replacing Agreed Order DE-00TCPER-1324 (AO 1324). The final deliverables under AO 1324 were completed in 2012 and consisted of:

- *Zone A Heating Evaluation*, dated October 29, 2012;
- *Vapor Sampling Results from Groundwater Monitoring Well MW-55S*, dated December 3, 2012; and
- *Proposed Flow Rates for Upgraded Zone A SVE System and Communication Protocols*, dated December 4, 2012.

The following documents were submitted to Ecology in 2012 as required by the new Agreed Order:

- Task 1, Subtask E: *Site-Wide Ground Water Performance and Protection Monitoring Operations and Maintenance Manual – Pasco Landfill Site – Pasco, Washington*, dated December 31, 2012;
- Task 1, Subtask F: *Pasco Landfill Site Updated Institutional Control Plan*, dated December 31, 2012; and
- Task 2: *Focused Feasibility Study Work Plan – Pasco Landfill*, dated December 31, 2012.

This 2012 Annual Report bridges AO1324 and DE-9240 and is being provided in conformance with the ongoing monitoring and reporting requirements for the Site contained within both orders.

## 2.0 OBJECTIVES

The objective of ground water monitoring and interim action performance monitoring at the Site is to evaluate ongoing trends in ground water quality and to document the operation and performance of the ongoing interim actions. This 2012 Annual Report presents the data collected during 2012 and reports O&M activities completed on the Zone A SVE system and landfill cover.

The specific objectives of the ground water monitoring and interim action performance monitoring conducted in 2012 include:

- Evaluation of trends in ground water quality over time;
- Evaluation of the performance and effectiveness of the SVE system;
- Evaluation of cap subsidence; and
- Assessment of ground water quality relative to April 2007 draft cleanup levels (dCULs).

## **2.1 Contaminants of Potential Concern**

Contaminants of Potential Concern (COPCs) were defined in the Site *Risk Assessment/Cleanup Level Analysis* Report (PSC 1998) based upon the occurrence and quantification of compounds detected in ground water during the Site investigation. The COPCs were defined as follows:

- Soil – acetone.
- Ground water – acetone, benzene, hexavalent chromium, 1,2-dichloroethane (1,2-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), tetrachloroethene (PCE), toluene, 1,1,1-trichloroethane (1,1,1-TCA), 1,1,2-trichloroethane (1,1,2-TCA), trichloroethene (TCE), and vinyl chloride (VC).

## **2.2 Draft Cleanup Levels<sup>1</sup>**

The dCULs for the Site were presented to the IWAG Group II by Ecology in a letter dated April 24, 2007. After discussion with Ecology, the IWAG Group II proposed revisions to these cleanup levels in a letter dated September 14, 2007. In a letter dated October 1, 2007, Ecology agreed to the proposed changes. Ecology also stated that the dCULs were provided in part to aid in evaluating interim system performance capabilities and remedy effectiveness, including both carcinogenic and non-carcinogenic indicators for ground water and soil, and are applicable to the entire Site. The dCULs for ground water are shown below and will be used in this report.

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<sup>1</sup>The draft cleanup levels discussed here were developed in 2007 under AO 1324 and will be superseded by cleanup levels developed under AO DE-9240. Final cleanup levels will be developed in the FFS and will be incorporated into the Cleanup Action Plan (CAP). The 2007 dCULs are used in this report for reference and discussion purposes.





**Draft Cleanup Levels for Ground Water  
 Pasco Landfill Site**

Acetone	80 µg/L
Benzene *	0.02 µg/L
1,2-Dichloroethane *	0.228 µg/L
1,1-Dichloroethene *	0.05 µg/L
cis-1,2-Dichloroethene	70 µg/L
Methylene Chloride *	1.0 µg/L
Tetrachloroethene *	0.4 µg/L
Toluene	570 µg/L
1,1,1-Trichloroethane	200 µg/L
Trichloroethene *	0.3 µg/L
Vinyl Chloride *	0.025 µg/L
Chromium VI *	40 µg/L

\* = Known or suspected carcinogenic compound.

Selective ion measurement (SIM) has been used during laboratory analysis of quarterly ground water samples for quantification of PCE, TCE, 1,1-DCE, vinyl chloride, 1,2-DCA, and benzene in order to attain detection limits less than the dCULs for those compounds. SIM analysis was not used during analysis of ground water samples collected during monthly sampling events (see below).

### **2.3 Methodology**

The following sections discuss the ground water and Interim Action performance monitoring methodologies implemented at the Site.

#### **2.3.1 Ground Water Monitoring**

Ground water monitoring employed the standard operating procedures for field sampling methods presented in:

- The *Operations and Maintenance Manual – SVE, NoVOCs, and Ground Water Monitoring* (O&M Manual), prepared by EPI, dated January 31, 2007, and revised February 23, 2007 and May 25, 2007 and approved by Ecology;
- *Addendum No. 1 – Operations and Maintenance Manual – SVE, NoVOCs, and Ground Water Monitoring* (O&M Addendum No. 1), prepared by EPI, dated January 8, 2008 and revised May 22, 2008 and approved by Ecology; and
- The *REVISED FINAL Work Plan for Additional Interim Actions – Phase I* (Phase I AIA Work Plan), dated May 5, 2008 and approved by Ecology.

After the first quarter sampling event in 2012 the IWAG sought and received approval from Ecology to modify the sampling frequencies and analyses for selected wells at the Site. The revised monitoring plans were presented in the following documents:

- *Technical Memorandum – Pasco Landfill: Enhanced Groundwater Monitoring Modification*, dated August 11, 2011 and revised on February 1, 2012.
- *Technical Memorandum – Pasco Landfill: Proposed Modifications to the Existing Interim Actions Quarterly Ground Water Monitoring Program*, dated April 23, 2012.

The modifications to the monthly ground water monitoring program included reducing the number of wells from 25 to six, all located either beneath or immediately downgradient of Zone A. The six wells (MW-52S, MW-53S, MW-50S, MW-47S, NVM-01, and MW-12S) were the only wells of the 25 previously monitored on a monthly basis that had contained a COC at a concentration exceeding a dCUL between July 2010 through June 2011. The modified monthly sampling program was approved by Ecology and the revised scope for this monitoring began in February 2012.

Modifications to the quarterly ground water monitoring program included reducing the number of quarterly monitoring wells from 58 to 37 by converting 13 wells from quarterly to semiannual monitoring, suspending monitoring at 14 wells and adding 6 wells into the quarterly monitoring program. The revised quarterly monitoring program was approved by Ecology on April 24, 2012 and was implemented with the second quarter sampling in April 2012.

As reported in the *First Quarter 2012 Ground Water Monitoring and Interim Actions Performance Monitoring Report*, dated June 15, 2012, and the *Revised Second Quarter 2012 Ground Water Monitoring and Interim Actions Performance Monitoring Report*, dated February 18, 2013, the inlet depths of the dedicated ground water sampling pumps were adjusted in 18 shallow depth monitoring wells during the first quarter sampling in January 2012. The inlet depths were adjusted in an additional three wells prior to sampling in April 2012. The 21 wells for which the pump inlet depths were adjusted were #4R, MW-10S, MW-11S, MW-12S, MW-13S, MW-15S, MW-16S, MW-17SR, MW-18S, MW-19S, MW-20S, MW-22S, MW-23S, MW-24S, MW-27SR, MW-47S, MW-49S, MW-50S, MW-52S, MW-53S, and NVM-01. Pump inlet adjustments were made in accordance with the letter *Pasco Landfill Site: Ecology Recommendations for Groundwater Sampling Pump Intake Zone Positioning and Possible Well Replacement*, from Ecology, dated November 28, 2011.



During the January quarterly monitoring event, pumps were manually raised and secured at the specified elevation prior to sampling. Following sampling, the pumps and ancillary tubing were removed from the wells and permanently modified such that the pump inlets were permanently set at the elevations specified in the Ecology letter. The pumps were reinstalled during the February monthly and April quarterly ground water sampling events. The inlet depths for the pumps from MW-18S, MW-20S and MW-27SR were modified prior to the April quarterly monitoring event. A new pump was manufactured in conformance with the objectives of pump inlet settings for a newly installed well MW-55S (see below) before sampling in April 2012.

While reviewing pump intake elevations it was noted that the top of the screen in wells EE-7R and EE-8R were reportedly more than 5 feet below the water table throughout the year. Ecology recommended decommissioning these wells and installing a new well near Zone C/D. Monitoring wells EE-7R, located at Zone C/D, and EE-8R, located at Zone E, were decommissioned in April 2012. A new monitoring well, MW-55S, was installed at Zone C/D and MW-27SR was added to the quarterly monitoring program to replace EE-8R. Figure 3 illustrates the location of MW-55S along the south side of Zone

C/D. This work was performed in accordance with the Ecology approved *Revised Technical Memorandum – Replacement Wells and Well Decommissioning*, dated June 7, 2012. At the time of MW-55S installation, a geotechnical boring was also drilled and sampled to provide physical soil property information in a location upgradient of historic waste disposal activities at the Site. The results of these activities were reported to Ecology in *Technical Memorandum – Results of Replacement Well Installation and Well Decommissioning*, dated June 15, 2012. Attachment B contains the borelog for MW-55S.

As part of the quarterly ground water monitoring activities, ground water levels were measured to the nearest 0.01 foot in 74 wells during the first quarter, 79 wells during the second quarter, 72 during the third quarter, and 79 wells during the fourth quarter. Ground water levels were not measured in the residential wells because those wells were not constructed or documented in a manner that allows such measurements.

Quarterly and semi-annual ground water samples were collected from a total of 55 wells in the first quarter, 58 during the second quarter, 39 during the third quarter, and 59 during the fourth quarter. Table 1 summarizes the wells sampled and the specific chemical analyses requested for each monthly, quarterly and semi-annual sampling event. Attachment A contains the data validation report for the fourth quarter sample analysis.

Monthly enhanced ground water monitoring samples were collected in the months between quarterly sampling (i.e., February, March, May, June, August, September, November, and December). Samples collected during the monthly enhanced ground water monitoring are only analyzed for VOCs by EPA Method 8260, do not incorporate SIM analyses, and are not submitted for third-party data validation. Table 1 also summarizes the wells sampled and analyses performed during each monthly sampling event.

### **2.3.2 Residential Well Monitoring**

The target residential well sampling frequency is presented in O&M Addendum No. 1. The actual number of wells sampled during each quarterly event in 2012 was dependent upon a number of factors including whether power was available to the pump, permission was granted by the property owner, and/or the equipment was functioning. The IWAG does not control or maintain the residential wells and is not responsible for their upkeep or performance.


Ground water samples were collected from one residential well in the first quarter, 11 in the second quarter, five in the third quarter, and 11 in the fourth quarter. Samples collected from the residential wells were analyzed for VOCs by EPA Method 8260 and 8260-SIM. Table 1 summarizes the residential well sampling and analysis.

### **2.3.3 SVE Performance Monitoring**

Through March 5, 2012 the SVE system was operated and monitored in accordance with the *O&M Manual, Addendum No. 1*, and the *Phase I AIA Work Plan*. During that time, the SVE system was operated using vapor extraction wells VEW-04 and VEW-05.

Between January 1 and March 5, 2012 the SVE performance monitoring was conducted in compliance with the standard operating procedures presented in the referenced documents. SVE performance monitoring consisted of monitoring both operational and performance parameters on a weekly basis. Operational monitoring consisted of monitoring flow rates, inlet vacuums, outlet pressures, and blower temperatures. Collection of these data allowed for the calculation of operational parameters such as total system flow, piping conveyance losses and standard flow rates. These data were also used to evaluate the need for SVE well and piping cleanouts.

The SVE performance monitoring included both field and laboratory monitoring of the effluent SVE air stream. Field measurements were conducted using a photoionization detector (PID) to monitor total VOCs in the SVE effluent, and using a GEM 2000 Landfill Gas Analyzer to monitor methane, carbon dioxide, oxygen, and the balance gases of the extracted vapor stream at each well. A carbon filter is used to prevent VOCs from affecting methane measurements. Laboratory monitoring included collecting a grab sample of the SVE effluent from each of the individual extraction wells and from the combined flow. The samples were then submitted for laboratory analysis of VOCs using a modified EPA Method 8260. The laboratory data, along with flow rates measured during performance monitoring, were used to calculate VOC removal rates.

On March 5, 2012 the upgraded SVE system was brought into initial service. VEW-04 and VEW-05 were disconnected from the SVE system and the six new wells (VEW-06S, VEW-06I, VEW-06D, VEW-07S, VEW-07I and VEW-07D) became active. Operation, testing, and monitoring of the upgraded SVE system was performed in accordance with the *Phase II Volume 1 Work Plan, the EDR Addendum 1* dated March 31, 2011, and *EDR Addendum 2* dated January 6, 2012. Between March 13 and July 13, 2012 five startup tests were performed on the upgraded system. Data from the five tests were evaluated to determine the optimal flow rates for each of the six wells within the constraints of operating conditions of the MSW flare. The results of the testing of the upgraded SVE system was reported to Ecology in the *As-Built and Testing Reports with Operations and Maintenance Manual: Volume 2 – Soil Vapor Extraction System Testing*, dated February 25, 2013. 

Flow rates for long-term SVE system operation were approved by Ecology and adjusted on November 27, 2012. The technical basis for the selected flow rates was formalized in the *Updated Technical Memorandum – Proposed Flow Rates for Upgraded Zone A SVE System and Communications Protocols*, dated December 4, 2012. This technical memorandum also presented the frequency of data collection related to the SVE system operation and communication and action protocols in response to various operating conditions. The proposed long-term operation and maintenance of the upgraded SVE system was detailed in the *As-Built, Testing/O&M Manual Volume 3*, dated February 25, 2013.

During the testing periods system parameters were measured and recorded at the individual well heads, at the SVE equipment compound, and at the flare end of the SVE effluent conveyance line. As outlined above, the parameters included flow rates, vacuum, temperature, carbon dioxide, oxygen, balance gas, lower explosive limit, and total VOCs. Vapor samples were collected during each test on a semi-weekly basis from all six extraction wells and on a modified schedule at both ends of the conveyance line from the SVE equipment compound (SV-BC) to the flare (SV-FS).

Discussion of the SVE system performance for 2012 below is limited to presentation of data collected and maintenance activities performed during the fourth quarter. All other testing and sampling activities

for the SVE system in 2012 have previously been reported to Ecology in detail under separate cover and is not repeated herein.

## **2.4 Findings**

### **2.4.1 Ground Water Elevation Data**

#### **2.4.1.1 Horizontal Hydraulic Gradients**

Ground water elevation contours were developed using the site-wide ground water elevation measurements from January, April, July, and October 2012. A summary of the ground water elevation data for the quarterly ground water monitoring events is presented in Table 2. Site-wide ground water elevation contours for shallow wells are presented in Figures 4 through 7.

The piezometric contours indicate that the ground water flow direction beneath Zone A is consistently southwesterly. The hydraulic gradient beneath Zone A was also consistent throughout 2012. As measured between wells MW-52S and MW-11S at the downgradient property boundary, the hydraulic gradient in 2012 was approximately 0.002 feet/feet (ft/ft) throughout 2012.

The direction of ground water migration downgradient of the property boundary is also consistent with a shift to a southerly orientation best indicated by the orientation of the dissolved-phase contaminant plume. The hydraulic gradient south of the property boundary is less steep than on the property and, as measured in 2012 between wells MW-11S at the property boundary and MW-43S, approximately 8,025 feet south of the property boundary, was less than 0.001 ft/ft throughout 2012. Figures 20 through 23 illustrate the orientation of the dissolved-phase contaminant plume downgradient of the property boundary.

Six groups of three-well clusters immediately downgradient of Zone A on the PSL property are screened at the shallow, intermediate, and deep portions of the aquifer. Four additional two-well clusters downgradient of the PSL property are screened at the shallow and intermediate portions of the aquifer.

Ground water elevation contours for the intermediate depth wells are presented in Figures 8 through 11. The direction of the ground water gradient for the intermediate portion of the aquifer was consistent with the shallow portion of the aquifer throughout 2012. Hydraulic gradient for the intermediate portion of the aquifer, as measured between MW-47I and MW-11I, ranged from 0.001 ft/ft in July to 0.002 ft/ft in April. As with the shallow portion of the aquifer, the gradient of the intermediate portion of the aquifer is less steep downgradient of the property and, as measured between MW-11I and MW54I, was less than 0.001 ft/ft throughout 2012.

Ground water elevation contours for the deep wells are presented in Figures 12 through 15. These contours are based on the six deep wells located immediately downgradient of Zone A. The direction of deep ground water migration appears to be slightly more westerly than in the shallow and intermediate portions of the aquifer. The hydraulic gradient in the deep portion of the aquifer was not calculated due to the limited horizontal distance between wells.

### 2.4.1.2 Vertical Hydraulic Gradients

The clusters of shallow, intermediate and deep wells allows for the calculation of vertical hydraulic gradients throughout the full thickness of the aquifer in six locations immediately downgradient of Zone A and for calculation of vertical hydraulic gradients between the shallow and intermediate portions of the aquifer in four locations downgradient of the property boundary. Tables 3 and 4 summarize the calculated vertical hydraulic gradients at the Site.

Vertical hydraulic gradients have been calculated for six well clusters near Zone A (#2R/I/D, MW-12S/I/D, MW47S/I/D, MW-48S/I/D, MW-49S/I/D and NVM-01/I/D) and four off-property well pairs, which are located along the inferred longitudinal axis of the dissolved-phase plume (MW-11S/I, MW-29S/I, MW-38S/I, and MW-43S/I). The calculations are based on ground water elevations and elevations of the center of the intermediate and deep well screens. Due to the accuracy of the water level meter and survey instruments, the vertical gradients have been rounded to the nearest thousandth. Negative values reflect an upward vertical gradient.

In October 2012 the vertical hydraulic gradients for the six well clusters near Zone A ranged from -0.007 ft/ft to 0.003 ft/ft. The average vertical gradients in the well clusters for the period from July 2008 (i.e., date of installation) through October 2012 ranged from -0.005 to 0.005 ft/ft. The data for 2012 are consistent with historical observations.

In October 2012 the vertical gradients for the downgradient off-property wells ranged from -0.005 ft/ft in to 0.004 ft/ft. The vertical gradients for the four well pairs for the period of April 2011 (i.e. date of installation) to October 2012 ranged from -0.006 to 0.003 ft/ft. As with the on-property wells, the vertical gradient data for 2012 are consistent with historical gradients.

The vertical gradient data indicate that only very small vertical gradients exist at the Site and that these vertical gradients are unlikely to have a significant effect on the vertical migration of dissolved-phase compounds. Samples from the intermediate and deep wells have either not had detectable concentrations of VOCs or have contained much lower concentrations on average than the shallow well in each cluster. Monitoring of all intermediate and deep wells, except for MW-43I and MW-54I, was either moved to semi-annual or suspended during 2012 in consideration of the historical analytical data from samples collected from these wells.



### 2.4.2 Ground Water Quality

Laboratory analytical results from ground water monitoring during 2012 are summarized in Tables 5 through 12, 14, and 15. Well stabilization parameters collected during well purging are summarized in Table 13. The following sections examine the findings according to well groupings, the distribution of dissolved-phase contaminants, and general concentration trends in 2012. The following discussion is focused on those compounds that were detected at concentrations exceeding a dCUL or conditions that are otherwise noteworthy.

#### **2.4.2.1 Evaluation by Well Grouping**

This section presents a discussion of the analytical results for the following groups of wells:

- MSW Landfill Wells
- Performance Monitoring Wells
  - Zone A
  - Zone B
  - Zones C/D
  - Zone E
- Sentinel Wells
- Property Boundary Wells
- Downgradient Wells
- Upgradient Wells
- Residential Wells

These well groupings are as presented in *Memorandum - Pasco Landfill: Proposed Modifications to Existing Interim Action Quarterly Ground Water Monitoring Program*. The following discussions are focused on the COPCs in each of those groupings for which a concentration exceeded a 2007 dCULs in 2012. Well locations are shown on Figure 4.

Section 2.4.2.2 discusses the Site-wide distribution of those compounds detected at concentrations above a 2007 dCUL.

##### **2.4.2.1.1 MSW Landfill Wells**

The ground water monitoring network for the MSW Landfill consisted of wells 4R, MW-16S, and MW-17SR. Table 1 summarizes the wells sampled and analyses requested for each. MSW landfill wells were sampled for VOCs in each of the four quarters. In 2012 concentrations of PCE, TCE, vinyl chloride, and benzene exceeded 2007 dCULs in some of the samples from these wells. PCE and TCE were detected at concentrations exceeding 2007 dCULs in samples from 4R, and MW-16S. Vinyl chloride and benzene were detected with concentrations above the 2007 dCULs in samples from MW-16S. VOC data for the MSW landfill wells are summarized in Table 5.

Landfill parameter samples were collected from wells 4R, MW-16S, and MW-17SR during the second and fourth quarters. Landfill parameters analyzed include nitrate, ammonia, sulfate, total dissolved solids, total alkalinity, bicarbonate, carbonate, hydroxide, chloride, total organic carbon, calcium, total iron, magnesium, manganese, potassium, and sodium. Landfill parameters data are discussed in the Well Stabilization, Natural Attenuation, and Landfill Parameters section below. Landfill parameter data for the MSW landfill wells are summarized in Table 15.

Further evaluation of MSW Landfill wells will be provided by the LFG in its 2012 Annual Report.

#### 2.4.2.1.2 Performance Monitoring Wells

The performance monitoring wells are grouped into wells monitoring ground water quality at Zone A, Zone B, Zone C/D, and Zone E. The wells associated with each Zone of the IWA are discussed below. Performance monitoring wells are sampled for a combination of VOCs, SVOCs, chlorophenoxy herbicides, priority pollutant metals, PCBs, total and hexavalent chromium, and natural attenuation parameters. Table 1 summarizes the Zone A wells, and the analyses requested for each well during each quarterly sampling event.



Analytical results for samples collected from Performance Monitoring Wells are summarized in Tables 5, 7 through 12, and 14.

##### 2.4.2.1.2.1 Zone A Wells

The ground water monitoring network for Zone A consists of a total of 11 wells. Wells EE-2, MW-13S, MW-47S, MW-50S, MW52S, MW-53S, and NVM-01 are completed in the shallow portion of the aquifer, wells MW-47I and NVM-01I are completed in the intermediate portion of the aquifer, and wells MW-47D and NVM-01D are completed in the deeper portion of the aquifer. After January 2012, Zone A monitoring did not include sampling of wells completed in the deep portion of the aquifer.

In 2012 concentrations of PCE, TCE, 1,1-DCE, 1,2-DCA, methylene chloride, benzene, toluene, and acetone exceeded a dCUL in the Zone A wells. No other compounds exceeded a dCUL at any time during the year.

One or more compounds were detected at a concentration exceeding a dCUL in six shallow wells. No compounds were detected at a concentration exceeding a dCUL in wells in the intermediate or deeper portion of the aquifer.

PCE was detected in 15 of 74 samples from Zone A wells at concentrations ranging from 0.060 µg/L to 6.4 µg/L. TCE was detected in 36 of 74 samples at concentrations ranging from 0.12 µg/L to 58 µg/L. 1,1-DCE was detected in 5 of 74 samples at concentrations ranging from 0.024 µg/L to 0.055 µg/L. 1,2-DCA was detected in 12 of 74 samples at concentrations ranging from 0.43 µg/L to 33 µg/L. Methylene chloride was detected in 2 of 74 samples at concentrations ranging from 8.4 to 77 µg/L. Benzene was detected in 1 of 74 samples at a concentration of 0.073 µg/L. Toluene was detected in 7 of 74 samples at concentrations ranging from 2.4 to 1,100 µg/L. Acetone was detected in 2 of 74 samples at concentrations of 310 and 1,800 µg/L.

Ground water quality at wells MW-52S and MW-53S exhibited a distinct trend in 2012. These two wells can be considered source zone wells and are completed immediately beneath the Zone A wastes. During the first five months of 2012 a total of 24 different VOCs were detected in samples from MW-52S and MW-53S with concentrations of PCE, TCE, 1,2-DCA, methylene chloride, benzene, toluene, and acetone exceeding a dCUL. Ground water quality exhibited a marked improvement starting in May 2012. Between June and December 2012 only three VOCs (TCE, 1,1-DCE, and toluene) were detected in samples collected from MW-52S and MW-53S. During the last seven months of the year, no VOC concentrations exceeded a dCUL. Table 5 summarizes VOC data for the Zone A wells.



Additionally, 1,1,1-TCA, chloromethanes, aromatic hydrocarbons, and ketones (i.e., 18 total VOCs) were detected in samples from MW-52S and MW-53S and during the first five months of 2012. After May 2012 only one of these 18 compounds (i.e., toluene) was detected in these two wells and only in a single sample. Otherwise, none of these 18 VOCs were detected in MW-52S or MW-53S after May 2012, and none of these compounds were detected in any other well at the Site during 2012. No VOCs were detected in samples collected from MW-52S during May through July and September through December. No VOCs were detected in samples collected from MW-53S during June or August through December. Similar trends in ground water quality improvement are observed in samples from other Zone A wells (e.g., MW-47S and MW-50S).

These data indicate an improvement in ground water quality beneath Zone A beginning in about June 2012. This change does not appear to be related to the change in pump inlet depth as the pump inlets were changed in January, approximately 6 month prior to the improvement in water quality. The most notable change in conditions at Zone A in this timeframe was the startup testing for the upgraded SVE system, which lasted from March through July and included operation of the shallow and deep extraction wells, and then extended operation of the SVE system through the last half of 2012. This increase in SVE extraction starting in March 2012 generally coincides with and may have contributed to the improved ground water quality beneath Zone A.

SVOC, chlorophenoxy herbicide, PCBs, and priority pollutant metal analyses were performed on samples from wells MW-52S, MW-53S, MW-50S, MW-47S, NVM-01, and MW-12S during the first and second quarters. Samples were collected for SVOC and herbicide analyses from these same six wells during the fourth quarter. **Herbicide analysis was not performed on any fourth quarter samples due to laboratory instrument problems.**



Neither herbicides nor PCBs were detected in any of the samples submitted for those analyses. Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) were detected in samples from MW-52S, MW-53S, MW-12S, and NVM-01 during the first quarter. m,p-Cresol was also detected in the sample from MW-53S during the first quarter. No SVOCs were detected in any Zone A samples during the second or fourth quarter. Tables 8, 9, 10 and 12 summarize the SVOC, herbicide, metals and PCB data for the Zone A wells.

Samples from Zone A wells were also analyzed for total and hexavalent chromium during each quarter of 2012. No hexavalent chromium was detected in any of the samples. Total chromium was detected in 11 of the 15 samples at concentrations ranging from 0.7 µg/L in NVM-01 in the first quarter to 123 µg/L in MW-13S also during the first quarter. The concentration detected in the first quarter sample from MW-13S was the only detection above the next highest concentration of 27.3 µg/L. Concentrations of total chromium in samples from MW-13S were below 4 µg/L in the second, third and fourth quarters. Table 11 summarizes the chromium data for Zone A wells.

While total chromium concentrations are generally consistently low in PSL wells, anomalously higher concentrations are occasionally detected. These higher concentrations are typically many times the prior detected total chromium concentrations within a well and return to lower historical baseline concentrations in subsequent sampling events. The cause of these higher concentrations is currently

being evaluated by the LFG at MW-22S and may explain sporadic increases in total chromium concentration observed in other wells.

Natural attenuation data for the Zone A well samples are summarized in Table 14 and are discussed in the Well Stabilization, Natural Attenuation, and Landfill Parameters section below.

#### **2.4.2.1.2.2 Zone B Wells**

The ground water monitoring network for Zone B consists of MW-26S. Well MW-26S was sampled for VOCs in the last three quarters of 2012 and for SVOCs and chlorophenoxy herbicides in all four quarters. Herbicide analysis was not performed on the fourth quarter sample due to laboratory instrument problems. No VOCs or herbicides were detected during 2012. cPAHs were detected during SVOC analysis but only in the first quarter of 2012. The detected cPAHs were benzo(k)fluoranthene (0.023 µg/L), dibenzo(a,h)anthracene (0.022 µg/L) and indeno(1,2,3-cd)pyrene (0.026 µg/L). No SVOCs were detected in the second, third, or fourth quarter samples. Analytical data for the Zone B well are summarized in Tables 5, 8 and 9.

#### **2.4.2.1.2.3 Zone C/D Wells**

The ground water monitoring network for Zone C/D consists of well MW-55S. MW-55S was installed in April 2012 as a replacement for EE-7R, which was decommissioned during April 2012. MW-55S was sampled for VOCs, and total and hexavalent chromium during the second, third, and fourth quarters. No VOCs were detected at a concentration exceeding a dCUL in MW-55S in 2012. No hexavalent chromium was detected in 2012. Total chromium was detected in two of three samples at a maximum concentration of 7.7 µg/L. Zone C/D analytical data are summarized in Tables 5 and 11.

#### **2.4.2.1.2.4 Zone E Wells**

The ground water monitoring network for Zone E consists of well MW-27SR. Sampling of MW-27SR was added to the quarterly ground water monitoring program in April and therefore, was not sampled during the first quarter. MW-27SR was sampled for VOC, total and hexavalent chromium in the second, third, and fourth quarters of 2012. No VOCs were detected in samples from MW-27SR at a concentration exceeding a dCUL in 2012. VOC data are summarized in Table 5. No hexavalent chromium was detected in samples from MW-27SR in 2012. Total chromium was detected in the samples from MW-27SR at concentrations of 2.9 µg/L, 500 µg/L and 3.8 µg/L in the second, third, and fourth quarters, respectively. The third quarter sample was anomalously high relative to prior detections in this well in 2012. This pattern of a single high result with much lower results in the prior or subsequent sampling events was also observed in 2012 in wells MW-13S (123 µg/L in the first quarter) and MW-22S (785 µg/L in the second quarter). These results do not appear to follow any particular spatial or temporal trends or patterns. Total and hexavalent chromium data are summarized in Table 11.

### 2.4.2.1.3 Sentinel Wells

The sentinel well monitoring network consisted of 11 shallow, three intermediate, and three deep wells sampled for VOCs, total and hexavalent chromium, SVOC, chlorophenoxy herbicides, priority pollutant metals, PCBs, and MNA parameters with a combination of quarterly and semi-annual frequency. The analyses for the wells are summarized in Table 1.

Starting in April, seven shallow wells (2R, MW-12S, MW-15S, MW-18S, MW-19S, MW-23S, and MW-49S) were sampled on a quarterly basis for VOCs with two of those wells (MW-12S and MW-19S) also sampled for total and hexavalent chromium. Well MW-12S was sampled twice for SVOCs and chlorophenoxy herbicides. Wells 2R, MW-12S, and MW-49S were sampled MNA parameters.

Also starting in April, three intermediate depth wells (2I, MW-12ID, and MW-49I) were sampled on a semi-annual basis for VOCs.

The remaining wells (2D, MW-12D, MW-48S, MW-48I, MW-48D, MW-49D, NVM-02, NVM-03, and NVM-04) were dropped from the monitoring program after the first quarter 2012 sampling event. Samples from these wells were analyzed for VOCs and MNA parameters during January. Well NVM-02, NVM-03 and NVM-04 samples were also subject to chromium analysis during January 2012.

The sentinel wells are generally located hydraulically downgradient from potential source areas and in most cases upgradient of property boundaries.

Wells MW-15S and MW-23S are generally hydraulically downgradient of the MSW Landfill and the monitoring data for those wells will be discussed by the LFG in its 2012 Annual Report.

Shallow wells 2R, MW-12S, and MW-49S and intermediate depth wells 2I, MW-12ID, and MW-49I are located hydraulically downgradient of Zone A. Well MW-18S is downgradient of Zones C/D and E and MW-19S is downgradient of Zone E.

The only VOCs detected at concentrations above a dCUL in the sentinel wells were PCE, TCE, 1,1-DCE and 1,2-DCA. All four compounds were detected at concentrations exceeding a dCUL in wells located downgradient of Zone A. The four compounds were not detected in samples from wells downgradient of Zones C/D and E. VOC data are summarized in Table 5.

No VOCs were detected in samples from well 2R. PCE detected was at a concentration above the dCUL in only one sample, which was from MW-12S (0.49 µg/L) in the third quarter. TCE and 1,2-DCA were commonly detected above the dCUL in MW-12S and MW-49S. TCE was detected above the dCUL in NVM-02 and NVM-03.

TCE was detected in the intermediate well 2I at a concentration exceeding the dCUL in the first quarter and at a concentration equal to the dCUL in the second quarter. The detected concentrations were higher than the concentrations in the shallow depth well 2R, which did not contain detectable concentrations of TCE. The TCE data for 2I exhibited a slight decreasing trend through 2012.



Wells MW-12S and MW-19S were sampled for total and hexavalent chromium. Total chromium concentrations in these wells ranged from 0.79 µg/L to 30 µg/L and do not exhibit any temporal trends. Hexavalent chromium was not detected in any samples from these wells.

Well MW-19S was sampled for SVOCs and MW-12S was sampled for SVOCs and chlorophenoxy herbicides. The only SVOC detected was indeno(1,2,3-CD)pyrene at estimated concentrations of 0.021 and 0.026 µg/L in the first quarter. This compound was not detected in any other quarterly sampling event. No chlorophenoxy herbicides were detected in samples from MW-12S. SVOC and chlorophenoxy herbicide analytical results are summarized in Tables 8 and 9.

Well MW-19S was sampled for priority pollutant metals during the first quarter and MW-12S was sampled for metals during the first and second quarters. Priority pollutant metals data are summarized in Table 10.

Well MW-12S was sampled for PCBs during the first and second quarters. No PCBs were detected in any samples collected during 2012.

Natural attenuation data for samples collected from sentinel wells downgradient of Zone A are summarized in Table 14 and are discussed in the Well Stabilization, Natural Attenuation, and Landfill Parameters section below.

#### **2.4.2.1.4 Property Boundary Wells**

The property boundary ground water monitoring network consisted of five shallow wells (MW-10S, MW-11S, MW-22S, MW-24S, and MW-51S) and one intermediate depth well (MW-11I). The shallow wells are sampled for VOCs on a quarterly basis and the intermediate depth well, which is paired with a shallow well, is sampled for VOCs on a semi-annual basis. MW-22S is also sampled for total and hexavalent chromium on a quarterly basis and for landfill parameters on a semi-annual basis. Well 1R was also sampled during the first quarter for VOCs, chromium and MNA parameters. Sampling of well 1R was suspended starting in February 2012.

Well MW-22S is located hydraulically downgradient of the MSW landfill and the monitoring data for that well will be discussed by the LFG in its 2012 Annual Report. Well MW-24S may be hydraulically downgradient of both the MSW Landfill and the IWA in an area of potential ground water mixing and data for that well are discussed below relative to other wells more clearly downgradient of the IWA.

TCE was the only compound detected in a property boundary well at a concentration exceeding a dCUL in 2012. TCE was detected at a concentration exceeding the dCUL in wells MW-10S, MW-11S and MW-24S. TCE concentrations from well MW-10S appear to exhibit a decreasing trend in 2012. TCE concentrations from wells MW-11S and MW-24S suggest generally low, but stable concentrations in 2012. VOC data are summarized in Table 5.

#### **2.4.2.1.5 Downgradient Wells**

The downgradient monitoring well network consists of ten shallow wells (MW-29S, MW-30S, MW-31S, MW-34S, MW-37S, MW-38S, MW-40S, MW-41SR, MW-42S, and MW-43S) sampled for VOCs on a quarterly basis. Shallow wells MW-44S and MW-45S are sampled for VOCs on a semi-annual basis. The downgradient monitoring well network also consists of one intermediate depth well (MW-54I) sampled on a quarterly basis and three intermediate depth wells (MW-29I, MW-38I, and MW-43I) sampled for VOCs on a semi-annual basis. With the exception of MW-54I, each of the intermediate depth wells is paired with an adjacent shallow depth well.

TCE was the only compound detected in a downgradient well at a concentration exceeding a dCUL. The locations where TCE was detected above the dCUL are interpreted to be along the axis of the dissolved phase plume and included MW-29S and MW-29I, MW-38, MW-41SR, MW-43S and MW-43I, and MW-54I.

TCE concentrations were typically highest in the area of MW-29S and MW-38S with concentrations farther downgradient generally consistent and between 0.32 µg/L and 0.45 µg/L. TCE concentrations at the well closest to Zone A, MW-29S, exhibited a declining trend in 2012 from 0.76 µg/L in the first quarter to 0.5 µg/L in the fourth quarter. Concentrations in other portions of the downgradient plume generally appear stable.

#### **2.4.2.1.6 Upgradient Wells**

The upgradient monitoring wells consisted of three shallow wells (NW-1, MW-20S, and MW-25S). Well MW-20S was sampled for VOCs, total and hexavalent chromium on a quarterly basis and MW-25S was sampled for VOCs on a semi-annual basis. All three of these wells were sampled for MNA parameters on a semi-annual basis and NW-1 was sampled for landfill parameters, also on a semi-annual basis.

Well NW-1 is located upgradient of the MSW Landfill and will be discussed in the 2012 Annual Report prepared by the LFG.

Well MW-20S is upgradient of Zones A, C/D, and E and MW-25S is located upgradient of Zone B.

No VOCs were detected in either well in 2012. VOC analytical results are summarized in Table 5.

Total chromium was detected in samples from MW-20S at concentrations ranging from 2.3 µg/L to 3.3 µg/L. Hexavalent chromium was not detected in this well. Chromium analytical results are summarized in Table 11.

#### **2.4.2.1.7 Residential Wells**

As outlined O&M Manual Addendum No. 1, all residential wells in the Groundwater Protection Area (GPA) are scheduled for sampling and VOC analysis on a semi-annual basis during second and fourth quarter sampling events. Wells with VOC concentrations that exceed a dCUL are sampled on a

quarterly basis until such time as detected concentrations are below the dCUL for four consecutive quarters, at which time the well is returned to semi-annual sampling.

In accordance with these guidelines, at the start of 2012, only the West well was scheduled for quarterly sampling. Table 1 summarizes which residential wells were sampled each quarter. VOC data are summarized in Table 5. Table 6 summarizes the VOCs detected in samples collected from the residential wells. As noted in Table 1, four of the residential wells were not sampled due to electrical, pump, property access, or piping issues. The IWAG is not responsible for the upkeep of these privately owned wells.

The City of Pasco 2012 – *East Pasco Plume Area – Well Location Survey*, dated November 30, 2012, contains a listing of residential wells within the GPA. This report is presented in Attachment C. Also included in Attachment C is the *Annual Institutional Controls Report*, dated January 17, 2013, from the Franklin County Planning and Building Department, which indicates that no new drinking water wells were installed within the GPA during 2012.

During 2012, only TCE and vinyl chloride concentrations exceeded a dCUL in any of the residential wells. TCE was detected at a concentration above the dCUL in the third quarter sample from the West well at a concentration of 0.31 µg/L. In the first, second, and fourth quarters TCE was detected in the West well at concentrations ranging from 0.22 µg/L to 0.30 µg/L. TCE was also detected in samples from the Salinas well in the second and fourth quarters but at concentrations below the dCUL.

Vinyl chloride was detected in samples from the Bradley, Rada, Yenney2 and Yenney3 wells at concentrations above the dCUL for vinyl chloride during the second quarter. Based on these concentrations, these wells were also sampled in the third and fourth quarters. Vinyl chloride was not detected in any of these wells in the third or fourth quarters. Vinyl chloride was not detected in any other residential well in 2012.

Based on this information the West well will continue to be sampled on a quarterly basis through at least July 2013 based on the TCE concentration from the third quarter 2012 sample. The Bradley, Rada, Yenney2, and Yenney3 wells will be sampled quarterly through at least April 2013 based on the vinyl chloride concentrations from the second quarter 2012. The remaining functional and accessible residential wells will be sampled on a semi-annual basis.

#### **2.4.2.2 Contaminant Distribution**

This section discusses the dissolved-phase distribution of the compounds for which dCULs have been established for the Site and for which observed concentrations exceeded a dCUL in 2012. Those compounds include PCE, TCE, 1,1-DCE, vinyl chloride, 1,2-DCA, methylene chloride, benzene, toluene, and acetone.

PCE, TCE, 1,1-DCE, and 1,2-DCA were detected at concentrations exceeding a dCUL in multiple quarterly events, and isoconcentration maps for have been prepared for each of the quarterly sampling events for those compounds. Vinyl chloride, methylene chloride, benzene, toluene, and acetone were

detected at concentrations exceeding their respective dCUL only infrequently or only in single wells, and the distribution of these compounds is presented in the text and tables only.

Figures 16 through 19 illustrate the distribution of dissolved-phase PCE in the shallow aquifer for the 2012 annual cycle relative to the draft cleanup level of 0.4 µg/L. These figures illustrate that the extent of PCE concentrations exceeding the dCUL in the shallow portion of the aquifer is generally limited to within the property boundary. A small portion of the areal extent of PCE exceeding dCULs may have extended off-property in the area of MW-16S during the first and second quarters. The highest observed concentrations of PCE are consistently in well 4R west of the MSW Landfill.

PCE did not exceed the dCUL in intermediate or deep wells during 2012.

During 2012 PCE concentrations appear to have decreased beneath Zone A. In viewing the consecutive quarterly isoconcentration contours for PCE it is clear that both the concentrations of PCE and the number of wells with PCE, at either detectable concentrations or concentrations above the dCUL, decreased throughout the year. This decrease was sufficient enough that by the third quarter only one well beneath or downgradient of Zone A (MW-12S) contained PCE at greater than the dCUL and by the fourth quarter no such wells contained PCE at greater than the dCUL.

Figures 20 through 23 illustrate the distribution of dissolved-phase TCE in the shallow aquifer for the 2012 annual cycle relative to the dCUL of 0.3 µg/L. These graphics appear to illustrate three apparent source areas for TCE to the shallow aquifer. These areas include the northern portion of the MSW Landfill in the area of MW-16S and 4R, the southern area of the MSW Landfill along the flowline through MW-15S and MW-24S, and Zone A.

The IWAG defers discussion of TCE from potential MSW Landfill sources to the 2012 Annual Report to be prepared by the LFG.

In the first quarter of 2012, TCE is present in ground water beneath and immediately downgradient of Zone A up to 32 µg/L, with decreasing concentrations in the downgradient direction. Concentrations decrease to 0.35 µg/L (MW-11S) and 0.33 µg/L (MW-10S) at the property boundary in the first quarter. In the first quarter TCE concentrations downgradient of the property boundary are consistent at these lower concentrations along the downgradient axis of the dissolved-phase plume.

TCE concentrations decreased downgradient of Zone A in 2012. This is most apparent when viewing the graphics for the consecutive quarterly events at Zone A. Both the maximum concentrations detected and the number of wells with concentrations exceeding the dCUL decreased in 2012, and impacts at the property boundary downgradient of Zone A exceeding a dCUL are limited to only MW-11S. TCE concentrations at MW-10S complied with the dCUL in the second half of 2012.

Figures 24 through 27 illustrate the distribution of dissolved-phase TCE in the intermediate portion of the aquifer for the 2012 annual cycle relative to the dCUL of 0.3 µg/L. TCE is more typically detected in the intermediate portion of the aquifer in wells beyond the property boundary than within the property boundary. TCE was detected at a concentration above the dCUL in only one intermediate depth well

on the property (2I) and only in the first quarter. TCE was detected in intermediate depth wells downgradient of the property boundary in each of the four quarterly sampling events.

TCE concentrations in MW-29I show a consistent decline from 0.41 µg/L in the first quarter to 0.19 µg/L in the fourth quarter.

TCE was not detected at a concentration exceeding the dCUL in the deeper portion of the aquifer during 2012.

Figures 28 through 31 illustrate the distribution of dissolved-phase 1,1-DCE in the shallow aquifer for the 2012 annual cycle relative to the dCUL of 0.05 µg/L. 1,1-DCE was detected only in wells beneath and immediately downgradient of Zone A. 1,1-DCE was not detected in any wells at a concentration exceeding the dCUL in either the third or fourth quarters.

1,1-DCE was not detected at a concentration exceeding a dCUL in any wells completed within the intermediate or deeper portion of the aquifer in 2012.

The 1,1-DCE data appear to parallel the PCE and TCE data indicating a general improvement in ground water quality beneath and downgradient of Zone A in 2012.

Figures 32 through 35 illustrate the distribution of dissolved-phase 1,2-DCA in the shallow aquifer for the 2012 annual cycle relative to the dCUL of 0.228 µg/L. 1,2-DCA is present primarily beneath and immediately downgradient of Zone A. Those impacts do not extent beyond the property boundary at concentrations exceeding a dCUL.

Trends in 1,2-DCA concentrations near Zone A are a strong indicator of improving ground water quality at the Site. In the first quarter of 2012 1,2-DCA was present beneath and downgradient of Zone A with four wells containing greater than 1.0 µg/L. In the second quarter that number had decreased to three wells. In the third quarter that number had decreased to one well and in the fourth quarter no wells contained greater than 1 µg/L of 1,2-DCA, with a maximum detected concentration of 0.25 µg/L.

The dCUL for vinyl chloride is 0.025 µg/L. Vinyl chloride was only detected during the second quarter of 2012. The sample from MW-16S contained an estimated concentration of 0.10 µg/L and was not detected in any other quarterly sampling event. Vinyl chloride was last detected in a sample from MW-16S in 2004.

The dCUL for methylene chloride is 1 µg/L. Methylene chloride was detected during the first quarter of 2012 in wells MW-52S and MW-53S at concentrations of 77 µg/L and 8.4 µg/L respectively. Methylene chloride was not detected in samples from these wells collected during the second, third or fourth quarter. Methylene chloride was not detected in any other shallow, intermediate, deep or residential well during 2012. While the dataset for this compound is limited, it is consistent with a general trend of improving ground water quality at Zone A throughout 2012



The dCUL for benzene is 0.02 µg/L. Benzene was detected in MW-16S in the first, second, and third quarters and in MW-53S in the first quarter of 2012 at concentrations above the dCUL. Benzene was not detected in any other shallow, intermediate, deep or residential well during 2012.

The dCUL for toluene is 570 µg/L. Toluene was not detected in a quarterly ground water sample at a concentration exceeding a dCUL. However, toluene was detected in the monthly sample for March from MW-53S at a concentration of 1,100 µg/L. Toluene was detected in January, February, and March in MW-52S and MW-53S and again in MW-52S in July, but in no other samples. The observed concentrations and the apparent trends are consistent with other trends within the data indicating a general improvement in ground water quality throughout 2012.

The dCUL for acetone is 80 µg/L. As with toluene, acetone was not detected in a quarterly ground water sample at a concentration exceeding a dCUL, but was detected at a concentration above a dCUL in the monthly sample for February from well MW-52S (1,800 µg/L) and the sample for March from MW-53S (310 µg/L). Acetone was not detected in any other samples at any other locations throughout 2012.

#### **2.4.3 Well Stabilization, Natural Attenuation, and Landfill Parameters**

Well stabilization parameters are collected to evaluate steady-state conditions in each well prior to sampling. pH, conductivity, dissolved oxygen (DO), and turbidity are the primary parameters used to evaluate steady-state conditions prior to sample collection. During well purging, temperature and oxidation-reduction potential (ORP) are also stabilized and recorded.

Samples from 31 wells were analyzed for natural attenuation parameters during the first quarter, ten during the second quarter, and seven during the fourth quarter of 2012. Table 1 lists the specific wells that were monitored for natural attenuation. The analysis included alkalinity, ammonia, chloride, chemical oxygen demand (COD), nitrate, nitrite, sulfate total dissolved solids (TDS), total organic carbon (TOC), ferrous iron, manganese, and methane, ethane and ethane (MEE). Analytical data for natural attenuation parameters are summarized in Table 14.

Analysis of ground water samples for natural attenuation parameters provides limited evidence of biochemical degradation processes occurring on the Site due to low concentrations of COPCs and other chemical indicators. However, the *Zone A Heating Evaluation* presented evidence of bacterial degradation within Zone A, based on analysis of the gases extracted by the SVE wells. The heating evaluation indicated that the observed heating was likely due to biological activity associated primarily with bacterial metabolism of ketones in the vadose zone.

Landfill parameter data are summarized in Table 15. Landfill parameter data will be discussed in the 2012 Annual Report for the MSW Landfill prepared by the LFG.

## **2.4.4 SVE Performance Monitoring**

### **2.4.4.1 SVE System Performance**

During the period from January 1 through March 5, 2012 the SVE system operated using VEW-04 and VEW-05 to extract soil vapors from Zone A. Figure 36 illustrates the locations of vapor extraction wells at the Zone A landfill.

Vapor samples were collected weekly from the individual SVE lines, VEW-04 and VEW-05, and from the conveyance piping to the flare through March 5, 2012. Analytical data from the samples from VEW-04 and VEW-05 are presented in Table 16. Weekly samples of the combined vapors were collected at the flare end of the conveyance line through March 5, 2012. The analytical data from these samples are presented in Table 17. Estimations of the contaminant mass removal rates were determined using weekly flow rate measurements and concentrations of VOCs detected during the weekly sampling. The cumulative mass removal through March 5 was calculated using data from the combined samples collected near the flare (SV-FS). For the remainder of the year the cumulative mass was calculated using data from combined line samples collected at the SVE system skid (SV-BC). The removal rates are summarized in Table 18.

In addition to laboratory testing of the air effluent samples, measurements of temperature, differential pressure, vacuum, barometric pressure, methane, carbon dioxide, oxygen, balance gas, and PID readings were collected weekly through March 5, 2012. These data are summarized in Table 19.

Between December 26, 2011 and March 5, 2012 the SVE system recovered approximately 6,293 total pounds of VOCs with an average removal rate of about 90 pounds/day (lbs./d).

After March 5, enhanced vapor extraction was performed using the upgraded SVE system from wells VEW-06S//D and VEW-07S//D. SVE system parameter data recorded after March 5, 2012 are summarized in Table 20. Laboratory analytical data, wellhead flow rates, and wellhead mass removal rates from March 5, 2012 through December 26, 2012 are summarized in Table 21.

Between March 6, 2012 and December 31, 2012, the SVE system recovered approximately 215,184 total pounds of VOCs with an average removal rate of about 727 lbs./d.

Figure 37 illustrates the calculated cumulative mass of VOCs removed by the SVE system through 2012. The two dark blue diamonds on the figure represent the dates when changes were made in the active wells used for vapor extraction. The first diamond represents the change from use of VEW-01, VMW-02D, VEW-04 and VEW-05 to use of only VEW-04 and VEW-05 in March 2010. The second dark blue diamond represents the change to system operation using the new VEW-06 and VEW-07 clusters.

It is estimated that the SVE system has recovered a total of approximately 660,533 pounds of VOCs between May 1997 and December 26, 2012.

In 2012 the SVE system removed a total of approximately 220,029 pounds of VOCs compared to 32,651 pounds recovered in 2011. The increase in mass removal in 2012 relative to 2011 is attributable to the initiation of upgraded SVE system operation. During the fourth quarter of 2012 when the SVE system was operating consistently in its current long-term operational mode, the mass recovery rate, as calculated from the SV-BC samples, ranged from 550 lbs./d. to 1,369 lbs./d.

Figure 38 illustrates the average daily contaminant mass removal rates from the six SVE wells, and the combined line at the SVE skid from March 14, 2012 through December 26, 2012. Gaps in the graphed data series represent periods when wells were not operated and/or samples were not collected during the SVE system upgrade testing.

The data in Table 21 and as presented graphically in Figure 38 illustrate that the wells VEW-07S and VEW-06I and VEW-07I represent the highest rates of mass recovery. This is particularly true of the intermediate depth wells when operated at their maximum attainable flow rates. It is also noted that the recovery rate for VEW-07D appears to have increased in the fourth quarter of 2012, while the flow rate of that well remained generally stable. A similar increase is not observed in mass recovery at VEW-06D.

The SVE system, as currently configured, is limited in its ability to remove and treat VOCs from Zone A by a number of factors. The SVE system must dilute the extracted vapors to maintain a lower explosive limit (LEL) of less than 40 percent in order to comply with the electrical and building permits for the system. This affects flow rates at VEW-06I and VEW-07I, which extract vapors with an LEL greater than 100 percent. The total air flow of the SVE system is also limited by the MSW flare to 600 scfm and to a total daily mass loading of the sum of benzene, toluene, ethylbenzene, and total xylenes (BTEX) of 510 lbs./d. These restrictions place limitations on how the SVE system can be operated and its maximum effectiveness for mass removal. The IWAG is currently evaluating equipment upgrades that would allow the SVE system to operate at higher mass removal rates.

The SVE system is also currently limited in its ability to extract vapors from VEW-06I based on the temperature of extracted gases. The flow rates from that well are currently being modulated in an attempt to maintain effluent gas flows of less than 140 degrees Fahrenheit. The IWAG continues to evaluate methods and procedures for addressing this operational limitation.

#### **2.4.4.2 Ground Water Quality Trends**

As discussed above, ground water quality at the Site appears to have improved in 2012, with a marked improvement in the second half of the year. This improvement in ground water quality is demonstrated by both a decrease in the concentrations of the compounds detected, but also in decreases in the numbers of compounds detected at any particular well and in the numbers of wells where individual compounds are detected. This trend is most readily observed in wells MW-52S and MW-53S located within Zone A. This trend can also be observed in ground water quality immediately downgradient of Zone A.

As outlined in Section 2.3.1, ground water samples were collected on a monthly basis from a subset of the monitoring wells downgradient from Zone A in order to assess changes in ground water quality that may correlate to operation of the SVE system. Data from Phase I AIA studies in the 2008 and 2009 Annual Reports illustrate that soil gas conditions and ground water quality appear to be linked at the Site, and vapor-phase transport through the vadose zone to the water table is likely the primary mechanism for contaminant migration from Zone A wastes to ground water. The consistent operation of the upgraded SVE system in the second half of 2012, at contaminant mass removal rates averaging approximately 700 lb/d, and improvements in ground water quality demonstrate that an SVE system is capable of significantly interrupting the contaminant migration pathway between the Zone A wastes and ground water.

The correlation between SVE performance and ground water quality can be demonstrated by evaluating cis-1,2-DCE concentrations at MW-47S, which is immediately downgradient of Zone A. Cis-1,2-DCE was relatively abundant at the Site prior to optimization of the prior SVE system in 2008. In August 2008, prior to SVE optimization, cis-1,2-DCE was present in MW-47S at a concentration of 3,200 µg/L. After optimization, the cis-1,2-DCE concentration decreased to 620 µg/L in December 2008 and continued to decrease to below 2.2 µg/L in 2011. During 2012 cis-1,2-DCE was only detected above the 2 µg/L reporting limit in samples collected in January and March and was not detected at any other time of the year.

Similar trends have been observed in other VOCs. Concentrations of the majority of the compounds previously detected in ground water samples during the monthly ground water sampling have decreased to concentrations less than the detection limits in the last few years.

TCE is the most frequently detected COPC that exceeds the dCUL. The highest concentrations of TCE are observed in wells MW-12S, MW-47S, MW-52S, MW-53S and NMV-01, located within and immediately downgradient of Zone A. Each of these wells was sampled on a monthly basis during 2012. Samples from each of these wells exhibited a decreasing trend in TCE concentrations throughout 2012, particularly in the second half of the year when the upgraded SVE system was in continual operation.

Figures 39 through 44 illustrate trends in PCE, TCE, 1,1-TCE, cis-1,2-DCE, and 1,2-DCA in wells MW-52S, MW-53S, MW-50S, MW-47S, NVM-01 and MW-12S between October 12, 2010 and January 30, 2012. These figures illustrate a substantial downward trend in VOC concentrations at the Site.

It is expected that this trend in improving ground water quality will propagate downgradient of Zone A as the SVE system continues to operate in its current configuration.

#### **2.4.5 Vapor Sampling**

In response to VOC concentrations detected in a vapor sample collected by the LFG in June 2012 from vapor monitoring point LFG-03D at the south end of the MSW Landfill, Ecology requested that vapor sampling be performed at MW-18S and newly installed well MW-55S. A vapor sampling plan was designed to assess the presence of vapor-phase VOCs in the vicinity of Zone C/D. The *Technical*

*Memorandum – Vapor Sampling at Groundwater Monitoring Wells MW-18S and MW-55S*, dated August 1, 2012 was presented to, and approved by Ecology.

The results of that vapor sampling were presented in *Memorandum – Vapor Sampling Results from Groundwater monitoring Well MW-55S*, dated December 3, 2012.

## **2.5 Waste Handling**

SVE system condensate is generated at two locations during system operation: at the SVE equipment skid and in the conveyance line from the skid to the MSW Landfill flare. The condensate is collected at the SVE equipment skid and at the north end of the conveyance line at the MSW Landfill flare, immediately upstream of the flame arrestor. The condensate is stored in polyethylene tanks, sampled, and characterized prior to disposal or off-site treatment.

Decontamination water from drilling, development water from new well installation, and purge water generated during routine sampling are similarly handled. Polyethylene tanks are used for storage of various liquid wastes produced during investigative activities and routine monitoring. Each tank contains only one type of waste at a time (e.g., SVE condensate, purge water, or development water).

Soil wastes from well installation are drummed on a boring-by-boring basis, sampled, and held until the disposal method is determined. The disposal of these wastes is performed in accordance with the O&M Manual for the Site and the Phase II Volume 1 and 2 Work Plans. Attachment D contains analytical data for samples collected from wastewater generated during the fourth quarter of 2012. Table 24 summarizes the wastes generated and disposed between December 15, 2011 and December 31, 2012.

During 2012, a total of 48,649 gallons of SVE condensate was generated at the SVE equipment skid and in the conveyance line to the MSW Landfill flare. Calibre Systems Inc. (Calibre) managed SVE condensate and investigation derived waste (IDW) for the Site during 2012. All SVE condensate generated at the Site during 2012 was designated as hazardous waste and transported to Burlington Environmental, LLC in Kent, Washington.

During 2012, 1,660 gallons of wastewater was generated from drilling, decontamination, well development, and purging of wells before sampling. This water was determined to be non-hazardous and was transported to the City of Pasco Publicly-Owned Treatment Works for treatment and disposal.

Installation of monitoring well MW-55S and geotechnical boring GB-1 generated 2,820 pounds of soil waste. This soil was determined to be non-hazardous waste and was disposed by BDI Transfer (Basin Disposal) of Pasco, Washington.

## **2.6 Repair Reporting**

### **2.6.1 SVE System**

Intermittent shutdowns of the SVE system occurred during 2012. Those system shutdowns occur both as planned shutdown for routine system maintenance or as unplanned shutdowns. During SVE system shutdowns the MSW flare generally remains on. MSW flare shutdowns result in automatic shutdown of the SVE system to prevent potential atmospheric discharges of untreated vapors.

Upgrades to the SVE system included a programmable logic controller (PLC) and a human-machine interface (HMI) with data logging capability. The specifics of system operation and configuration are summarized in Volume 3 of the *SVE System As-Built and Testing Report with Operations and Maintenance Manual*, dated February 25, 2013.

SVE operation and maintenance items for the first quarter 2012 monitoring period include the following:

- March 1 – Glacier Environmental Services performed maintenance of the discharge piping of the below ground moisture separators;
- March 1 – HiLine performed additional logic programming to ensure SVE system shutdown in the event of a flare shutdown. HiLine also replaced a faulty vacuum sensor in VEW-071 line; and
- March 5 – HiLine performed flow tests on condensate system and reprogrammed PLC for more accurate condensate generation flow volumes.

Attachment E presents a detailed summary of the shutdown and restart history of the SVE system, by quarter, in 2012.

## **2.7 Zone A Landfill Cap**

In response to areas of measured subsidence on the Zone A cap, field activities were initiated including installation of eight settlement benchmarks on May 28, 2008 to be used for settlement surveying. The *Pasco Landfill Zone A Cover Evaluation (2009 Cover Evaluation)*, prepared by SCS Engineers in October 2008, and revised March 10, 2009, describes results of settlement monitoring at eight monuments from May 29, 2008 (the day after installation) through December 30, 2008, a period of 216 days. Three of the monuments were located in the northern settlement area; one in the middle settlement area; two in the southern settlement area; and the remaining two in the northeastern and southeastern portions of Zone A as background monitoring locations. The settlement benchmark locations were designated as SB-1 through SB-8.

The areas of settlement and existing settlement monitoring benchmarks were adjacent to planned Phase II AIA activities that included vertical well drilling and SVE system piping installation. Due to the possibility of inadvertent disturbance of the existing benchmarks during Phase II AIA drilling activities on top of the Zone A landfill, two additional settlement benchmarks were installed in areas where inadvertent disturbance of the benchmarks was unlikely. The new benchmarks, SB-9 and SB-10, were installed on August 8, 2010.

During August 2011 as part of the Phase II AIA activities, maintenance was performed on the Zone A cap to improve surface drainage and minimize potential ponding of precipitation in the subsidence areas. Zone A cover maintenance activities are summarized in the *Cover Maintenance Documentation Report – Pasco Landfill Zone A*, produced by SCS Engineers and dated September 2011.

During the Zone A cap maintenance, settlement benchmarks SB-1 through SB-5 and SB-8 were necessarily destroyed leaving only settlement benchmarks SB-6, SB-7, SB-9 and SB-10. Settlement plates SP-1, SP-2, SP-3 and SP-4 were installed as replacement for the destroyed benchmarks and were surveyed on August 23, 2011. Figure 45 illustrates the locations of the four remaining benchmarks and four new plates on the Zone A cover.

This report summarizes the results of the 2012 subsidence monitoring measurements and compares those results to previous data. Table 22 lists elevation measurements for the 8 monitoring points between May 29, 2008 and October 16, 2012. Figure 46 is a graphical representation of the same measurements. Table 23 summarizes the average subsidence in inches per day for each monitoring period. Figure 47 is a graphical representation of these averages.

The monitoring data indicate the following:

- From Day 1 to Day 215 (May 28, 2008 to December 30, 2008), the period covered by the *Pasco Landfill Zone A Cover Evaluation*, monuments surveyed exhibited settlement rates of 0.0001 to 0.0167 inches per day, averaging 0.0074 inches per day. SB-2 (i.e., the northernmost monument) had the highest value while SB-6 (i.e., adjacent to east detention basin) had the lowest value.
- From Day 1 to Day 804 (August 11, 2010), just before the Phase II AIA work began in Zone A, SB-6 and SB-7 exhibited settlement rates of 0.0004 to 0.0066 inches per day, with an average 0.0035 inches per day or 1.28 inches per year.
- From Day 804 to Day 1,169 (August 11, 2011), the four remaining original monuments not removed during Phase II AIA activities exhibited settlement rates of between 0.0044 to 0.0077 inches/day, with an average of 0.0058 inches per day or 2.12 inches per year.
- From Day 1,169 to Day 1,601 (October 16, 2012), the four new settlement plates installed within the areas of cap maintenance exhibited settlement rates of between 0.0094 and 0.0396 inches/day, with an average settlement rate of about 0.0206 inches/day. This settlement rate is higher than the established benchmarks. The previous benchmarks exhibited settlement rates of between 0.0032 and 0.0114 inches/day, with an average of 0.0065 inches/day. The settlement rates in the newly maintained areas will continue to be monitored on a quarterly basis to assess whether there is persistent differential settlement in the subsiding areas relative to the surrounding areas of the cap.

The IWAG will continue to perform bi-monthly subsidence monitoring on the Zone A cap. Discussions with SCS Engineers indicates that the settlement rates observed are within the range of expected rates for landfill caps and that uniform settlement does not place an unacceptable strain on the landfill membrane or geotextile materials. The IWAG will continue to assess the potential development of areas of differential settlement and, if observed, to assess the total strain on membrane and geotextiles relative to the allowable strain.

No conditions requiring maintenance or repair were observed on the Zone C/D or E caps in 2012. The Zone A Landfill Cover, Detention/Evaporation Basin and Fence Inspection Checklists for 2012 are presented in Attachment F along with similar checklists for Zone C/D and Zone E. The condition of Zone B is reported by Bayer Crop Science (BCS) in its reporting to Ecology.

### **3.0 SUMMARY**

The following summarizes the primary findings of the ground water monitoring and the interim action operations and maintenance in 2012:

- Ground water quality at the Site improved particularly in the second half of 2012 in most areas. This is most readily observed in wells located within and immediately downgradient of Zone A. Wells located in those areas contained fewer compounds and at lower concentrations in the second half of the year. Fewer wells contained compounds at concentrations exceeding dCULs as the year progressed.
- The current monitoring network is adequate to assess and evaluate ongoing ground water quality at the Site.
- Ground water quality improved at the property boundary downgradient of Zone A with only one well (MW-11S) exceeding a dCUL for one compound (TCE) by the fourth quarter. The detected concentration of TCE in the fourth quarter was only slightly above the dCUL.
- The orientation of the dissolved-phase plume downgradient of the property boundary appears stable. The shallow and intermediate depth well pairs located along the inferred axis of the plume consistently provide the highest concentrations within this portion of the plume.
- Improvements in ground water quality in most areas appear associated with operation of the upgraded SVE system in the second half of 2012. The SVE system was in a testing mode starting in March and was in long-term operation from July through the end of the year. It is in that latter time period that ground water quality improved most markedly. Mass removal rates from the SVE system reached nearly 1,400 lb/d during testing, and averaged around 700 lb/d through the end of the year.
- The upgraded SVE system provides substantially higher sustained mass removal rates than the previous system. In 2012 the upgraded SVE system removed about 220,000 lbs. of total VOCs compared to about 33,000 pounds in 2011 for the prior system. That represents an approximately 700 percent increase in mass removal. The SVE system is currently limited in



its capacity to remove contaminant mass by the destruction removal efficiency of the MSW flare, the total allowable air volume that can be sent to the flare, the requirement to dilute the extracted gasses from the intermediate depth wells so as to not exceed LEL limits, and extracted vapors not exceeding 140 degrees Fahrenheit.

- Settlement of the Zone A cover continued during 2012 at slightly increasing rates. Measurements of apparent settlement within the newly maintained areas were higher than in other areas of the Zone A cap.

#### **4.0 REFERENCES**

*FINAL DRAFT Phase I Remedial Investigation Report - Pasco Landfill - Pasco, Washington, Volumes I to IV*, dated December 1993, by Burlington Environmental Inc. (Prepared for Pasco Landfill PLP Group)

*Ecological Assessment - Pasco Landfill - Pasco, Washington*, dated September 1997 by Phillip Services Corp. (Prepared for Pasco Landfill PLP Group)

*Interim Measures Completion Report - Pasco Landfill - Pasco Washington*, dated February 4, 1998, by Phillip Environmental Services Corporation. (Prepared for Pasco Landfill PLP Group)

*Risk Assessment/Cleanup Level Analysis - Pasco Landfill - Pasco, Washington*, dated September 1998, by Phillip Services Corp. (Prepared for Pasco Landfill PLP Group)

*Feasibility Study Report - Pasco Landfill - Pasco, Washington*, dated April 28, 1999, by Phillip Environmental Services Corporation. (Prepared for Pasco Landfill PLP Group)

*Operations and Maintenance Manual - Landfill Gas Collection Control and Flare - Pasco Sanitary Landfill - Pasco, Washington*, dated July 15, 2002, by Phillip Services Corporation. (Prepared for Pasco Landfill PLP Group)

*Operations and Maintenance Manual - Landfill Caps Volumes I and II - Pasco Sanitary Landfill - Pasco, Washington*, dated July 15, 2002, by Phillip Services Corporation. (Prepared for Pasco Landfill PLP Group)

*Operations and Maintenance Manual - SVE, NoVOCs, and Ground Water Monitoring - Pasco Sanitary Landfill - Pasco, Washington*, dated July 15, 2002, by Phillip Services Corporation. (Prepared for Pasco Landfill PLP Group)

*Interim Action Performance Monitoring Report - Pasco Landfill Site - Pasco Washington*, dated January 31, 2007, by Environmental Partners, Inc. (Prepared for IWAG Group II)

*Operations and Maintenance Manual - SVE, NoVOCs, and Ground Water Monitoring - Pasco Landfill Site - Pasco Washington*, dated January 31, 2007 and revised February 23, 2007 and May 25, 2007, by Environmental Partners, Inc. (Prepared for IWAG Group II)

*The REVISED FINAL Work Plan for Additional Interim Actions - Phase I*, dated May 5, 2008 by Environmental Partners, Inc. (Prepared for IWAG Group II)

*Addendum No. 1 - Operations and Maintenance Manual - SVE, NoVOCs and Ground Water Monitoring*, dated January 8, 2008 and revised May 22, 2008 by Environmental Partners, Inc. (Prepared for IWAG Group II)

*Pasco Landfill Zone A Cover Evaluation*, dated March 10, 2009 by SCS Engineers. (Prepared for Environmental Partners, Inc.)

2012 Annual Report - Ground Water Monitoring and Interim Action Performance Monitoring  
Pasco Landfill NPL Site, Pasco, Washington  
EPI Project Number: 03912.2  
March 15, 2013

*2008 Annual Report - Ground Water Monitoring and Phase I Additional Interim Actions- Volumes 1 to 3*, dated May 20, 2009, by Environmental Partners, Inc. (Prepared for IWAG Group II)

*Draft Final Phase II Additional Interim Actions Work Plan Volume 1 – Soil Vapor Extraction System Upgrades and Start-up Testing with Monitoring Well Installation*, dated May 14, 2010 by Environmental Partners, Inc. (Prepared for IWAG Group II)

*Revised 100% Submittal Engineering Design Report for SVE System Upgrades – Phase II Additional Interim Actions*, dated July 2, 2010 by Environmental Partners, Inc. (Prepared for IWAG Group II)

*Technical Methodology for NoVOCs Well Decommissioning*, dated October 22, 2010 by the IWAG Group III, Environmental Partners, Inc., and Anchor QEA, LLC. (Prepared for Ecology)

*Revised Final Phase II Additional Interim Actions Work Plan Volume 2 – Sub-Zone A Investigation, Downgradient Well Installation and Cap Maintenance*, dated January 28, 2011 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Revised Addendum No. 1 – 100% Engineering Design Report for SVE System Upgrades – Phase II Additional Interim Actions*, dated March 31, 2011 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Technical Memorandum – Summary of NoVOCs Well Decommissioning*, dated August 31, 2011.

*Cover Maintenance Documentation Report – Pasco Landfill Zone A*, dated September 2011 by SCS Engineers. (Prepared for Environmental Partners, Inc.)

*Pasco Landfill Site: Ecology Recommendations for Groundwater Sampling Pump Intake Zone Positioning and Possible Well Replacement*, dated November 28, 2011 by Ecology

*Revised Phase II Additional Interim Actions - Sub-Zone A Investigation and Downgradient Well Installation Report, Volumes I and II*, dated September 30, 2011 and revised May 21, 2012 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Addendum No. 2 – 100% Engineering Design Report for SVE System Upgrades – Revisions to SVE Startup Testing*, dated January 6, 2012 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Revised Phase II Additional Interim Actions - Sub-Zone A Investigation and Downgradient Well Installation Report, Volumes I and II*, dated May 21, 2012 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Revised Technical Memorandum – Replacement Wells and Well Decommissioning*, dated June 7, 2012 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Technical Memorandum – Results of Replacement Well Installation and Well Decommissioning*, dated June 15, 2012 by Environmental Partners, Inc. (Prepared for IWAG Group III)

2012 Annual Report - Ground Water Monitoring and Interim Action Performance Monitoring  
Pasco Landfill NPL Site, Pasco, Washington  
EPI Project Number: 03912.2  
March 15, 2013

*Technical Memorandum – Vapor Sampling at Groundwater Monitoring Wells MW-18S and MW-55S*, dated August 1, 2012 by IWAG Group III

*Zone A Heating Evaluation, Pasco Sanitary Landfill Site*, dated September 14, 2012 by Anchor QEA (Prepared for IWAG Group III)

October 31, 2012 a new Agreed Order (No. DE 9240)

*Updated Technical Memorandum – Proposed Flow Rates for Upgraded Zone A SVE System and Communications Protocols*, dated December 4, 2012 Environmental Partners, Inc. (Prepared for IWAG Group III)

*Site-Wide Ground Water Performance and Protection Monitoring Operations and Maintenance Manual – Pasco Landfill Site – Pasco, Washington*, dated December 31, 2012 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Focused Feasibility Study Work Plan – Pasco Landfill*, dated December 31, 2012 by Anchor QEA, LLC, Aspect Consulting, LLC, Environmental Partners, Inc., and AMEC Environment & Infrastructure, Inc. (Prepared for IWAG Group III)

*Pasco Landfill Site Updated Institutional Control Plan*, dated December 31, 2012 by Anchor QEA, LLC. (Prepared for IWAG Group III)

*Operations and Maintenance Manual for Industrial Waste Area Caps – Zones A, C/D, and E – Pasco Landfill Site – Pasco, Washington*, dated January 29, 2013 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*As-Built and Testing Reports with Operations and Maintenance Manual*, dated February 25, 2013 by Environmental Partners, Inc. (Prepared for IWAG Group III)

*Volume 1 – As-Built Report for SVE System Upgrades;*  
*Volume 2 – Soil Vapor Extraction System Testing; and*  
*Volume 3 – Operations and Maintenance Manual, which includes:*  
*Attachment A – Sampling and Analysis Plan*

## Tables



TABLE 2  
Ground Water Elevation Data  
(in feet)

2012 Annual Report

Pasco Landfill, Pasco, WA

PERIOD: 1/1/12 thru 12/31/12

Page: 1 of 2

WELL ID	WATER ELEVATION 1/23/12	WATER ELEVATION 4/23/12	WATER ELEVATION 7/24/12	WATER ELEVATION 10/12/12	RANGE
#9	359.63	360.88	359.25	358.02	2.86
1R	353.04	353.82	352.65	351.88	1.94
2D	353.19	354.06	352.96	352.09	1.97
2I	353.32	354.12	353.22	352.17	1.95
2R	353.23	354.02	353.05	352.06	1.96
4R	358.78	359.90	358.27	357.19	2.71
8R	357.62	358.76	357.25	356.18	2.58
EE-2	353.83	354.64	353.52	352.63	2.01
EE-6R	358.09	359.24	357.77	356.57	2.67
EE-7R	357.69	Decommissioned	--	--	--
EE-8R	359.30	Decommissioned	--	--	--
MW-10S	352.47	353.21	352.22	351.34	1.87
MW-11I	352.23	352.98	351.97	351.17	1.81
MW-11S	352.25	352.98	351.94	351.15	1.83
MW-12D	353.36	354.17	352.98	352.18	1.99
MW-12ID	353.38	354.18	352.99	352.20	1.98
MW-12S	353.36	353.74	352.96	352.18	1.56
MW-13S	353.66	354.53	353.29	352.48	2.05
MW-14S	355.15	356.10	354.88	353.89	2.21
MW-15S	354.08	354.97	353.69	352.87	2.10
MW-16S	360.44	361.63	360.00	358.80	2.83
MW-17SR	355.94	356.96	355.57	354.57	2.39
MW-18S	NM	357.40	356.06	355.01	2.39
MW-19S	358.69	359.86	358.21	357.05	2.81
MW-20S	361.41	362.79	361.02	359.61	3.18
MW-22S	354.21	355.05	NM	352.95	2.10
MW-23S	357.81	358.89	357.25	356.29	2.60
MW-24S	353.11	353.97	NM	351.98	1.99
MW-25S	359.00	355.16	358.55	357.31	3.84
MW-26S	358.59	359.73	358.18	356.97	2.76
MW-27SR	359.37	360.59	360.04	357.76	2.83
MW-28S	364.89	366.33	364.35	362.82	3.51
MW-29I	350.86	351.56	350.74	349.98	1.58
MW-29S	350.99	351.47	350.63	349.89	1.58
MW-30S	350.25	350.87	350.00	349.35	1.52
MW-31S	350.58	351.18	350.38	349.73	1.45
MW-32S	350.47	351.13	350.14	349.56	1.57
MW-33S	351.23	351.87	350.96	350.18	1.69

TABLE 2  
Ground Water Elevation Data  
(in feet)

2012 Annual Report

Pasco Landfill, Pasco, WA

PERIOD: 1/1/12 thru 12/31/12

Page: 2 of 2

WELL ID	WATER ELEVATION 1/23/12	WATER ELEVATION 4/23/12	WATER ELEVATION 7/24/12	WATER ELEVATION 10/12/12	RANGE
MW-34S	349.52	350.12	349.38	348.72	1.40
MW-36S	NM	349.32	348.73	348.07	1.25
MW-37S	348.46	349.27	348.69	348.03	1.24
MW-38I	348.51	349.02	348.46	347.80	1.22
MW-38S	348.46	349.05	348.49	347.84	1.21
MW-40S	348.11	348.64	348.16	347.49	1.15
MW-41SR	348.29	348.80	348.28	347.63	1.17
MW-42S	347.73	348.24	347.80	347.11	1.13
MW-43I	347.89	348.30	347.81	347.14	1.16
MW-43S	347.84	348.37	347.93	347.22	1.15
MW-44S	347.82	348.31	347.81	347.14	1.17
MW-45S	348.27	348.77	348.26	347.60	1.17
MW-47D	353.60	354.46	353.25	352.45	2.01
MW-47I	353.60	354.44	353.21	352.42	2.02
MW-47S	353.63	354.42	353.20	352.41	2.01
MW-48D	353.67	354.72	353.55	352.66	2.06
MW-48I	353.65	354.47	353.34	352.46	2.01
MW-48S	353.86	354.49	353.37	352.49	2.00
MW-49D	352.96	353.97	352.74	351.99	1.98
MW-49I	352.91	353.70	352.53	351.78	1.92
MW-49S	353.14	353.73	352.55	351.82	1.91
MW-50S	353.93	354.65	353.48	352.69	1.96
MW-51S	352.55	353.23	NM	351.44	1.79
MW-52S	354.37	355.19	354.00	353.16	2.03
MW-53S	353.84	354.69	353.45	352.63	2.06
MW-54I	346.64	347.12	346.83	346.10	1.02
MW-55S	New Well	349.28	338.82	356.68	17.86
NVM-01	353.56	354.37	355.39	352.39	3.00
NVM-01D	353.57	354.38	353.22	352.37	2.01
NVM-01I	353.55	354.39	353.07	352.36	2.03
NVM-02	353.52	354.34	353.15	352.34	2.00
NVM-03	353.47	354.31	353.19	352.32	1.99
NVM-04	353.25	354.07	352.87	352.13	1.94
NW-1	NM	373.77	NM	369.53	4.24
NW-2	NM	369.27	NM	365.64	3.63
NW-3	NM	366.83	NM	363.49	3.34
NW-4	NM	369.13	NM	365.55	3.58
NW-5	368.99	370.36	368.22	366.55	3.81



TABLE 3  
Evaluation of Vertical Gradients  
Zone A Well Clusters  
2012 Annual Report  
Pasco Landfill, Pasco, WA

Shallow Well	Water Elevation (in feet)	Shallow to Intermediate Vertical Piezometric Gradient (in feet/feet)	Intermediate Well	Elevation at Center of Screen (in feet)	Water Elevation (in feet)	Intermediate to Deep Vertical Piezometric Gradient (in feet/feet)	Deep Well	Elevation at Center of Screen (in feet)	Water Elevation (in feet)	Shallow to Deep Vertical Piezometric Gradient (in feet/feet)
<b>October 2012</b>										
<b>2R</b>	352.06	-0.004	<b>2I</b>	<b>327.50</b>	352.17	0.003	<b>2D</b>	<b>297.50</b>	352.09	-0.001
<b>MW-12S</b>	352.18	-0.001	<b>MW-12ID</b>	<b>326.80</b>	352.20	0.001	<b>MW-12D</b>	<b>293.00</b>	352.18	<±0.001
<b>MW-47S</b>	352.41	<±0.001	<b>MW-47I</b>	<b>326.70</b>	352.42	-0.001	<b>MW-47D</b>	<b>293.40</b>	352.45	-0.001
<b>MW-48S</b>	352.49	0.001	<b>MW-48I</b>	<b>327.90</b>	352.46	-0.006	<b>MW-48D</b>	<b>293.30</b>	352.66	-0.003
<b>MW-49S</b>	351.82	0.002	<b>MW-49I</b>	<b>328.90</b>	351.78	-0.007	<b>MW-49D</b>	<b>299.50</b>	351.99	-0.003
<b>NVM-01</b>	352.39	0.001	<b>NVM-01I</b>	<b>324.10</b>	352.36	<±0.001	<b>NVM-01D</b>	<b>296.40</b>	352.37	<±0.001
<b>Average of Water Elevations and Vertical Hydraulic Gradients - July 2008 Through October 2012</b>										
<b>2R</b>	352.76	-0.004	<b>2I</b>	<b>327.50</b>	352.86	0.001	<b>2D</b>	<b>297.50</b>	352.79	-0.001
<b>MW-12S</b>	352.86	-0.001	<b>MW-12ID</b>	<b>326.80</b>	352.90	<±0.001	<b>MW-12D</b>	<b>293.00</b>	352.89	<±0.001
<b>MW-47S</b>	353.16	<±0.001	<b>MW-47I</b>	<b>326.70</b>	353.15	<±0.001	<b>MW-47D</b>	<b>293.40</b>	353.18	<±0.001
<b>MW-48S</b>	353.21	0.001	<b>MW-48I</b>	<b>327.90</b>	353.19	-0.004	<b>MW-48D</b>	<b>293.30</b>	353.41	-0.003
<b>MW-49S</b>	352.49	0.002	<b>MW-49I</b>	<b>328.90</b>	352.44	-0.005	<b>MW-49D</b>	<b>299.50</b>	352.69	-0.004
<b>NVM-01</b>	353.24	0.005	<b>NVM-01I</b>	<b>324.10</b>	353.09	<±0.001	<b>NVM-01D</b>	<b>296.40</b>	353.08	0.003

Downward gradients follow gravity and are shown as positive numbers. Upward gradients go against gravity and are shown as negative (-) numbers. Example: If a shallow well has a lower water elevation than the cluster's intermediate well, the gradient from the shallow well to the intermediate well will be a negative number.



Shallow Well	Water Elevation (in feet)	Shallow to Intermediate Vertical Piezometric Gradient (in feet/feet)	Intermediate Well	Elevation at Center of Screen (in feet)	Water Elevation (in feet)
<b>October 2012</b>					
<b>MW-11S</b>	351.15	-0.001	<b>MW-11I</b>	<b>328.94</b>	351.17
<b>MW-29S</b>	349.89	-0.005	<b>MW-29I</b>	<b>331.39</b>	349.98
<b>MW-38S</b>	347.84	0.003	<b>MW-38I</b>	<b>333.17</b>	347.80
<b>MW-43S</b>	347.22	0.004	<b>MW-43I</b>	<b>327.22</b>	347.14
<b>Average Water Elevations and Vertical Hydraulic Gradients - April 2011 to Oct. 2012</b>					
<b>MW-11S</b>	352.04	<±0.001	<b>MW-11I</b>	<b>328.94</b>	352.05
<b>MW-29S</b>	350.68	-0.006	<b>MW-29I</b>	<b>331.39</b>	350.79
<b>MW-38S</b>	348.46	0.003	<b>MW-38I</b>	<b>333.17</b>	348.42
<b>MW-43S</b>	347.84	0.003	<b>MW-43I</b>	<b>327.22</b>	347.77

Notes:

Downward gradients are shown as positive numbers. Upward gradients are shown as negative (-) numbers. The intermediate wells were installed in March 2011.

Elevations for MW-29S/I are based on the June 2012 survey measurements.

















TABLE 6  
Residential Well VOCs  
Detected Compounds Only  
(in ug/L)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

Quarter	WELL	Chloroethenes		
		Tetrachloroethene	Trichloroethene	Vinyl Chloride
<b>Draft Clean-up Levels (µg/L)</b>		<b>0.4</b>	<b>0.3</b>	<b>0.025</b>
<b>Q1-2012</b>	West	0.078 J	0.26	< 0.032 U
<b>Q2-2012</b>	Bradley	< 0.050 U	< 0.053 U	<b>0.11</b>
	Rada	< 0.050 U	< 0.053 U	<b>0.26</b>
	Salinas	0.28	0.23	< 0.032 U
	West	0.056	0.3	< 0.032 U
	Yenney2	< 0.050 U	< 0.053 U	<b>0.22</b>
	Yenney3	< 0.050 U	< 0.053 U	<b>0.20</b>
<b>Q3-2012</b>	West	< 0.05 U	<b>0.31</b>	< 0.032 U
<b>Q4-2012</b>	Salinas	< 0.050 U	0.21	< 0.032 U
	West	< 0.050 U	0.22	< 0.032 U







TABLE 8  
Semi-Volatile Organic Compounds in Ground Water  
(in ug/L)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

SAMPLED: 1/1/12 to 12/31/2012

Page: 2 of 2

SEMI-VOLATILE ORGANIC COMPOUND	Q1-2012								Q2-2012							Q3-2012	Q4-2012						
	MW-12S	MW-19S	MW-26S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01	MW-12S	MW-26S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01	MW-26S	MW-12S	MW-26S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01
Chrysene	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	0.025 J	0.056 J	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U
Di-N-Octyl Phthalate	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Dibenzo(a,h)anthracene	< 0.020 U	< 0.020 U	<b>0.022</b>	< 0.020 U	< 0.020 U	<b>0.03</b>	<b>0.048</b>	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U
Dibenzofuran	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Dibutyl phthalate	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Diethyl phthalate	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Dimethyl phthalate	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Fluoranthene	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Fluorene	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Hexachlorobenzene	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Hexachlorobutadiene	< 0.56 U	< 0.56 U	< 0.56 U	< 0.56 U	< 0.56 U	< 0.56 U	< 0.56 U	< 0.56 U	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Hexachlorocyclopentadiene	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Hexachloroethane	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Indeno(1,2,3-cd)pyrene	<b>0.021 J</b>	<b>0.026 J</b>	<b>0.026 J</b>	< 0.020 U	< 0.020 U	<b>0.037 J</b>	<b>0.057 J</b>	<b>0.025 J</b>	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U
Isophorone	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 UJ	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
m-Nitroaniline	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
m,p-Cresol (2:1 ratio)	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	<b>2.2</b>	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
N-Nitrosodi-n-propylamine	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
N-Nitrosodimethylamine	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
N-Nitrosodiphenylamine	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Naphthalene	R	R	< 2.0 U	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Nitrobenzene	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
o-Cresol	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Pentachlorophenol	R	< 0.50 U	R	R	R	R	R	R	R	R	R	R	R	R	R	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Phenanthrene	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Phenol	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Pyrene	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Pyridine	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U

TABLE 9  
Chlorinated Herbicides in Ground Water  
(in ug/L)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

SAMPLED: 1/1/12 to 12/31/2012

Page 1 of 1

HERBICIDE	Q1-2012							Q2-2012							Q3-2012
	MW-12S	MW-26S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01	MW-12S	MW-26S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01	MW-26S
2,4,5-T	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
2,4-D	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
2,4-DB	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
4-Nitrophenol	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
Dalapon (DPA)	< 0.038 UH	< 0.038 UH	< 0.038 UH	< 0.038 UH	< 0.038 UH	< 0.038 UH	< 0.038 UH	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
Dicamba	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
Dichlorprop	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
Dinoseb	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
MCPA	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
Mecoprop	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
Pentachlorophenol	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
Silvex	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 UH	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
2,4-D	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
2,4-DB	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
2,4,5-T	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
4-Nitrophenol	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
Dalapon (DPA)	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U								
Dicamba	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
Dichlorprop	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
Dinoseb	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
MCPA	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
Mecoprop	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
Pentachlorophenol	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								
Silvex	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U	< 0.24 U								

EPA Method 8151

U = Not detected above reporting limit.

UH = Not detected above reporting limit. Hold time exceeded.

TABLE 10  
Priority Pollutant Metals in Ground Water  
(in ug/L)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

SAMPLED: 1/01/12 to 12/31/2012

METAL	Q1-2012						Q2-2012					
	MW-12S	MW-19S	MW-47S	MW-50S	MW-52S	MW-53S	MW-12S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01
Antimony	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Arsenic	3.6	4.8	3.4	3	4.2	3.5	3.5	3.8	2.5	3.0	2.8	2.7
Beryllium	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Cadmium	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
Chromium	27.3	1.5	< 1 U	2.1	8.6	27.3	9.8	< 0.5 U	< 0.5 U	3.3	3.0	< 0.5 U
Copper	1.5	1.9	0.9	1.4	1.3	3.5	1.6	1.0	1.3	1.7	1.4	1.1
Lead	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	0.1	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
Manganese	4.3	< 0.5 U	505	1,950	17.1	347	13	1,000	2,400	10	120	420
Mercury	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U
Nickel	6	1.5	1.3	4.2	13.2	51.2	4.9	2.3	4.0	2.4	5	1.6
Selenium	0.8	1.1	0.5	< 0.5 U	0.8	1	0.9	0.6	< 0.5 U	1.0	0.9	0.8
Silver	< 0.2 U	< 0.2 UJ	< 0.2 UJ	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	< 0.2 UJ	< 0.2 UJ	< 0.2 UJ	< 0.2 UJ	< 0.2 UJ
Thallium	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Zinc	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	16	< 4 U	< 4 U

EPA Methods 200.8 and 7470A

U = Compound not detected above reporting limit.

UJ = Compound not detected. Concentration is estimated.



TABLE 11  
Chromium in Ground Water  
(in ug/L)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

WELL	Total Chromium				Hexavalent Chromium			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1R	1.4	--	--	--	< 10 U	--	--	--
EE-2	1.9	--	--	--	< 10 U	--	--	--
MW-12S	27.3	9.8 J	30	0.79	< 10 U	< 10 U	< 10 U	< 10 U
MW-13S	123	3.8	2.6	0.98	< 10 U	< 10 U	< 10 U	< 10 U
MW-19S	1.5	3.1	26	18	< 10 U	< 10 U	< 10 U	< 10 U
MW-20S	--	2.3	2.6	3.3	--	< 10 U	< 10 U	< 10 U
MW-22S	785	95	--	1.6	< 10 U	< 10 U	--	< 10 U
MW-27SR	--	2.9	500 J	3.8	--	< 10 U	< 10 U	< 10 U
MW-47S	< 1.0 U	< 0.5 U	--	--	< 10 U	< 10 U	--	--
MW-50S	2.1	< 0.5 U	--	--	R	< 10 U	--	--
MW-52S	8.6	3.3 J	--	--	< 10 U	< 10 U	--	--
MW-53S	27.3	3.0 J	--	--	< 10 U	< 10 U	--	--
MW-55S	--	< 2.0 U	7.7	7.3	--	< 10 U	< 10 U	< 10 U
NVM-01	0.7	< 0.5 U	--	--	< 10 U	< 10 U	--	--
NVM-02	1.3	--	--	--	< 10 U	--	--	--
NVM-03	0.9	--	--	--	< 10 U	--	--	--
NVM-04	1.6	--	--	--	< 10 U	--	--	--

Note: The Site draft cleanup level for hexavalent chromium is 40 µg/L.

TABLE 12  
Polychlorinated Biphenyls in Ground Water  
(in micrograms per liter)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

PERIOD: 1/1 - 12/31/2012

PCB	Q1-2012						Q2-2012					
	MW-12S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01	MW-12S	MW-47S	MW-50S	MW-52S	MW-53S	NVM-01
PCB-1016	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1221	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1232	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1242	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1248	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1254	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1260	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U
PCB-1268	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U	< 0.067 U

TABLE 13  
Well Stabilization Parameters  
2012 Annual Report  
Pasco Landfill, Pasco, WA

PERIOD: 1/1/12 thru 12/31/12

Page: 1 of 4

SITE	DATE	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	pH	Specific Conductivity (mS/m)	Temperature (Degrees Celcius)	Turbidity (NTU)
1R	1/24/12	11.93	45	7.64	50.0	11.69	0.00
2R	1/24/12	9.47	51	7.50	51.7	15.88	0.49
	4/25/12	7.44	42	7.54	54.5	19.19	0.28
	7/25/12	10.43	-8	7.48	53.7	18.72	0.64
	10/16/12	7.35	-35	8.14	52.8	18.15	2.61
2I	1/24/12	9.48	107	7.35	50.4	14.78	0.00
	4/26/12	8.54	112	7.31	51.1	18.21	0.22
	10/16/12	7.29	32	8.02	52.3	17.95	0.73
2D	1/24/12	9.42	126	7.42	50.6	15.17	0.00
4R	1/27/12	5.10	69	6.77	65.3	16.91	0.37
	4/24/12	7.81	69	6.89	71.5	19.35	0.24
	7/24/12	8.95	143	6.87	70.5	18.16	0.71
	10/17/12	1.31	67	7.58	68.5	17.91	0.63
EE-2	1/25/12	12.47	40	7.55	49.9	16.73	0.00
	4/25/12	7.65	48	7.62	55.0	19.61	0.41
	10/17/12	5.30	20	8.29	52.1	18.61	0.62
MW-10S	1/24/12	8.77	30	7.64	50.9	16.76	0.34
	7/24/12	8.90	-28	7.52	55.6	19.07	3.25
	10/17/12	5.17	-27	7.94	51.3	16.87	0.63
MW-11S	1/24/12	10.46	4	7.51	52.4	12.60	2.66
	4/26/12	8.53	15	7.38	53.4	17.79	1.68
	7/24/12	9.09	19	7.36	56.2	18.97	0.59
	10/17/12	4.15	15	8.05	52.9	17.17	0.37
MW-11I	1/24/12	10.69	24	7.58	50.5	11.85	0.00
	4/26/12	8.76	43	7.44	51.3	17.69	0.18
	10/17/12	4.12	7	8.12	51.1	16.83	0.42
MW-12S	1/25/12	9.69	-6	7.32	54.3	16.69	1.10
	4/25/12	6.42	34	7.36	58.2	20.09	0.42
	7/25/12	7.94	10	7.30	63.2	20.23	0.39
	10/16/12	4.87	38	7.98	56.7	18.19	0.53
MW-12ID	1/25/12	12.92	42	7.52	50.9	16.63	0.10
	4/25/12	8.32	43	7.58	53.0	18.71	0.65
	10/16/12	7.92	32	8.20	51.3	17.57	0.53
MW-12D	1/25/12	12.79	41	7.52	50.9	16.19	0.00
MW-13S	1/24/12	9.20	67	7.50	52.1	15.98	0.00
	4/25/12	7.20	44	7.50	56.3	20.15	0.44
	7/25/12	9.56	15	7.45	57.6	19.72	1.02
	10/16/12	6.64	31	8.06	54.2	18.22	0.51
MW-15S	1/26/12	6.45	-15	7.06	61.3	17.33	0.54
	4/27/12	5.74	38	7.10	60.9	17.28	1.10
	7/24/12	9.84	38	7.01	66.8	18.38	0.86
	10/17/12	3.34	31	7.73	61.8	17.37	0.80
MW-16S	1/27/12	5.27	-4	6.84	60.3	12.79	0.88
	4/24/12	6.15	38	6.79	68.3	19.77	0.73
	7/24/12	8.16	16	6.83	62.8	18.42	0.62
	10/15/12	0.83	10	7.52	59.7	17.97	0.67
MW-17SR	1/26/12	8.67	2	7.49	51.1	17.40	0.35
	7/24/12	9.11	5	7.46	53.1	18.33	1.44
	10/15/12	5.03	53	8.12	51.9	17.45	1.13
MW-18S	4/27/12	6.71	72	7.54	48.1	15.87	1.40
	7/25/12	12.72	94	7.37	50.3	16.51	0.62
	10/18/12	6.98	84	8.24	48.5	16.66	0.68
MW-19S	1/26/12	9.87	99	7.19	60.6	15.09	0.47
	4/26/12	10.14	58	7.21	62.0	15.96	0.54
	7/25/12	11.05	-10	7.22	65.5	18.59	4.01
MW-20S	10/15/12	6.16	-4	7.91	59.3	18.33	0.59
	4/26/12	9.69	4	7.60	50.0	15.92	1.08
	7/24/12	9.00	54	7.55	54.0	19.39	0.70
	10/15/12	6.95	22	7.92	52.4	18.52	0.81

SITE	DATE	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	pH	Specific Conductivity (mS/m)	Temperature (Degrees Celcius)	Turbidity (NTU)
MW-22S	1/26/12	8.10	-14	7.43	52.6	17.23	0.74
	4/24/12	9.16	31	7.36	58.4	18.77	0.51
	10/17/12	3.77	19	8.15	53.2	17.31	0.62
MW-23S	1/26/12	8.19	-1	7.38	50.3	17.37	0.22
	4/24/12	9.12	32	7.32	53.7	18.74	0.55
	7/24/12	9.57	90	7.29	58.1	18.26	0.52
	10/17/12	3.55	-36	7.95	56.3	17.25	1.77
MW-24S	1/26/12	8.01	-6	7.33	55.2	17.34	0.22
	4/26/12	8.84	23	7.34	55.6	17.15	0.69
	10/17/12	3.95	-2	8.02	57.3	17.11	0.84
MW-25S	4/26/12	10.15	20	7.57	48.7	16.26	0.42
	10/15/12	6.45	54	8.25	52.0	18.14	0.44
MW-26S	1/26/12	8.92	50	7.55	51.3	17.27	0.24
	4/26/12	10.56	83	7.59	47.0	16.32	0.41
	7/24/12	9.26	86	7.42	53.8	19.26	0.50
	10/15/12	5.98	6	8.29	52.3	18.25	0.44
MW-27SR	4/26/12	9.49	30	7.45	49.7	15.98	0.10
	7/25/12	12.13	77	7.43	50.8	17.01	9.34
	10/15/12	5.58	19	8.14	52.9	18.36	1.74
MW-29S	1/26/12	8.96	-7	7.40	57.7	18.25	0.65
	4/25/12	8.03	27	7.49	61.8	19.15	0.70
	7/25/12	9.32	28	6.95	60.9	20.02	0.83
	10/18/12	8.30	-23	8.18	54.8	18.46	1.47
MW-29I	1/26/12	8.71	-8	7.46	53.8	18.06	0.48
	4/25/12	8.52	31	7.53	55.7	18.93	0.49
	10/18/12	7.81	-9	8.23	52.3	17.79	0.74
MW-30S	4/25/12	8.63	41	7.50	56.2	18.24	0.32
	7/26/12	9.50	-20	7.42	57.9	18.40	2.40
MW-31S	1/26/12	8.56	-11	7.33	54.7	17.72	0.45
	4/25/12	7.39	36	7.40	57.1	18.85	0.36
	7/25/12	11.10	-4	7.42	55.8	18.86	0.77
	10/18/12	7.47	-7	8.08	53.5	17.73	0.79
MW-33S	1/26/12	9.41	11	7.39	57.8	17.15	0.00
MW-34S	1/25/12	13.40	47	7.30	55.5	17.05	0.00
	4/25/12	9.34	47	7.39	56.2	17.88	0.38
	7/26/12	8.43	12	7.35	60.3	19.76	0.50
	10/18/12	9.95	6	8.05	53.4	17.36	0.60
MW-37S	1/25/12	14.73	21	7.31	55.0	14.97	0.21
	4/25/12	8.58	30	7.41	56.8	18.42	0.55
	7/26/12	9.74	NM	7.35	58.4	18.29	2.23
	10/18/12	8.45	-19	8.10	54.4	18.03	0.87
MW-38S	1/26/12	10.61	14	7.55	47.6	17.96	0.00
	4/24/12	9.75	57	7.54	49.6	19.14	0.30
	7/26/12	9.47	16	7.60	49.1	19.75	0.47
	10/18/12	12.73	10	8.35	44.8	18.04	0.65
MW-38I	1/26/12	9.09	22	7.43	55.0	17.98	0.00
	4/24/12	8.89	56	7.45	58.5	19.01	0.39
	10/18/12	8.45	-5	8.26	54.3	18.22	0.66
MW-40S	1/25/12	12.88	28	7.44	55.8	17.70	0.42
	4/25/12	8.97	55	7.48	58.3	18.50	1.01
	7/26/12	9.77	NM	7.48	59.5	18.39	0.52
	10/18/12	7.95	-1	8.20	54.7	17.67	0.57
MW-41SR	1/26/12	10.61	8	7.39	46.5	18.11	1.78
	4/24/12	9.46	42	7.46	50.1	19.15	1.30
	7/26/12	9.24	23	7.51	50.9	19.36	1.17
	10/18/12	9.82	-8	8.19	48.5	17.32	1.08

TABLE 13  
Well Stabilization Parameters  
2012 Annual Report  
Pasco Landfill, Pasco, WA

PERIOD: 1/1/12 thru 12/31/12

Page: 3 of 4

SITE	DATE	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	pH	Specific Conductivity (mS/m)	Temperature (Degrees Celcius)	Turbidity (NTU)
MW-42S	1/25/12	13.95	10	7.41	56.2	17.83	0.05
	4/25/12	8.85	63	7.38	59.2	18.90	0.55
	7/26/12	9.44	NM	7.42	62.8	19.21	0.70
	10/18/12	10.17	-19	8.14	55.6	17.82	0.65
MW-43S	1/25/12	14.51	35	7.36	57.7	15.47	0.00
	4/24/12	9.21	36	7.40	58.8	19.09	0.18
	7/26/12	8.66	NM	7.46	60.4	19.71	0.46
	10/17/12	4.38	-9	8.19	55.5	18.37	0.66
MW-43I	1/25/12	14.42	41	7.39	54.9	15.21	0.00
	4/24/12	9.07	54	7.40	58.2	19.12	0.19
	7/26/12	8.93	NM	7.45	58.9	19.30	0.58
	10/17/12	4.26	-4	8.19	54.7	18.13	0.62
MW-44S	1/25/12	14.47	43	7.27	62.6	16.21	0.00
	4/24/12	8.70	64	7.32	66.7	20.09	0.29
	10/17/12	4.56	1	8.11	62.4	18.58	0.64
MW-45S	1/26/12	9.36	39	7.16	59.1	17.35	0.00
	4/24/12	8.75	41	7.32	62.0	19.51	0.32
	10/18/12	7.76	34	7.78	56.9	17.76	0.65
MW-47S	1/26/12	2.28	-167	7.06	58.4	19.09	3.31
	4/25/12	4.86	-161	7.07	73.0	20.84	4.05
	7/25/12	5.17	-164	7.08	69.2	22.03	2.48
	10/16/12	0.00	-170	7.66	60.9	19.93	2.85
MW-47I	1/26/12	8.51	49	7.50	51.7	17.34	0.00
	4/25/12	7.24	69	7.55	54.5	19.91	0.31
	10/16/12	7.50	55	8.14	51.9	17.48	0.50
MW-47D	1/26/12	8.65	27	7.59	51.7	17.46	0.00
MW-48S	1/25/12	12.20	44	7.50	53.5	18.16	0.00
MW-48I	1/25/12	12.05	45	7.55	51.5	17.20	0.00
MW-48D	1/25/12	11.78	38	7.60	50.7	16.86	0.86
MW-49S	1/24/12	3.04	0	7.30	57.9	12.85	0.39
	4/26/12	6.95	10	7.21	60.5	16.34	0.80
	7/26/12	6.55	81	7.10	62.9	18.58	0.51
	10/16/12	0.00	11	7.77	62.8	18.49	0.53
MW-49I	1/24/12	10.72	109	7.58	50.1	12.36	0.00
	4/26/12	9.07	63	7.49	50.0	17.00	0.19
	10/16/12	7.32	44	8.16	51.6	18.07	0.50
MW-49D	1/24/12	10.36	109	7.62	48.4	12.31	0.00
MW-50S	1/26/12	1.00	-149	7.09	67.8	20.26	0.87
	4/25/12	4.64	-127	7.15	88.1	22.52	0.51
	7/25/12	7.70	-106	7.14	87.9	24.00	0.86
	10/16/12	0.00	-104	7.71	70.3	20.53	0.56
MW-51S	1/24/12	10.23	34	7.61	50.7	13.12	0.53
	4/26/12	8.85	26	7.48	51.1	17.33	0.69
	10/17/12	4.23	0	8.18	50.6	16.75	0.33
MW-52S	1/24/12	10.02	10	7.53	55.6	13.04	2.39
	4/24/12	5.72	57	7.19	76.1	23.74	0.35
	7/24/12	6.59	37	7.42	62.9	23.83	0.72
	10/16/12	7.48	35	8.25	57.7	21.89	0.53
MW-53S	1/24/12	9.37	-5	7.31	60.9	12.56	1.31
	4/24/12	5.12	34	7.14	73.8	24.74	0.46
	7/24/12	6.27	52	7.15	65.2	24.22	0.55
	10/16/12	7.13	92	7.73	60.2	21.09	0.56
MW-54I	1/25/12	12.63	90	7.22	59.7	16.79	0.00
	4/24/12	9.82	136	7.31	64.0	19.45	0.24
	7/26/12	8.90	NM	7.44	63.0	19.04	0.32
	10/17/12	4.49	23	8.17	59.1	17.50	0.63
MW-55S	4/26/12	9.67	96	7.45	48.6	16.07	1.19
	7/25/12	10.82	-30	7.42	52.9	18.72	9.43
	10/15/12	5.37	20	8.12	52.3	18.30	2.22

SITE	DATE	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	pH	Specific Conductivity (mS/m)	Temperature (Degrees Celcius)	Turbidity (NTU)
NVM-01	1/25/12	1.51	-20	7.16	58.1	19.43	0.00
	4/25/12	4.72	39	7.23	60.6	20.71	0.29
	7/25/12	9.05	11	7.18	62.8	21.26	0.54
	10/16/12	0.00	15	7.78	58.5	19.69	0.51
NVM-01I	1/25/12	11.39	40	7.53	52.1	17.95	0.00
	4/25/12	7.45	50	7.59	54.5	19.81	0.40
	10/17/12	4.12	-6	8.25	51.3	17.56	1.00
NVM-01D	1/25/12	12.03	47	7.54	50.9	16.99	0.08
NVM-02	1/24/12	8.37	101	7.43	52.6	16.22	0.00
NVM-03	1/24/12	4.55	95	7.29	53.0	16.11	0.00
NVM-04	1/24/12	12.28	158	7.23	52.2	12.29	0.00
BRADLEY	4/27/12	5.33	185	7.39	57.4	16.84	0.55
	7/26/12	9.19	185	7.35	62.5	17.38	0.45
	10/19/12	6.98	222	7.81	57.1	16.40	0.65
HAND	4/27/12	4.90	110	7.51	54.7	16.91	0.45
	10/19/12	1.60	101	7.92	54.5	16.51	0.52
LOPEZ	4/27/12	5.20	-34	7.53	55.2	16.48	2.00
	10/19/12	0.00	-88	7.84	54.7	17.63	5.70
MONTALVO	4/27/12	5.48	103	7.48	56.4	16.49	0.40
	10/19/12	2.99	160	7.91	55.4	16.17	0.61
NORVELL	4/27/12	6.22	60	7.43	54.7	16.09	0.35
	10/19/12	3.87	60	7.88	55.3	16.04	0.66
NORVELL2	10/19/12	3.94	87	7.90	55.0	16.28	0.68
RADA	4/27/12	6.15	80	7.43	54.8	16.13	0.50
	7/26/12	10.28	171	7.33	59.5	16.62	0.31
	10/19/12	3.94	68	7.92	55.0	15.94	0.60
RINDT	4/27/12	5.71	52	7.65	51.8	17.06	3.90
SALINAS	4/27/12	5.32	66	7.59	51.2	16.71	1.10
	10/18/12	11.38	69	8.11	50.9	16.32	0.57
WEST	1/27/12	6.67	13	7.72	47.6	14.66	8.98
	4/27/12	5.80	50	7.77	46.1	15.64	21.00
	7/26/12	9.39	18	7.51	52.4	16.67	10.37
	10/18/12	7.18	0	8.29	49.9	15.99	4.48
YENNEY2	4/27/12	6.31	44	7.55	51.5	16.02	2.70
	7/26/12	9.84	3	7.48	57.2	16.64	1.91
	10/19/12	6.40	2	8.00	52.4	15.88	1.49
YENNEY3	4/27/12	6.36	29	7.64	50.8	15.86	4.00
	7/26/12	10.64	NM	7.38	55.9	16.27	1.45
	10/19/12	4.52	0	8.10	51.2	15.75	1.20



TABLE 15  
Landfill Parameters in Ground Water  
(in mg/L)  
2012 Annual Report  
Pasco Landfill, Pasco, WA

WELL	Quarter	Nitrate (as N)	Ammonia (as N)	Sulfate	Total Dissolved Solids	Total Alkalinity	Bicarbonate	Carbonate	Hydroxide	Chloride	Total Organic Carbon	Calcium	Total Iron	Magnesium	Manganese	Potassium	Sodium
4R	Q2	8.6	< 0.050 U	63	460	280	280	< 9.0 U	< 9.0 U	27	1.7	88	< 0.010 U	24	< 0.010 U	10	36
	Q4	7.0	< 0.050 U	60	500	300	300	< 9.0 U	< 9.0 U	27	1.2	100	< 0.010 U	22	0.0017 J	8.3	38
MW-16S	Q2	4.7	< 0.050 U	63	430	300	300	< 9.0 U	< 9.0 U	23	1.7	83	0.27	29	0.05	7.8	34
	Q4	6.8	< 0.050 U	65	450	260	260	< 9.0 U	< 9.0 U	25	1.1	78	0.09	24	0.041	7.4	32
MW-17SR	Q4	11.1	< 0.050 U	65	370	190	190	< 9.0 U	< 9.0 U	24	1.2	59	0.035	22	0.0052	6.2	31
MW-20S	Q2	10.2	< 0.050 U	58	380	190	190	< 9.0 U	< 9.0 U	22	1.4	60	0.013	22	< 0.0036 U	6.5	32
	Q4	9.5	< 0.050 U	56	330	190	190	< 9.0 U	< 9.0 U	22	1.1	58	0.014	22	< 0.00060 U	6.3	31
MW-22S	Q2	11.5	< 0.050 U	63	400	190	190	< 9.0 U	< 9.0 U	24	1.5	66	0.15	22	< 0.010 U	7.3	35
	Q4	11.5	< 0.050 U	63	370	200	200	< 9.0 U	< 9.0 U	23	1.1	62	< 0.010 U	22	< 0.00060 U	7.3	36
MW-25S	Q2	10.8	< 0.050 U	60	400	190	190	< 9.0 U	< 9.0 U	24	1.3	59	< 0.010 U	21	< 0.0036 U	7.8	35
	Q4	10.4	< 0.050 U	62	360	190	190	< 9.0 U	< 9.0 U	23	1.1	58	< 0.010 U	22	< 0.00060 U	6.4	31



Compound (ug/L)	VEW-04	VEW-05	VEW-04	VEW-05	VEW-04	VEW-05	VEW-04	VEW-05	VEW-04	VEW-05
	1/3/12	1/3/12	1/9/12	1/9/12	1/17/12	1/17/12	1/23/12	1/23/12	2/1/12	2/1/12
Acetone	110	430	130	360	130	360	130	530	190	600
Benzene	0.79	4.3	0.54	4.1	0.5	3.5	0.65	2.9	0.55	3.2
Bromobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Bromochloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Bromodichloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Bromoform	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Bromomethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
2-Butanone	110	390	110	320	110	290	120	390	140	380
N-Butylbenzene	0.32	0.91	0.25	< 0.20 U	< 0.2 U	0.26	0.36	0.99	0.26	0.78
S-Butylbenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
T-Butylbenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Carbon Disulfide	< 0.20 U	0.28	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Carbon Tetrachloride	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Chlorobenzene	< 0.20 U	0.38	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	0.29	< 0.20 U	0.34
Chloroethane	< 0.20 U	0.6	< 0.20 U	0.45	< 0.2 U	0.46	< 0.2 U	0.45	< 0.20 U	0.53
Chloroform	1.1	3.1	0.96	2	0.88	1.9	1.2	2.4	1.2	2.9
Chloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
2-Chlorotoluene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
4-Chlorotoluene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Dibromochloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,2-Dibromo 3-Chloropropane	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dibromoethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Dibromomethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,2-Dichlorobenzene	< 0.20 U	0.67	< 0.20 U	0.56	< 0.2 U	0.24	< 0.2 U	0.71	< 0.20 U	0.6
1,3-Dichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,4-Dichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,1-Dichloroethane	7.6	15	7.5	12	7.3	11	8.9	12	8.4	15
1,2-Dichloroethane	2.4	13	2.2	12	2.1	9.8	2.6	12	2.4	13
1,1-Dichloroethene	0.46	0.84	0.34	0.42	0.28	0.48	0.41	0.48	0.28	0.59
cis-1,2-Dichloroethene	1	6.1	1	4.5	0.97	4	1.3	4.8	1.2	5.5
trans-1,2-Dichloroethene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
2,2-Dichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,2-Dichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,3-Dichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,1-Dichloropropene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
cis-1,3-Dichloropropene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
trans-1,3-Dichloropropene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Ethylbenzene	34	97	36	91	38	76	36	100	41	100
Hexachlorobutadiene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
2-Hexanone	< 1.0 U	4.2	< 1.0 U	8.4	< 1.0 U	3.1	< 1.0 U	3.7	< 1.0 U	4.3
Isopropylbenzene	1.7	6.6	1.2	2.6	1.4	2.7	2.1	5.5	1.4	6
p-Isopropyltoluene	0.21	0.97	< 0.20 U	0.43	< 0.2 U	0.37	0.24	1	< 0.20 U	0.77
4-Methyl-2-Pentanone	70	190	68	170	72	130	66	160	79	150
Methylene Chloride	8.2	77	27	92	48	110	29	99	41	110
Naphthalene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
N-Propylbenzene	3.1	9.2	2.8	5.3	2.3	4.5	3.8	11	2.7	9.4
Styrene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,1,1,2-Tetrachloroethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,1,2,2-Tetrachloroethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Tetrachloroethylene	8.5	20	6	12	6.6	13	11	22	7.2	21
Toluene	470	1,400	320	1,300	530	1,200	470	1,500	500	1,500
1,2,3-Trichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,2,4-Trichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,1,1-Trichloroethane	11	18	10	12	10	12	12	13	11	15
1,1,2-Trichloroethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
Trichloroethene	77	200	67	170	71	160	80	190	87	190
Trichlorofluoromethane	0.37	1.7	0.43	1.5	0.44	1.1	0.59	1.3	0.53	1.5
1,2,3-Trichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U
1,2,4-Trimethylbenzene	11	19	9.9	15	8.7	10	12	22	9.4	21
1,3,5-Trimethylbenzene	7.9	14	7	9.5	6.5	7.3	9.3	16	6.8	15
Vinyl Chloride	0.098	0.39	< 0.020 U	0.11	< 0.02 U	0.098	< 0.02 U	0.11	< 0.020 U	0.21
m+p Xylene	130	310	130	270	130	220	140	320	150	370
o-Xylene	35	85	34	75	33	58	34	86	37	92
<b>Total [X] (in ug/L)</b>	<b>1,101.75</b>	<b>3,318.24</b>	<b>972.12</b>	<b>2,950.87</b>	<b>1,209.97</b>	<b>2,689.81</b>	<b>1,171.45</b>	<b>3,507.63</b>	<b>1,318.32</b>	<b>3,628.62</b>
Flow rate (scfm) [Y]	207	252	245	297	241	284	242	254	239	237
<b>Removal Rate (lbs/day)</b>	<b>20.51</b>	<b>75.19</b>	<b>21.42</b>	<b>78.81</b>	<b>26.22</b>	<b>68.69</b>	<b>25.49</b>	<b>80.11</b>	<b>28.33</b>	<b>77.33</b>

Notes:

EPA Method 8260

Removal Rate (lbs/day) = [X] ug/L x 28.32 L/ft3 x [Y] ft3/min x 0.002205 lbs/gm / 1,000,000 ug/gm x 1440 min/day

Compound (ug/L)	VEW-04	VEW-05	VEW-04	VEW-05	VEW-04	VEW-05	VEW-04	VEW-05	VEW-04	VEW-05
	2/6/12	2/6/12	2/13/12	2/13/12	2/21/12	2/21/12	2/27/12	2/27/12	3/5/12	3/5/12
Acetone	200	640	64	170	78	190	86	250	90	210
Benzene	0.78	4	0.61	3.4	0.75	3.7	0.77	4.4	0.8	3.2
Bromobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Bromochloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Bromodichloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Bromoform	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Bromomethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2-Butanone	130	390	130	390	140	440	140	440	160	420
N-Butylbenzene	0.43	1	0.22	0.45	0.38	0.8	0.38	0.88	0.34	0.75
S-Butylbenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	0.73	< 0.20 U	< 0.20 U
T-Butylbenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Carbon Disulfide	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Carbon Tetrachloride	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Chlorobenzene	0.23	0.3	< 0.20 U	0.21	< 0.20 U	0.25	< 0.20 U	0.28	< 0.20 U	0.24
Chloroethane	< 0.20 U	0.61	< 0.20 U	0.5	0.22	0.53	< 0.20 U	0.63	0.26	0.61
Chloroform	1.2	2.5	0.91	2.2	0.99	2.5	1.1	2.6	1.1	2.6
Chloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	0.2	< 0.20 U	< 0.20 U
2-Chlorotoluene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
4-Chlorotoluene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Dibromochloromethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2-Dibromo 3-Chloropropane	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dibromoethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Dibromomethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2-Dichlorobenzene	< 0.20 U	0.7	< 0.20 U	0.6	< 0.20 U	0.73	< 0.20 U	0.74	< 0.20 U	0.68
1,3-Dichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,4-Dichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1-Dichloroethane	10	15	9.1	14	10	15	11	18	12	18
1,2-Dichloroethane	3	14	2.3	12	2.7	13	2.8	14	3.1	14
1,1-Dichloroethene	0.37	0.55	0.48	0.63	0.55	0.73	0.58	0.78	0.57	0.76
cis-1,2-Dichloroethene	1.3	5.9	1.2	4.9	1.3	5.5	1.4	5.7	1.5	5.7
trans-1,2-Dichloroethene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2,2-Dichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2-Dichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,3-Dichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1-Dichloropropene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
cis-1,3-Dichloropropene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
trans-1,3-Dichloropropene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Ethylbenzene	49	110	32	76	49	120	52	120	47	100
Hexachlorobutadiene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2-Hexanone	< 1.0 U	4.5	< 1.0 U	11	< 1.0 U	12	< 1.0 U	14	< 1.0 U	10
Isopropylbenzene	2.4	5.6	1.1	3	1.9	4.4	1.9	5	1.8	4.4
p-Isopropyltoluene	0.24	1	< 0.20 U	0.44	0.22	0.74	0.24	0.87	0.21	0.61
4-Methyl-2-Pentanone	74	170	82	190	97	210	94	210	100	190
Methylene Chloride	43	120	24	83	30	100	27	100	26	100
Naphthalene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
N-Propylbenzene	4	11	2.2	5.4	4	8.5	4.1	9.8	3.7	8.3
Styrene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1,1,2-Tetrachloroethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1,2,2-Tetrachloroethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Tetrachloroethylene	10	22	6.7	18	9.8	27	9.7	28	9.2	23
Toluene	550	1,500	430	1,100	460	1,400	530	1,400	470	1,200
1,2,3-Trichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2,4-Trichlorobenzene	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1,1-Trichloroethane	14	16	10	12	12	14	12	15	13	14
1,1,2-Trichloroethane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Trichloroethene	92	190	66	160	85	210	94	220	97	160
Trichlorofluoromethane	4.1	2.6	0.65	1.4	0.71	1.7	0.83	1.8	0.93	1.7
1,2,3-Trichloropropane	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2,4-Trimethylbenzene	14	24	8.6	16	13	27	13	28	12	23
1,3,5-Trimethylbenzene	9.8	17	5.4	9.3	8.5	13	8.3	15	7.6	12
Vinyl Chloride	< 0.20 U	0.21	0.13	0.33	0.16	0.41	0.18	0.44	0.18	0.42
m+p Xylene	180	340	120	220	160	380	180	380	170	310
o-Xylene	45	90	33	66	44	93	47	95	46	85
<b>Total [X] (in ug/L)</b>	<b>1,438.85</b>	<b>3,698.47</b>	<b>1,030.60</b>	<b>2,570.76</b>	<b>1,210.18</b>	<b>3,294.49</b>	<b>1,318.28</b>	<b>3,381.85</b>	<b>1,274.29</b>	<b>2,918.97</b>
Flow rate (scfm) [Y]	239	238	238	236	238	234	240	230	242	231
<b>Removal Rate (lbs/day)</b>	<b>30.92</b>	<b>79.15</b>	<b>22.06</b>	<b>54.56</b>	<b>25.90</b>	<b>69.32</b>	<b>28.45</b>	<b>69.94</b>	<b>27.73</b>	<b>60.63</b>

Notes:  
EPA Method 8260  
Removal Rate (lbs/day) = [X] ug/L x 28.32 L/ft3 x [Y] ft3/min x 0.002205 lbs/gm / 1,000,000 ug/gm x 1440 min/day

**TABLE 17**  
**SVE Combined Vapor Through March 5, 2012**  
**2012 Annual Report**  
**Pasco Landfill, Pasco, WA**

Compound (µg/L)	1/3/12	1/9/12	1/17/12	1/23/12	2/1/12	2/6/12	2/13/12	2/21/12	2/27/12	3/5/12
Acetone	260	320	260	280	420	340	89	160	320	110
Benzene	2.1	2.2	2	1.6	1.7	2	1.8	2.3	2.4	2.1
Bromobenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Bromochloromethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Dichlorobromomethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	1
Bromoform	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Bromomethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2-butanone (MEK)	240	330	180	180	240	250	260	260	560	260
n-butylBenzene	0.28	< 0.20 U	< 0.2 U	0.37	0.33	0.41	0.2	0.34	0.43	0.37
Sec-Butylbenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Tert-Butylbenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Carbon disulfide	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Carbon tetrachloride	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Chlorobenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	0.21	0.22	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Chloroethane	0.31	0.29	0.26	0.3	0.3	0.3	0.31	0.42	0.38	0.43
Chloroform	2	1.5	1.2	1.7	2.1	1.6	1.5	1.8	1.8	1.9
Chloromethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2-Chlorotoluene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	3	< 0.20 U
4-Chlorotoluene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Dibromochloromethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2-Dibromo-3-Chloropropane	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylene dibromide	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Dibromomethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2-Dichlorobenzene	< 0.20 U	0.23	< 0.2 U	0.24	0.24	0.26	0.23	0.26	0.33	0.31
1,3-Dichlorobenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,4-Dichlorobenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1-Dichloroethane	11	9.5	8.9	10	12	11	11	13	13	15
1,2-Dichloroethane	6.6	6.3	6.1	6.7	7.3	7.5	6.4	7.7	7.8	8.6
1,1-Dichloroethene	0.64	0.38	0.32	0.51	0.55	0.39	0.53	0.68	0.7	0.75
cis-1,2-dichloroethene	3	2.7	2.3	2.9	3.3	3.1	2.7	3.5	3.4	3.7
trans-1,2-Dichloroethene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2,2-Dichloropropane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2-Dichloropropane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,3-Dichloropropane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1-Dichloropropene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Cis-1,3-Dichloropropene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Trans-1,3-Dichloropropene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Ethylbenzene	47	50	49	51	51	62	42	57	65	63
Hexachlorobutadiene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
2-Hexanone	1.3	< 1.0 U	1.5	1.2	2.1	1.6	4.8	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	2.1	1.4	1.7	2.3	2.8	2.9	1.5	2.4	2.6	2.6
p-Isopropyltoluene	0.29	0.21	0.2	0.35	0.32	0.34	< 0.20 U	0.3	0.38	0.31
4-Methyl-2-pentanone (MIBK)	110	120	120	120	140	130	140	140	150	130
Methylene chloride	41	55	72	56	73	76	56	59	62	61
Napthalene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
n-propylbenzene	3.5	2.8	2.8	4.3	4.2	4.7	2.4	4.1	4.8	4.8
Styrene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1,1,2-Tetrachloroethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1,2,2-Tetrachloroethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Tetrachloroethene	11	8.2	9.3	13	15	14	9.3	14	14	14
Toluene	820	970	870	770	890	890	620	750	1,500	810
1,2,3-Trichlorobenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2,4-Trichlorobenzene	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,1,1-Trichloroethane	14	11	11	12	13	12	10	13	13	14
1,1,2-Trichloroethane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
Trichloroethene	130	110	110	120	130	140	100	130	150	140
Trichlorofluoromethane	0.9	0.83	0.72	0.93	1.2	1.2	1	1.4	1.3	1.5
1,2,3-Trichloropropane	< 0.20 U	< 0.20 U	< 0.2 U	< 0.2 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
1,2,4-Trimethylbenzene	9.2	8.8	7.3	11	11	13	7.7	11	13	12
1,3,5-Trimethylbenzene	7	6	6	8	8	8	5	7	8	8
Vinyl chloride	0.23	< 0.020 U	< 0.02 U	< 0.02 U	0.063	0.043	0.23	0.29	0.3	0.32
m,p-Xylene	140	170	150	160	160	200	130	170	200	200
o-Xylene	38	44	39	40	40	50	37	44	52	54
<b>Total [X] (in ug/L)</b>	<b>1,900.95</b>	<b>2,231.34</b>	<b>1,911.10</b>	<b>1,854.10</b>	<b>2,229.41</b>	<b>2,222.96</b>	<b>1,540.20</b>	<b>1,853.69</b>	<b>3,149.82</b>	<b>1,918.96</b>
Flow rate (scfm) [Y]	459	542	525	496	476	477	474	472	470	473
Removal Rate (lbs/day)	78.46	108.75	90.22	82.69	95.42	95.35	65.65	78.68	133.12	81.62
Total Run Time (Days)	8.0	6.0	8.0	6.0	9.0	5.0	7.0	8.0	6.0	7.0
Mass removal between sampling rounds (lbs)	627.7	652.5	721.8	496.2	858.8	476.7	459.5	629.4	798.7	571.3
<b>Cumulative mass removal since start (lbs)</b>	<b>439,685</b>	<b>440,337</b>	<b>441,059</b>	<b>441,555</b>	<b>442,414</b>	<b>442,891</b>	<b>443,350</b>	<b>443,980</b>	<b>444,778</b>	<b>445,350</b>

Notes:  
EPA Method 8260  
Removal Rate (lbs/day) = [X] µg/L x 28.32 L/ft<sup>3</sup> x [Y] ft<sup>3</sup>/min x 0.002205 lbs/gm / 1,000,000 µg/gm x 1440 min/day

Sample Date	Removal Rate (pounds per day)				Flow Rate (cubic feet per minute)		
	VEW-04	VEW-05	TOTAL (Individual Wells)	Combined Sample	VEW-04	VEW-05	Cumulative Flow Rate
01/03/12	20.51	75.19	95.70	78.46	207	252	459
01/09/12	21.42	78.81	100.23	108.75	245	297	542
01/17/12	26.22	68.69	94.91	90.22	241	284	525
01/23/12	25.49	80.11	105.60	82.69	242	254	496
02/01/12	28.33	77.33	105.66	95.42	239	237	476
02/06/12	30.92	79.15	110.07	95.35	239	238	477
02/13/12	22.06	54.56	76.62	65.65	238	236	474
02/21/12	25.90	69.32	95.22	78.68	238	234	472
02/27/12	28.45	69.94	98.39	133.12	240	230	470
03/05/12	27.73	60.63	88.36	81.62	242	231	473
<b>2012 Average</b>	<b>26</b>	<b>71</b>	<b>97</b>	<b>91</b>	<b>237</b>	<b>249</b>	<b>486</b>

Beginning March 12, 2012, air flow from VEW-04 and VEW-05 was diverted to VEW-06 and VEW-07 and testing began on the upgraded SVE system.

Table 19  
SVE System Parameter Measurements  
Through March 5, 2012  
2012 Annual Report  
Pasco Landfill, Pasco, WA

Date	VEW-04									
	Temperature (f°)	Vacumn at Wellhead (wc")	Vacumn at Skid (wc")	PID (ppm)	CH4 (%)	CO2 (%)	O2 (%)	Bal (%)	LEL (%)	DS-300 Flow Rate (cfm)
01/03/12	66	14.2	34.0	544	0.0	1.9	19.0	79.1	9.0	207
01/09/12	64	16.8	43.0	439	0.0	2.0	18.8	79.2	8.0	245
01/17/12	64	16.0	42.0	807	0.0	2.1	19.1	78.8	0.0	241
01/23/12	64	16.1	42.0	570	0.0	2.3	18.9	78.8	2.0	242
02/01/12	65	15.5	42.0	663	0.0	2.4	18.7	78.9	4.0	239
02/06/12	65	16.2	42.0	503	0.0	2.3	19.0	78.7	1.0	239
02/13/12	65	16.8	43.0	673	0.0	1.9	18.2	79.9	0.0	238
02/21/12	66	16.4	42.0	787	0.0	2.0	18.2	79.8	1.0	238
02/27/12	65	17.0	42.0	869	0.0	2.0	18.5	79.5	3.0	240
03/05/12	66	15.5	41.0	667	0.0	1.9	18.4	79.7	3.0	242

Date	VEW-05									
	Temperature (f°)	Vacumn at Wellhead (wc")	Vacumn at Skid (wc")	PID (ppm)	CH4 (%)	CO2 (%)	O2 (%)	Bal (%)	LEL (%)	DS-300 Flow Rate (cfm)
01/03/12	83	13.5	47.0	1,524	0.0	7.8	11.5	80.7	15.0	252
01/09/12	83	16.0	63.0	1,449	0.0	6.7	12.9	80.4	14.0	297
01/17/12	82	15.6	61.0	2,325	0.0	7.6	12.1	80.3	4.0	284
01/23/12	78	16.0	61.0	1,587	0.0	8.1	11.6	80.3	6.0	254
02/01/12	82	15.3	61.0	1,659	0.0	8.3	11.6	80.1	8.0	237
02/06/12	82	15.0	61.0	1,394	0.0	8.2	11.4	80.4	7.0	238
02/13/12	82	15.5	61.0	1,653	0.0	7.1	12.0	80.9	7.0	236
02/21/12	82	15.9	61.0	1,754	0.0	6.5	12.9	80.6	5.0	234
02/27/12	81	16.4	61.0	2,321	0.0	7.8	11.8	80.4	10.0	230
03/05/12	82	15.1	60.0	1,647	0.0	7.1	12.1	80.8	9.0	231

Date	Time	Barometric Pressure	Measured at SVE System Skid			Measured at Flare	
			Pressure (wc")	Temperature (f°)	DS-300 Cumulative Flow Rate (cfm)	PID (ppm)	FlexMASter Cumulative Flow Rate (cfm)
01/03/12	10:30	30.25	30	165	459	943	452
01/09/12	9:00	30.37	27	175	542	1,044	477
01/17/12	10:00	29.88	27	176	525	1,461	482
01/23/12	11:00	30.02	29	176	496	972	473
02/01/12	9:30	29.98	29	181	476	871	480
02/06/12	10:30	30.31	29	179	477	1,001	-
02/13/12	10:00	29.97	29	180	474	903	495
02/21/12	10:30	29.99	28	182	472	757	-
02/27/12	9:00	30.25	29	178	-	1,356	479
03/05/12	14:00	29.65	29	182	-	878	487











Table with columns: Well, Test, Date, VOC Sample, Well Head Vacuum (in. H2O), Skid Vacuum (in. H2O), Skid Airflow (cfm), Well Head Airflow (cfm), Dilution Airflow (cfm), Well Head Temperature (F), Well Head CO2 (%), Well Head O2 (%), Well Head CH4 (%), Well Head Balance Gas (%), Well Head PID (ppm), Skid LEL (%), Well Head LEL (%). Includes well identifier VEW-071 and data for tests 1 through 5 across various dates.















Sample Location	Test	Day	Sample Date	Aromatic Compounds									Ketones				PAHs	Other VOCs																		
				1,3,5-Trimethyl benzene	n-Propyl benzene	Isopropyl benzene (Cumene)	n-Butyl benzene	Sec-Butyl benzene	Toluene	p-Isopropyl toluene	m, p-Xylene	o-Xylene	4-Methyl-2-pentanone (MIBK)	2-Butanone (MEK)	Acetone	2-Hexanone (MBK)	Naphthalene	Trichloro fluoro methane (CFC-11)	Carbon Disulfide	Bromo chloro methane	Bromo methane	2-Chloro toluene	1,2,3-Trichloro propane	1,2-Dichloro propane	2,2-Dichloro propane	Cis-1,3-Dichloro propene										
SV-FS	1	2	3/14/12	15	8.7	5.3	0.59	0.41	2,900	0.35	790	160	370	1,200	680	< 1.0 U	< 0.20 U	7.6	0.25	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U					
	2	2	3/28/12	16	9.3	6.3	0.59	< 0.20 U	4,200	0.38	750	150	750	1,500	760	7.2	< 0.20 U	3.1	0.27	< 0.20 U	0.85	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U					
	3	2	4/11/12	35	14	7.9	1.2	< 0.20 U	1,300	0.81	670	190	300	650	440	< 1.0 U	< 0.20 U	5.2	0.3	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U				
	4	2	4/25/12	28	15	9.8	1.2	< 0.20 U	2,300	0.79	590	150	600	1,700	1,100	< 1.0 U	< 0.20 U	6.6	0.65	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	3.9	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U				
	5	-	6/18/12	28	13	6.8	1.1	< 0.20 U	3,800	0.69	900	250	670	1,700	1,200	< 1.0 U	0.2	7.1	0.38	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U				
	VEW-06S	1	2	3/14/12	24	7.2	3.5	1.8	< 0.20 U	1,300	0.88	340	110	40	5	< 2.5 U	< 1.0 U	0.47	5.2	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U			
			7	3/19/12	19	5.9	3.6	1.1	< 0.20 U	1,600	0.65	430	110	59	42	20	< 1.0 U	< 0.20 U	2.3	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U		
			14	3/26/12	26	7.9	5.1	1.2	0.78	1,900	0.74	390	140	140	140	45	< 1.0 U	< 0.20 U	2.3	0.22	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	
		2	2	3/28/12	16	5.6	3.5	0.8	< 0.20 U	1,700	0.54	430	120	150	130	57	< 1.0 U	< 0.20 U	1.9	0.22	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	
			7	4/2/12	11	4.1	2.2	0.62	< 0.20 U	990	0.39	230	81	100	110	63	< 1.0 U	0.3	3.1	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U		
		3	2	4/11/12	25	12	6.9	1.6	< 0.20 U	1,500	1.3	900	130	120	110	60	< 1.0 U	< 0.20 U	2	0.26	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U		
			7	4/16/12	28	9.4	5.5	1.3	< 0.20 U	1,400	0.98	490	150	140	140	94	< 1.0 U	< 0.20 U	1.3	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	
		4	2	4/25/12	23	6.4	4.1	0.79	< 0.20 U	1,500	0.64	610	130	200	220	150	< 1.0 U	< 0.20 U	1.3	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	
			7	4/30/12	23	7.4	4.5	0.95	< 0.20 U	940	0.76	530	130	140	190	140	< 1.0 U	< 0.20 U	1.7	0.23	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	
			14	5/7/12	15	6.5	3.7	0.76	< 0.20 U	1,100	0.61	510	110	150	190	130	4.8	< 0.20 U	1.8	0.23	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	
			-	-	5/16/12	15	6	3.7	0.78	< 0.20 U	1,300	0.62	620	120	170	220	390	< 1.0 U	0.21	2.6	0.26	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U	< 0.20 U
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Column headings with blue text indicate the top ten VOCs removed by the SVE system.



TABLE 21
SVE System Analytical Data
Detected Compounds Only (in µg/L unless noted)
2012 Annual Report
Pasco Landfill, Pasco, WA

Table with columns: Sample Location, Test, Day, Sample Date, Aromatic Compounds (1,3,5-Trimethyl benzene, n-Propyl benzene, Isopropyl benzene, n-Butyl benzene, Sec-Butyl benzene, Toluene, p-Isopropyl toluene, m, p-Xylene, o-Xylene), Ketones (4-Methyl-2-pentanone, 2-Butanone, Acetone, 2-Hexanone), PAHs (Naphthalene), and Other VOCs (Trichloro fluoro methane, Carbon Disulfide, Bromo chloro methane, Bromo methane, 2-Chloro toluene, 1,2,3-Trichloro propane, 1,2-Dichloro propane, 2,2-Dichloro propane, Cis-1,3-Dichloro propene).

Column headings with blue text indicate the top ten VOCs removed by the SVE system.



















Date Surveyed	Days	SB-6	SB-7	SB-9	SB-10	SP-1	SP-2	SP-3	SP-4
05/29/08	1	424.593	425.408						
06/26/08	28	424.596	425.402						
07/29/08	61	424.573	425.371						
09/08/08	102	424.587	425.377						
09/30/08	124	424.592	425.369						
10/30/08	154	424.593	425.359						
12/05/08	190	424.592	425.315						
12/30/08	215	424.592	425.336						
01/30/09	246	424.616	425.315						
03/26/09	301	424.610	425.290						
04/23/09	329	424.616	425.279						
06/05/09	372	424.598	425.242						
07/28/09	425	424.598	425.220						
11/18/09	538	424.588	425.158						
01/07/10	588	424.583	425.128						
05/19/10	720	424.566	425.027						
08/11/10	804	424.566	424.966	420.258	420.767				
10/27/10	881	424.361	424.925	420.221	420.732				
12/15/10	930	424.359	424.899	420.201	420.712				
02/15/11	992	424.395	424.850	420.203	420.703				
04/14/11	1,050	424.383	424.796	420.172	420.676				
06/10/11	1,107	424.362	424.761	420.146	420.656				
08/11/11	1,169	424.359	424.732	420.123	420.633	429.865	430.448	434.477	435.199
11/04/11	1,254	424.345	424.674	420.090	420.603	429.713	430.275	434.258	435.107
12/16/11	1,296	424.341	424.645	420.075	420.585	429.683	430.203	434.153	435.060
02/16/12	1,358	424.336	424.611	420.057	420.573	429.643	430.145	434.089	435.017
04/17/12	1,419	424.323	424.552	420.023	420.543	429.580	429.961	433.960	434.947
06/15/12	1,478	424.306	424.472	419.980	420.501	429.535	429.624	433.822	434.907
09/07/12	1,562	424.259	424.355	419.923	420.454	429.477	429.142	433.698	434.857
10/16/12	1,601	424.242	424.322	419.906	420.438	429.462	429.022	433.677	434.860

Elevation measurements are in feet above mean sea level



	SB-6	SB-7	SB-9	SB-10	SP-1	SP-2	SP-3	SP-4
Elevation Change 5/28/08 to 8/11/10 (inches)	-0.3	-5.3						
Average Change Day 1 to Day 804 (inches/day)	-0.0004	-0.0066						

**-0.0035 Average Change in Elevation 5/28/08 Through 8/11/10 (inches/day)**

	SB-6	SB-7	SB-9	SB-10	SP-1	SP-2	SP-3	SP-4
Elevation Change 8/11/10 to 8/11/11 (inches)	-2.5	-2.8	-1.6	-1.6				
Average Change Day 804 to Day 1,169 (inches/day)	-0.0068	-0.0077	-0.0044	-0.0044				

**-0.0058 Average Change in Elevation 8/11/10 Through 8/11/11 (inches/day)**

	SB-6	SB-7	SB-9	SB-10	SP-1	SP-2	SP-3	SP-4
Elevation Change since August 2011 (inches)	-1.4	-4.9	-2.6	-2.3	-4.8	-17.1	-9.6	-4.1
Average Change since August 2011 (inches/day)	-0.0032	-0.0114	-0.0060	-0.0054	-0.0112	-0.0396	-0.0222	-0.0094

**-0.0136 Average Change in Elevation since August 2011 (inches/day)**

Notes:

Elevations are in reference to the North American Vertical Datum of 1988 (NAVD88).

SB-1 through SB-8 were installed on May 28, 2008.

SB-9 and SB-10 were installed August 8, 2010.

Sonic drilling activities began on the Zone A landfill in September 2010.

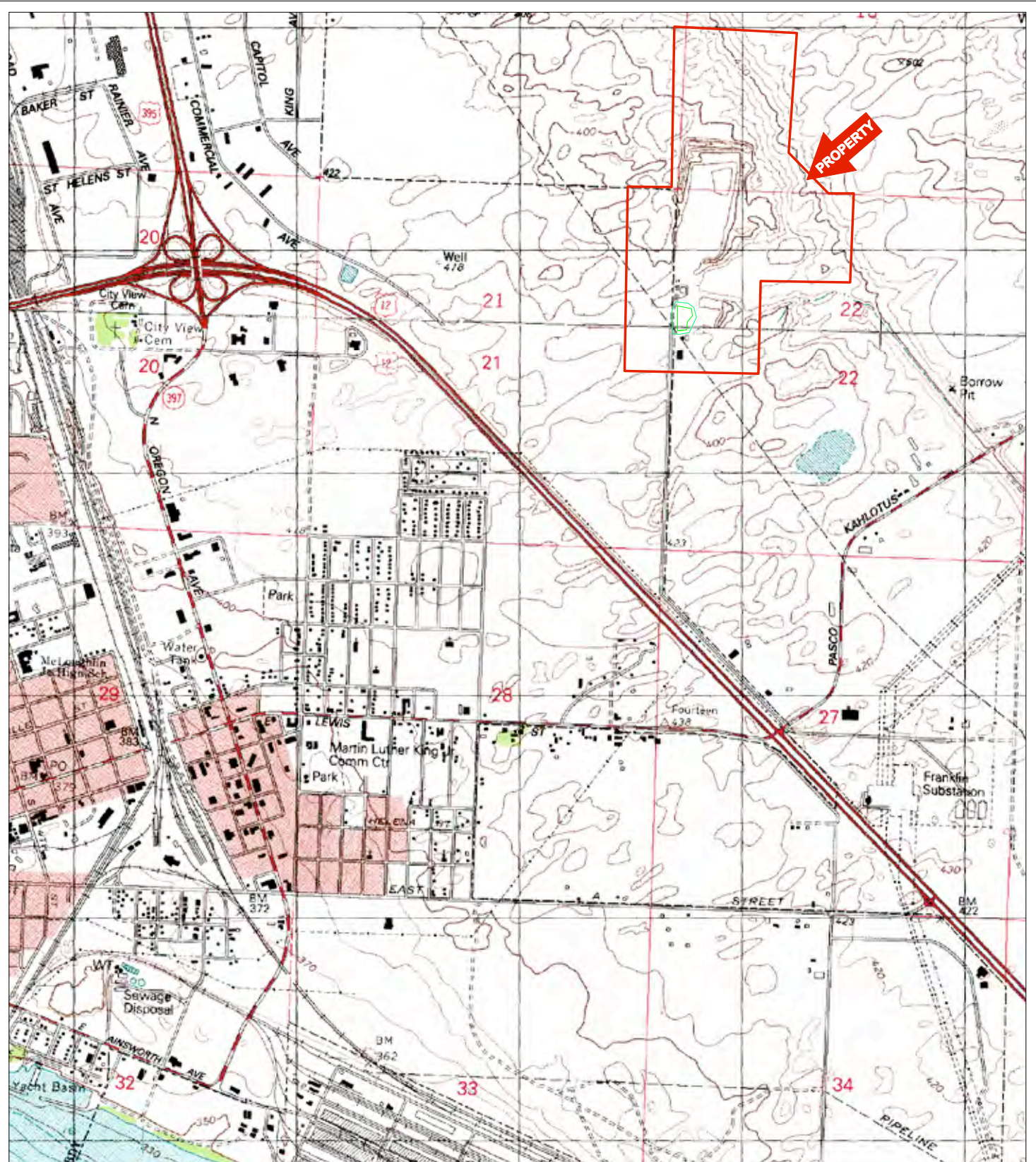
SB-1, SB-2, SB-3, SB-4, SB-5 and SB-8 were lost during cap maintenance activities in August 2011.

Settlement plates SP-1 through SP-4 were installed on August 23, 2011.

Time Period	SB-6	SB-7	SB-9	SB-10	SP-1	SP-2	SP-3	SP-4
5/29 to 6/26/2008	-0.001	0.003						
6/26 to 7/29/2008	0.008	0.011						
7/29 to 9/8/2008	-0.004	-0.002						
9/8 to 9/30/2008	-0.003	0.004						
9/30 to 10/30/2008	0.000	0.004						
10/30 to 12/5/2008	0.000	0.015						
12/5 to 12/30/2008	0.000	-0.010						
12/30/08 to 1/30/09	-0.009	0.008						
1/30 to 3/26/2009	0.001	0.005						
3/26 to 4/23/2009	-0.003	0.005						
4/23 to 6/5/2009	0.005	0.010						
6/5 to 7/28/2009	0.000	0.005						
7/28 to 11/18/2009	0.001	0.007						
11/18/09 to 1/7/10	0.001	0.007						
1/7 to 5/19/2010	0.002	0.009						
5/19 to 8/11/2010	0.000	0.009						
8/11 to 10/27/2010	0.032	0.006	0.006	0.005				
10/27 to 12/15/2010	0.000	0.006	0.005	0.005				
12/15/10 to 2/15/11	-0.007	0.009	0.000	0.002				
2/15 to 4/14/2011	0.002	0.011	0.006	0.006				
4/14 to 6/10/2011	0.004	0.007	0.005	0.004				
6/10 to 8/11/2011	0.001	0.006	0.004	0.004				
8/11 to 11/04/2011	0.002	0.008	0.005	0.004	0.025	0.028	0.036	0.015
11/4 to 12/16/11	0.001	0.008	0.004	0.005	0.009	0.021	0.030	0.013
12/16 to 2/16/12	0.001	0.007	0.003	0.002	0.008	0.011	0.012	0.008
2/16 to 4/17/12	0.003	0.012	0.007	0.006	0.012	0.036	0.025	0.014
4/17 to 6/15/12	0.003	0.016	0.009	0.009	0.009	0.069	0.028	0.008
6/15 to 9/7/12	0.007	0.017	0.008	0.007	0.008	0.069	0.018	0.007
9/7 to 10/16/12	0.005	0.010	0.005	0.005	0.005	0.037	0.006	-0.001
<b>Average Rate since Installation (inches per day)</b>	<b>0.002</b>	<b>0.007</b>	<b>0.005</b>	<b>0.005</b>	<b>0.011</b>	<b>0.039</b>	<b>0.022</b>	<b>0.009</b>

Waste	Volume (gallons)	Disposal or Treatment Facility	Disposal Date	Designation	SVE Equipment Skid Volume (gallons)	Conveyance Line at MSW Flare Volume (gallons)
SVE Condensate	4,443	Burlington Environmental, Kent, WA	1/24/2012	DW D035, D040	2,166	2,277
SVE Condensate	3,009	Burlington Environmental, Kent, WA	2/14/2012	DW D035, D040	1,288	1,721
SVE Condensate	3,476	Burlington Environmental, Kent, WA	3/13/2012	DW D035, D040	1,657	1,819
	<b>10,928</b>	<b>Q1-2012 SVE Condensate Totals</b>			<b>5,111</b>	<b>5,817</b>
SVE Condensate	5,120	Burlington Environmental, Kent, WA	5/7/2012	DW D035, D040	3,069	2,051
SVE Condensate	4,425	Burlington Environmental, Kent, WA	6/11/2012	DW D035, D040	1,598	2,827
	<b>9,545</b>	<b>Q2-2012 SVE Condensate Totals</b>			<b>4,667</b>	<b>4,878</b>
SVE Condensate	5,120	Burlington Environmental, Kent WA	7/10/2012	DW D035, D040	2,600	2,520
SVE Condensate	4,985	Burlington Environmental, Kent, WA	8/7/2012	DW D035, D040	908	4,077
SVE Condensate	4,380	Burlington Environmental, Kent, WA	8/30/2012	DW D035, D040	1,290	3,090
SVE Condensate	5,200	Burlington Environmental, Kent, WA	9/26/2012	DW D035, D040	1,700	3,500
	<b>19,685</b>	<b>Q3-2012 SVE Condensate Totals</b>			<b>6,498</b>	<b>13,187</b>
SVE Condensate	5,175	Burlington Environmental, Kent WA	10/17/2012	DW D035, D040	2,936	2,239
SVE Condensate	5,149	Burlington Environmental, Kent WA	11/8/2012	DW D035, D040	1,731	3,418
SVE Condensate	4,708	Burlington Environmental, Kent WA	11/19/2012	DW D035, D040	2,800	1,908
SVE Condensate	5,023	Burlington Environmental, Kent WA	12/11/2012	DW D035, D040	3,553	1,470
SVE Condensate	3,468	Burlington Environmental, Kent, WA	12/27/2012	DW D035, D040	2,268	1,200
	<b>8,491</b>	<b>Q4-2012 SVE Condensate Totals</b>			<b>5,821</b>	<b>2,670</b>
	<b>48,649</b>	<b>2012 Dangerous Waste Disposal Totals (gallons)</b>			<b>22,097</b>	<b>26,552</b>
Purge Water	910	City of Pasco Waste Water Treatment Plant	3/29/2012	Non-DW	-	-
Purge Water	400	City of Pasco Waste Water Treatment Plant	8/9/2012	Non-DW	--	--
Drilling and Development Water (MW-55S & GB-1)	350	City of Pasco Waste Water Treatment Plant	8/9/2012	Non-DW	--	--
	<b>1,660</b>	<b>2012 Non-Dangerous Waste Disposal Total (gallons)</b>				
Well Installation Soil (MW-55S & GB-1)	2,820 lbs	Basin Disposal, Inc./Finley Buttes	10/4/2012	Non-DW	--	--
	<b>2,820</b>	<b>2012 Non-Dangerous Waste Disposal Total (pounds)</b>				

## Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE  
(TOPOGRAPHIC)

GLADE, WASHINGTON - 1992  
PASCO, WASHINGTON - 1992



SCALE = 1:24,000



**ENVIRONMENTAL PARTNERS INC**

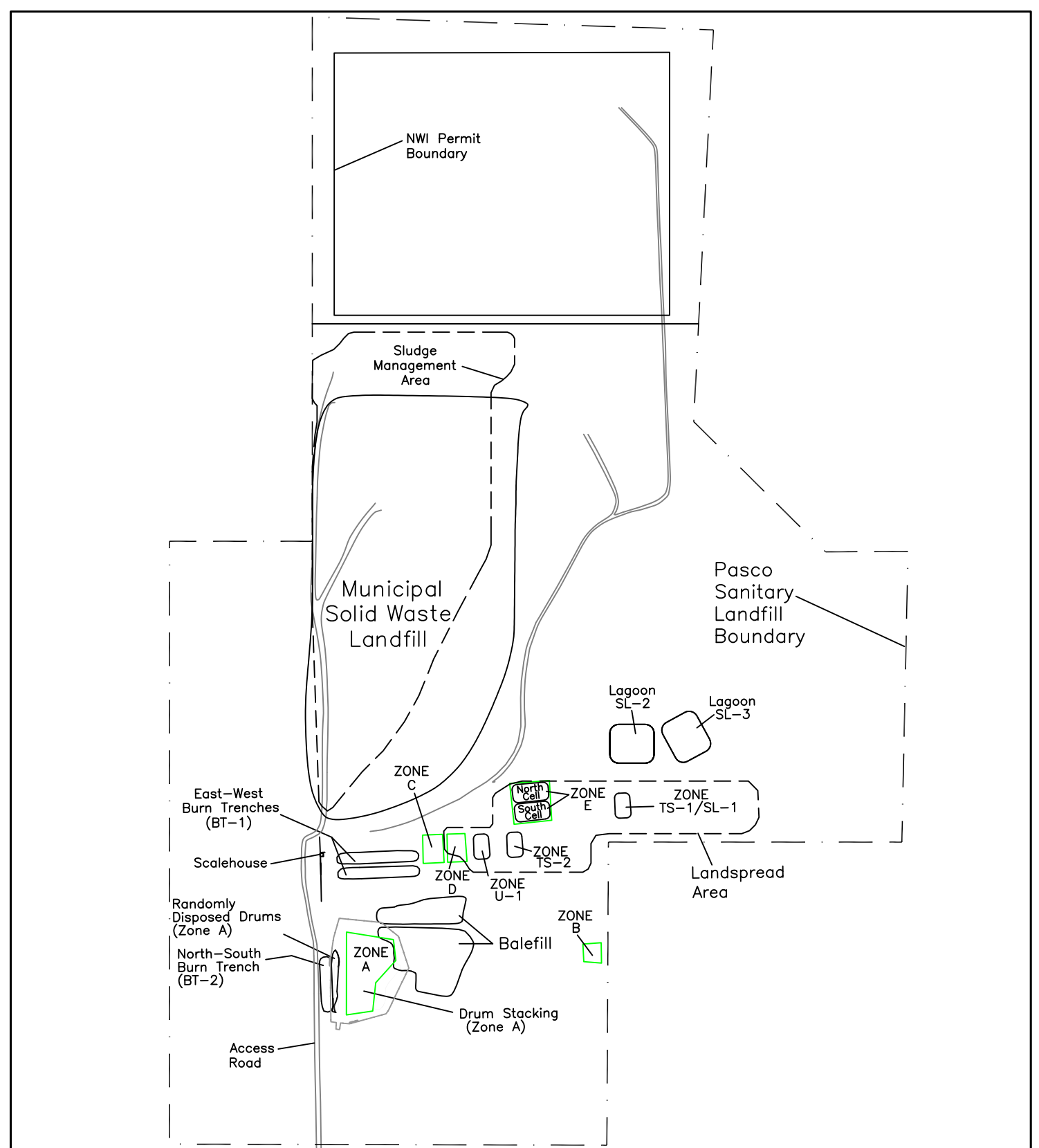
295 NE Gilman Boulevard, Suite 201  
Issaquah, Washington 98027

FIGURE 1

SITE LOCATION MAP

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	MMH	MMH	12/12/12





KEY: SOURCE: BURLINGTON 1993

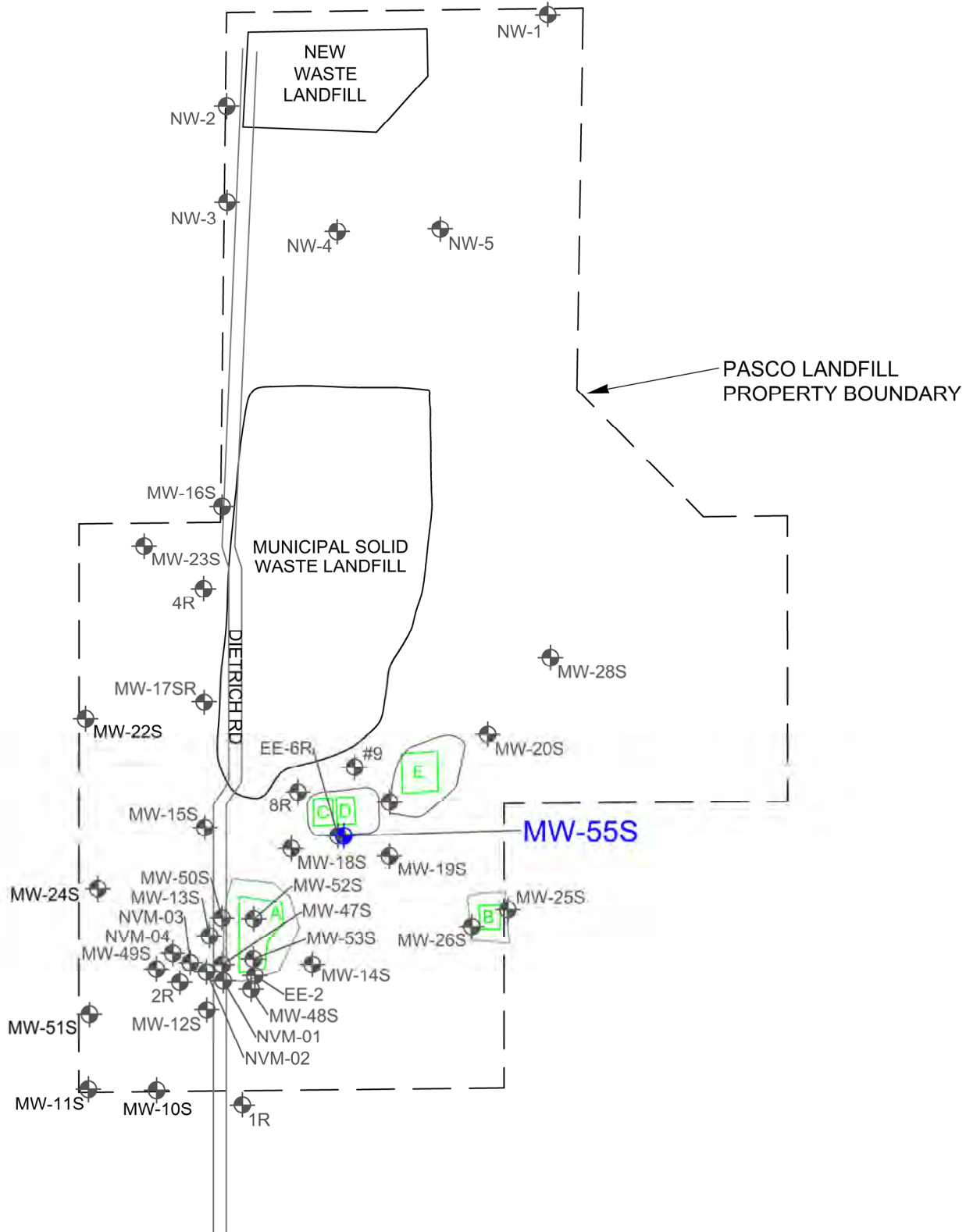
SCALE: 1" = 600'

**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

**FIGURE 2**

**PASCO LANDFILL NPL SITE PROPERTY REPRESENTATION**

<b>PROJECT</b>	03912.2		
<b>PREPARED FOR</b>	IWAG GROUP III PASCO LANDFILL		
<b>LOCATION</b>	1901 DIETRICH ROAD PASCO, WASHINGTON		
<b>SHEET</b>	<b>DRAWN BY</b>	<b>REVIEWED BY</b>	<b>DATE</b>
1 of 1	MMH	MMH	12/12/12



- MW-11S NEW WELL
- MW-11S PROPERTY BOUNDARY MONITORING WELL



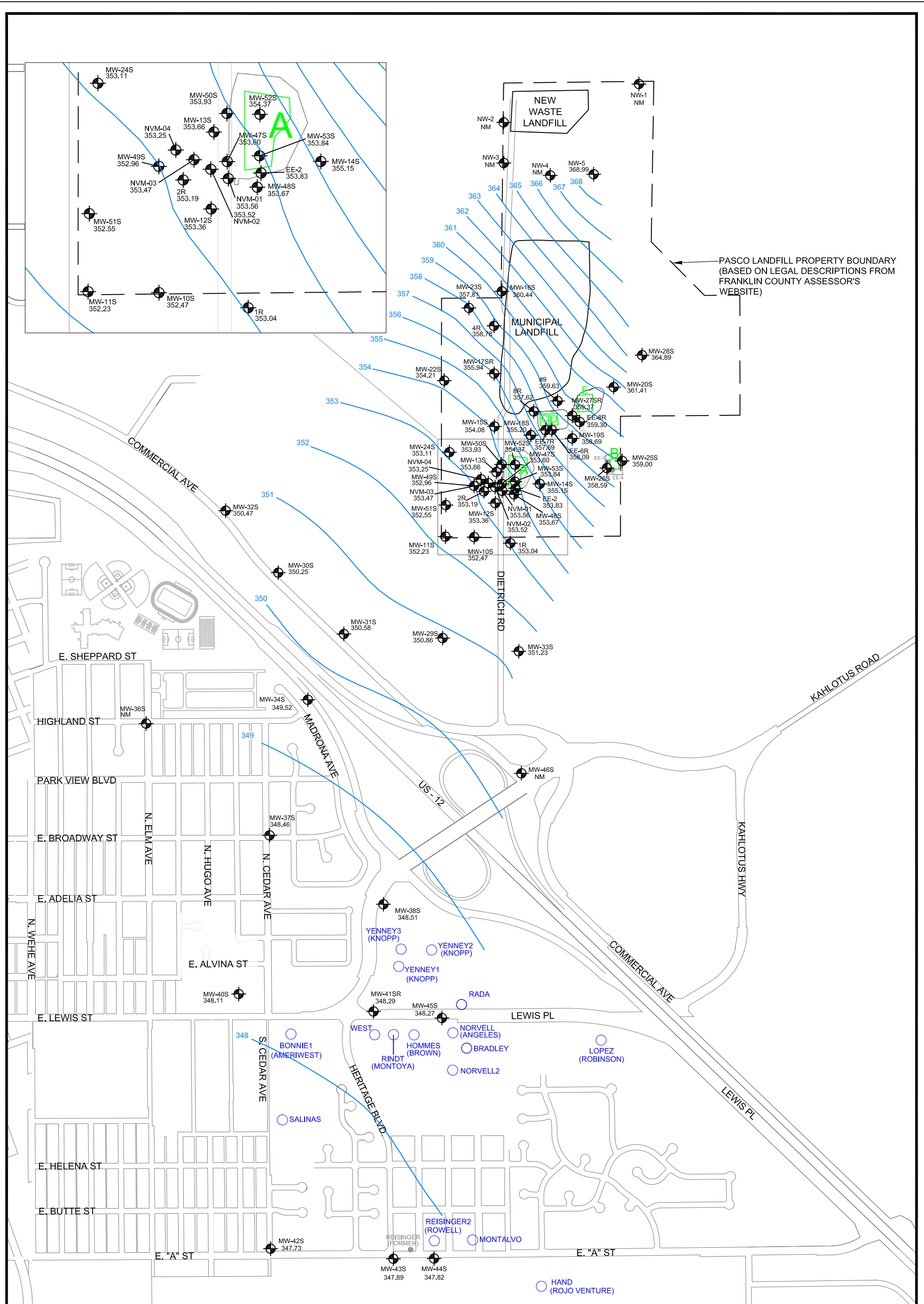
APPROXIMATE SCALE: 1" = 700'

**epi ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 3

NEW GROUND WATER MONITORING WELL LOCATION  
 PASCO LANDFILL NPL SITE

<b>PROJECT</b>	03912.2		
<b>PREPARED FOR</b>	IWAG GROUP III PASCO LANDFILL		
<b>LOCATION</b>	1901 DIETRICH ROAD PASCO, WASHINGTON		
<b>DRAWN BY</b>	ALW	<b>REVIEWED BY</b>	MMH
		<b>DATE</b>	2/28/13



PASCO LANDFILL PROPERTY BOUNDARY  
(BASED ON LEGAL DESCRIPTIONS FROM  
FRANKLIN COUNTY ASSESSOR'S  
WEBSITE)

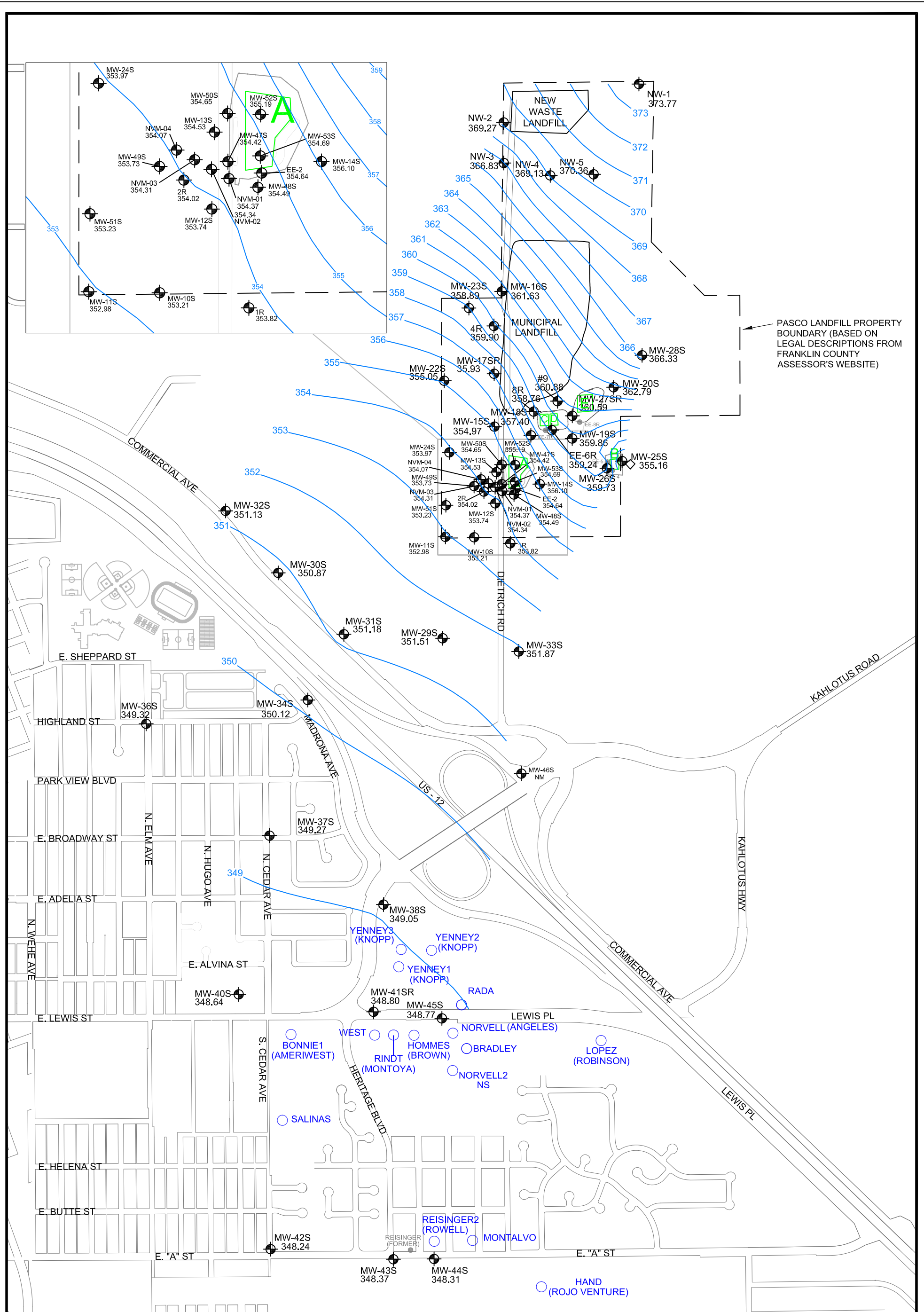
MW-42S 347.14 SHALLOW AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
   
 WATER ELEVATION CONTOUR, INTERVAL = 1 FOOT. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
   
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
   
 REISINGER DECOMMISSIONED WELL

0 250 500 1000
   
 APPROXIMATE SCALE: 1" = 1,000'

**ENVIRONMENTAL PARTNERS INC**
  
 295 NE Gilman Boulevard, Suite 201
   
 Issaquah, Washington 98027

**FIGURE 4**
  
**SHALLOW GROUND WATER ELEVATIONS**
  
**JANUARY 23, 2012**

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	06/01/12

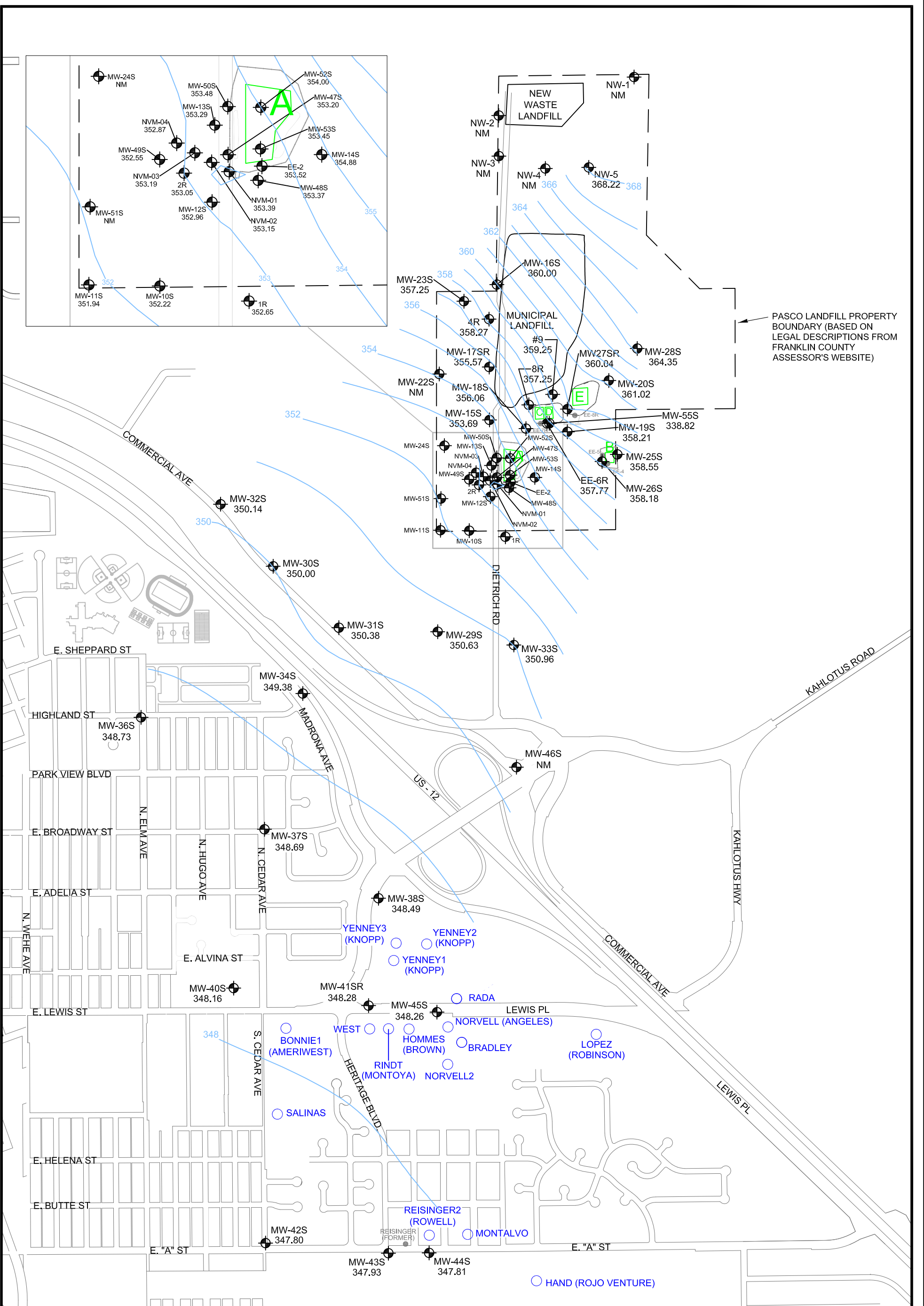


PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

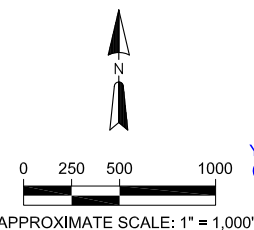
MW-42S 347.14 SHALLOW AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
   
 WATER ELEVATION CONTOUR. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
   
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
   
 REISINGER DECOMMISSIONED WELL
   
 0 250 500 1000
   
 APPROXIMATE SCALE: 1" = 1,000'

ENVIRONMENTAL PARTNERS INC
   
 295 NE Gilman Boulevard, Suite 201
   
 Issaquah, Washington 98027
   
 FIGURE 5
   
 SHALLOW GROUND WATER ELEVATIONS
   
 APRIL 23, 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMH
DATE	09/12/12		



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

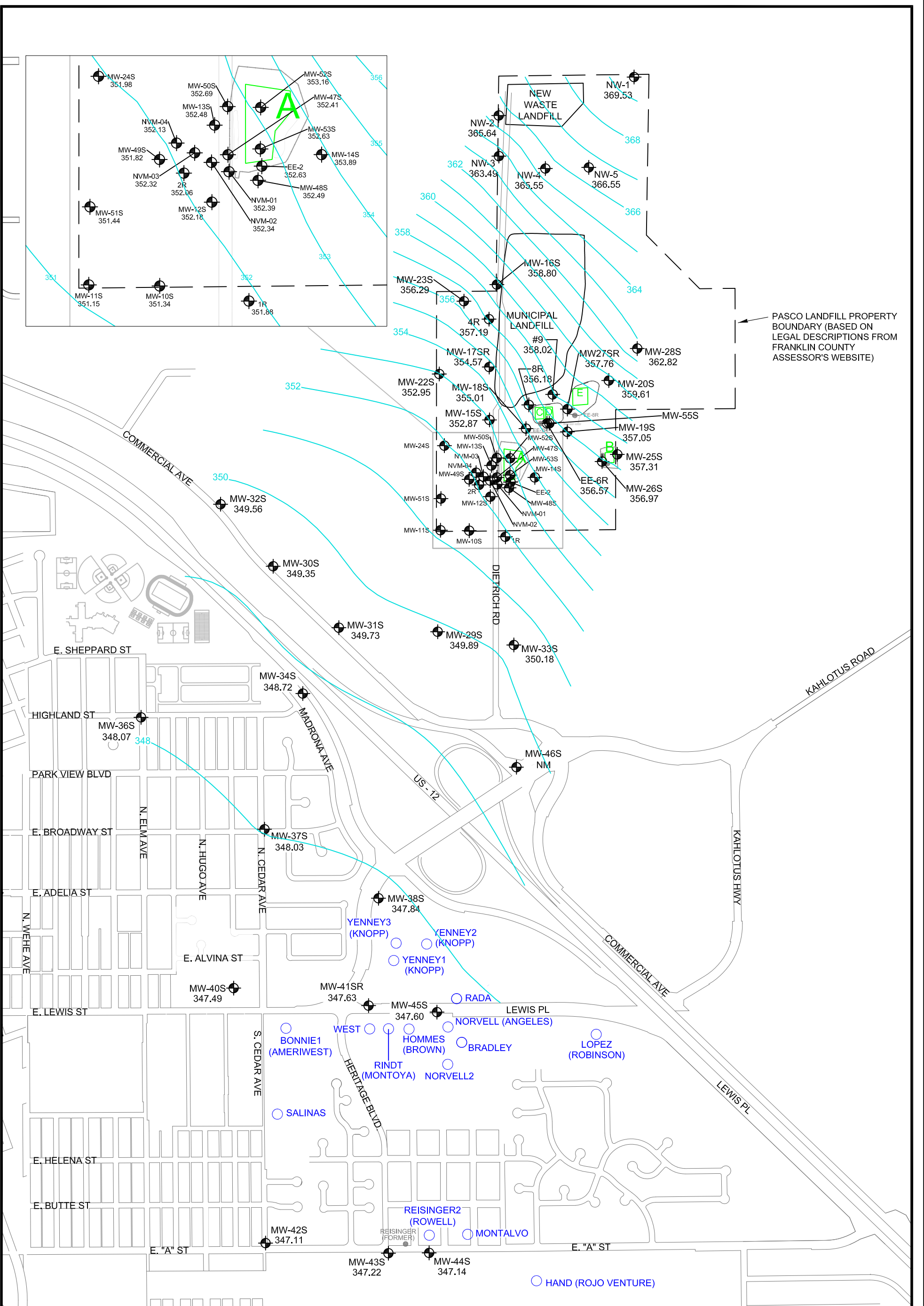


- MW-42S 347.80 SHALLOW AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
- WATER ELEVATION CONTOUR. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
- YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
- REISINGER DECOMMISSIONED WELL

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 Issaquah, Washington 98027

FIGURE 6  
 SHALLOW GROUND WATER ELEVATIONS  
 JULY 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	REVIEWED BY	DATE	
MMH	TCM	01/08/13	

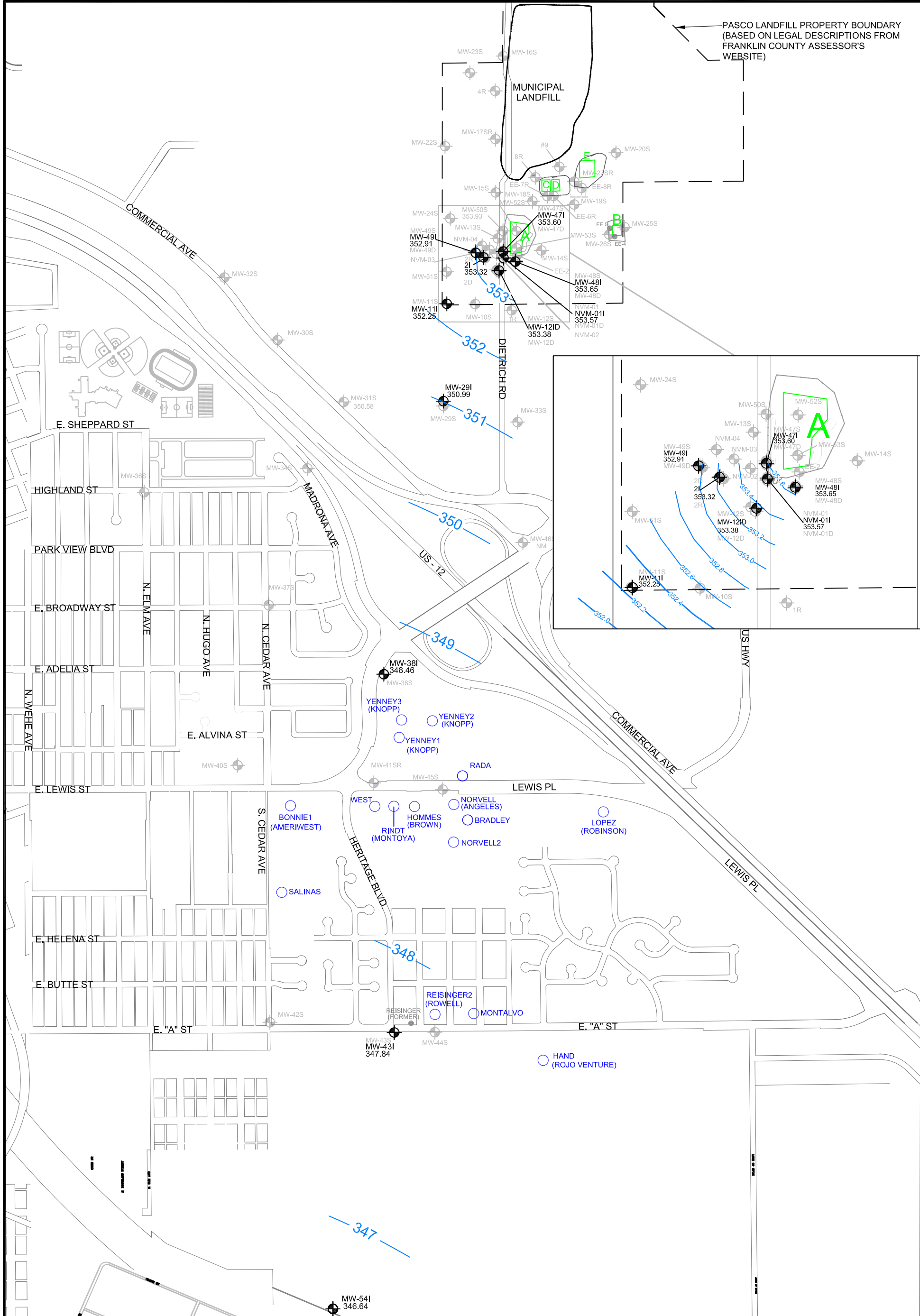


PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

MW-42S 347.14 ● SHALLOW AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
   
 WATER ELEVATION CONTOUR. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
   
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
   
 REISINGER ● DECOMMISSIONED WELL
   
 0 250 500 1000
   
 APPROXIMATE SCALE: 1" = 1,000'

ENVIRONMENTAL PARTNERS INC
   
 295 NE Gilman Boulevard, Suite 201
   
 Issaquah, Washington 98027
   
 FIGURE 7
   
 SHALLOW GROUND WATER ELEVATIONS
   
 OCTOBER 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMM
DATE	2/25/13		



PASCO LANDFILL PROPERTY BOUNDARY  
(BASED ON LEGAL DESCRIPTIONS FROM  
FRANKLIN COUNTY ASSESSOR'S  
WEBSITE)

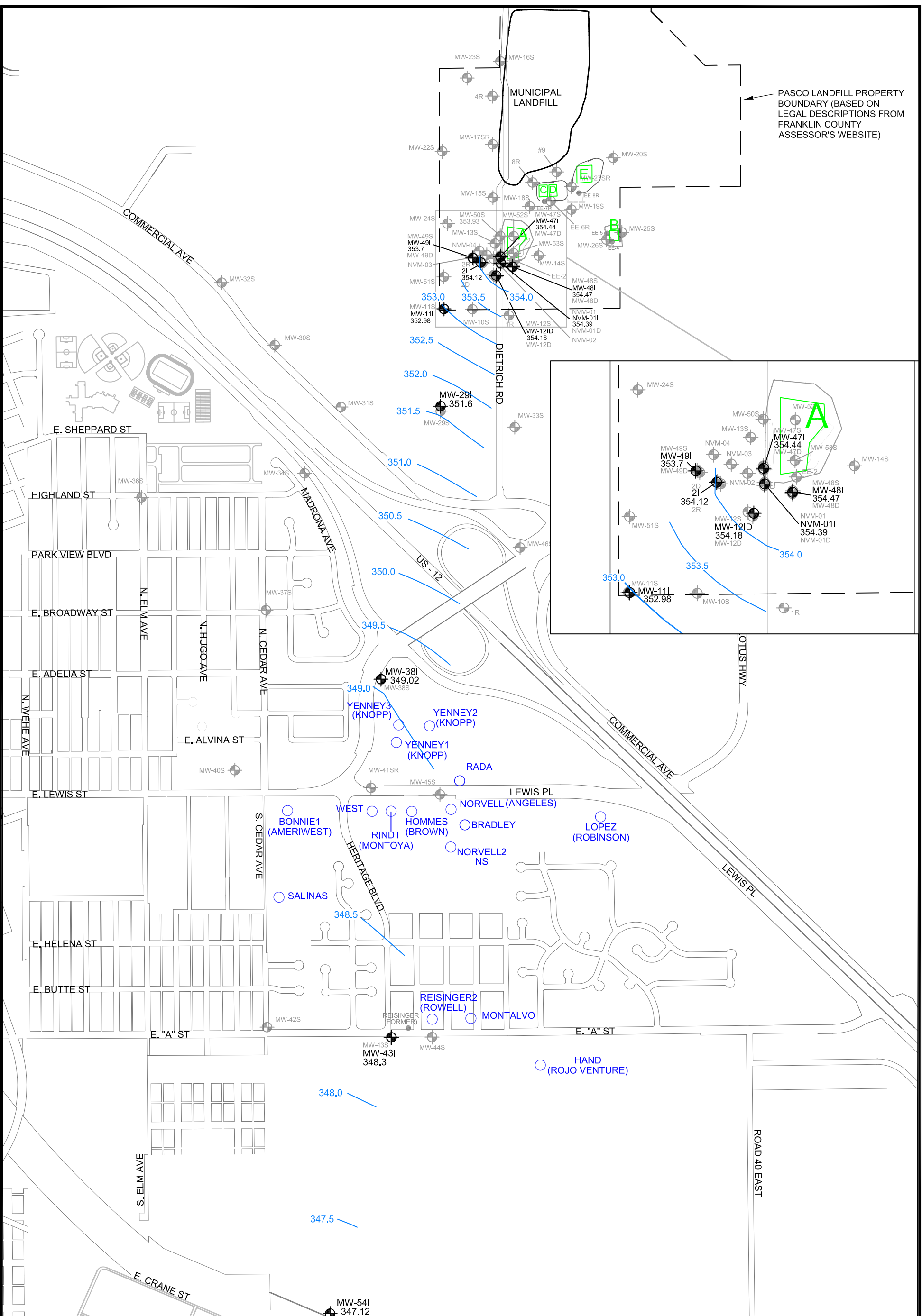
MUNICIPAL  
LANDFILL

**ept ENVIRONMENTAL PARTNERS INC**  
295 NE Gilman Boulevard, Suite 201  
Issaquah, Washington 98027

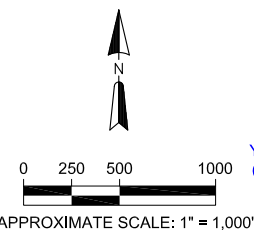
PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMH
DATE	06/01/12		

FIGURE 8  
INTERMEDIATE  
GROUND WATER ELEVATIONS  
JANUARY 23, 2012

MW-54I 346.64 INTERMEDIATE AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED  
 WATER ELEVATION CONTOUR. INTERVAL = 1 FOOT. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.  
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 REISINGER DECOMMISSIONED WELL  
 APPROXIMATE SCALE: 1" = 1,000'



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)



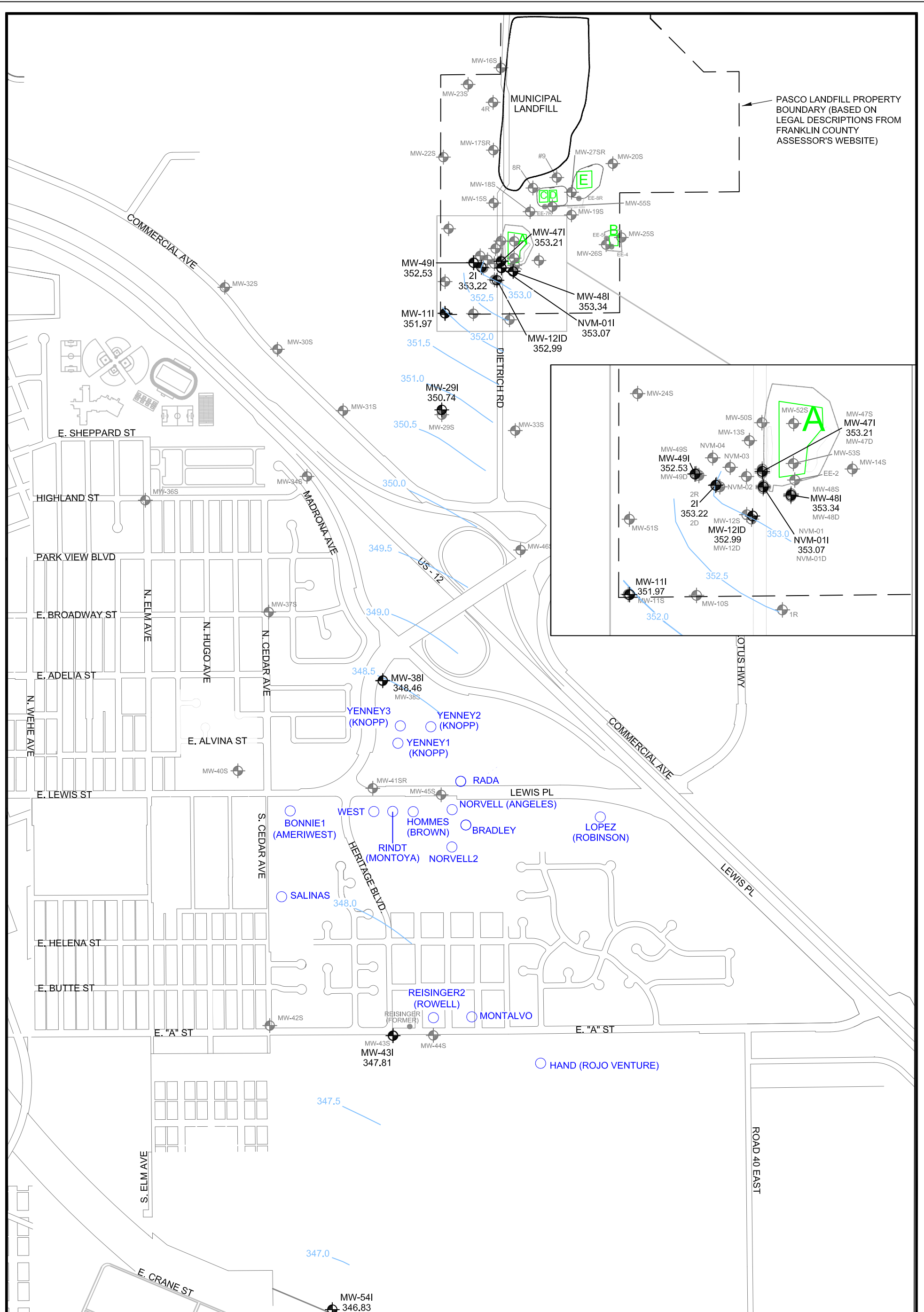
- MW-54I 346.64 INTERMEDIATE AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
- WATER ELEVATION CONTOUR. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
- YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
- REISINGER DECOMMISSIONED WELL

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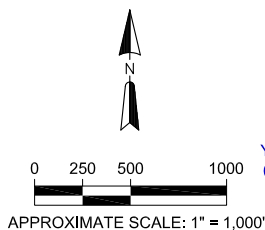
FIGURE 9  
 INTERMEDIATE GROUND WATER ELEVATIONS  
 APRIL 23, 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	MMH	REVIEWED BY	TCM
DATE	09/04/12		





PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

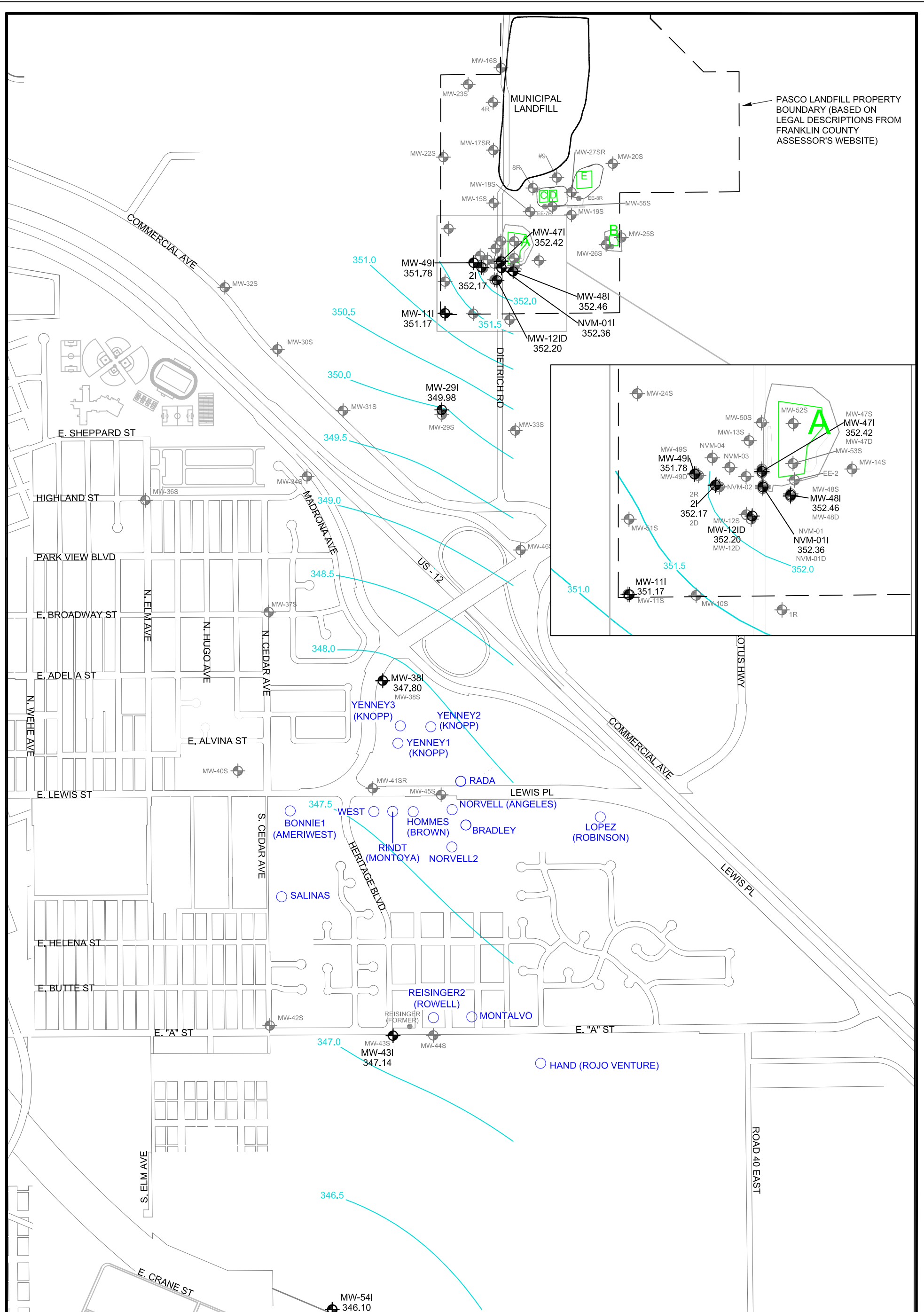


- MW-54I 346.64 INTERMEDIATE AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
- WATER ELEVATION CONTOUR. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
- YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
- REISINGER DECOMMISSIONED WELL

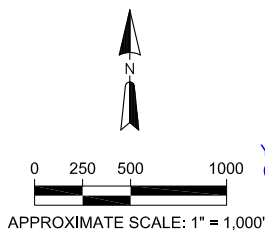
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FIGURE 10  
 INTERMEDIATE GROUND WATER ELEVATIONS  
 JULY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	01/08/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

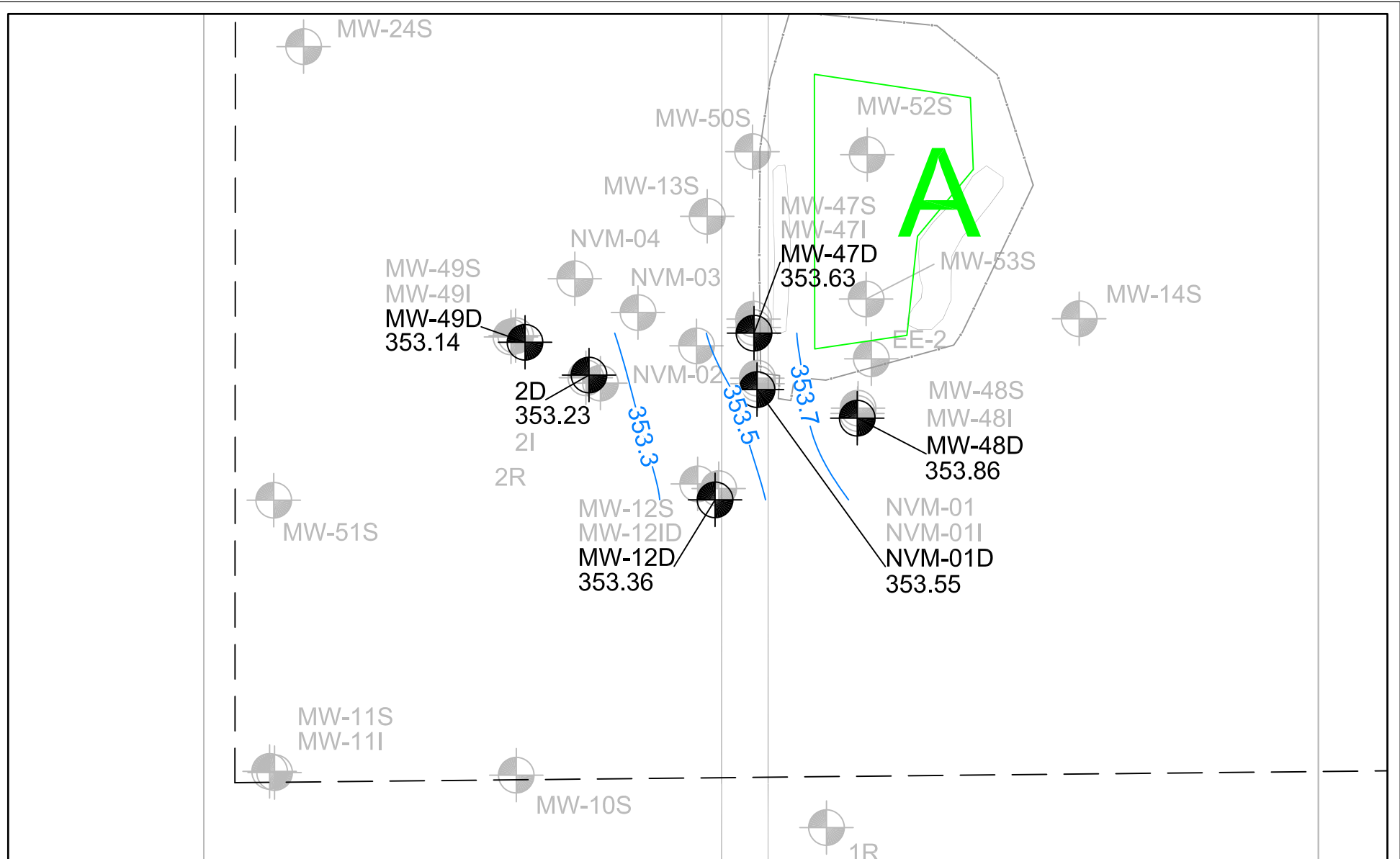


- MW-541 346.64 INTERMEDIATE AQUIFER MONITORING WELL WITH WATER ELEVATION IN FEET, NAVD88. NM = NOT MEASURED
- WATER ELEVATION CONTOUR. WATER LEVELS NOT MEASURED IN RESIDENTIAL WELLS.
- YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
- REISINGER DECOMMISSIONED WELL

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FIGURE 11  
 INTERMEDIATE GROUND WATER ELEVATIONS  
 OCTOBER 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMM
DATE	2/25/13		



KEY:

MW-47D 352.59 DEEP AQUIFER MONITORING WELL WITH WATER LEVEL IN FEET, NAVD88

MW-47S SHALLOW AND INTERMEDIATE MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)

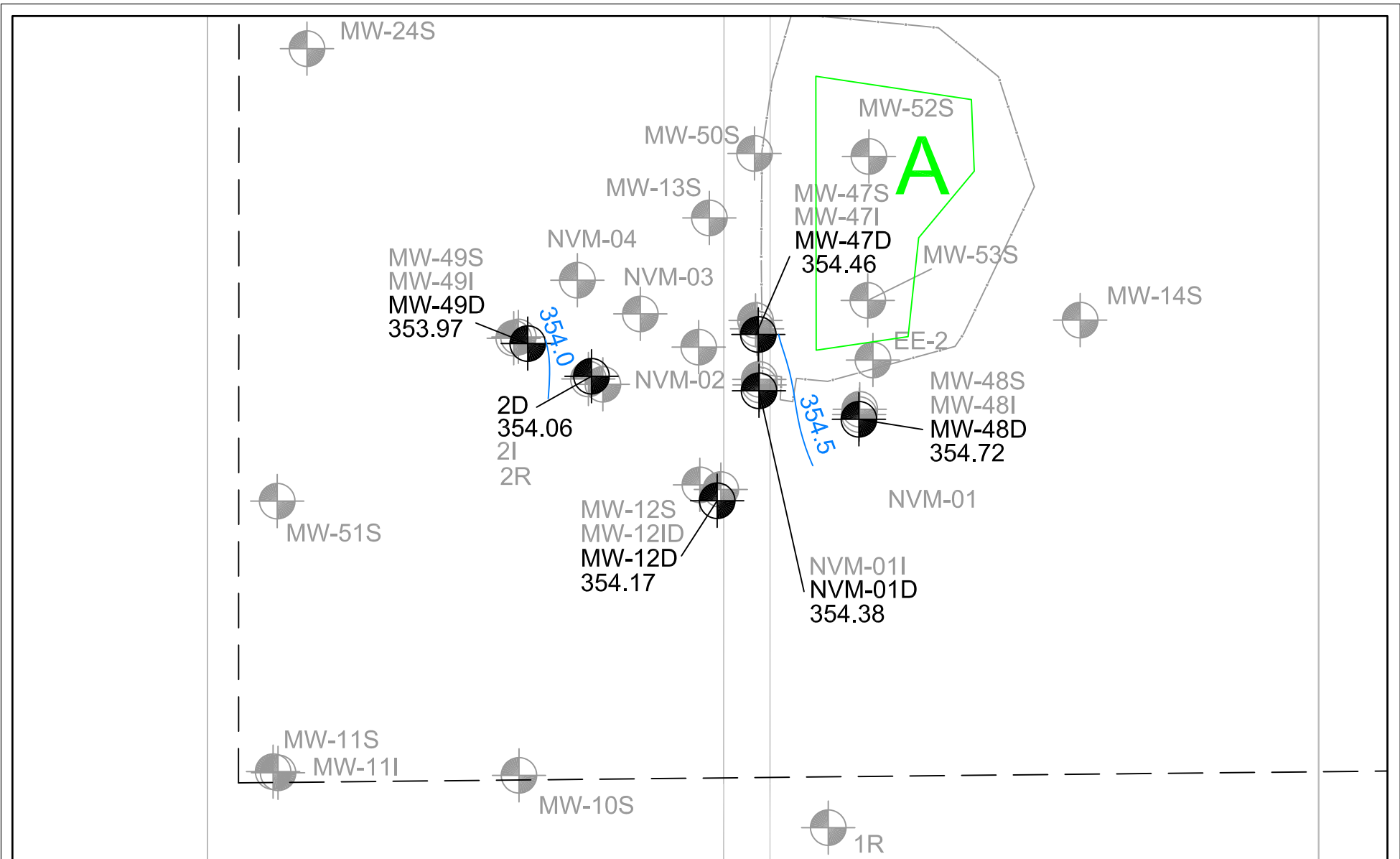
WATER ELEVATION CONTOUR

SCALE: 1" = 180'

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FIGURE 12  
 DEEP GROUND WATER ELEVATIONS  
 JANUARY 23, 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	DRAWN BY	REVIEWED BY	DATE
	ALW	TCM	06/01/12



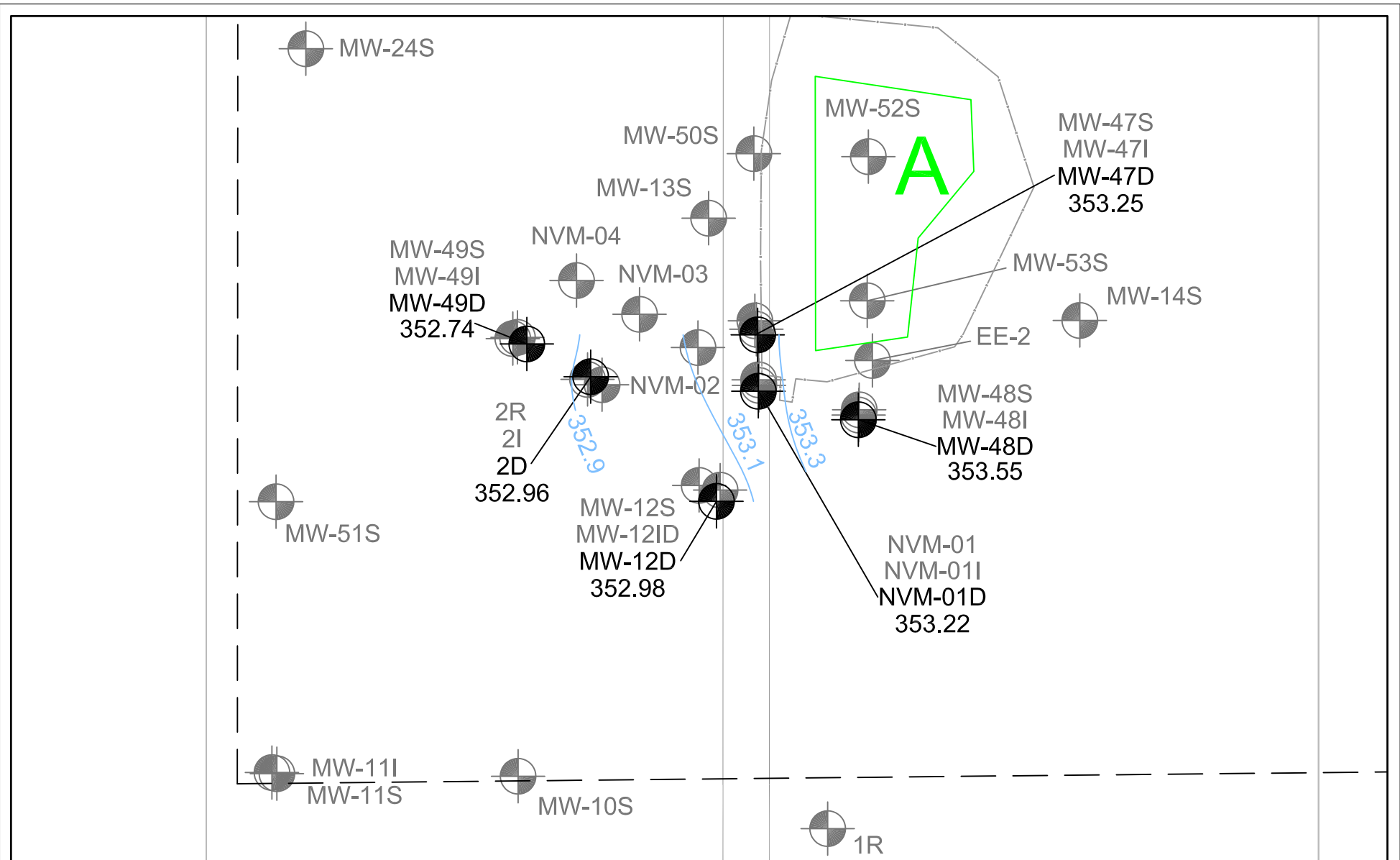
KEY:

		<p>MW-47D 352.59</p> <p>DEEP AQUIFER MONITORING WELL WITH WATER LEVEL IN FEET, NAVD88</p>
		<p>MW-47S</p> <p>SHALLOW AND INTERMEDIATE MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)</p>
	<p>SCALE: 1" = 180'</p>	
		<p>WATER ELEVATION CONTOUR</p>

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FIGURE 13  
 DEEP GROUND WATER ELEVATIONS  
 APRIL 23, 2012

<b>PROJECT</b>	03912.2		
<b>PREPARED FOR</b>	IWAG GROUP III PASCO LANDFILL		
<b>LOCATION</b>	1901 DIETRICH ROAD PASCO, WASHINGTON		
	<b>DRAWN BY</b> MMH	<b>REVIEWED BY</b> TCM	<b>DATE</b> 09/04/12



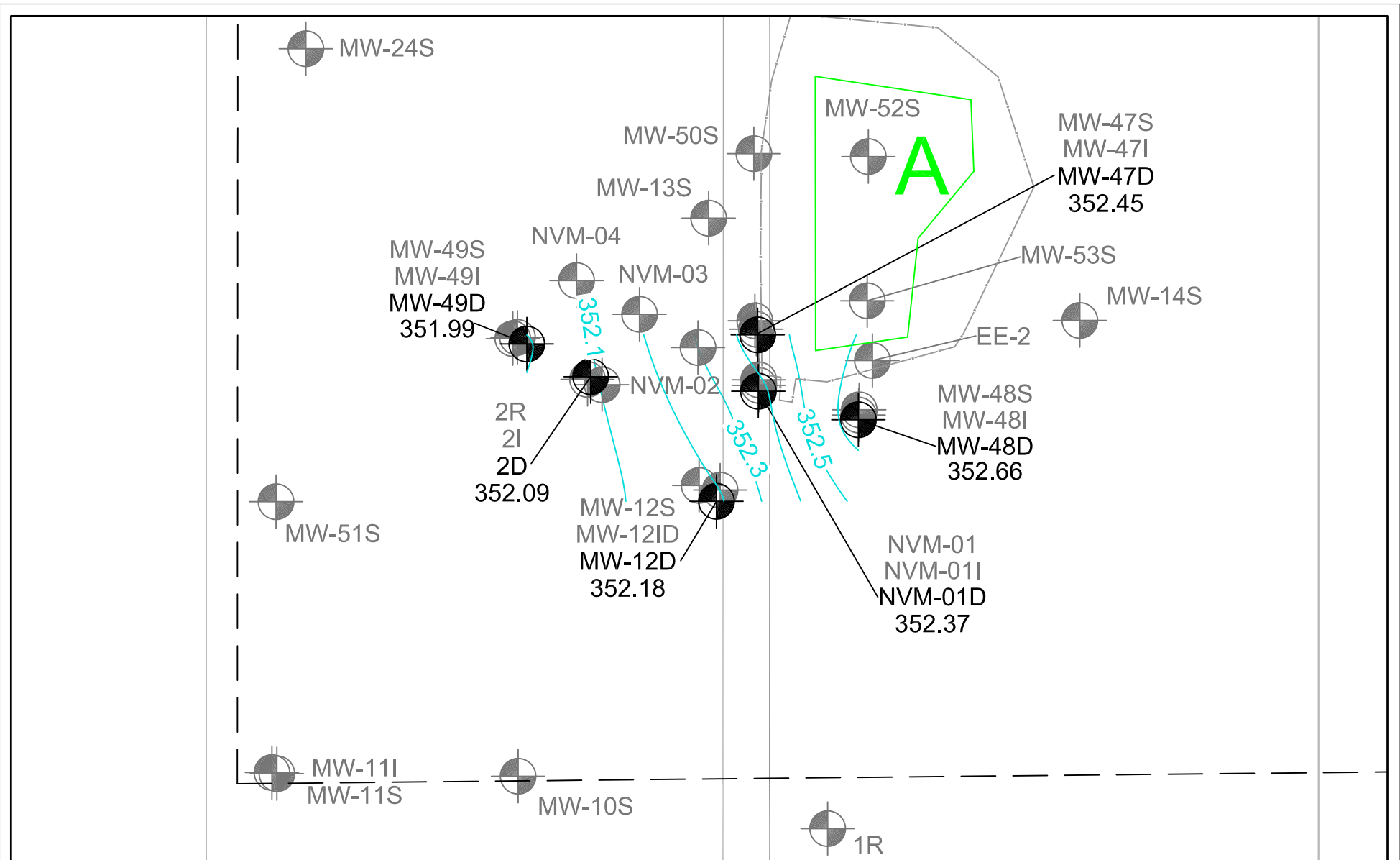
KEY:

MW-47D 352.59 DEEP AQUIFER MONITORING WELL WITH WATER LEVEL IN FEET, NAVD88  
 MW-47S SHALLOW AND INTERMEDIATE MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)  
 SCALE: 1" = 180'  
 WATER ELEVATION CONTOUR

ENVIRONMENTAL PARTNERS INC  
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 Issaquah, Washington 98027

FIGURE 14  
 DEEP GROUND WATER ELEVATIONS  
 JULY 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	DRAWN BY	REVIEWED BY	DATE
	MMH	TCM	01/08/13



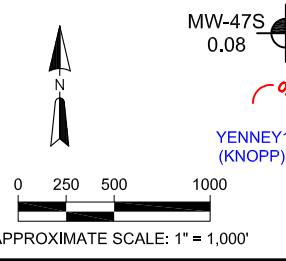
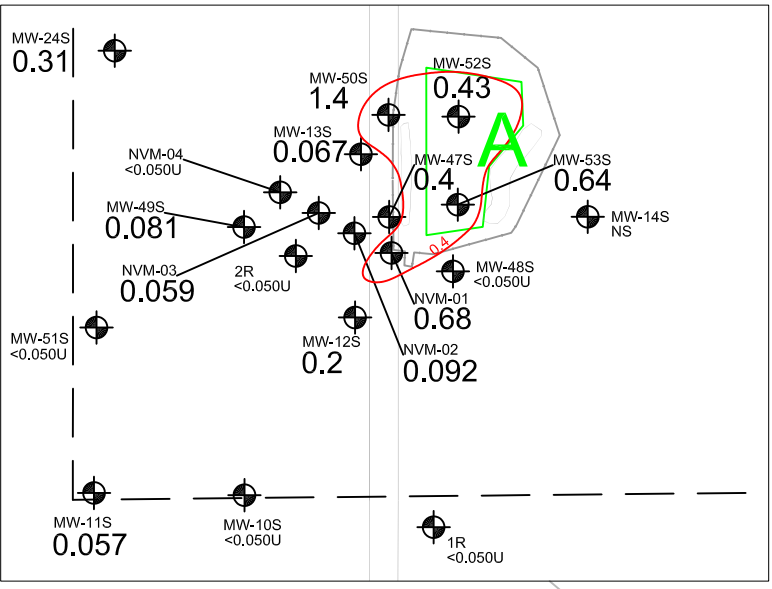
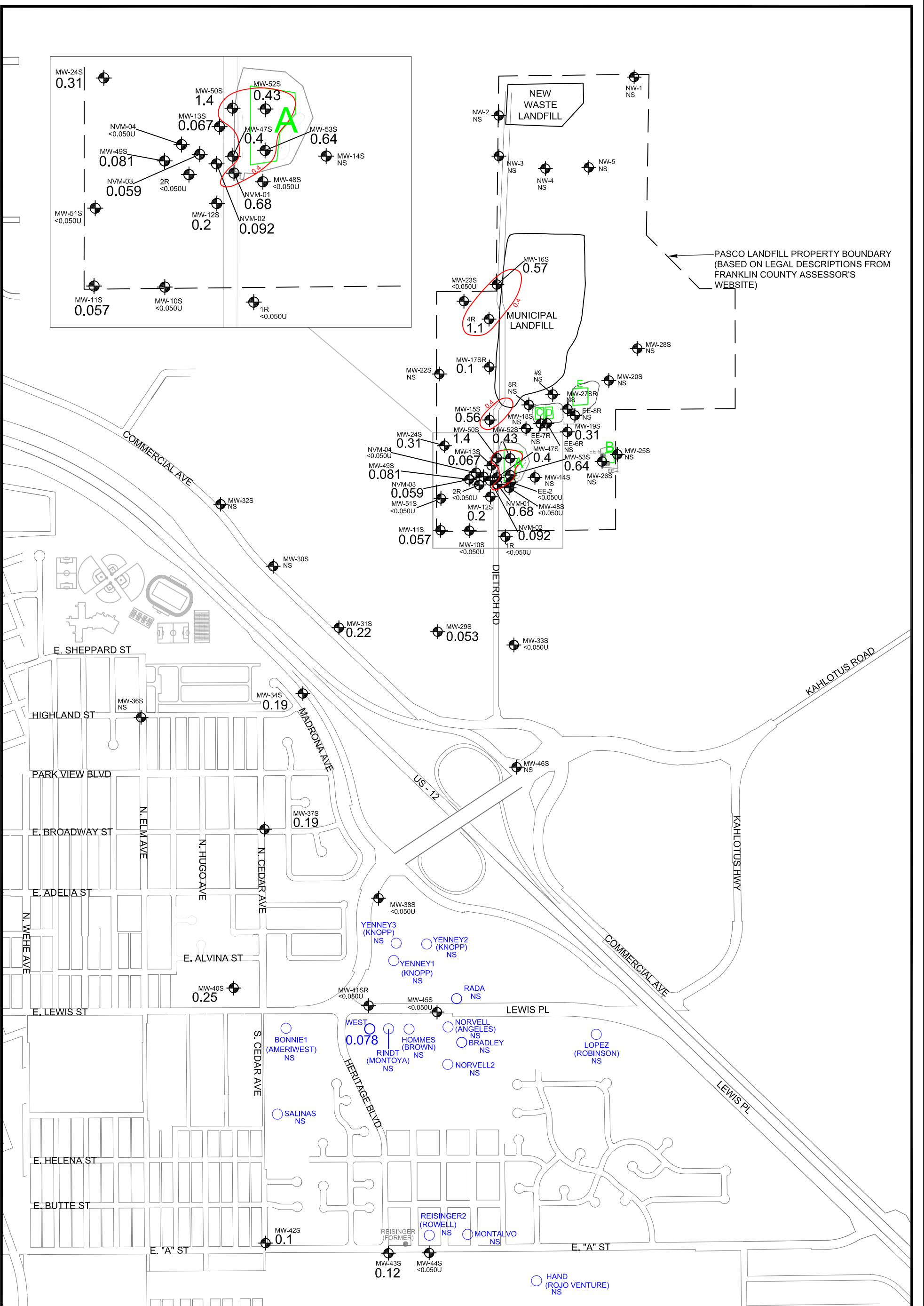
KEY:

	<p>MW-47D 352.59</p> <p>MW-47S</p>	<p>DEEP AQUIFER MONITORING WELL WITH WATER LEVEL IN FEET, NAVD88</p> <p>SHALLOW AND INTERMEDIATE MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)</p>
<p>SCALE: 1" = 180'</p>	<p>WATER ELEVATION CONTOUR</p>	

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 Issaquah, Washington 98027

FIGURE 15  
 DEEP GROUND WATER ELEVATIONS  
 OCTOBER 2012

<b>PROJECT</b>	03912.2		
<b>PREPARED FOR</b>	IWAG GROUP III PASCO LANDFILL		
<b>LOCATION</b>	1901 DIETRICH ROAD PASCO, WASHINGTON		
	<b>DRAWN BY</b> ALW	<b>REVIEWED BY</b> MMM	<b>DATE</b> 2/25/13

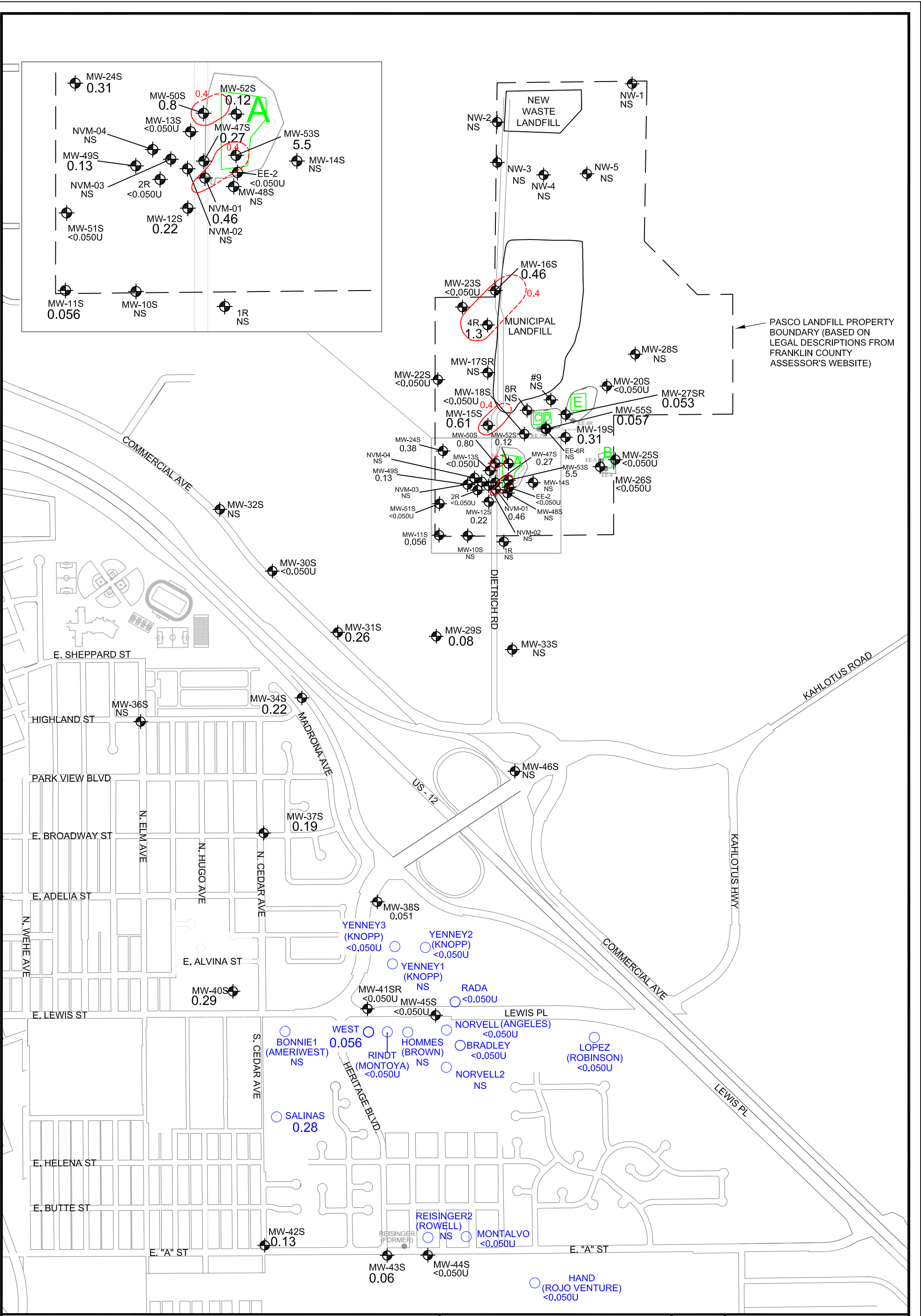


MW-47S 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)  
 TETRACHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERRIED WHERE UNCERTAIN  
 YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TETRACHLOROETHENE CLEANUP LEVEL = 0.4 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

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 Issaquah, Washington 98027

**FIGURE 16**  
 ISOCONCENTRATION MAP OF  
 TETRACHLOROETHENE IN  
 SHALLOW GROUND WATER  
 JANUARY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	06/14/12



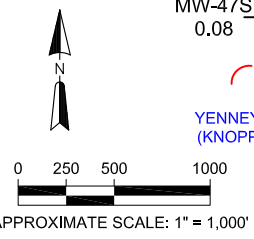
PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

MW-47S 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)  
 TETRACHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERRIED WHERE UNCERTAIN  
 YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TETRACHLOROETHENE CLEANUP LEVEL = 0.4 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

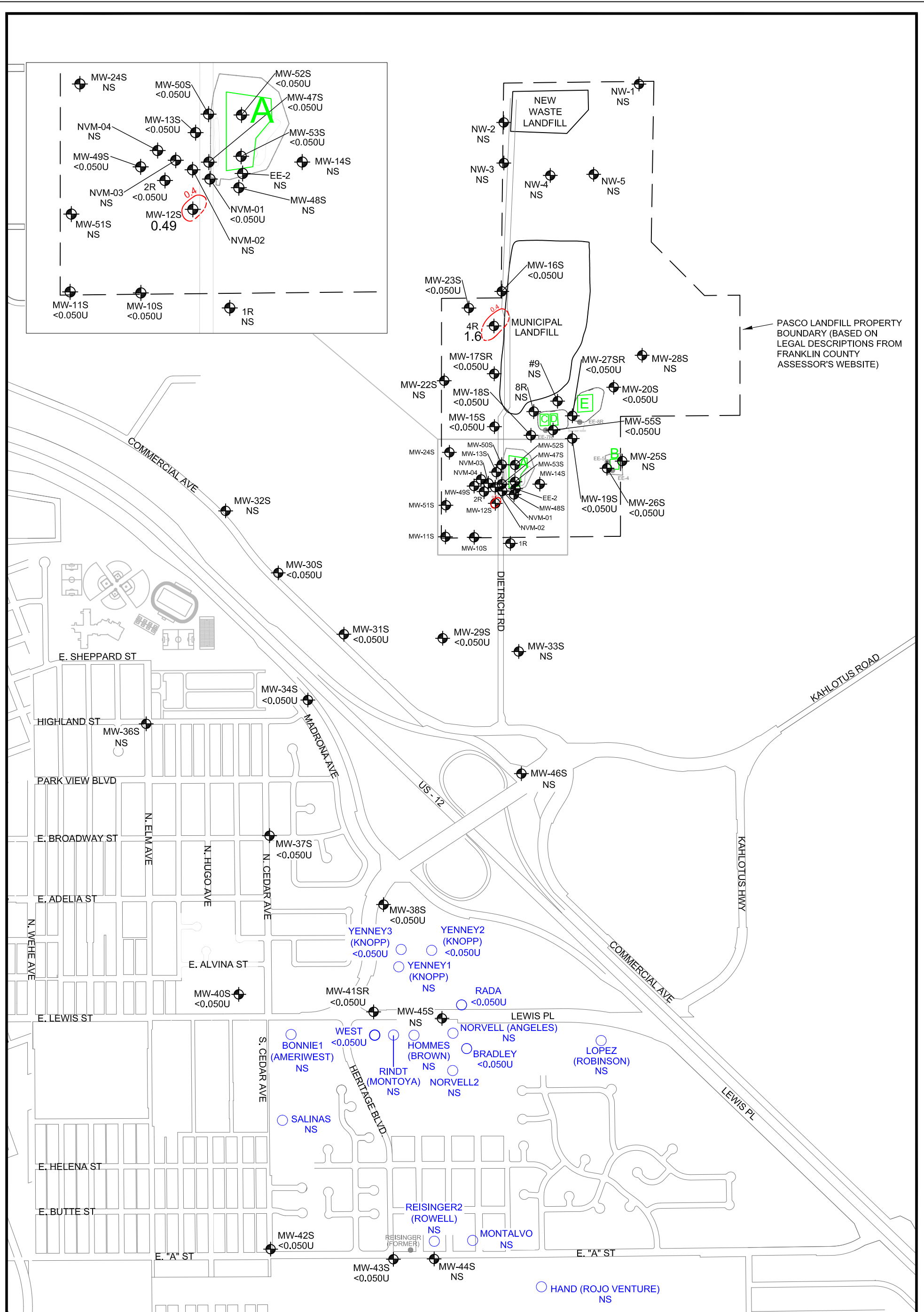
**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 17  
 ISOCONCENTRATION MAP OF  
 TETRACHLOROETHENE IN  
 SHALLOW GROUND WATER  
 APRIL 2012

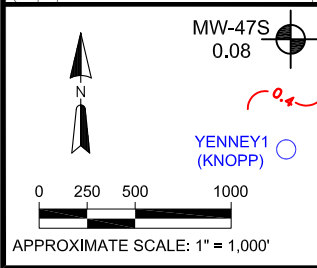
PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	01/11/13







PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

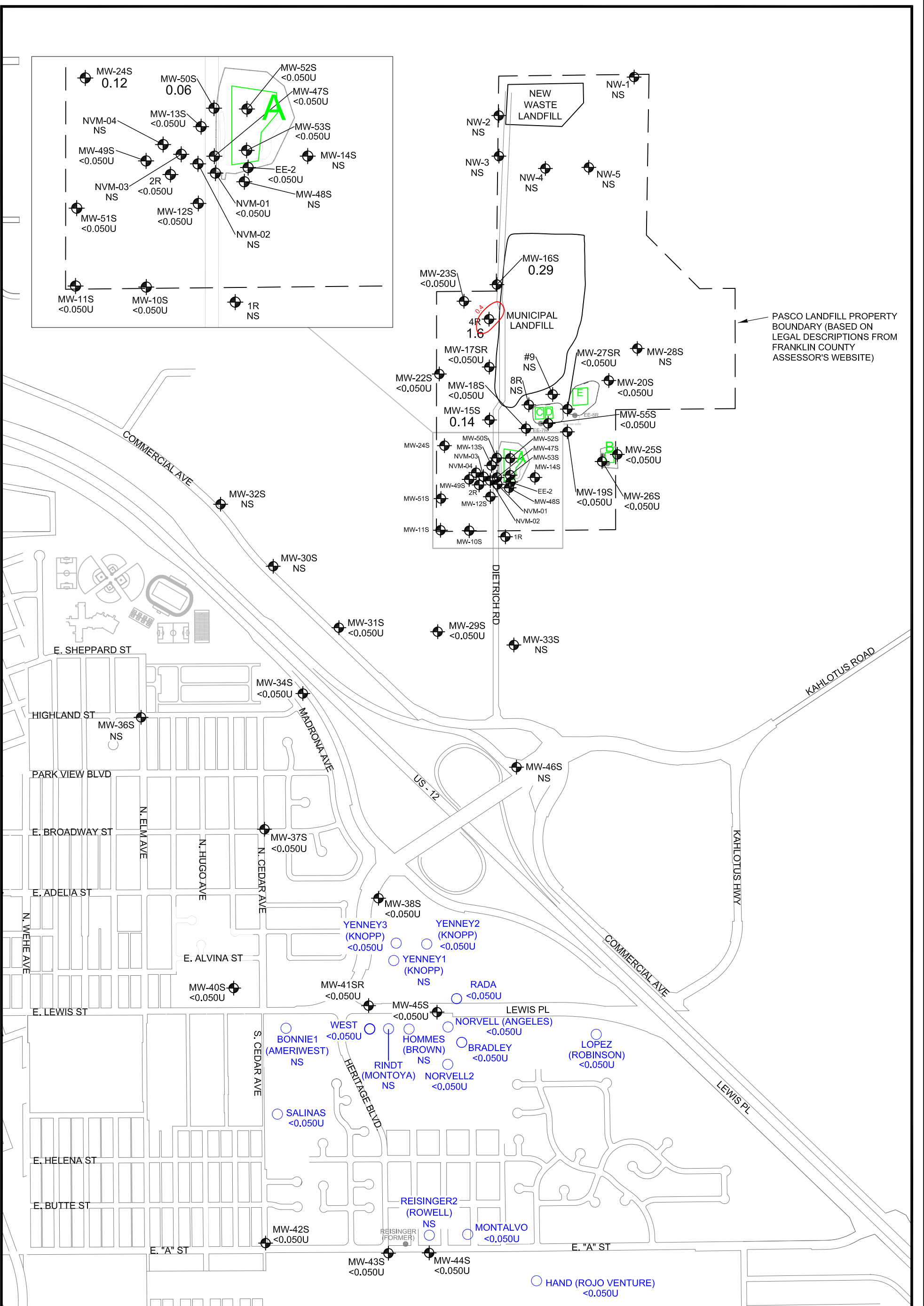


MW-47S 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)  
 TETRACHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERRIED WHERE UNCERTAIN  
 YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TETRACHLOROETHENE CLEANUP LEVEL = 0.4 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

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 Issaquah, Washington 98027

FIGURE 18  
 ISOCONCENTRATION MAP OF  
 TETRACHLOROETHENE IN  
 SHALLOW GROUND WATER  
 JULY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	01/08/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

**MW-47S** 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)

**0.4**  
 TETRACHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN

**YENNEY1 (KNOPP)**  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)

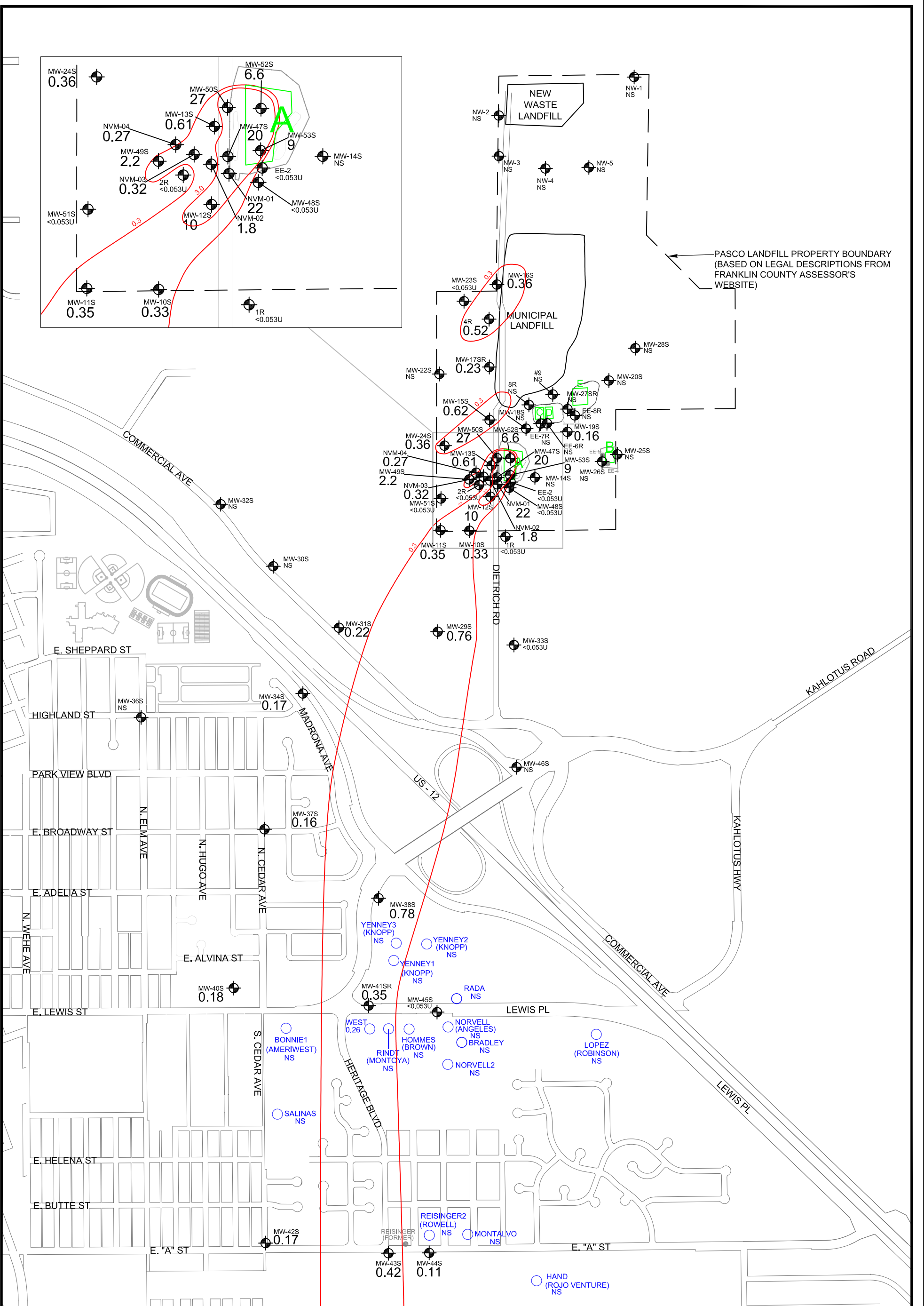
TETRACHLOROETHENE CLEANUP LEVEL = 0.4 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

0 250 500 1000  
 APPROXIMATE SCALE: 1" = 1,000'

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 Issaquah, Washington 98027

**FIGURE 19**  
 ISOCONCENTRATION MAP OF  
 TETRACHLOROETHENE IN  
 SHALLOW GROUND WATER  
 OCTOBER 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMM
DATE	2/25/13		



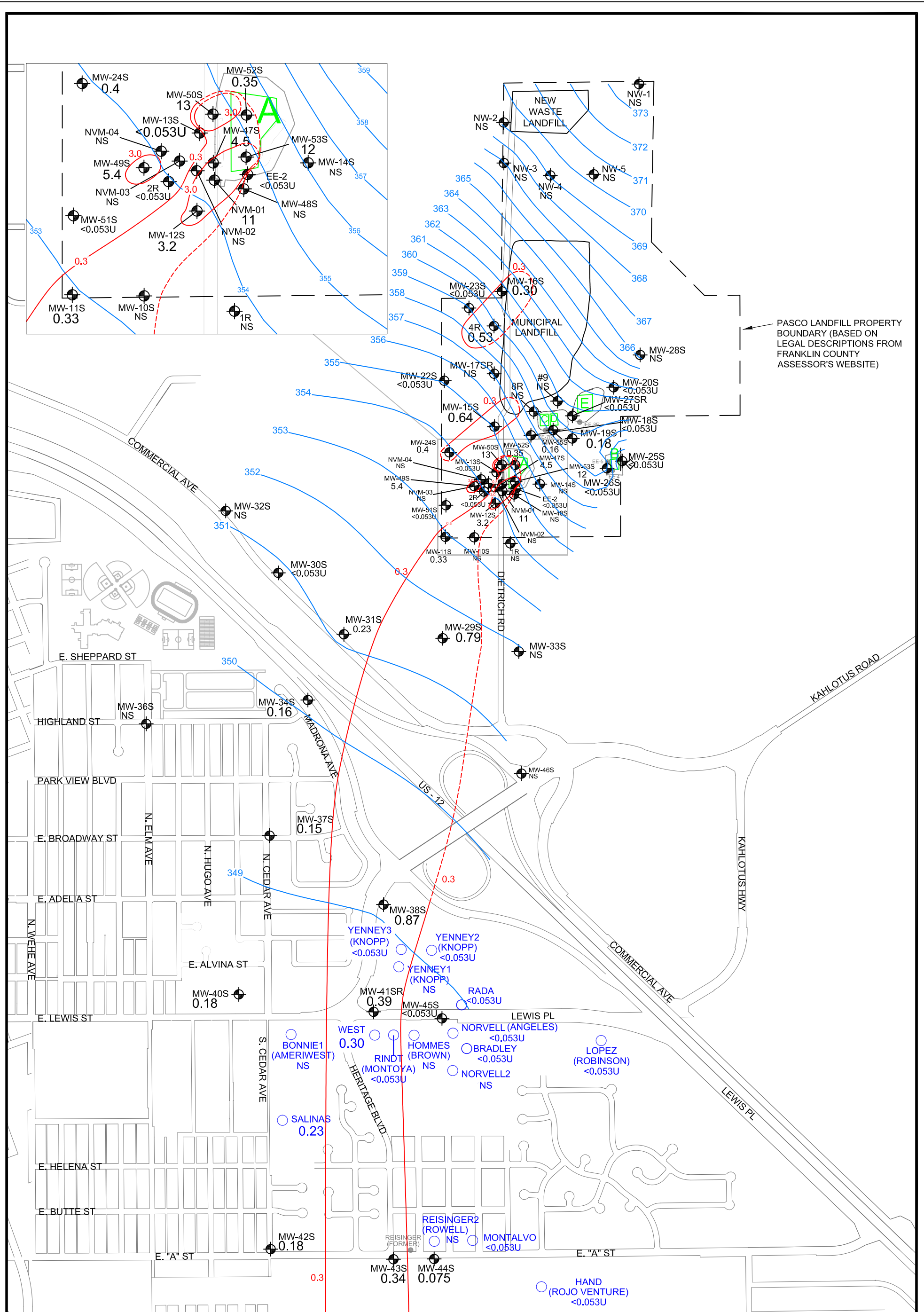
MW-47S 0.08 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)  
 TRICHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED. QUERIED WHERE UNCERTAIN  
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

0 250 500 1000  
 APPROXIMATE SCALE: 1" = 1,000'

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 Issaquah, Washington 98027

**FIGURE 20**  
**ISOCONCENTRATION MAP OF TRICHLOROETHENE IN SHALLOW GROUND WATER JANUARY 2012**

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMH
DATE	06/14/12		



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

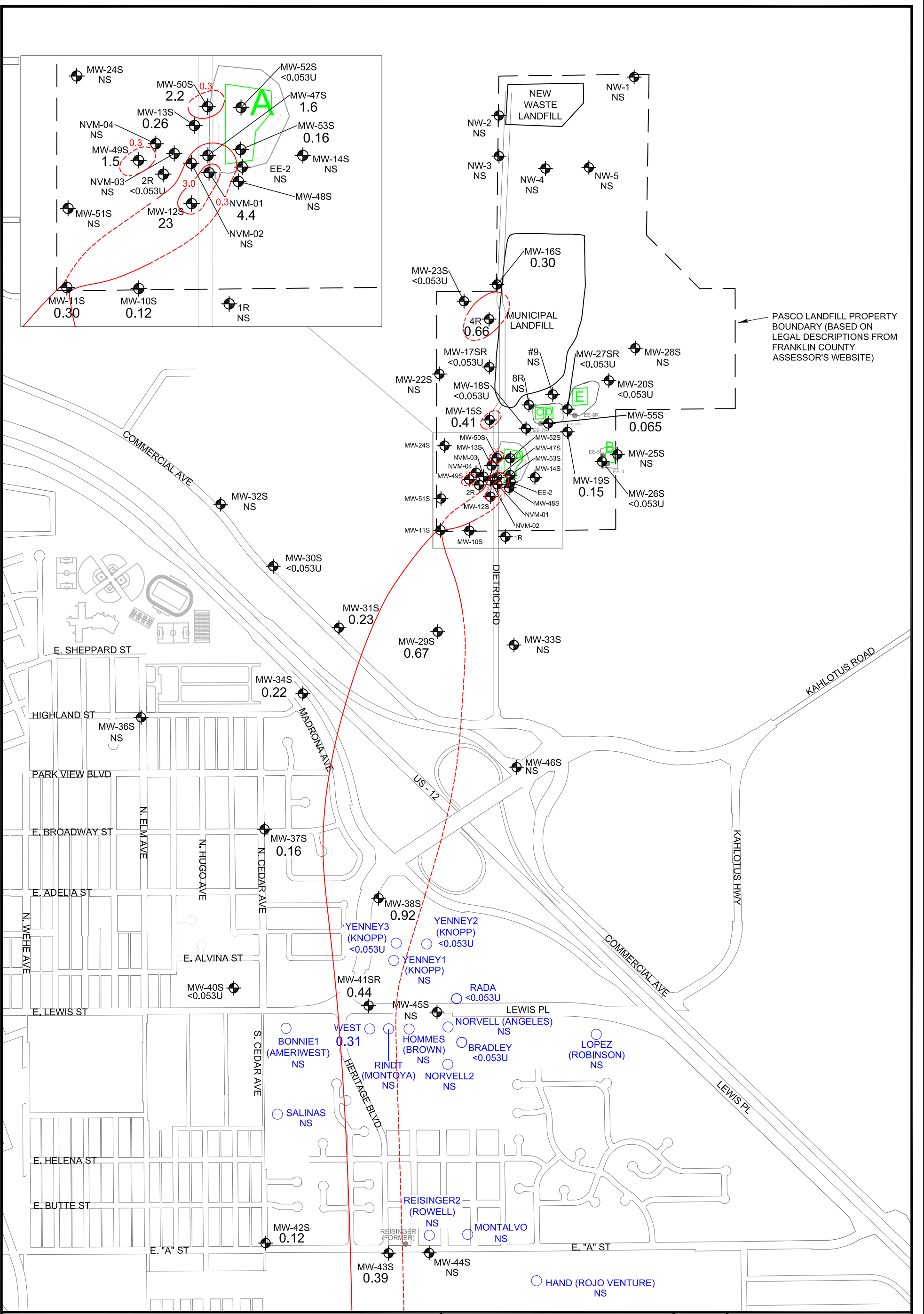
APPROXIMATE SCALE: 1" = 1,000'

MW-47S 0.08 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)  
 TRICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN  
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

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 Issaquah, Washington 98027

**FIGURE 21**  
**ISOCONCENTRATION MAP OF TRICHLOROETHENE IN SHALLOW GROUND WATER**  
**APRIL 2012**

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	TCM
DATE	02/6/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

MW-47S 0.08 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)
   

 TRICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN
   

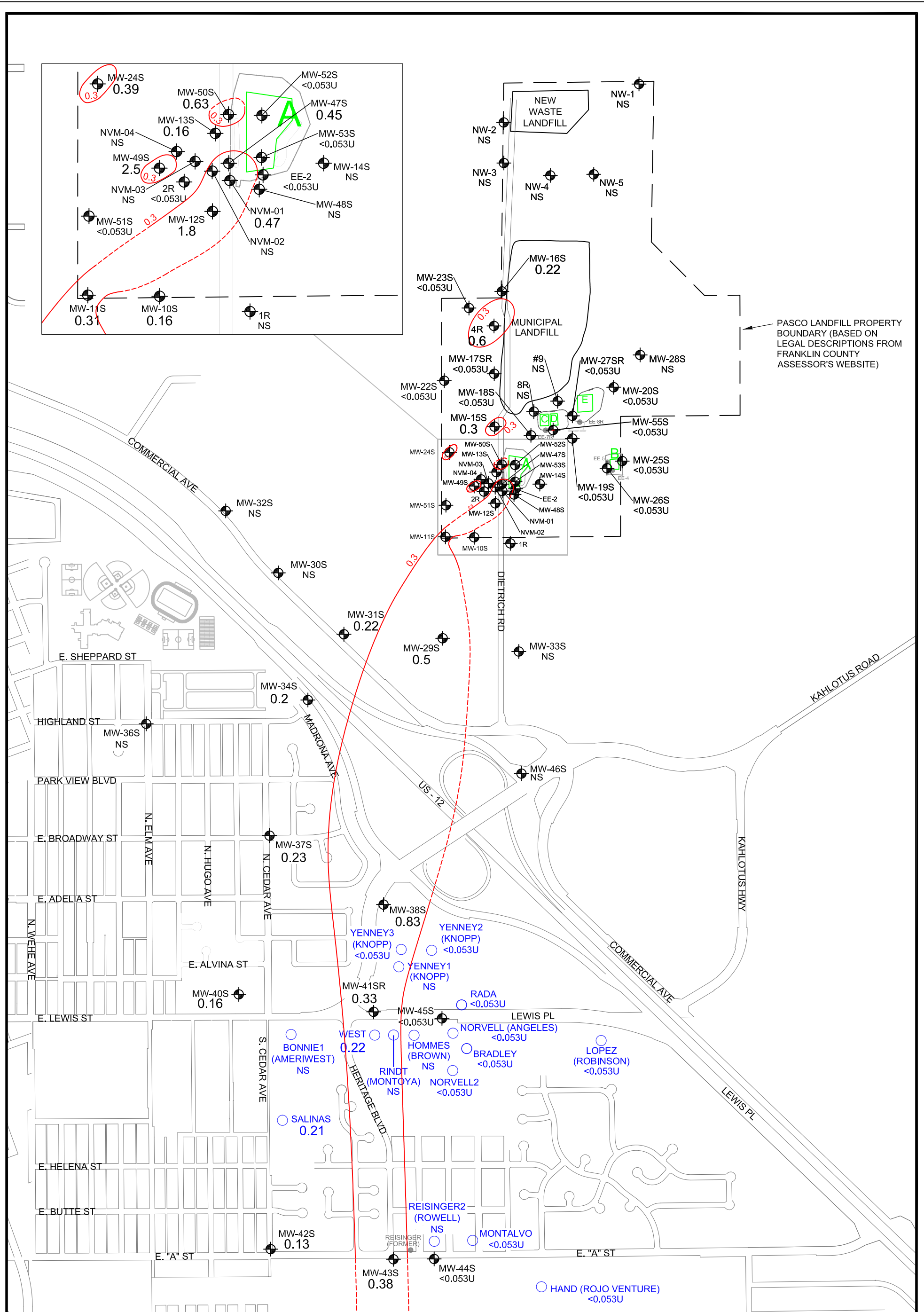
 RESIDENTIAL WELL (WITH PROPERTY OWNER)
   
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L
   
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT
   
 NS = NOT SAMPLED

0 250 500 1000
   
 APPROXIMATE SCALE: 1" = 1,000'

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FIGURE 22
   
**ISOCONCENTRATION MAP OF TRICHLOROETHENE IN SHALLOW GROUND WATER JULY 2012**

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	REVIEWED BY	DATE	
MMH	TCM	01/16/13	



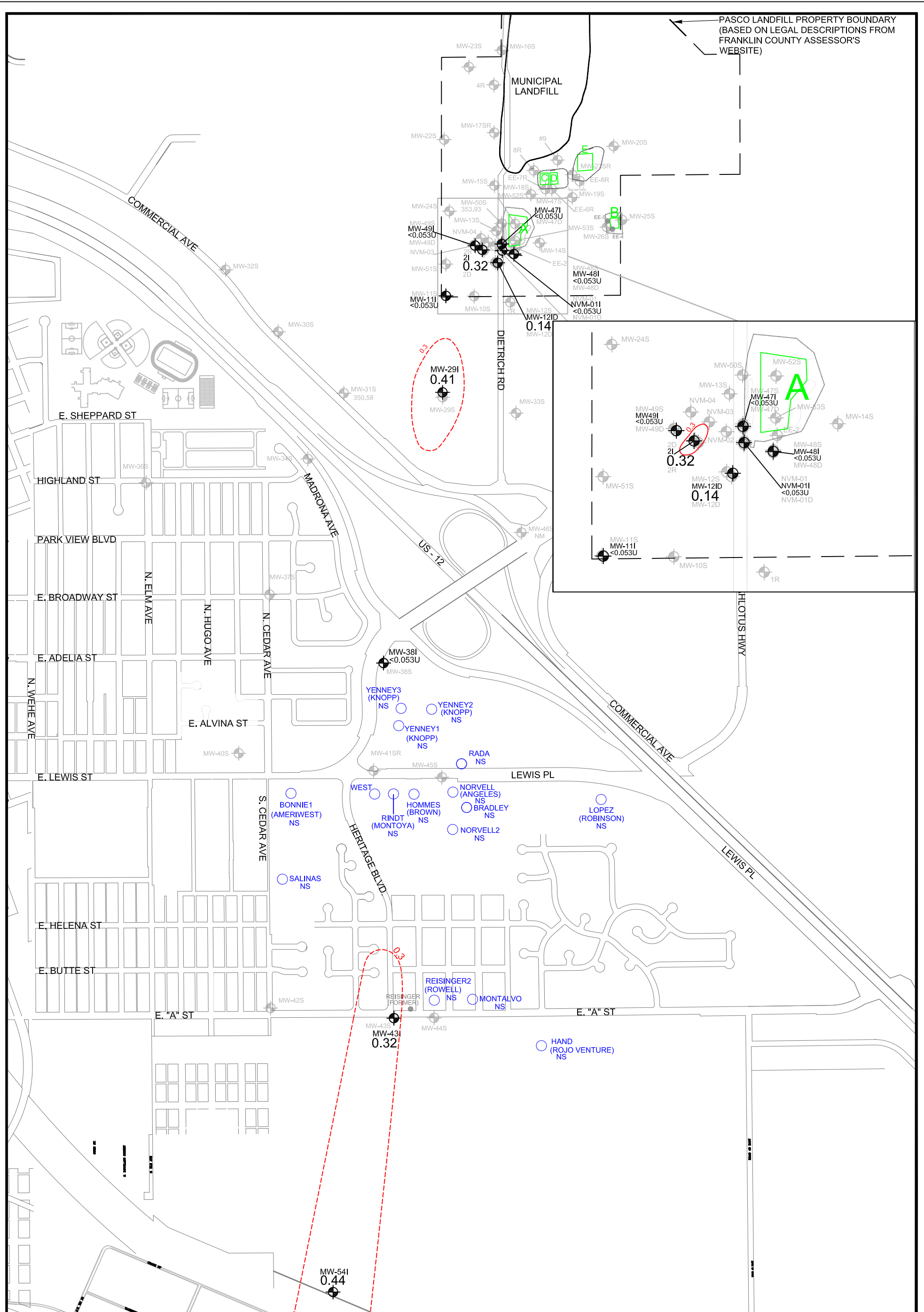
PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

MW-47S 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)  
 TRICHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED. QUERIED WHERE UNCERTAIN  
 YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

0 250 500 1000  
 APPROXIMATE SCALE: 1" = 1,000'

**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027  
 FIGURE 23  
 ISOCONCENTRATION MAP OF  
 TRICHLOROETHENE IN  
 SHALLOW GROUND WATER  
 OCTOBER 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMM
DATE	2/28/13



PASCO LANDFILL PROPERTY BOUNDARY  
(BASED ON LEGAL DESCRIPTIONS FROM  
FRANKLIN COUNTY ASSESSOR'S  
WEBSITE)

MUNICIPAL  
LANDFILL

COMMERCIAL AVE

DIETRICH RD

E. SHEPPARD ST

HIGHLAND ST

PARK VIEW BLVD

E. BROADWAY ST

E. ADELIA ST

E. LEWIS ST

E. HELENA ST

E. BUTTE ST

E. "A" ST

S. CEDAR AVE

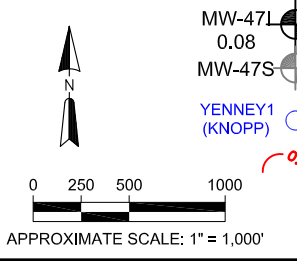
HERITAGE BLVD

LEWIS PL

COMMERCIAL AVE

PHILOTUS HWY

LEWIS PL

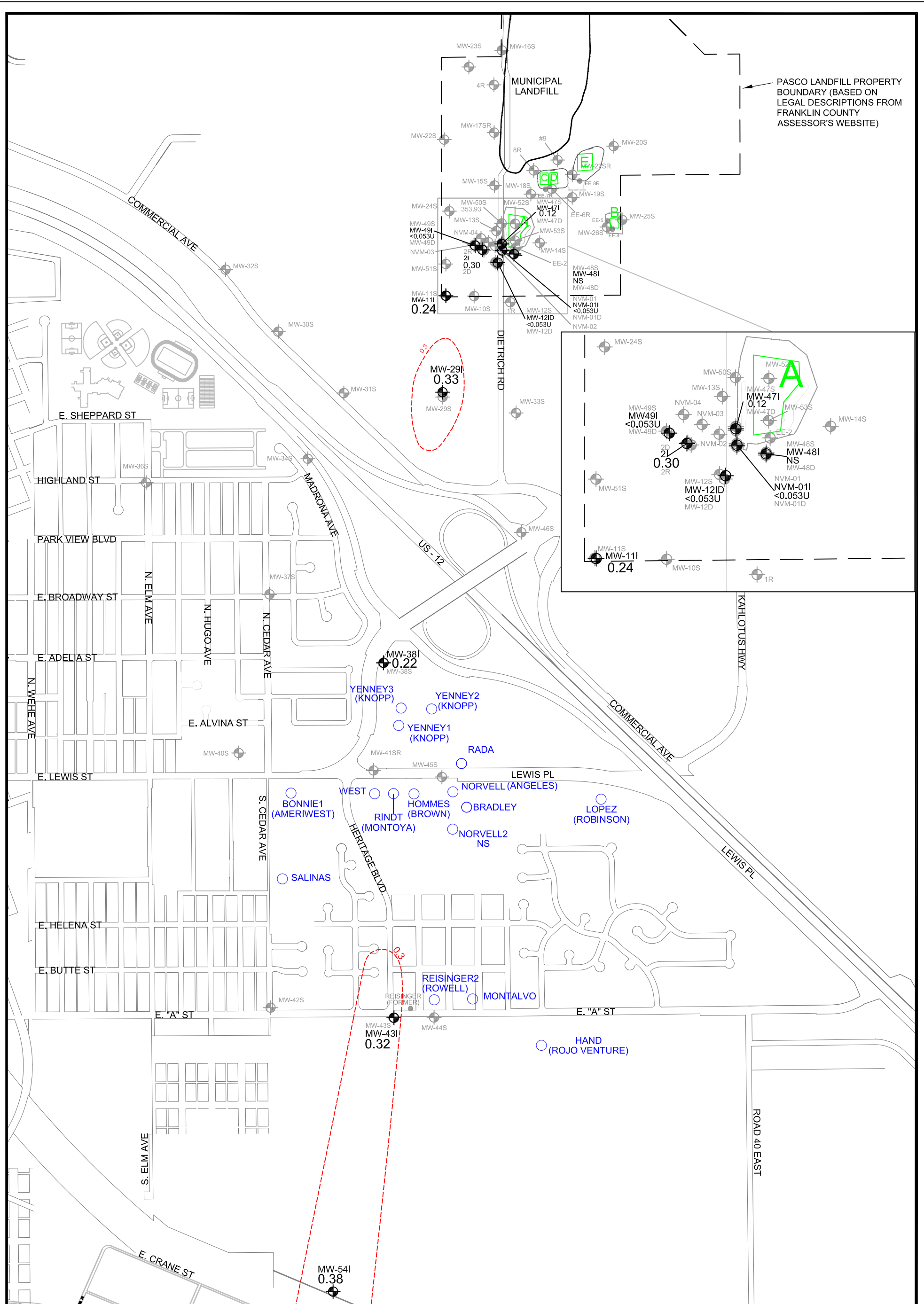


MW-471 0.08  
 MW-475 0.32  
 YENNEY1 (KNOPP)  
 INTERMEDIATE MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)  
 SHALLOW AND DEEP MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TRICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN  
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L  
 <###U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

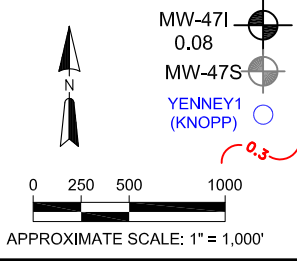
**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 24  
 ISOCONCENTRATION MAP OF TRICHLOROETHENE IN INTERMEDIATE GROUND WATER  
 JANUARY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	3/4/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)



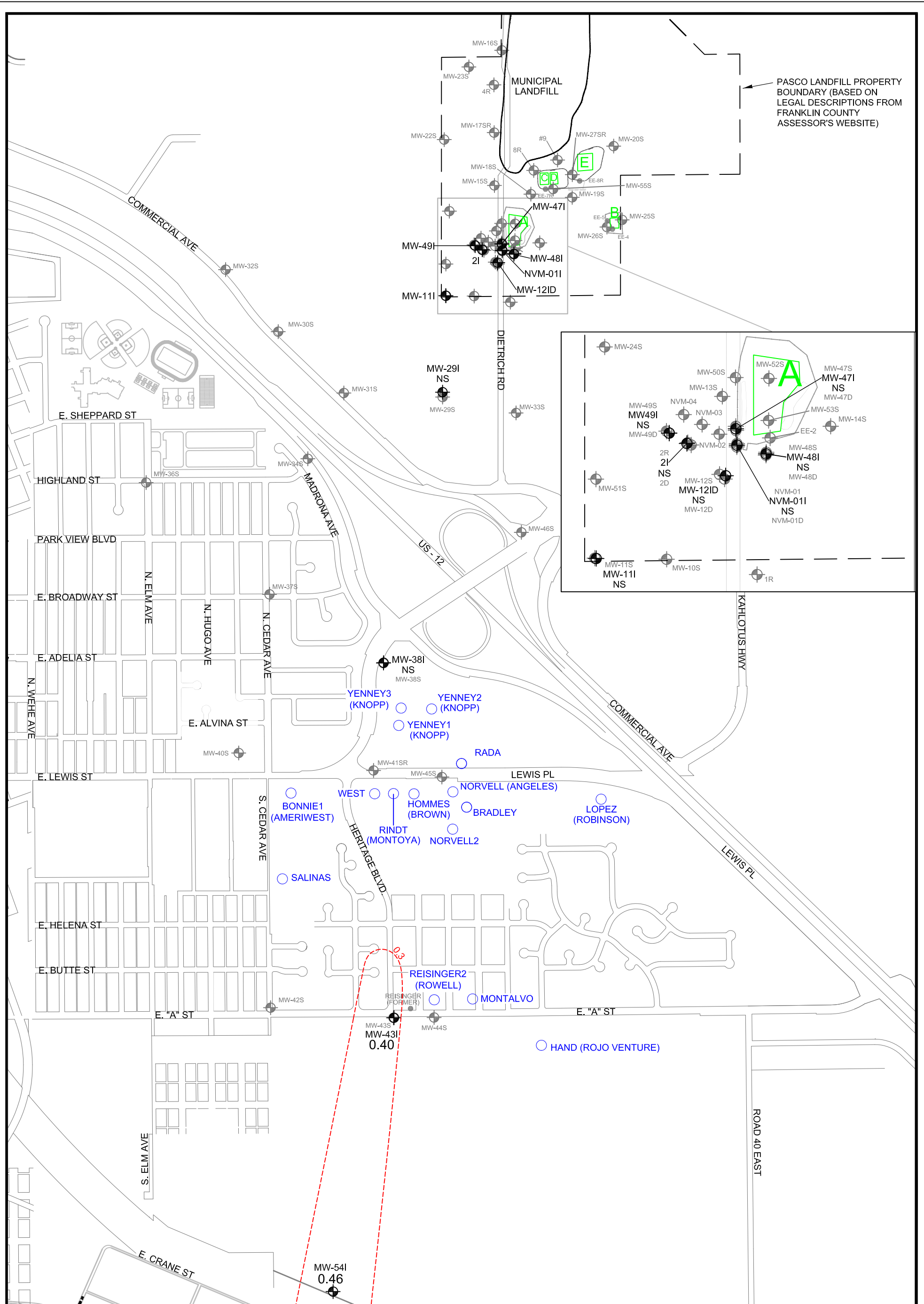
- MW-471 0.08 ● INTERMEDIATE MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)
- MW-475 ● SHALLOW AND DEEP MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)
- YENNEY1 (KNOPP) ○ RESIDENTIAL WELL (WITH PROPERTY OWNER)
- 0.3 - - - - TRICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERRIED WHERE UNCERTAIN
- 0.3 ——— TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L
- <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT
- NS = NOT SAMPLED

**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 25  
**ISOCONCENTRATION MAP OF TRICHLOROETHENE IN INTERMEDIATE GROUND WATER**  
 APRIL 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	3/4/13





PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

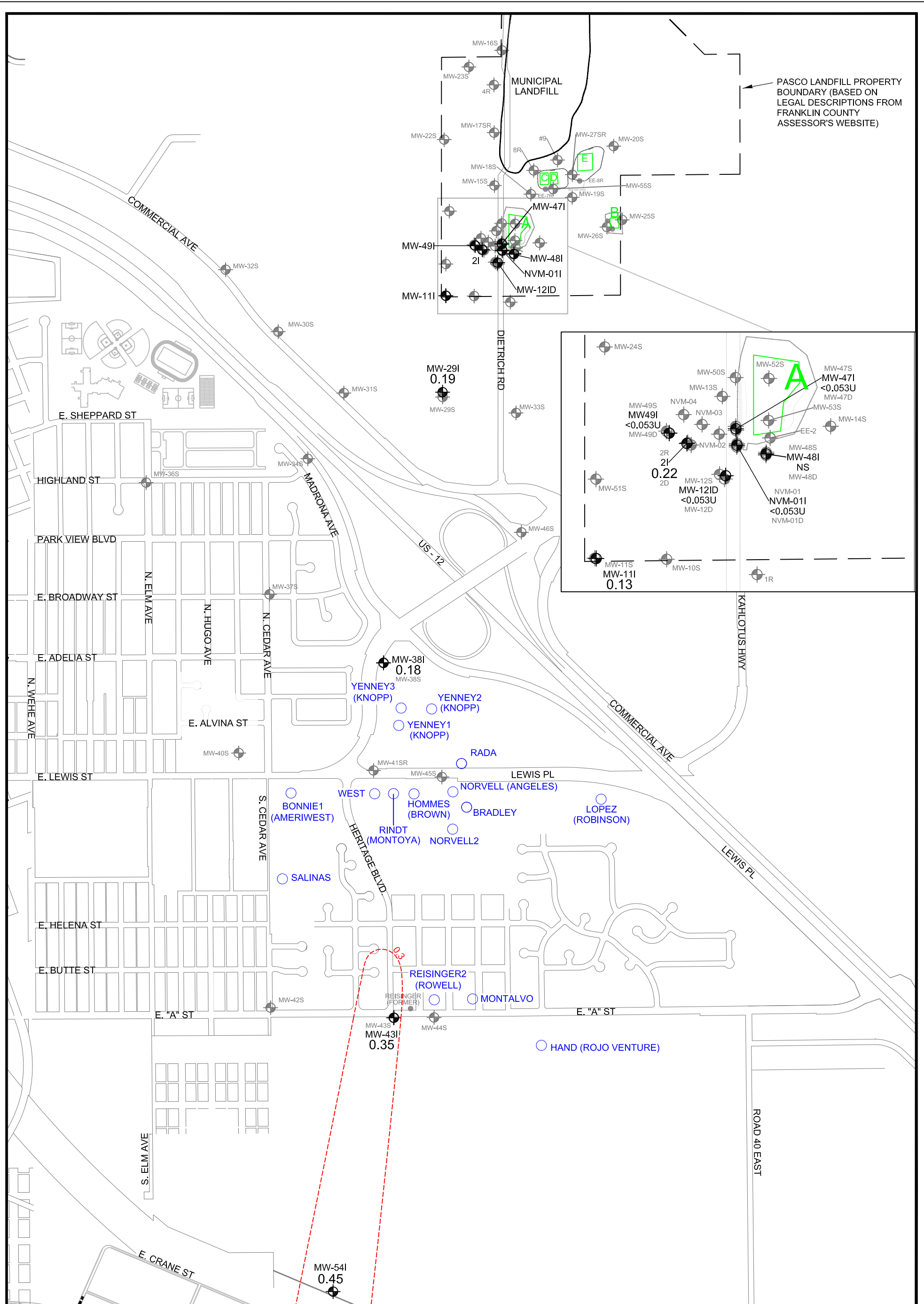
MW-431 0.40  
 MW-47S  
 YENNEY1 (KNOPP)  
 0.3  
 INTERMEDIATE MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)  
 SHALLOW AND DEEP MONITORING WELLS (INCLUDED FOR LOCATION REFERENCE)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 TRICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN  
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

0 250 500 1000  
 APPROXIMATE SCALE: 1" = 1,000'

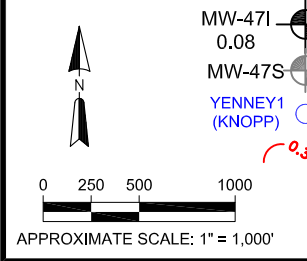
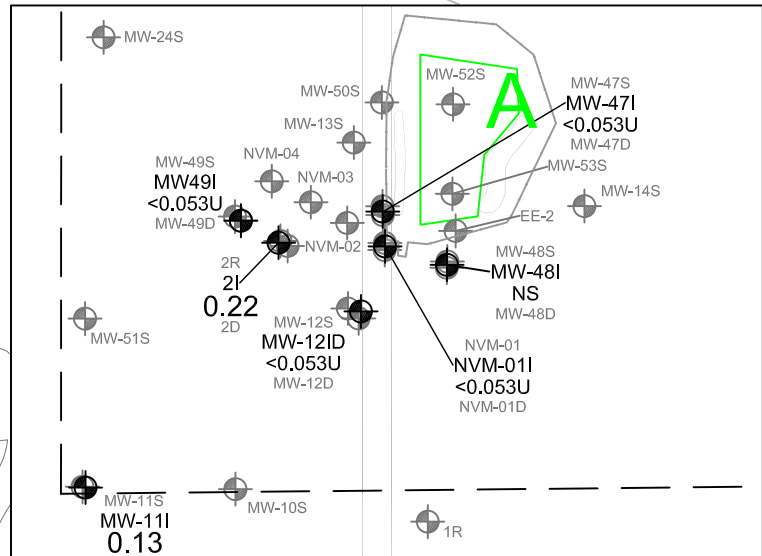
**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

**FIGURE 26**  
 ISOCONCENTRATION MAP OF TRICHLOROETHENE IN INTERMEDIATE GROUND WATER  
 JULY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	3/4/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

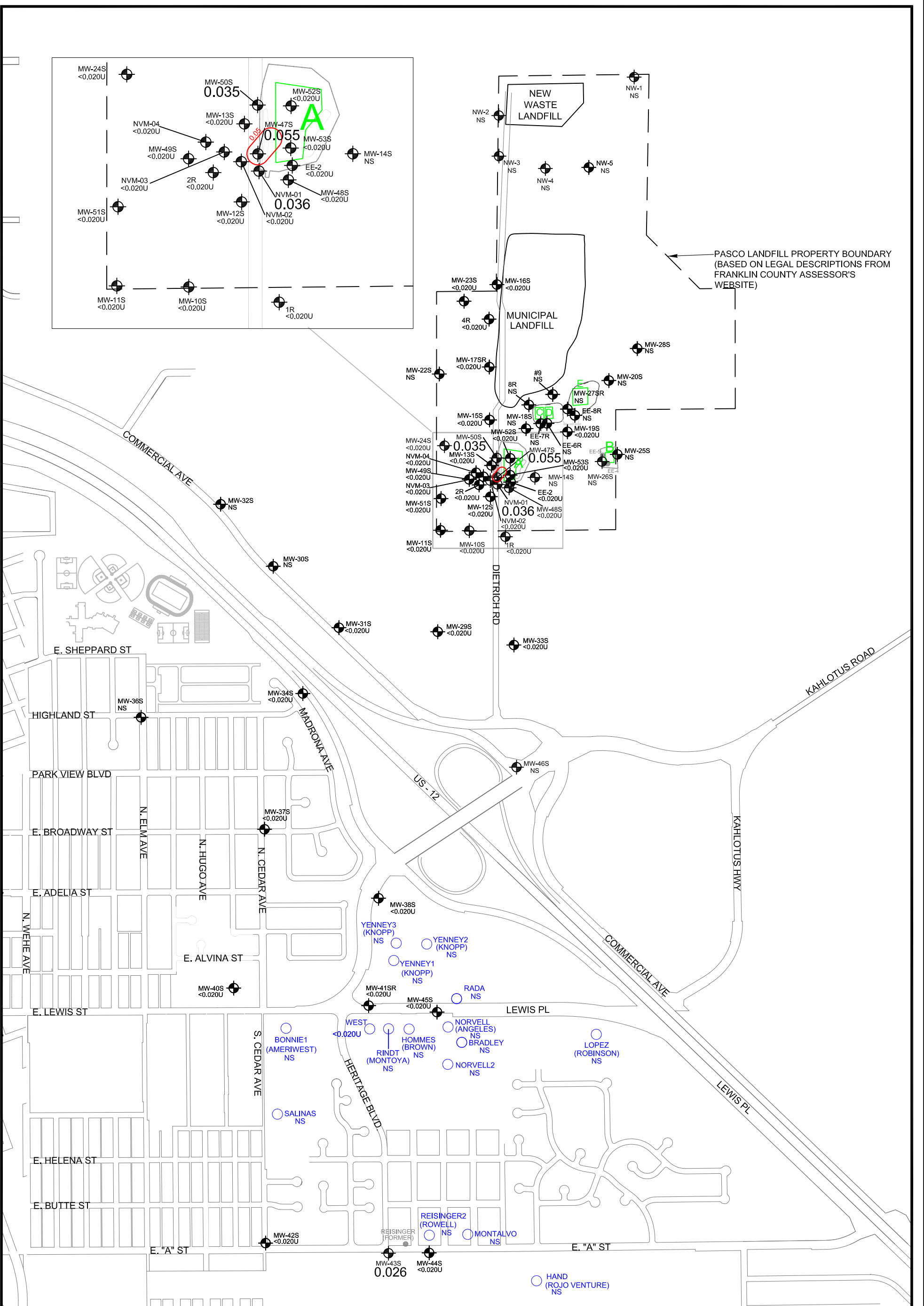


MW-471 0.08  
 MW-47S  
 YENNEY1 (KNOPP)  
 TRICHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN  
 TRICHLOROETHENE CLEANUP LEVEL = 0.3 ug/L  
 <###U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 27  
 ISOCONCENTRATION MAP OF TRICHLOROETHENE IN INTERMEDIATE GROUND WATER  
 OCTOBER 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMM
DATE	3/4/13



APPROXIMATE SCALE: 1" = 1,000'

MW-47S 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)

YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)

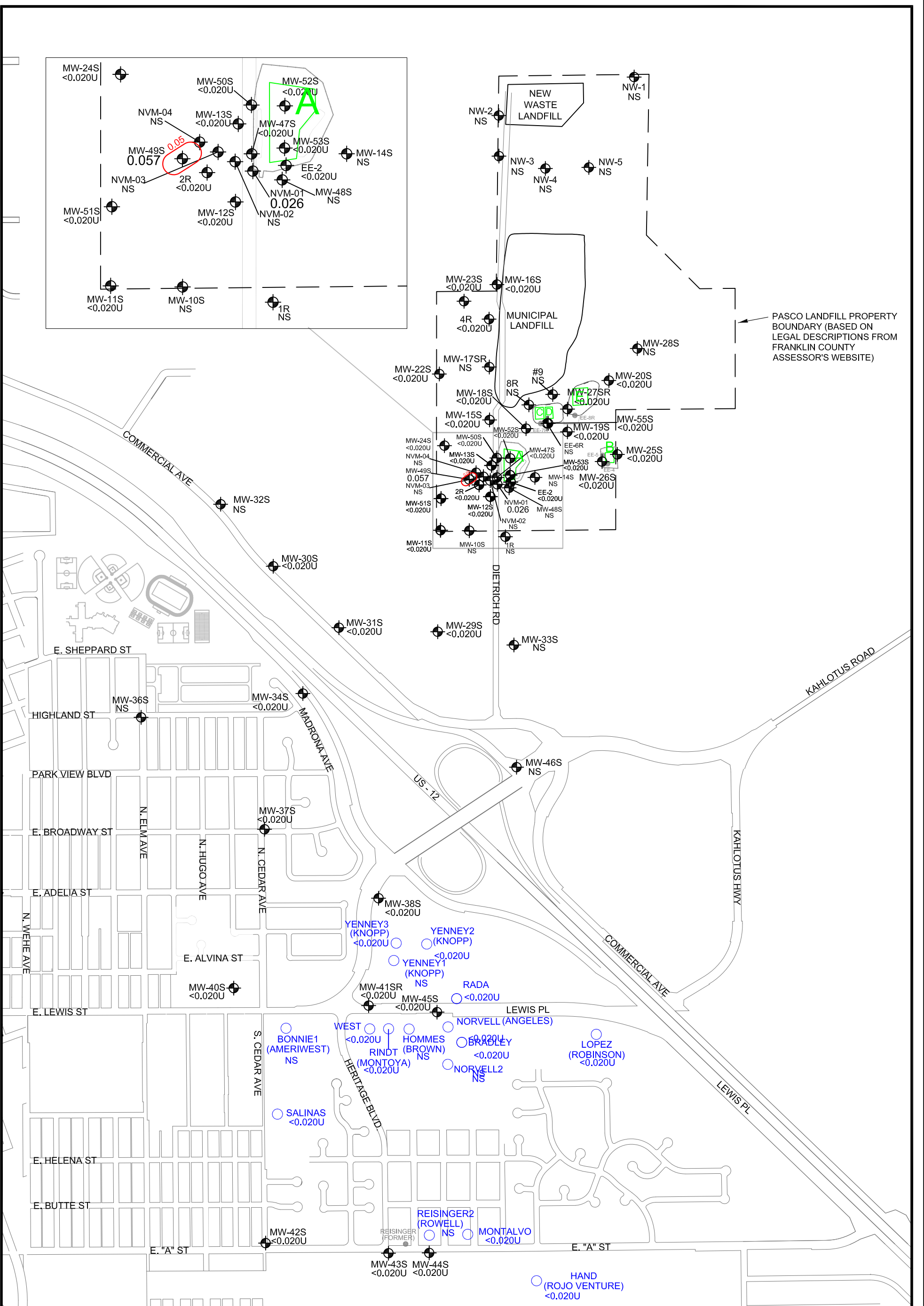
0.05  
 1,1 DICHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN

NS  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 1,1-DICHLOROETHENE CLEANUP LEVEL = 0.05 ug/L  
 NS = NOT SAMPLED

ENVIRONMENTAL PARTNERS INC  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 28  
 ISOCONCENTRATION MAP OF  
 1,1-DICHLOROETHENE IN  
 SHALLOW GROUND WATER  
 JANUARY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	06/14/12



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

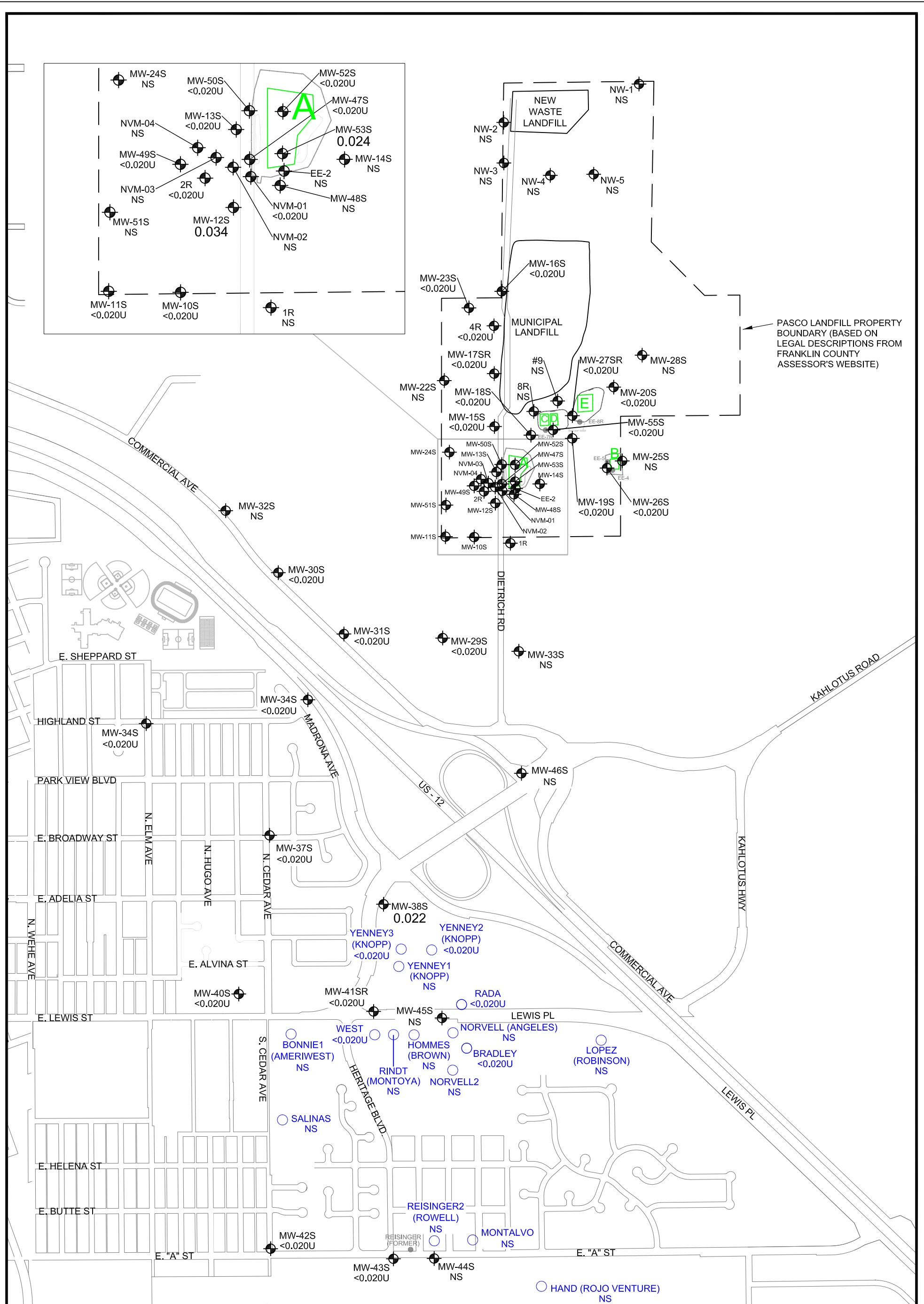
MW-47S 0.08 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)
   
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)
   
 1,1 DICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN
   
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT
   
 1,1-DICHLOROETHENE CLEANUP LEVEL = 0.05 ug/L
   
 NS = NOT SAMPLED

0 250 500 1000
   
 APPROXIMATE SCALE: 1" = 1,000'

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 295 NE Gilman Boulevard, Suite 201
   
 Issaquah, Washington 98027

FIGURE 29
   
**ISOCONCENTRATION MAP OF 1,1-DICHLOROETHENE IN SHALLOW GROUND WATER**
  
 APRIL 2012

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	ALW	REVIEWED BY	MMH
DATE	07/10/12		



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

APPROXIMATE SCALE: 1" = 1,000'

MW-47S 0.08  
 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)

YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)

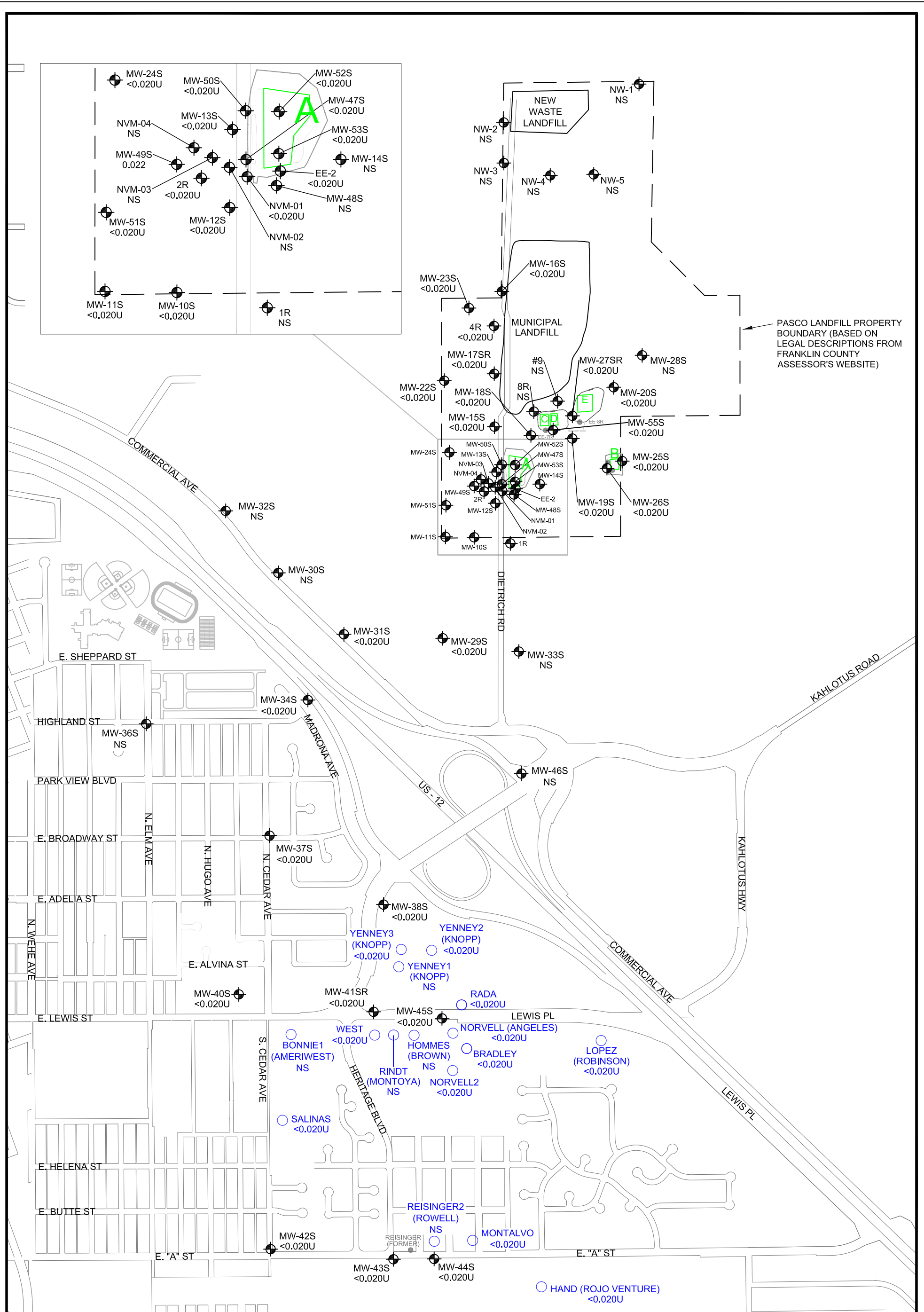
0.05  
 1,1 DICHLOROETHENE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN

<##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 1,1-DICHLOROETHENE CLEANUP LEVEL = 0.05 ug/L  
 NS = NOT SAMPLED

**ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 30  
**ISOCONCENTRATION MAP OF 1,1-DICHLOROETHENE IN SHALLOW GROUND WATER JULY 2012**

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	10/5/12



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

APPROXIMATE SCALE: 1" = 1,000'

MW-47S 0.08  
 SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)

YENNEY1 (KNOPP)  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)

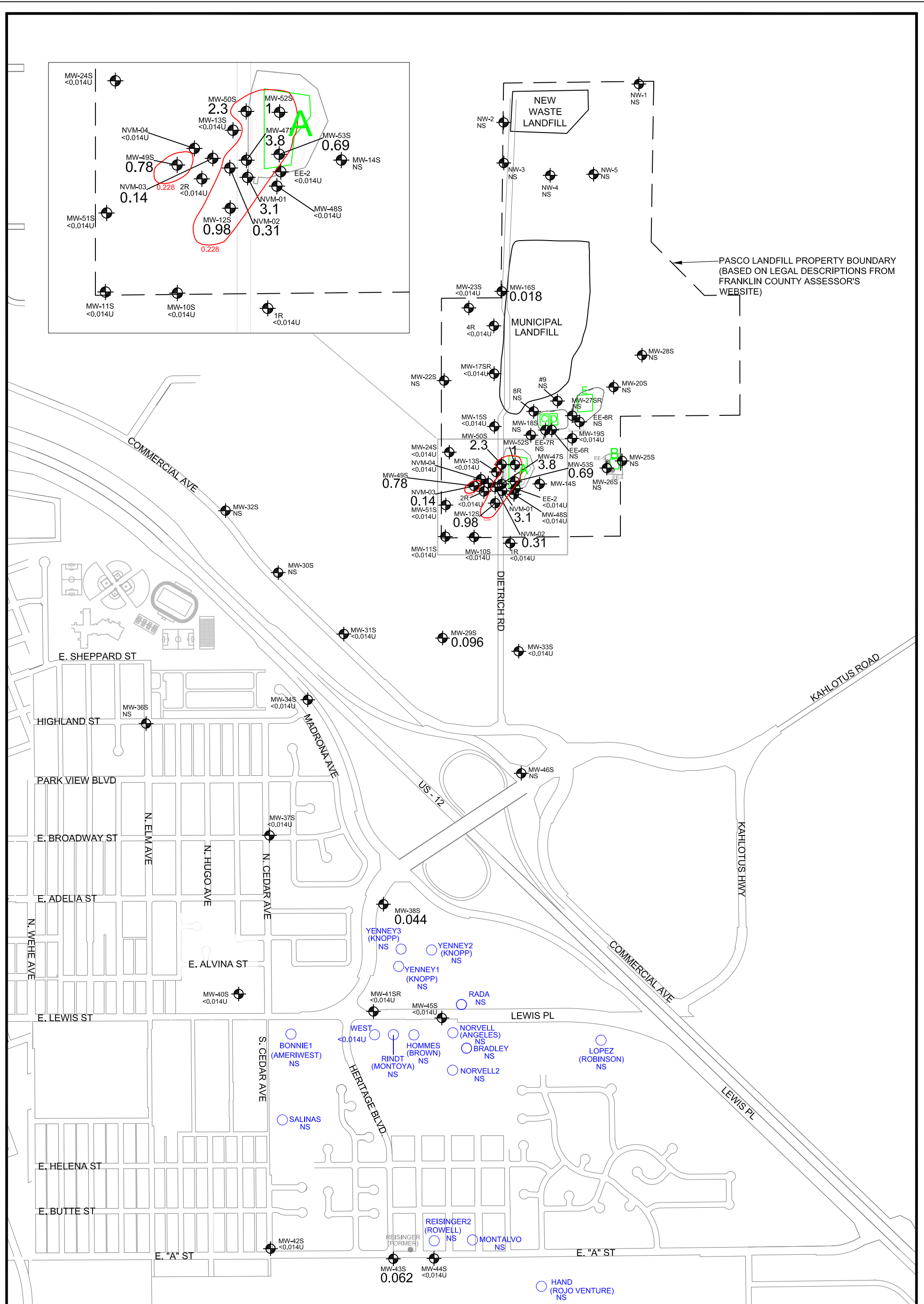
0.05  
 1,1-DICHLOROETHENE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN

<##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 1,1-DICHLOROETHENE CLEANUP LEVEL = 0.05 ug/L  
 NS = NOT SAMPLED

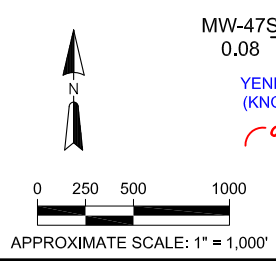
**ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 31  
**ISOCONCENTRATION MAP OF 1,1-DICHLOROETHENE IN SHALLOW GROUND WATER OCTOBER 2012**

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMM
DATE	2/25/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

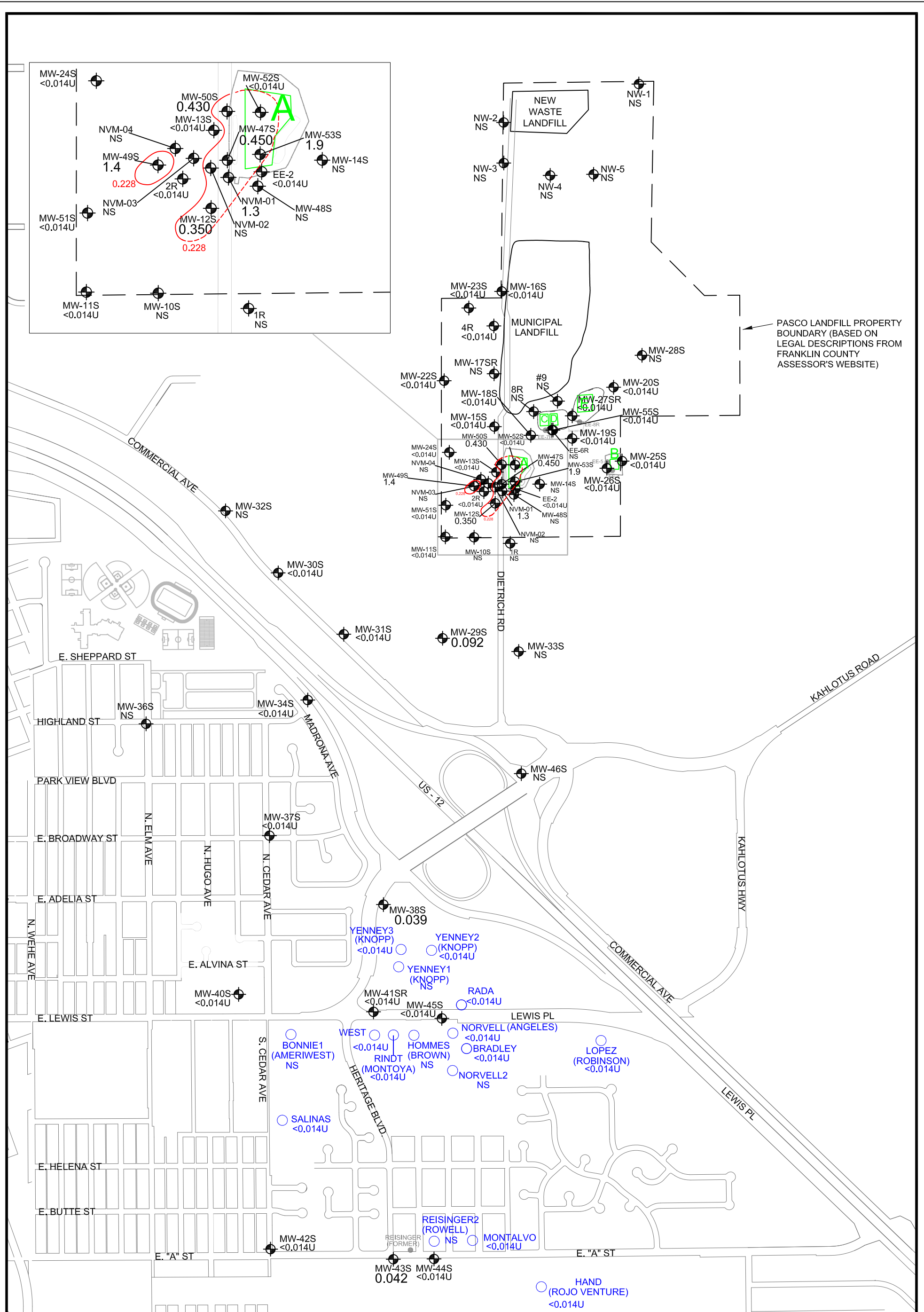


MW-47S 0.08 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)  
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 1,2-DICHLOROETHANE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERRIED WHERE UNCERTAIN  
 1,2-DICHLOROETHANE CLEANUP LEVEL = 0.228 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

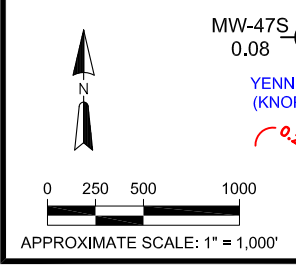
**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 32  
**ISOCONCENTRATION MAP OF 1,2 DICHLOROETHANE IN SHALLOW GROUND WATER JANUARY 2012**

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	06/14/12



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)



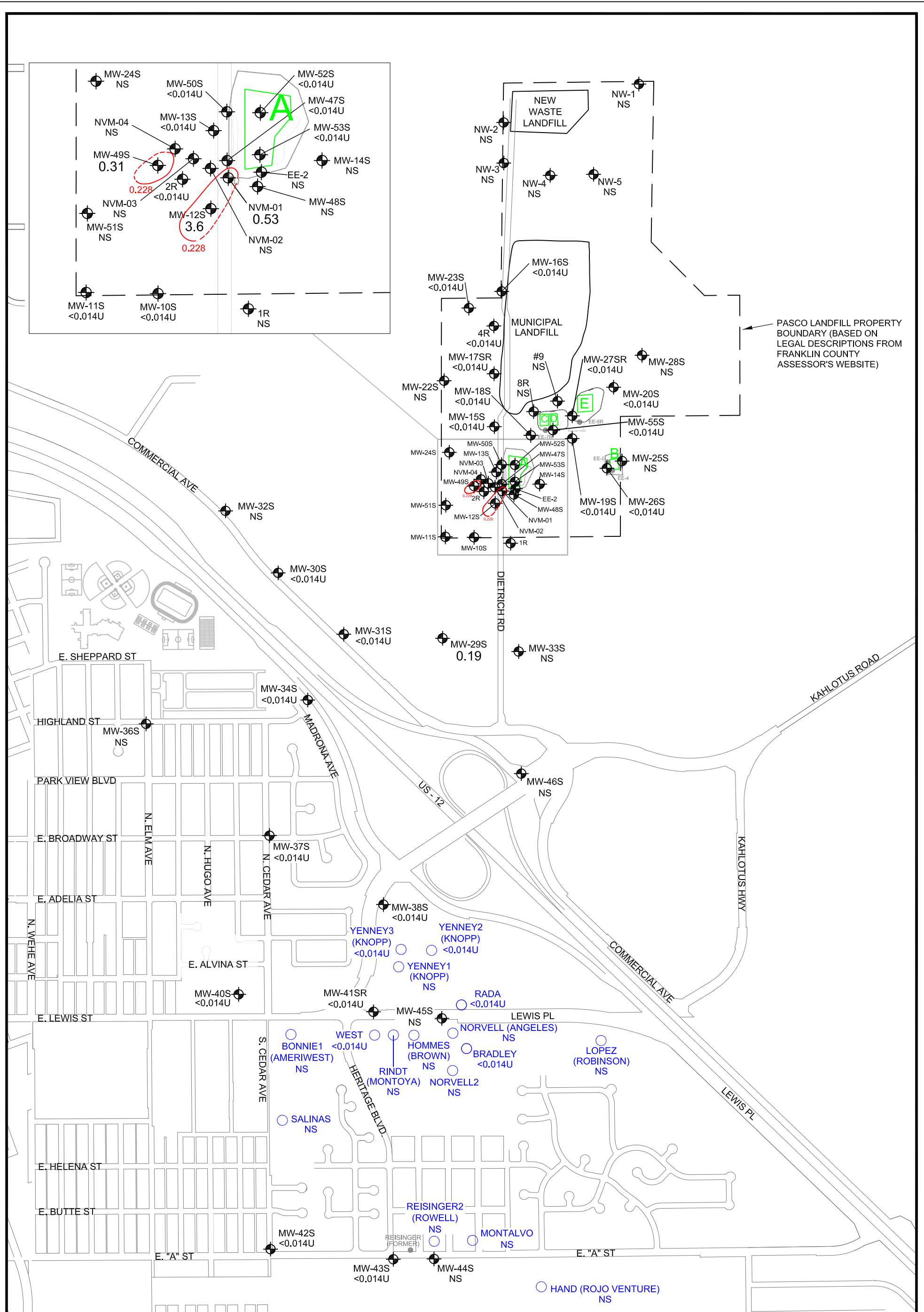
MW-47S 0.08 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)  
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 1,2-DICHLOROETHANE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERRED WHERE UNCERTAIN  
 1,2-DICHLOROETHANE CLEANUP LEVEL = 0.228 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

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 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 33  
**ISOCONCENTRATION MAP OF 1,2 DICHLOROETHANE IN SHALLOW GROUND WATER APRIL 2012**

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	01/11/13





PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

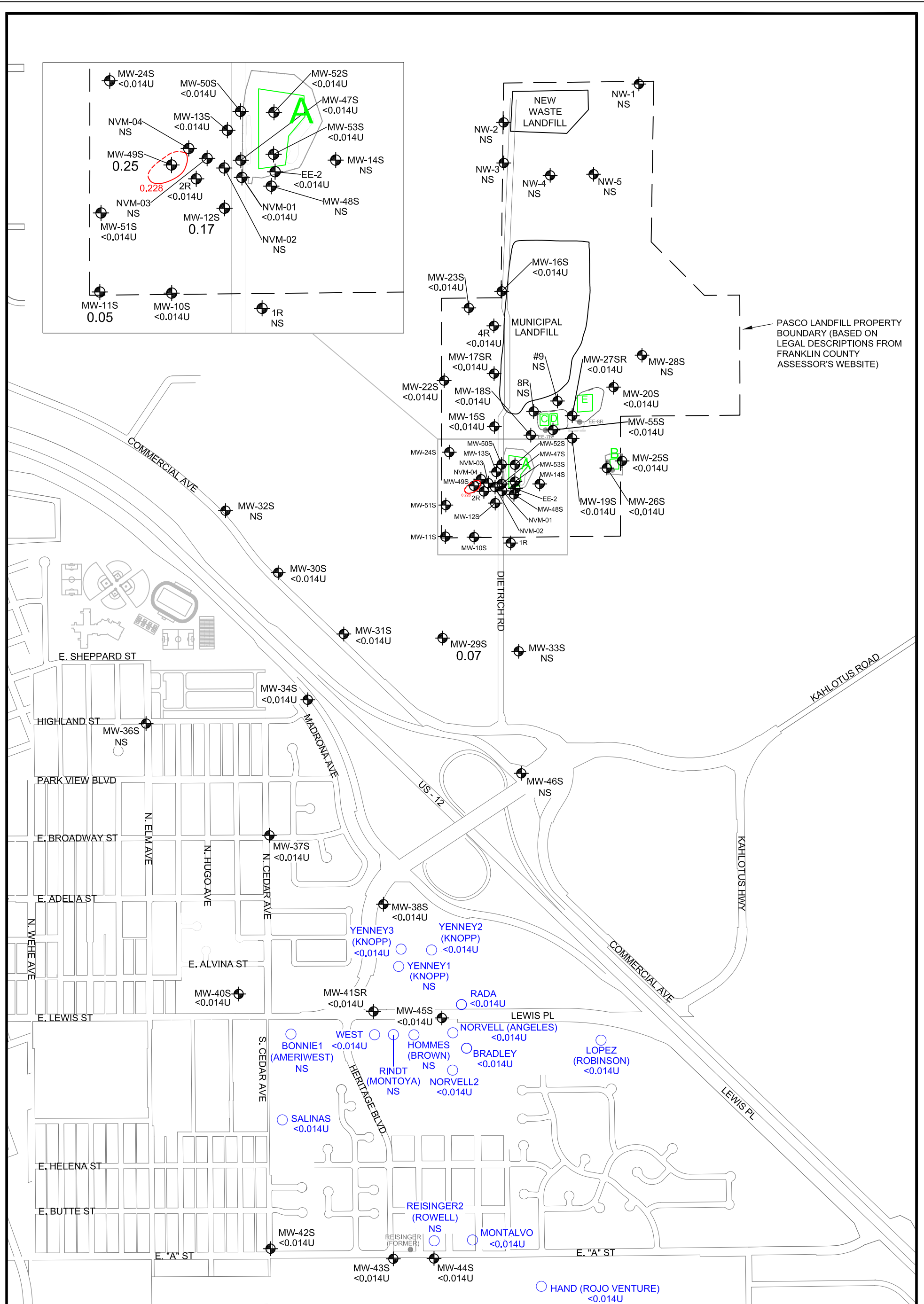
SHALLOW MONITORING WELL  
 CONCENTRATION IN GROUND WATER (ug/L)  
 1,2-DICHLOROETHANE CONCENTRATION CONTOUR  
 DASHED WHERE INFERRED, QUERIED WHERE UNCERTAIN  
 RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 1,2-DICHLOROETHANE CLEANUP LEVEL = 0.228 ug/L  
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT  
 NS = NOT SAMPLED

0 250 500 1000  
 APPROXIMATE SCALE: 1" = 1,000'

**ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 34  
 ISOCONCENTRATION MAP OF  
 1,2 DICHLOROETHANE IN  
 SHALLOW GROUND WATER  
 JULY 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	MMH
REVIEWED BY	TCM
DATE	01/08/13



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

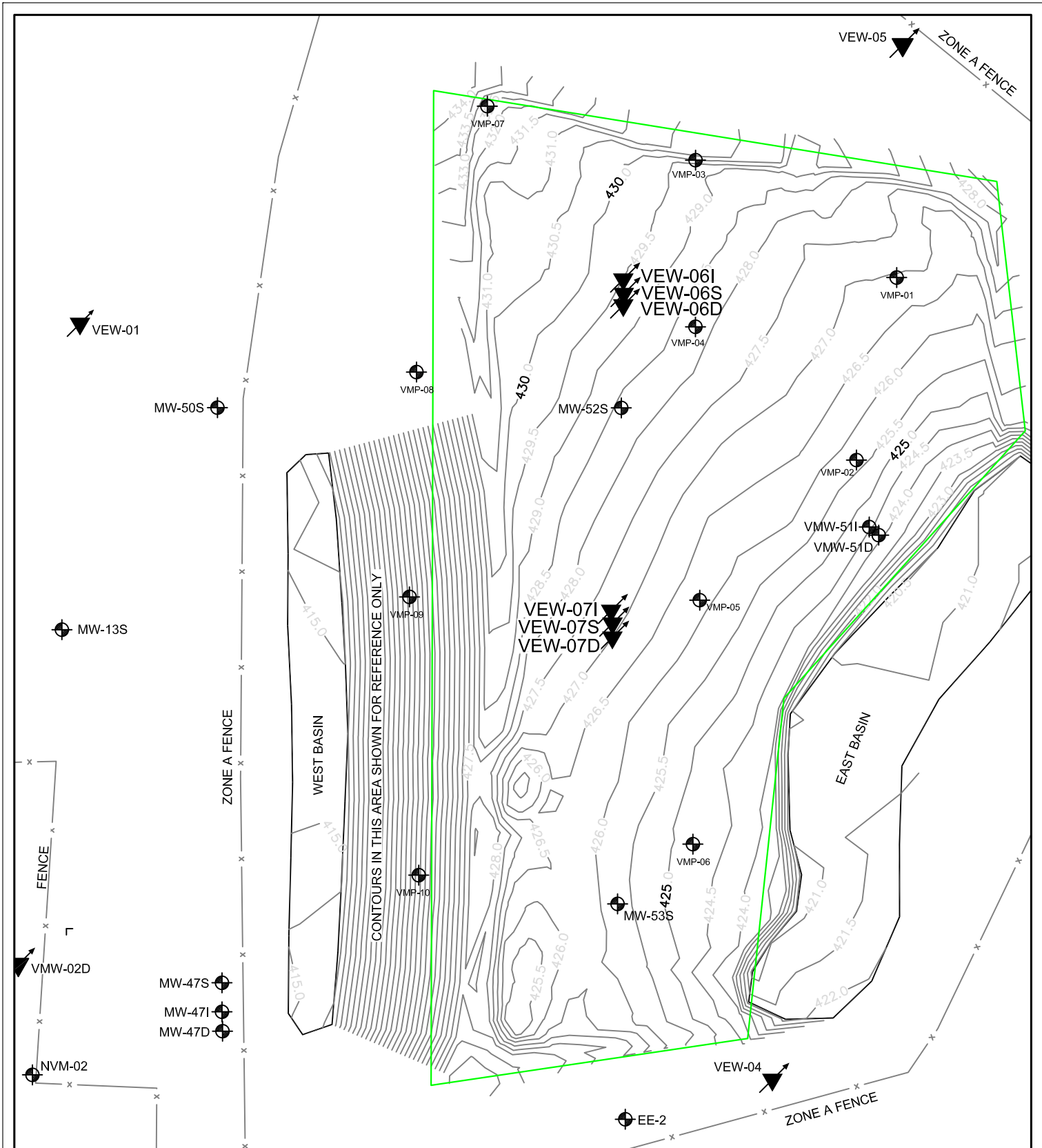
MW-47S 0.08 SHALLOW MONITORING WELL CONCENTRATION IN GROUND WATER (ug/L)
   
 RESIDENTIAL WELL (WITH PROPERTY OWNER)
   
 1,2-DICHLOROETHANE CONCENTRATION CONTOUR DASHED WHERE INFERRED, QUERRIED WHERE UNCERTAIN
   
 1,2-DICHLOROETHANE CLEANUP LEVEL = 0.228 ug/L
   
 <##U = COMPOUND NOT DETECTED ABOVE REPORTING LIMIT
   
 NS = NOT SAMPLED

0 250 500 1000
   
 APPROXIMATE SCALE: 1" = 1,000'

ENVIRONMENTAL PARTNERS INC
   
 295 NE Gilman Boulevard, Suite 201
   
 Issaquah, Washington 98027

FIGURE 35
   
 ISOCONCENTRATION MAP OF 1,2 DICHLOROETHANE IN SHALLOW GROUND WATER OCTOBER 2012

PROJECT	03912.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	3/1/13



KEY:

VEW-05 SOIL VAPOR EXTRACTION WELL  
 VMP-06 VAPOR MONITORING PROBE OR GROUND WATER MONITORING WELL  
 LANDFILL SURFACE ELEVATION CONTOUR, IN FEET (08-29-08)

SCALE: 1" = 50'

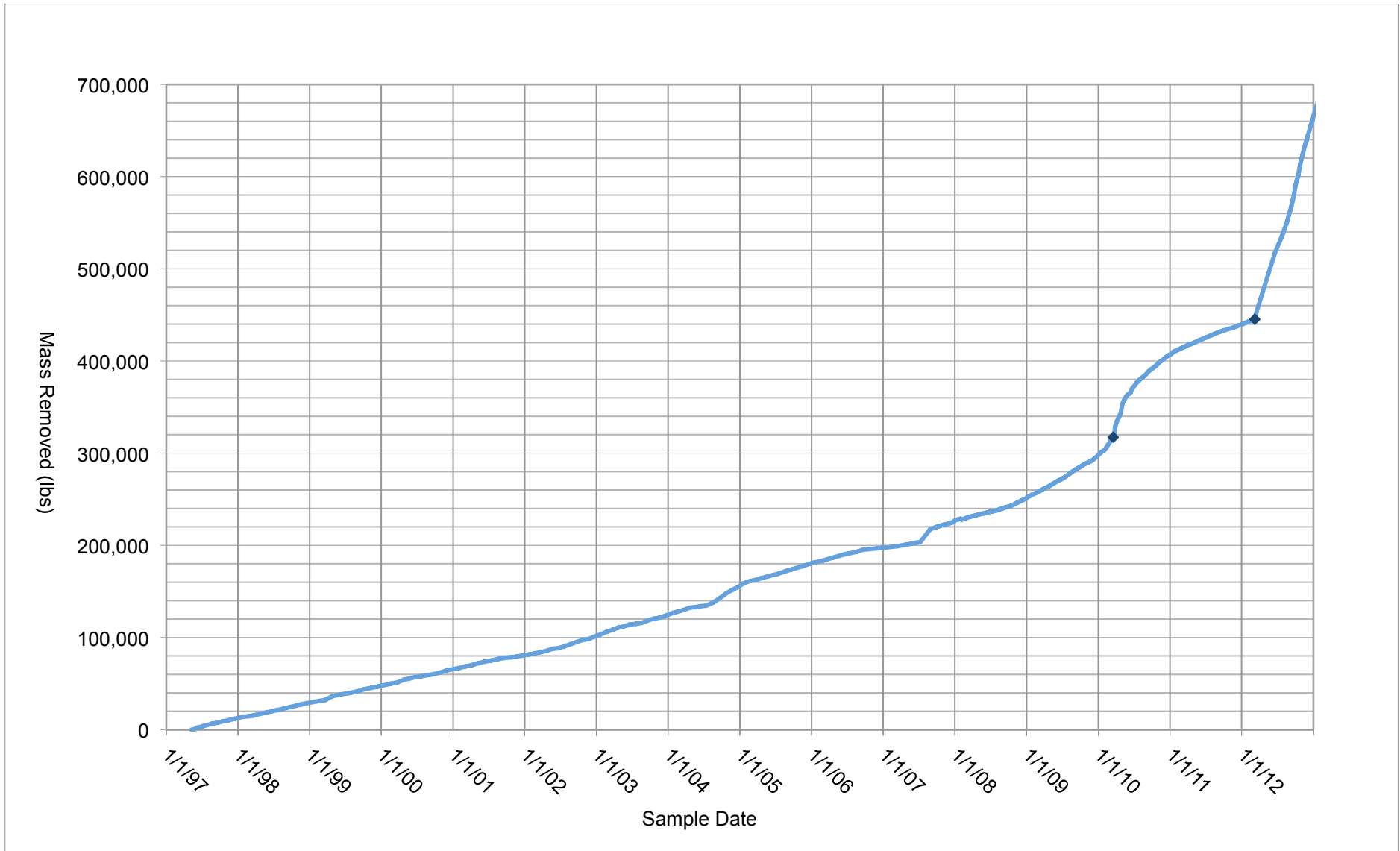
ENVIRONMENTAL PARTNERS INC  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

FIGURE 36

LOCATIONS OF SOIL VAPOR EXTRACTION (SVE) SYSTEM WELLS

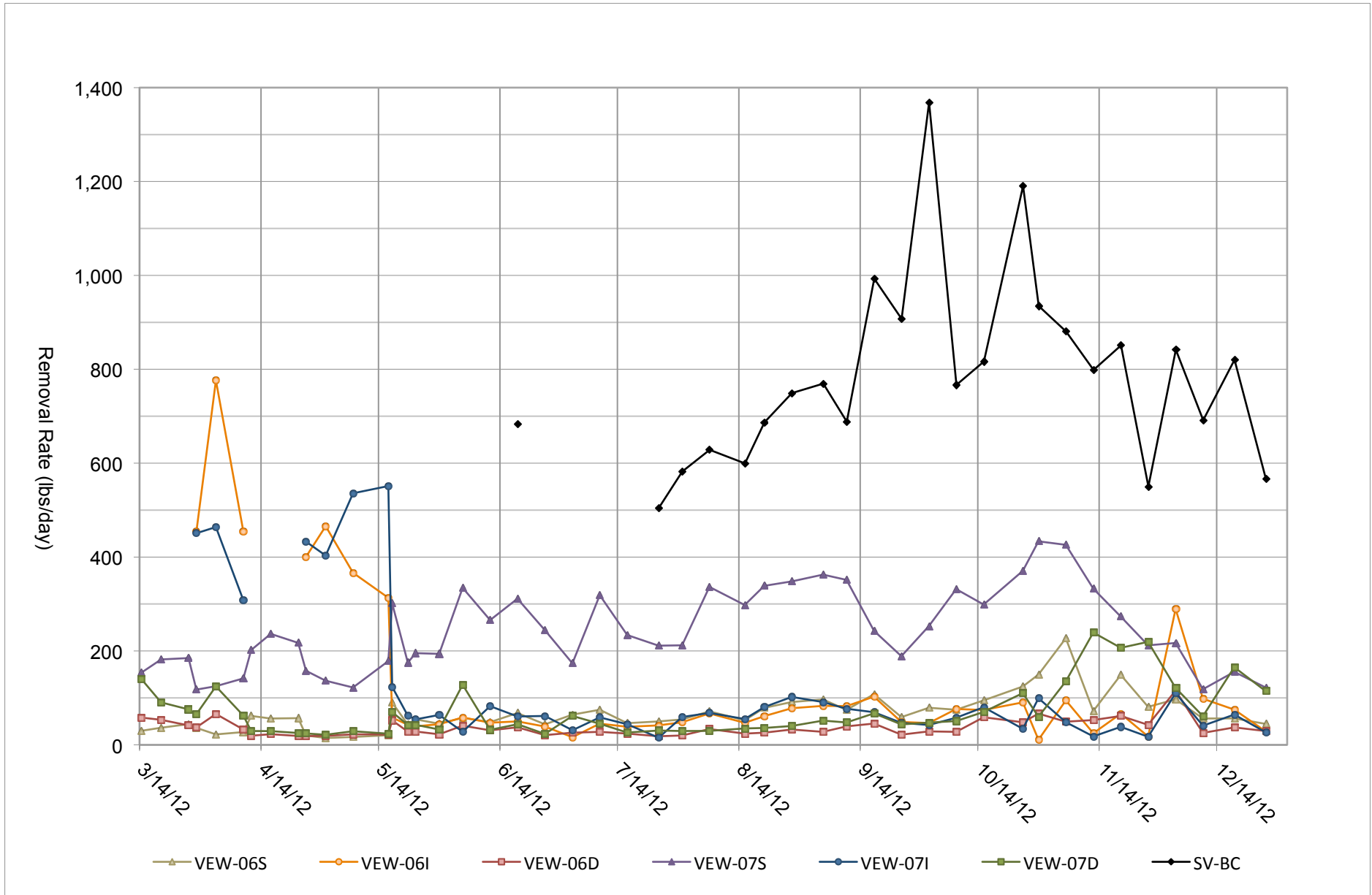
PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	MMH	REVIEWED BY	TCM
DATE	03/04/13		

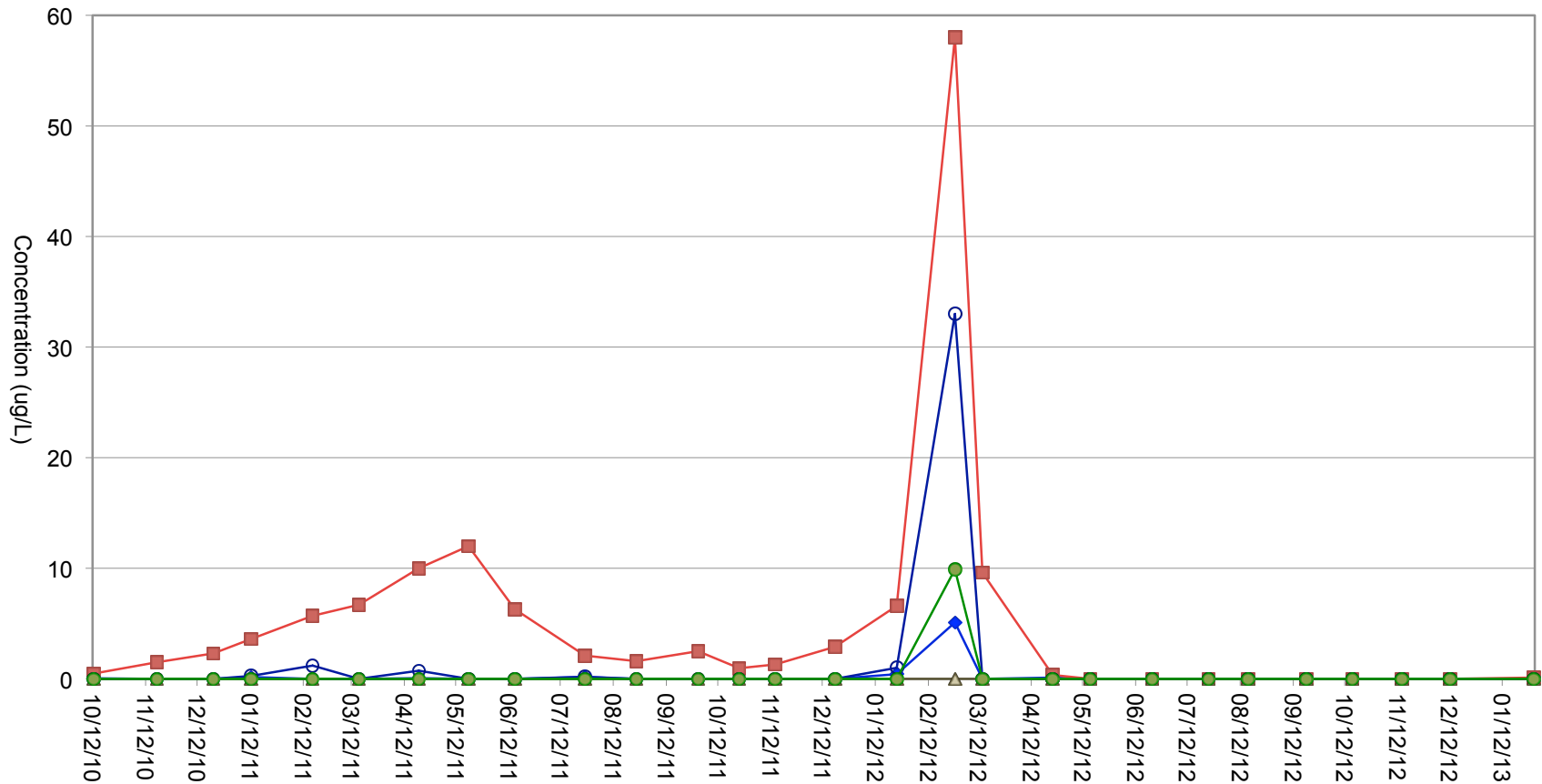
Figure 37  
Cumulative Mass Removed Since May 1997  
by Zone A SVE System  
2012 Annual Report  
Pasco Landfill, Pasco, WA



Active wells May 1997 - March 2010: VEW-01, VMW-02D, VEW-04 and VEW-05  
Active wells March 2010 - March 2012: VEW-04 and VEW-05  
Active wells since March 2012: All six VEW-06 and -07 wells

Figure 38  
 SVE System Removal Rates (in lbs/day)  
 2012 Annual Report  
 Pasco Landfill, Pasco, WA



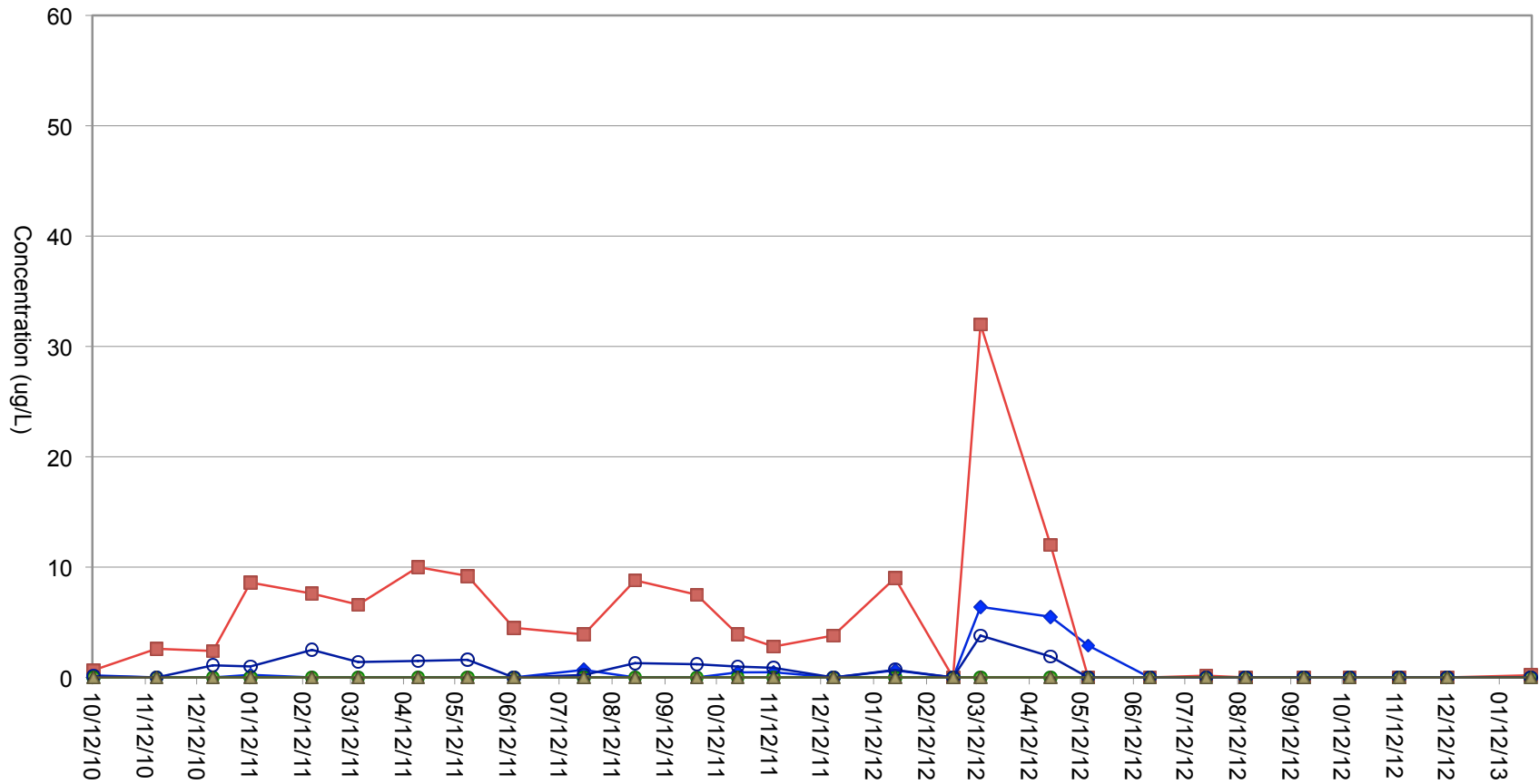


- Legend:
- ◆ Tetrachloroethene
  - Trichloroethene
  - 1,2-Dichloroethane
  - ▲ 1,1-Dichloroethene
  - Cis-1,2-Dichloroethene



FIGURE 39  
GROUNDWATER CONCENTRATION TRENDS  
MW-52S

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	Drawn By MMH	Reviewed By TCM	Date 03/01/13



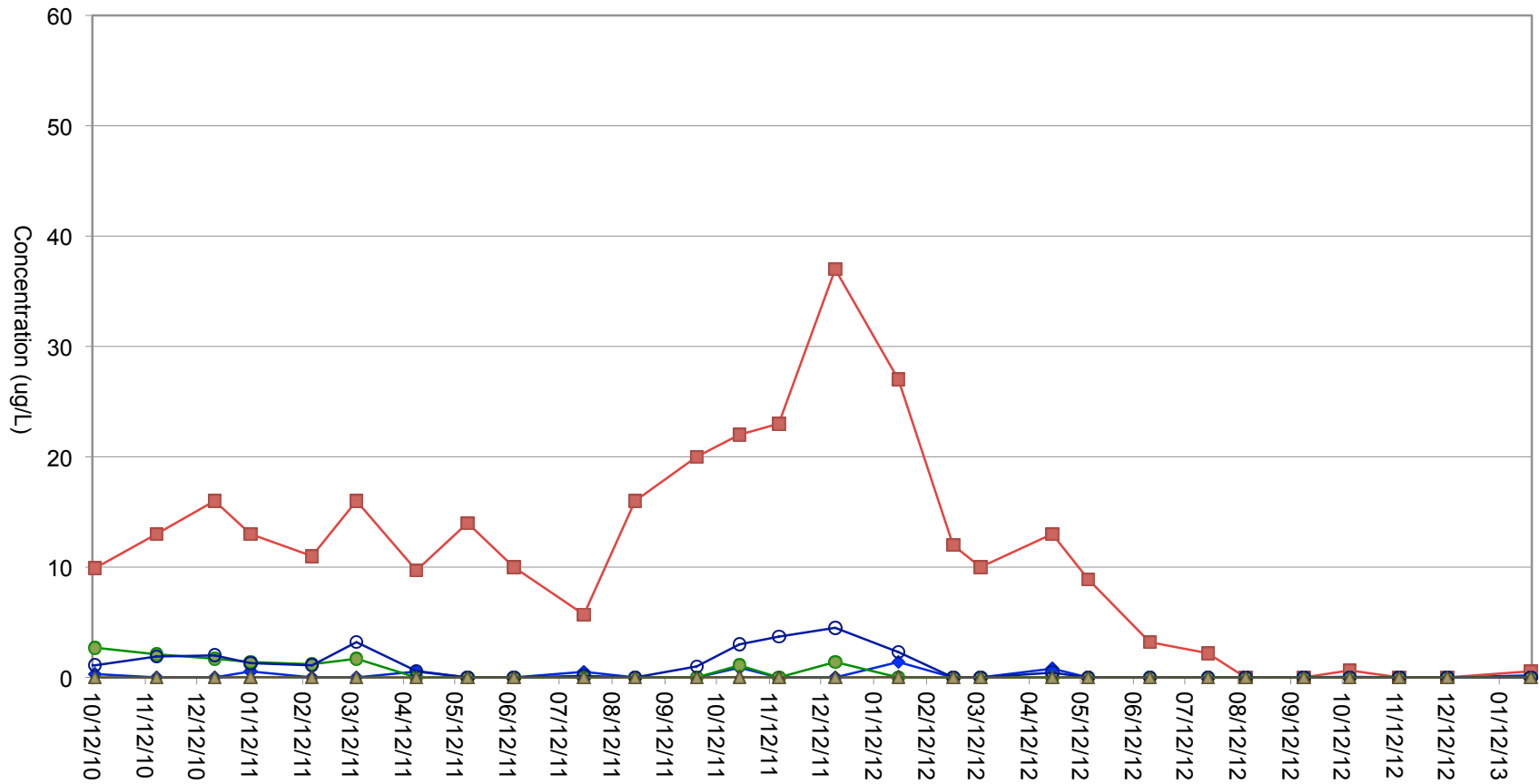
Legend:

- ◆ Tetrachloroethene
- Trichloroethene
- Cis-1,2-Dichloroethene
- 1,2-Dichloroethane
- ▲ 1,1-Dichloroethene



**FIGURE 40**  
GROUNDWATER CONCENTRATION TRENDS  
MW-53S

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	Drawn By MMH	Reviewed By TCM	Date 03/01/13



Legend:

- ◆ Tetrachloroethene
- Trichloroethene
- Cis-1,2-Dichloroethene
- 1,2-Dichloroethane
- ▲ 1,1-Dichloroethene

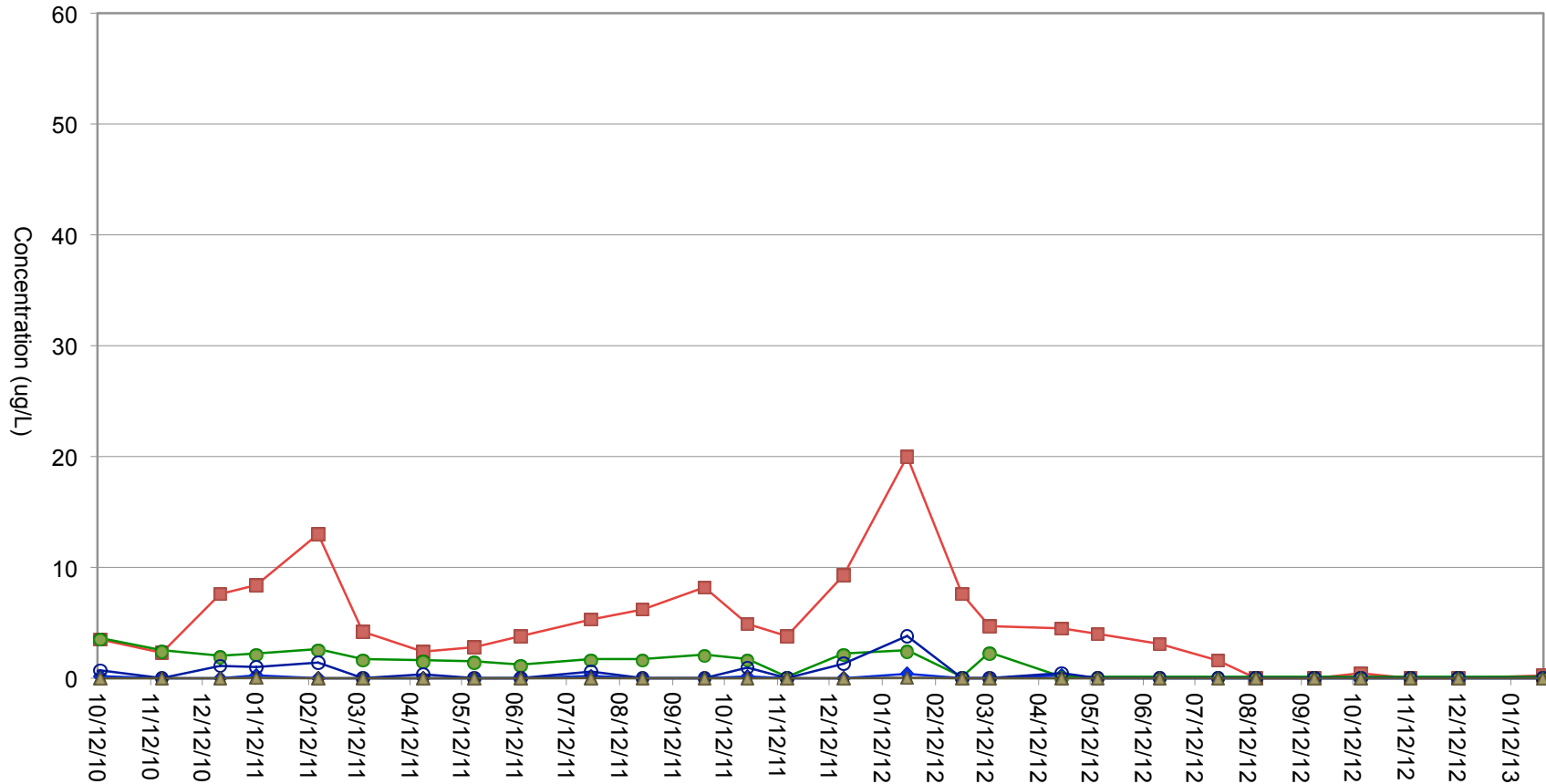


**ENVIRONMENTAL PARTNERS INC**

**FIGURE 41  
GROUNDWATER CONCENTRATION TRENDS  
MW-50S**

<i>PROJECT</i>	03912.2		
<i>PREPARED FOR</i>	IWAG GROUP III PASCO LANDFILL		
<i>LOCATION</i>	1901 DIETRICH ROAD PASCO, WASHINGTON		
	Drawn By MMH	Reviewed By TCM	Date 03/01/13





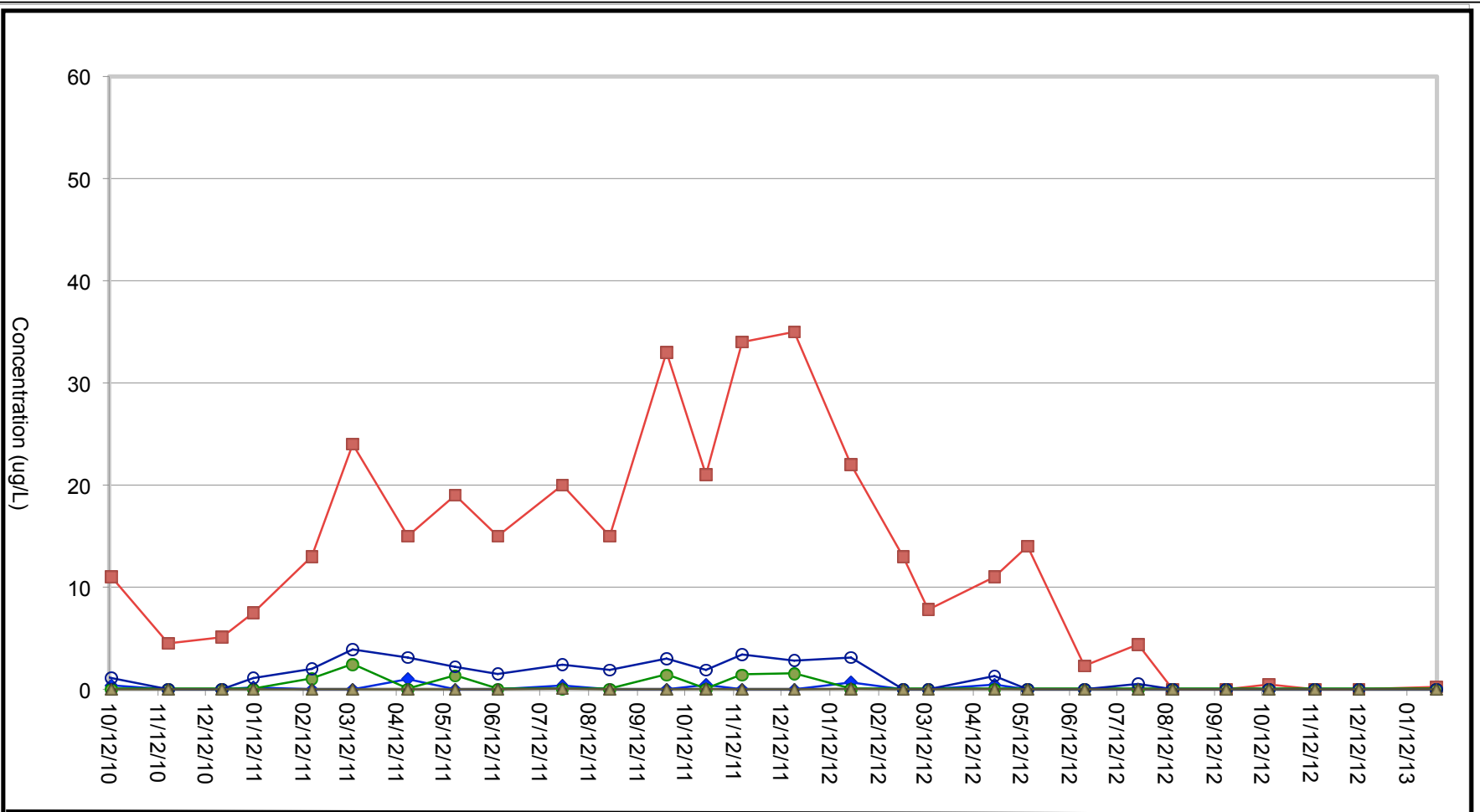
LEGEND:

- Tetrachloroethene
- Trichloroethene
- Cis-1,2-Dichloroethene
- 1,2-Dichloroethene
- ▲— 1,1-Dichloroethene



FIGURE 42  
GROUNDWATER CONCENTRATION TRENDS  
MW-47S

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	DRAWN BY MMH	REVIEWED BY MMH	DATE 03/01/13



Legend:

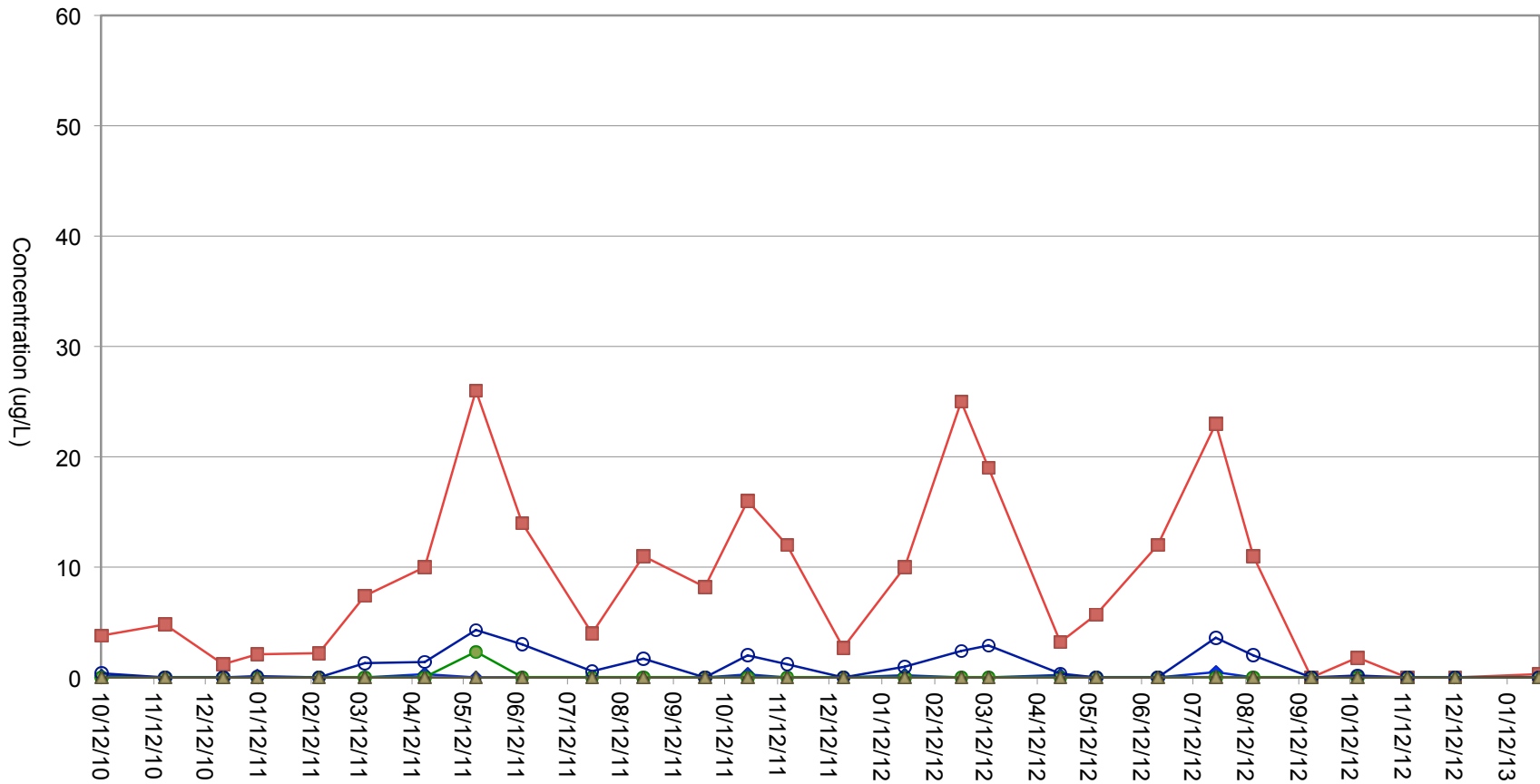
- Tetrachloroethene
- Trichloroethene
- Cis-1,2-Dichloroethene
- 1,2-Dichloroethene
- ▲— 1,1-Dichloroethene



**ENVIRONMENTAL PARTNERS INC**

**FIGURE 43  
GROUNDWATER SAMPLING RESULTS  
NVM-01**

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	Drawn By MMH	Reviewed By TCM	Date 03/01/13



Legend:

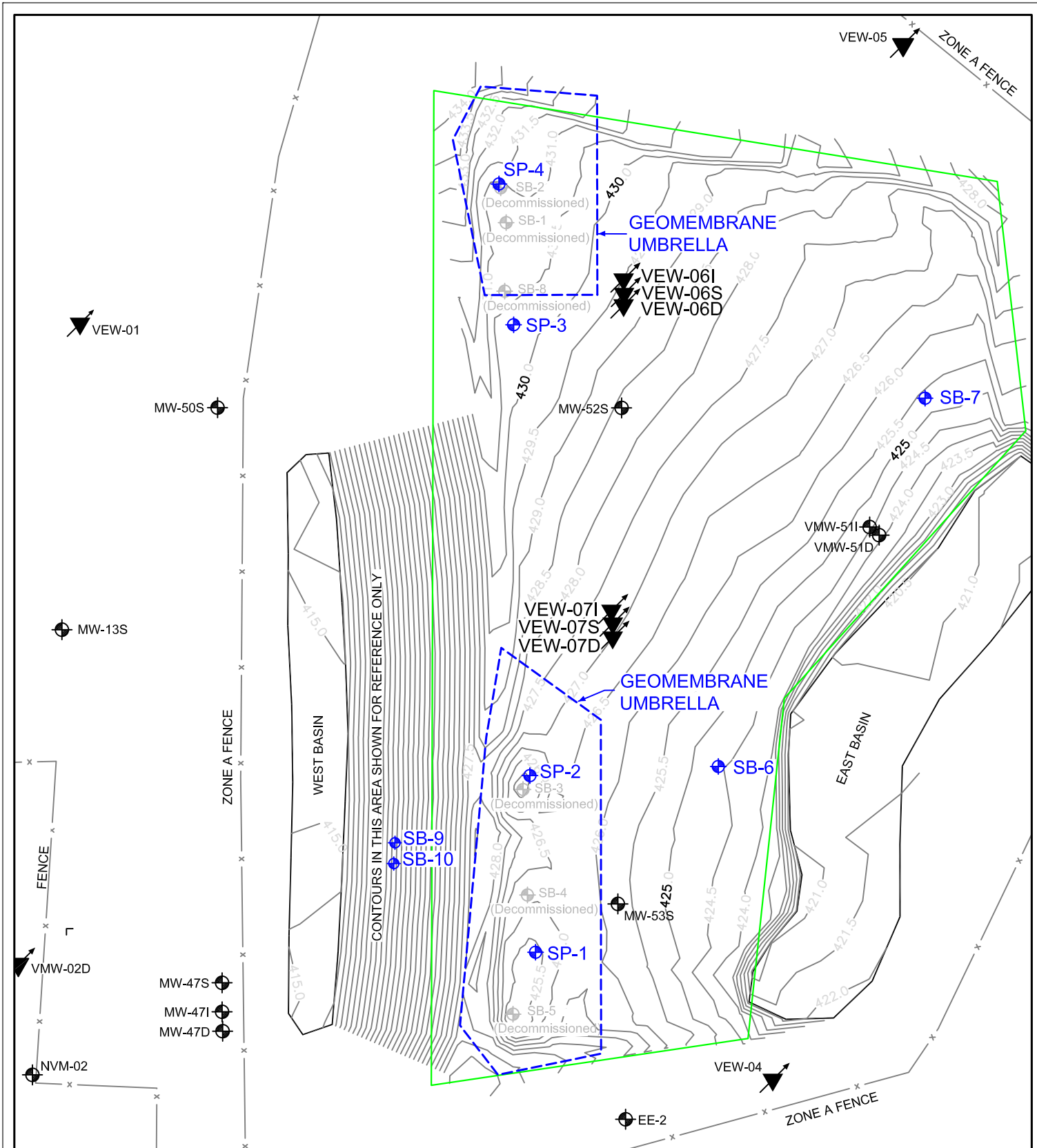
- ◆ Tetrachloroethene
- Trichloroethene
- Cis-1,2-Dichloroethene
- 1,2-Dichloroethene
- ▲ 1,1-Dichloroethene



**ENVIRONMENTAL PARTNERS INC**

**FIGURE 44  
GROUNDWATER SAMPLING RESULTS  
MW-12S**

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
	Drawn By MMH	Reviewed By TCM	Date 03/01/13



**KEY:**

- ◆ SB-1 SUBSIDENCE BENCHMARK
- ◆ SP-1 SETTLEMENT PLATE
- LANDFILL SURFACE ELEVATION CONTOUR, IN FEET (08-29-08)
- VEW-05 SOIL VAPOR EXTRACTION WELL
- MW-47D GROUND WATER MONITORING WELL

SCALE: 1" = 50'

**ept ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

**FIGURE 45**

**LOCATIONS OF ZONE A SUBSIDENCE BENCHMARKS AND SETTLEMENT PLATES**

PROJECT	03912.2		
PREPARED FOR	IWAG GROUP III PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
DRAWN BY	MMH	REVIEWED BY	TCM
		DATE	03/04/13

FIGURE 46  
 Zone A Subsidence Measurements  
 2012 Annual Report  
 Pasco Landfill, Pasco, WA

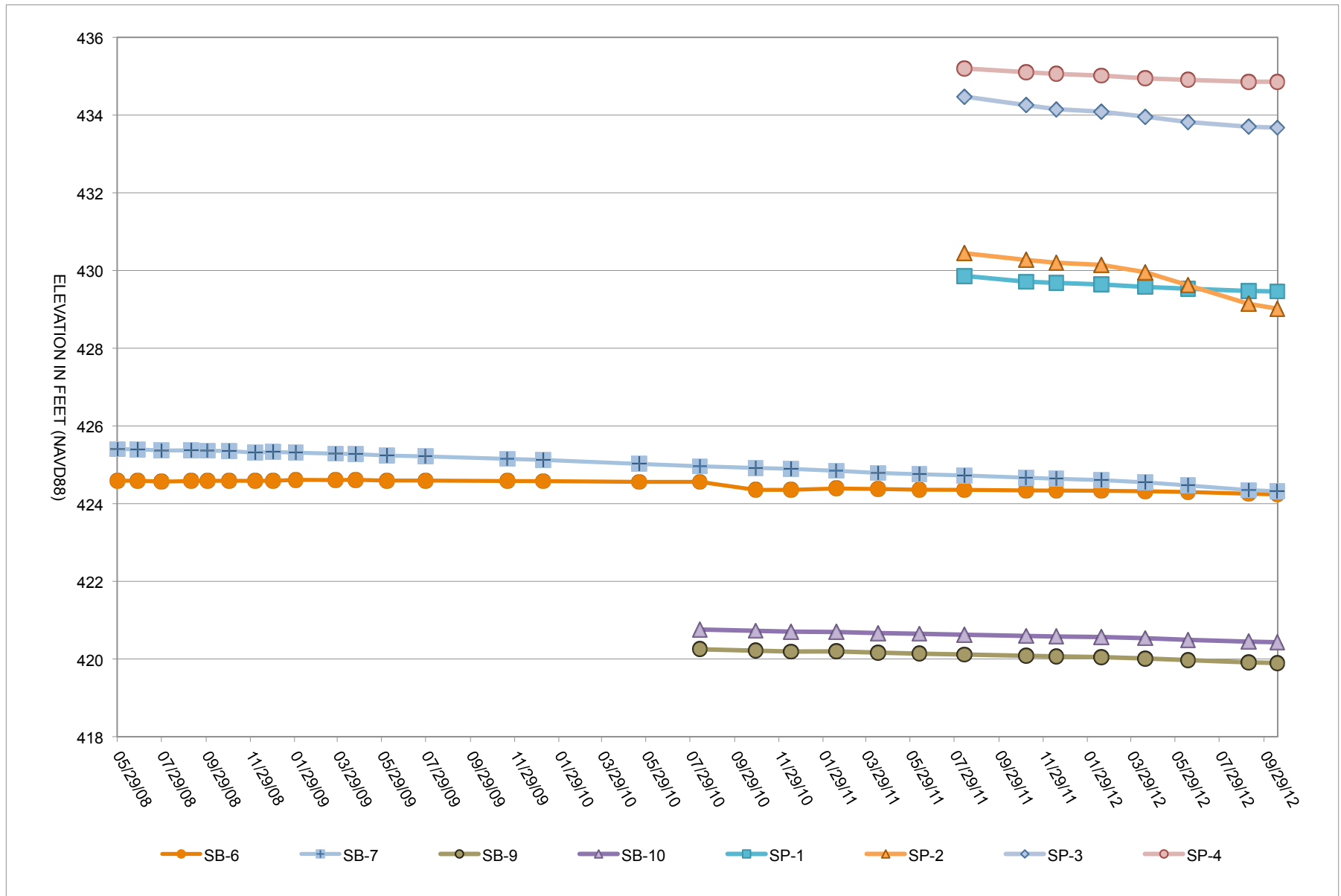
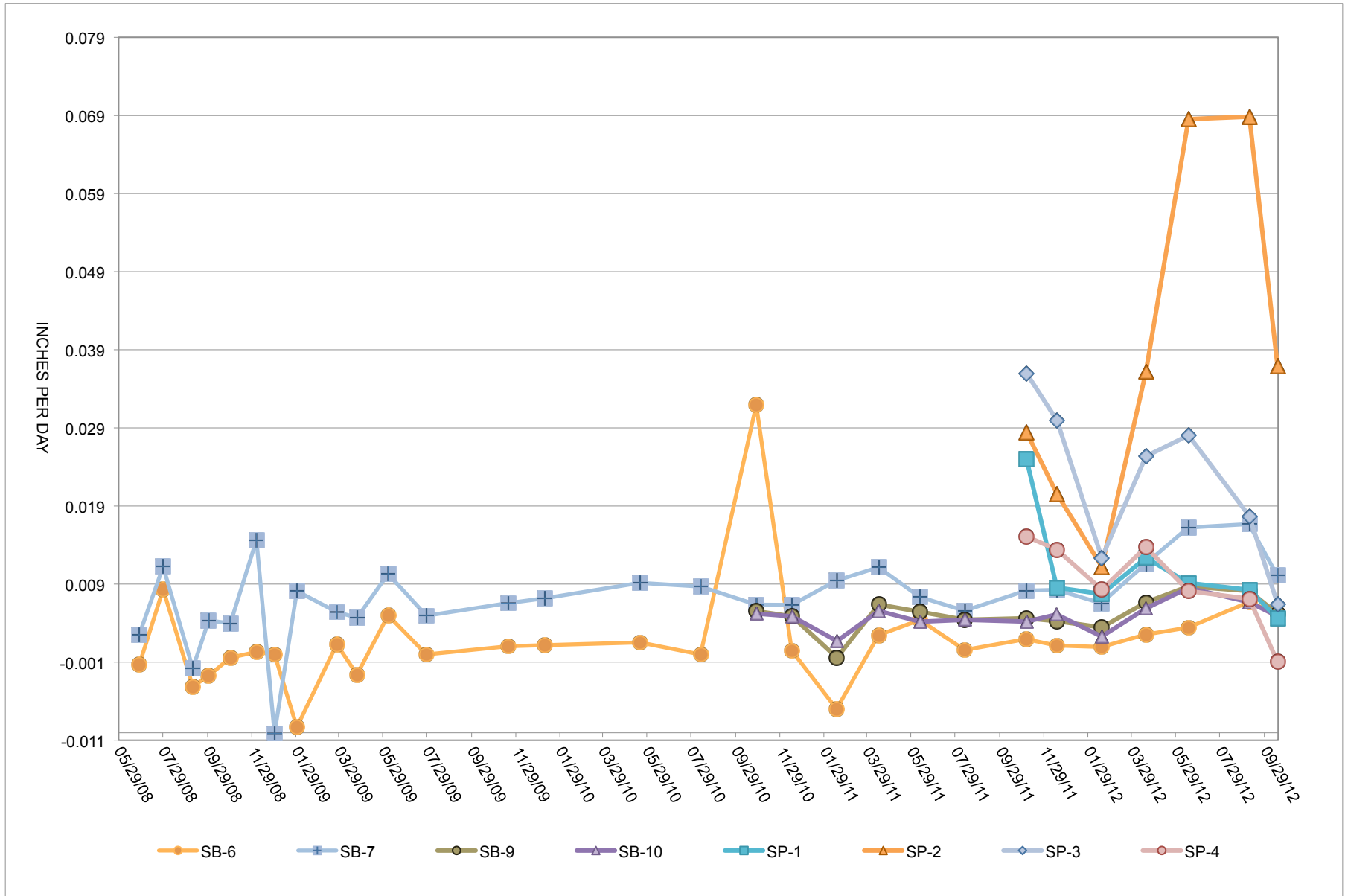


FIGURE 47  
 Zone A Subsidence Rates  
 2012 Annual Report  
 Pasco Landfill, Pasco, WA



## **Attachments**

**Attachment A**  
*Data Validation Report*



# Data Validation Report

---

## Pasco Sanitary Landfill Groundwater Monitoring October 2012 Sampling

Laboratory SDG Number: EV12100091

*Prepared for:*

**Environmental Partners, Inc.**

*295 NE. Gilman Blvd., Suite 201  
Issaquah, WA 98027*

*Prepared by:*

**Pyron Environmental, Inc.**

*3530 32<sup>nd</sup> Way NW  
Olympia, WA 98502*

**February 9, 2013**

## Table of Content

Table of Content.....	2
Acronyms.....	5
<b>I. INTRODUCTION.....</b>	<b>7</b>
<b>II. DATA VALIDATION FINDINGS .....</b>	<b>12</b>
<b>1. Sample Custody, Preservation, and Analysis Completeness.....</b>	<b>12</b>
<b>2. Volatile Organic Compounds (VOCs; SW846 Method 8260C – SIM) .....</b>	<b>12</b>
2.1 Holding Time .....	12
2.2 GC/MS Instrument Performance Check .....	12
2.3 Initial Calibration (ICAL).....	12
2.4 Calibration Verification .....	12
2.5 Blanks .....	13
2.6 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD) .....	13
2.7 Surrogate Spikes.....	13
2.8 Matrix Spike and Matrix Spike Duplicate (MS/MSD).....	13
2.9 Internal Standards .....	13
2.10 Field Duplicates .....	14
2.11 Laboratory Reporting Limits.....	14
2.12 Overall Assessment of VOCs Data Usability .....	14
<b>3. Semi-volatile Organic Compounds (SVOCs; SW846 Method 8270D – Full Scan and SIM) .....</b>	<b>14</b>
3.1 Holding Time .....	14
3.2 GC/MS Instrument Performance Check .....	14
3.3 Initial Calibration .....	14
3.4 Calibration Verification .....	15
3.5 Method Blanks .....	15
3.6 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD) .....	15
3.7 Surrogate Spikes.....	15
3.8 Matrix Spike and Matrix Spike Duplicate (MS/MSD).....	15
3.9 Internal Standards .....	16
3.10 Field Duplicates .....	16
3.11 Laboratory Reporting Limits.....	16
3.12 Overall Assessment of SVOCs Data Usability .....	16
<b>4. Metals (SW846 Method 6010C and Method 6020B) .....</b>	<b>17</b>
4.1 Holding Time .....	17
4.2 ICP/MS Tune Analysis.....	17
4.3 Initial Calibration .....	17
4.4 Initial and Continuing Calibration Verification .....	17
4.5 Blanks .....	17
4.6 ICP Interference Check Sample (ICS).....	17
4.7 Laboratory Control Sample (LCS) .....	17
4.8 Laboratory Duplicate Analysis.....	18
4.9 Matrix Spike (MS).....	18
4.10 Serial Dilution .....	18

4.11	Internal Standards .....	18
4.12	Field Duplicates .....	18
4.13	Laboratory Reporting Limits.....	18
4.14	Overall Assessment of Metals Data Usability.....	18
<b>5.</b>	<b>Methane, Ethane, &amp; Ethene (MEE) Gases (Laboratory Standard Operation Procedure) .....</b>	<b>19</b>
5.1	Holding Time .....	19
5.2	Initial Calibration .....	19
5.3	Calibration Verification .....	19
5.4	Method Blanks .....	19
5.5	Laboratory Duplicate Analyses.....	19
5.6	Matrix Spike and Matrix Spike Duplicate (MS/MSD).....	19
5.7	Laboratory Control Sample (LCS) .....	19
5.8	Field Duplicates .....	20
5.9	Reporting Limits .....	20
5.10	Overall Assessment of MEE Gases Data Usability .....	20
<b>6.</b>	<b>Alkalinity, COD, TOC, TDS, Anions, Cr (VI), and Ammonia .....</b>	<b>20</b>
6.1	Holding Times.....	20
6.2	Initial Calibration .....	20
6.3	Initial and Continuing Calibration Verification .....	20
6.4	Blanks .....	21
6.5	Laboratory Duplicate Analysis.....	21
6.6	Matrix Spike (MS).....	21
6.7	Laboratory Control Sample (LCS) .....	21
6.8	Field Duplicates .....	21
6.9	Laboratory Reporting Limits.....	21
6.10	Overall Assessment of Inorganic Constituent Data.....	21
<b>III.</b>	<b>FIELD DUPLICATE SUMMARY.....</b>	<b>22</b>
<b>IV.</b>	<b>DATA VALIDATION SUMMARY .....</b>	<b>24</b>
<b>1.</b>	<b>Data Qualification .....</b>	<b>24</b>
<b>2.</b>	<b>Data Qualifier Definition .....</b>	<b>25</b>
<b>V.</b>	<b>DATA QUALITY OBJECTIVE ASSESSMENT .....</b>	<b>26</b>
<b>1.</b>	<b>Precision .....</b>	<b>26</b>
1.1	Manganese – Field Duplicate .....	26
1.2	1,2-Dichloroethane – Field Duplicate.....	26
<b>2.</b>	<b>Accuracy .....</b>	<b>26</b>
2.1	SVOCs – Instrument Calibration Verification .....	27
<b>3.</b>	<b>Representativeness.....</b>	<b>27</b>
<b>4.</b>	<b>Comparability .....</b>	<b>27</b>
<b>5.</b>	<b>Completeness .....</b>	<b>28</b>

**6. Sensitivity .....28**  
**VI. REFERENCES .....29**

## Acronyms

<b>%D</b>	percent difference
<b>%D<sub>f</sub></b>	percent drift
<b>%R</b>	percent recovery
<b>%RSD</b>	percent relative standard deviation
<b>ALS-Everett</b>	ALS Laboratory Group, Everett, Washington
<b>ALS-Kelso</b>	ALS Laboratory Group, Kelso, Washington
<b>ARI</b>	Analytical Resources, Inc., Tukwila, Washington
<b>BFB</b>	bromofluorobenzene
<b>CCB</b>	continuing calibration blank
<b>CCV</b>	continuing calibration verification
<b>CF</b>	calibration factor
<b>CLP</b>	U.S. EPA Contract Laboratory Program
<b>COC</b>	chain-of-custody
<b>COD</b>	chemical oxygen demand
<b>Cr</b>	chromium
<b>Cr (VI)</b>	hexavalent chromium
<b>DQO</b>	data quality objective
<b>DFTPP</b>	decafluorotriphenylphosphine
<b>EDD</b>	electronic data deliverable
<b>EPA</b>	U.S. Environmental Protection Agency
<b>GC/FID</b>	gas chromatography/flame ionization detector
<b>GC/MS</b>	gas chromatography/mass spectrometer
<b>ICAL</b>	initial calibration
<b>ICB</b>	initial calibration blank
<b>ICP/MS</b>	Inductively coupled plasma/mass spectrometer
<b>ICS</b>	interference check sample
<b>ICV</b>	initial calibration verification
<b>IDL</b>	instrument detection limit
<b>LCS</b>	laboratory control sample
<b>LCSD</b>	laboratory control sample duplicate
<b>µg/L</b>	micrograms per liter
<b>mg/L</b>	milligrams per liter

<b>MDL</b>	method detection limit
<b>MEE</b>	methane, ethane, and ethane
<b>MS</b>	matrix spike
<b>MSD</b>	matrix spike duplicate
<b>OMM</b>	Operations and Maintenance Manual SVE, No VOCs and Groundwater Monitoring, Environmental Partners, Inc., 2007.
<b>QA/QC</b>	quality assurance/quality control
<b>RF</b>	response factor
<b>RL</b>	reporting limit
<b>RPD</b>	relative percent difference
<b>SDG</b>	sample delivery group
<b>SIM</b>	selective ion monitoring
<b>SOP</b>	standard operating procedures
<b>SRM</b>	standard reference material
<b>SVOCs</b>	semi-volatile organic compounds
<b>TDS</b>	total dissolved solids
<b>TOC</b>	total organic carbon
<b>VOCs</b>	volatile organic compounds

## I. INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data associated with the 70 water samples collected during October 15 through 19, 2012 for the referenced project. The validation procedures followed the requirements specified in the following documents, as applicable:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2008, EPA-540-R-08-01.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*, Office of Superfund Remediation and Technical Innovation, U.S. Environmental Protection Agency, January 2010, USEPA 540/R-10/011.

A level III validation was performed based on the summaries of sample and quality control (QC) analytical results submitted by the laboratories. The numerical quality assurance and quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the analytical methods, the *Operations and Maintenance Manual SVE, No VOCs<sup>TM</sup> and Groundwater Monitoring ([OMM], Environmental Partners, Inc. 2007) & Addendum No. 1 (May 28, 2008)*, and the performance-based control limits established by the laboratory (laboratory control limits). The frequency of QC analyses was evaluated according to the OMM and the analytical methods. Sample-specific method detection limits and reporting limits were evaluated against the reporting limits revised in February 2012. Raw data were not reviewed herein unless necessary for clarification purposes.

Validation findings are discussed in **Section II – Data Validation Findings**, pertinent to the QC parameters for each type of analysis. Field duplicate results were compared and data qualified based on the advisory criteria and presented in **Section III**. Qualified data along with proper data qualifiers, qualification reasons, and qualifier definitions are presented in **Section IV - Data Validation Summary**.

A data quality objective assessment summarizing the overall precision, accuracy, representativeness, comparability, completeness, and sensitivity of data collected in this sampling event was prepared and included in **Section V – Data Quality Objective Assessment**. Any additional laboratory submittals requested during the validation are transferred to Environmental Partners, Inc. along with this report.

As part of the validation, the electronic data deliverable (EDD) was verified against the hardcopy report. Any anomalies found or revisions made on the EDD were summarized in **Section IV, 3**. Data qualifiers and qualification reasons identified *via* the validation have been added to the EDD. Samples collected during this sampling event and the associated analyses are summarized below:

Field Sample ID	ALS Laboratory Sample ID	Sample Collection Date	Matrix	Analysis					
				VOCs	SVOCs	MEE	Cr Cr (VI)	Metals	Inorganic
PLF-MW20S-1012	EV12100091-01	10/15/12	Water	X		X	X	X	X
PLF-MW25S-1012	EV12100091-02	10/15/12	Water	X		X		X	X
PLF-MW26S-1012	EV12100091-03	10/15/12	Water	X	X				
PLF-MW19S-1012	EV12100091-04	10/15/12	Water	X			X		
PLF-MW27SR-1012	EV12100091-05	10/15/12	Water	X			X		
PLF-MW55S-1012	EV12100091-06	10/15/12	Water	X			X		
PLF-MW16S-1012	EV12100091-07	10/15/12	Water	X				X	X <sup>(A)</sup>
PLF-MW17SR-1012	EV12100091-08	10/15/12	Water	X				X	X <sup>(A)</sup>
PLF-TripBlank-1012	EV12100091-09	10/15/12	Water	X					
PLF-MW53S-1012	EV12100091-10	10/16/12	Water	X	X				
PLF-MW52S-1012	EV12100091-11	10/16/12	Water	X	X				
PLF-MW47S-1012	EV12100091-12	10/16/12	Water	X	X	X		Mn	X
PLF-NVM01-1012	EV12100091-13	10/16/12	Water	X	X				
PLF-MW50S-1012	EV12100091-14	10/16/12	Water	X	X			Mn	X
PLF-TripBlank2-1012	EV12100091-15	10/16/12	Water	X					
PLF-MW953S-1012	EV12100091-16	10/16/12	Water	X					
PLF-MW12S-1012	EV12100091-17	10/16/12	Water	X	X	X	X	Mn	X
PLF-MW912S-1012	EV12100091-18	10/16/12	Water	X		X		Mn	X
PLF-MW-12ID-1012	EV12100091-19	10/16/12	Water	X					
PLF-MW13S-1012	EV12100091-20	10/16/12	Water	X			Cr		
PLF-#2I-1012	EV12100091-21	10/16/12	Water	X					
PLF-#2R-1012	EV12100091-22	10/16/12	Water	X		X		Mn	X
PLF-MW49I-1012	EV12100091-23	10/16/12	Water	X				Mn	
PLF-MW49S-1012	EV12100091-24	10/16/12	Water	X		X			X
PLF-TripBlank3-1012	EV12100091-25	10/16/12	Water	X					
PLF-MW47I-1012	EV12100091-26	10/16/12	Water	X					
PLF-MW10S-1012	EV12100091-27	10/17/12	Water	X					
PLF-TripBlank4-1012	EV12100091-28	10/17/12	Water	X					
PLF-MW11S-1012	EV12100091-29	10/17/12	Water	X					
PLF-MW11I-1012	EV12100091-30	10/17/12	Water	X					
PLF-MW51S-1012	EV12100091-31	10/17/12	Water	X					
PLF-MW24S-1012	EV12100091-32	10/17/12	Water	X					



Field Sample ID	ALS Laboratory Sample ID	Sample Collection Date	Matrix	Analysis					
				VOCs	SVOCs	MEE	Cr Cr (VI)	Metals	Inorganic
PLF-23S-1012	EV12100091-33	10/17/12	Water	X					
PLF-MW15S-1012	EV12100091-34	10/17/12	Water	X					
PLF-NVM01I-1012	EV12100091-35	10/17/12	Water	X					
PLF-EE2-1012	EV12100091-36	10/17/12	Water	X					
PLF-#4R-1012	EV12100091-37	10/17/12	Water	X				X	X <sup>(A)</sup>
PLF-#94R-1012	EV12100091-38	10/17/12	Water	X				X	
PLF-MW22S-1012	EV12100091-39	10/17/12	Water	X			X	X	X <sup>(A)</sup>
PLF-MW13S-1012	EV12100091-40	10/17/12	Water				Cr(VI)		
PLF-MW922S-1012	EV12100091-41	10/17/12	Water				X		
PLF-MW54I-1012	EV12100091-42	10/17/12	Water	X					
PLF-MW954I-1012	EV12100091-43	10/17/12	Water	X					
PLF-MW44S-1012	EV12100091-44	10/17/12	Water	X					
PLF-MW43S-1012	EV12100091-45	10/17/12	Water	X					
PLF-MW43I-1012	EV12100091-46	10/17/12	Water	X					
PLF-MW45S-1012	EV12100091-47	10/18/12	Water	X					
PLF-TripBlank5-1012	EV12100091-48	10/18/12	Water	X					
PLF-MW41SR-1012	EV12100091-49	10/18/12	Water	X					
PLF-MW42S-1012	EV12100091-50	10/18/12	Water	X					
PLF-MW40S-1012	EV12100091-51	10/18/12	Water	X					
PLF-MW37S-1012	EV12100091-52	10/18/12	Water	X					
PLF-MW34S-1012	EV12100091-53	10/18/12	Water	X					
PLF-MW38S-1012	EV12100091-54	10/18/12	Water	X					
PLF-MW38I-1012	EV12100091-55	10/18/12	Water	X					
PLF-MW31S-1012	EV12100091-56	10/18/12	Water	X					
PLF-MW29S-1012	EV12100091-57	10/18/12	Water	X					
PLF-MW29I-1012	EV12100091-58	10/18/12	Water	X					
PLF-MW18S-1012	EV12100091-59	10/18/12	Water	X					
PLF-Salinas-1012	EV12100091-60	10/18/12	Water	X					
PLF-West-1012	EV12100091-61	10/18/12	Water	X					
PLF-Lopez-1012	EV12100091-62	10/19/12	Water	X					
PLF-Bradley-1012	EV12100091-63	10/19/12	Water	X					
PLF-Norvell-1012	EV12100091-64	10/19/12	Water	X					

Field Sample ID	ALS Laboratory Sample ID	Sample Collection Date	Matrix	Analysis					
				VOCs	SVOCs	MEE	Cr Cr (VI)	Metals	Inorganic
PLF-Norvell2-1012	EV12100091-65	10/19/12	Water	X					
PLF-Montalvo-1012	EV12100091-66	10/19/12	Water	X					
PLF-Rada-1012	EV12100091-67	10/19/12	Water	X					
PLF-Hand-1012	EV12100091-68	10/19/12	Water	X					
PLF-Yenney2-1012	EV12100091-69	10/19/12	Water	X					
PLF-Yenney3-1012	EV12100091-70	10/19/12	Water	X					

**Notes:**

X - The analysis was requested and performed on the sample.

VOCs – Volatile organic compounds

SVOCs – Semi-volatile organic compounds

Mn – The sample was analyzed for manganese by SW846 Method 6020B.

Metals – Calcium, Iron, magnesium, manganese, potassium, and sodium

MEE – Methane, ethane, and ethane gases

Cr – Chromium

Cr (VI) – Hexavalent chromium

Inorganic – Alkalinity (total, carbonate, bicarbonate, & hydroxide), chloride, nitrate, nitrite, sulfate, chemical oxygen demand (COD), total organic carbon (TOC), total dissolved solids (TDS), and ammonia.

<sup>(A)</sup> – The sample was not analyzed for nitrite or COD.

The analytical parameters requested for the samples, the respective analytical methods, and the analytical laboratories are summarized below:

Parameter	Analytical Method	Laboratory
Volatile organic compounds (VOCs)	SW846 Method 8260C - SIM <sup>(A)</sup>	ALS Laboratory Group (ALS), Everett, Washington
Semi-volatile organic compounds (SVOCs)	SW846 Methods 3510C/8270D full scan and SIM <sup>(B)</sup>	
Methane, ethane, ethane (MEE)	Laboratory Standard Operation Procedure	
Chromium, Manganese	SW846 Method 6020B	
Total dissolved solids (TDS)	SM Method 2540C	
Hexavalent chromium (Cr [VI])	SW846 Method 7196A	
Calcium, Iron, Magnesium, Manganese, Potassium, Sodium	SW846 Method 6010C	ALS Kelso, Washington
Alkalinity (total, carbonate, bicarbonate, & hydroxide)	SM Method 2320B	
Anions (chloride, nitrate, nitrite, & sulfate)	EPA Method 300.0	
Chemical oxygen demand (COD)	SM Method 5220D	
Total organic carbon (TOC)	SM Method 5310B	
Ammonia	EPA Method 350.1 Modified	

**Notes:**

SW846 - *USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, Third Edition, December 1996.

EPA Methods - *USEPA Methods for Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983 Revision.

SM – Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 20<sup>th</sup> Edition, 1995.

<sup>(A)</sup> – Selective ion monitoring (SIM) technique was performed for target compounds to achieve lower detection limits.

<sup>(B)</sup> – SIM technique was performed for selected SVOCs to achieve lower detection limits.

## II. DATA VALIDATION FINDINGS

### 1. Sample Custody, Preservation, and Analysis Completeness

Sample custody was maintained and documented as required from the sample collection to the receipt at the laboratory. The samples were received properly preserved and consistent with the accompanying chain-of-custody (COC) documentation. The temperature for a cooler was measured at 6.5°C where ice was still present in the cooler upon receipt at the laboratory. The higher cooler temperature of this cooler was likely a result of short sample transit time (samples were shipped overnight), and had no significantly adverse effects on data quality. No further action was required. All requested analyses on the COC forms were completed and reported.

### 2. Volatile Organic Compounds (VOCs; SW846 Method 8260C – SIM)

#### 2.1 Holding Time

Water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding time.

#### 2.2 GC/MS Instrument Performance Check

Bromofluorobenzene (BFB) tuning analyses were performed at the required frequency. Relative abundance of all required ions met the method requirements.

#### 2.3 Initial Calibration (ICAL)

The Functional Guidelines require that the %RSD values be  $\leq 30\%$  and the average RF be  $\geq 0.05$  for all target and surrogate compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be  $\leq 20\%$  for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient ( $r$ ) be  $\geq 0.99$ , and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination ( $r^2$ ) be  $\geq 0.99$ . A second source standard (ICV) was analyzed immediately after the ICAL; the percent difference (%D) or percent drift (%D<sub>f</sub>) values were within  $\pm 25\%$ . The initial calibration met the criteria.

#### 2.4 Calibration Verification

The Functional Guidelines and method criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank

and samples, (2) the %D or %D<sub>f</sub> values be within  $\pm 25\%$ , and (3) the RF be  $\geq 0.05$  for all target and surrogate compounds.

Calibration verification analyses were performed at the required frequency. The %D and %D<sub>f</sub> values either met the criteria or the outliers had no effects on associated data (*e.g.*, bias-high %D value where the analyte was not detected in the samples).

## 2.5 Blanks

**Method Blanks:** Method blanks were analyzed at the required frequency. Target compounds were not detected at or above the reporting limits (RLs) in the method blanks.

**Trip Blanks:** One trip blank was submitted daily with each sample shipment for VOCs analyses. Target compounds were not detected at or above the RLs in the trip blanks.

## 2.6 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses, named as blank spike and blank spike duplicate by the laboratory, were performed as required. The %R and relative percent difference (RPD) values were within the laboratory control limits.

## 2.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. %R values either met the laboratory control limits or the %R values were greater than the upper control limits and associated compounds were not detected in the samples. No data qualifying action was required.

## 2.8 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on project samples as requested. All %R and RPD values were either within the laboratory control limits or the %R outliers had no adverse effects on data usability (*e.g.*, biased-high %R values for a non-detected compound).

## 2.9 Internal Standards

Proper internal standards were added to all samples. Internal standard retention times were within the  $\pm 0.5$  minute window of the associated standard in all samples. All internal standard intensity either met the method requirement of  $-50\%$  to  $+100\%$  of the associated standard or the recovery outliers had no adverse effects on data usability (*e.g.*, biased-high internal standard recovery where all associated compounds were not detected in the sample).

## 2.10 Field Duplicates

Four field duplicate pairs were submitted for VOCs analysis. All field duplicate results met the precision criteria. The RPD (or concentration difference values) and data qualification for detected target compounds are presented in **Section III**. Note that no target compounds were detected in one field duplicate pair, samples PLF-MW53S-1012 and PLF-MW953S-1012.

## 2.11 Laboratory Reporting Limits

Target compounds specified for the project were analyzed for and reported as required. Reporting limits were supported with proper initial calibration concentrations for all target compounds. The reporting limit goals specified in the OMM and revisions were achieved.

## 2.12 Overall Assessment of VOCs Data Usability

VOCs data are acceptable for use, based on the information submitted by the laboratory.

# 3. Semi-volatile Organic Compounds (SVOCs; SW846 Method 8270D – Full Scan and SIM)

## 3.1 Holding Time

Water samples should be extracted within 7 days of collection and the extracts analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

## 3.2 GC/MS Instrument Performance Check

Decafluorotriphenylphosphine (DFTPP) tuning analyses were performed at the required frequency. Relative abundance for all required ions met the method requirements.

## 3.3 Initial Calibration

The CLP National Functional Guidelines require that the %RSD values be  $\leq 30\%$  and the average RF be  $\geq 0.05$  for all target and surrogate compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be  $\leq 20\%$  for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient ( $r$ ) be  $\geq 0.99$ , and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination ( $r^2$ ) be  $\geq 0.99$ . A second source standard (ICV) was analyzed immediately after the ICAL; the %D or %D<sub>f</sub> values were within  $\pm 25\%$ . The initial calibration met the criteria.

### 3.4 Calibration Verification

The Functional Guidelines and method criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D or %D<sub>f</sub> values be within ±25%, and (3) the RF be ≥0.05 for all target and surrogate compounds. Calibration verification analyses were performed at the required frequency. The %D and %D<sub>f</sub> values either met the criteria or the outliers had no effects on associated data (*e.g.*, bias-high %D value for a compound that was not detected in the samples), except for the following:

Calibration Verification ID	Analyte	%D <sub>f</sub>	Bias	Affected Sample	Data Qualification
J2916.D	4-Chloroaniline Benzoic Acid 2,4-Dinitrophenol	-28.0% -40.0% -40.0%	Low	PLF-MW26S-1012 PLF-MW53S-1012 PLF-MW52S-1012 PLF-MW47S-1012 PLF-NVM01-1012 PLF-MW50S-1012 PLF-MW12S-1012	UJ

### 3.5 Method Blanks

Method blanks were analyzed at the required frequency. No target compounds were detected at or above the RLs in the method blank.

### 3.6 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required. The %R and RPD values either met the laboratory control limits or the %R and RPD outliers had no adverse effects on data quality and usability (*e.g.*, high-bias %R or out-of-control RPD for a compound not detected in associated samples).

### 3.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate %R values met the laboratory control limits.

### 3.8 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample PLF-MW53S-1012. All %R and RPD values were either within the laboratory control limits or the %R outliers had no adverse effects on data usability (*e.g.*, biased-high %R values for a non-detected compound).

### 3.9 Internal Standards

Proper internal standards were added to all samples. Internal standard retention times were within the  $\pm 0.5$  minute window of the associated standard in all samples. All internal standard intensity either met the method requirement of  $-50\%$  to  $+100\%$  of the associated standard or the recovery outliers had no adverse effects on data usability (*e.g.*, biased-high internal standard recovery where all associated compounds were not detected in the sample).

### 3.10 Field Duplicates

Field duplicates were not submitted for SVOCs analysis in this sampling event.

### 3.11 Laboratory Reporting Limits

Target compounds specified for the project were analyzed for and reported as required. Reporting limits were supported with proper initial calibration concentrations for all target analytes. The reporting limit goals specified in the OMM and revisions were achieved.

### 3.12 Overall Assessment of SVOCs Data Usability

Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, *bis*(2-chloroethyl)ether, chrysene, dibenz(a,h)anthracene, hexachlorobenzene, indeno(1,2,3-cd)pyrene, and pentachlorophenol results for all samples were to be reported from the EPA Method 8270D-SIM analyses in favor of the lower detection limits. The results from the EPA Method 8270D full scan analyses were qualified (DNR) and rejected.

1,2-Dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,4-trichlorobenzene results for samples analyzed with both methods EPA 8260C and EPA 8270D should be reported from the EPA 8260C analyses, in favor of the lower reporting limits. Results from the EPA Method 8270D analyses were qualified (DNR) and rejected. Data qualified in these respects are summarized in **Section IV -1**.

SVOCs data are acceptable for use as qualified, based on the information submitted by the laboratory.



#### 4. Metals (SW846 Method 6010C and Method 6020B)

##### 4.1 Holding Time

Water samples should be analyzed within 180 days of collection. All samples were analyzed within the required holding times.

##### 4.2 ICP/MS Tune Analysis

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <0.75 AMU at 5% peak height) met the method criteria.

##### 4.3 Initial Calibration

The ICP methods require that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

##### 4.4 Initial and Continuing Calibration Verification

Initial calibration verification (ICV) and continuing calibration verification (CCV) analyses were performed at the required frequency. All %R values were within 90-110%.

##### 4.5 Blanks

**Calibration Blanks:** Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were analyzed at the required frequency. Chromium and manganese were not detected at or above the instrument detection limits (IDLs) in the ICBs and CCBs.

**Method Blank:** Method blanks were analyzed at the required frequency. No target analytes were detected at or above the RLs in method blanks.

##### 4.6 ICP Interference Check Sample (ICS)

ICS analyses were performed as required. No false positive or negative detections were observed (no detections of target analytes in ICS Solution A). All %R values were within 80-120% in Solution AB for target analytes.

##### 4.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required. All %R values were within the method control limits.

#### **4.8 Laboratory Duplicate Analysis**

Duplicate analyses were performed on project samples as requested. The RPD or concentration difference values met the laboratory control limits.

#### **4.9 Matrix Spike (MS)**

MS analyses were performed on project samples as requested. The %R values were within the laboratory control limits.

#### **4.10 Serial Dilution**

Serial dilution was performed on a project sample for ICP/MS metals. The %D values were within 10%.

#### **4.11 Internal Standards**

At least three internal standards were added to all samples and QC analyses. All percent relative intensity values were within the Functional Guidelines criterion (60 - 125% of those of the calibration blank).

#### **4.12 Field Duplicates**

Samples PLF-MW12S-1012 and PLF-MW912S-1012 were field duplicates submitted for manganese analyses. Samples PLF-#4R-1012 and PLF-#94R-1012 were field duplicates submitted for calcium, iron, magnesium, manganese, potassium, and sodium, analyses. The RPD (or concentration difference values) and data qualification are presented in **Section III**.

#### **4.13 Laboratory Reporting Limits**

RLs were supported with proper initial calibration concentrations for target analytes, and met the detection limit goals listed in the OMM and revisions.

#### **4.14 Overall Assessment of Metals Data Usability**

Metals data are acceptable for use as qualified, based on the information submitted by the laboratory.

## **5. Methane, Ethane, & Ethene (MEE) Gases (Laboratory Standard Operation Procedure)**

### **5.1 Holding Time**

Water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding time.

### **5.2 Initial Calibration**

A 4-point calibration was performed for each target compound according to the analytical method. The correlation coefficient was  $\geq 0.995$  for the initial calibration linear regression and met the method requirement.

### **5.3 Calibration Verification**

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the %D<sub>f</sub> value be within  $\pm 20\%$  of the true value. Calibration verification analyses met the laboratory SOP criteria.

### **5.4 Method Blanks**

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

### **5.5 Laboratory Duplicate Analyses**

Duplicate analyses were not reported in this SDG. Analytical precision was evaluated with LCS/LCSD and field duplicate results.

### **5.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)**

MS/MSD analyses were not applicable for the method.

### **5.7 Laboratory Control Sample (LCS)**

LCS and LCS duplicate (LCSD) analyses were performed as required by the method for methane. All %R and RPD values met the laboratory control limits.

## **5.8 Field Duplicates**

Samples PLF-MW12S-1012 and PLF-MW912S-1012 were field duplicates submitted for MEE gases analyses. MEE gases were not detected at or above the RLs in these samples; the field precision was acceptable for MEE analyses.

## **5.9 Reporting Limits**

The reported RLs were supported with adequate ICAL concentrations. Sample-specific RLs met the OMM reporting limit requirements for all samples.

## **5.10 Overall Assessment of MEE Gases Data Usability**

MEE gases data are of known quality and acceptable for use, based on the information submitted by the laboratory.

# **6. Alkalinity, COD, TOC, TDS, Anions, Cr (VI), and Ammonia**

## **6.1 Holding Times**

The samples were analyzed within the required holding times of 24 hours for Cr (VI), 48 hours for nitrate and nitrite; seven days for total dissolved solids (TDS), 14 days for alkalinity; and 28 days for ammonia, chloride, sulfate, chemical oxygen demand (COD), and total organic carbon (TOC). All analyses were performed within the required holding times.

## **6.2 Initial Calibration**

Initial calibration (ICAL) is required for anions (nitrite, nitrate, chloride, and sulfate by EPA Method 300.0), Cr (VI), ammonia, and TOC analyses. The initial calibration correlation coefficients were greater than 0.995 and met the method requirements for these parameters.

## **6.3 Initial and Continuing Calibration Verification**

Initial calibration verification (ICV) and continuing calibration verification (CCV) analyses were performed at the required frequency for all inorganic constituents. All %R values were within the control limits of 90 – 110%.

#### 6.4 Blanks

**Calibration Blanks:** ICBs and CCBs were analyzed at the required frequency. Target analytes were either not detected at or above the RLs in ICBs and CCBs, or detected at levels that had no adverse effects on sample results (*e.g.*, sample result >10x the concentration in the blank).

**Method Blanks:** Method blanks were analyzed at the required frequency. Target analytes were either not detected at or above the RLs in method blanks, or detected at levels that had no adverse effects on sample results (*e.g.*, sample result >10x the concentration in the blank).

#### 6.5 Laboratory Duplicate Analysis

Duplicate analyses were performed for all inorganic constituents on project samples. All RPD or concentration difference values met the laboratory control criteria.

#### 6.6 Matrix Spike (MS)

Matrix spike analyses were performed for anions, COD, TOC, Cr (VI), and ammonia on project samples. Samples PLF-MW12S-1012 and PLF-MW20S-1012 contained high levels of anions; the anion %R values for MS performed on these samples were not applicable for accuracy evaluation. All other %R values were within the laboratory control limits (75 - 125%).

#### 6.7 Laboratory Control Sample (LCS)

LCS analyses were performed for TDS, alkalinity, anions, TOC, COD, Cr (VI), and ammonia at the required frequency. All %R values were within the laboratory control limits.

#### 6.8 Field Duplicates

Samples PLF-MW12S-1012 and PLF-MW912S-1012 were field duplicates submitted for inorganic constituents analyses. The RPD (or concentration difference values) and data qualification are presented in **Section III**.

#### 6.9 Laboratory Reporting Limits

The reporting limits were supported with adequate ICAL concentrations and met the OMM goals for inorganic constituents.

#### 6.10 Overall Assessment of Inorganic Constituent Data

Inorganic constituent data are of known quality and acceptable for use as qualified, based on the information submitted by the laboratory.

### III. FIELD DUPLICATE SUMMARY

Field duplicate RPD is indicative of field and laboratory precision and sample homogeneity in combination. The Functional Guidelines or OMM do not specify criteria for field duplicate evaluation. An advisory criterion of 35 percent was applied to evaluating the RPD values of field duplicate results  $\geq 5xRL$ . For results  $< 5xRL$ , an advisory criterion of  $2xRL$  was applied to evaluating the concentration differences. The RPD (or concentration difference) values and data qualification for detected compounds in field duplicate pairs are presented as follows:

Detected Analyte	Unit	RL	Field Duplicate Sample ID & Concentration		RPD (%)	Concentration Difference	Data Qualification
			4R	94R			
Calcium	µg/L	50	100000	100000	0%	0	
Iron	µg/L	10	ND	ND	-	0	
Magnesium	µg/L	20	22000	23000	7%	-	
Manganese	µg/L	0.6	1.7	ND	-	1.7	J/UJ
Potassium	µg/L	100	8300	8300	0%	-	
Sodium	µg/L	200	37000	38000	4%	-	
Tetrachloroethene	µg/L	0.05	1.6	1.6	0%	-	
Trichloroethene	µg/L	0.053	0.6	0.61	2%	-	
			MW-12S	MW-912S			
Chloride	µg/L	920	29000	29000	0%	0	
Nitrate	µg/L	1500	39000	40000	4%	-	
Nitrite	µg/L	140	ND	ND	-	0	
Sulfate	µg/L	2600	71000	68000	6%	-	
Ammonia	mg/L	0.05	ND	ND	-	0	
Alkalinity, Total	mg/L	9	200	200	0%	-	
Bicarbonate	mg/L	9	200	200	0%	-	
Carbonate	mg/L	9	ND	ND	-	0	
Hydroxide	mg/L	9	ND	ND	-	0	
Total Dissolved Solids	µg/L	5000	390000	420000	11%	-	
Chemical Oxygen Demand	mg/L	5	ND	ND	-	0	
Total Organic Carbon	mg/L	0.5	1.1	1.1	-	0	
Manganese	µg/L	3.6	ND	ND	-	0	
1,2-Dichloroethane	µg/L	0.014	0.17	0.16	9%	-	
Trichloroethene	µg/L	0.053	1.8	1.8	0%	-	
			MW-22S	MW-922S			
Hexavalent Chromium	µg/L	10	ND	ND	-	0	
Total Chromium	µg/L	0.59	1.6	1.6	-	0	
			MW-54S	MW-954S			
1,2-Dichloroethane	µg/L	0.014	0.06	ND	-	0.06	J/UJ
Trichloroethene	µg/L	0.053	0.45	0.46	2%	-	

**Notes:**

mg/L – Milligram per liter

NA – Not available

ND – Not detected at or above the RL

RL – Reporting limit

RPD – Relative percent difference

µg/L – Microgram per liter

## IV. DATA VALIDATION SUMMARY

### 1. Data Qualification

Sample ID	Analyte	Data Qualifier	Reason	Report Section
PLF-MW26S-1012 PLF-MW53S-1012 PLF-MW52S-1012 PLF-MW47S-1012 PLF-NVM01-1012 PLF-MW50S-1012 PLF-MW12S-1012	4-Chloroaniline Benzoic Acid 2,4-Dinitrophenol	UJ	The calibration verification %D <sub>f</sub> value indicated a potential low bias of the reported value.	Section II, 3.4
PLF-MW26S-1012 PLF-MW53S-1012 PLF-MW52S-1012 PLF-MW47S-1012 PLF-NVM01-1012 PLF-MW50S-1012 PLF-MW12S-1012	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)anthracene <i>bis</i> (2-chloroethyl)ether Chrysene Dibenz(a,h)anthracene Hexachlorobenzene Indeno(1,2,3-cd)pyrene Pentachlorophenol (EPA 8270D-Full Scan)	DNR	Report from the SIM analysis in favor of the lower detection limit.	Section II, 3.12
PLF-MW26S-1012 PLF-MW53S-1012 PLF-MW52S-1012 PLF-MW47S-1012 PLF-NVM01-1012 PLF-MW50S-1012 PLF-MW12S-1012	1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Hexachlorobutadiene Naphthalene 1,2,4-Trichlorobenzene (EPA 8270D-Full Scan)	DNR	Report from the EPA 8260C-Full Scan analysis in favor of the lower detection limit.	Section II, 3.12
PLF-#4R-1012 PLF-#94R-1012	Manganese	J UJ	The field duplicate concentration difference value was >2xRL.	Section III
PLF-MW54I-1012 PLF-MW954I-1012	1,2-Dichloroethane	J UJ	The field duplicate concentration difference value was >2xRL.	Section III



## 2. Data Qualifier Definition

Data Qualifier	Definition
DNR	The result for this analyte should be reported from an alternative analysis for optimal result.
J	The analyte was detected above the reported quantitation limit, and the reported concentration is an estimated value.
UJ	The analyte is not detected above the sample quantitation limit, and the reported quantitation limit is an estimated value.

## **V. DATA QUALITY OBJECTIVE ASSESSMENT**

The quality of the data collected in this sampling event is assessed against the data quality objectives (DQOs) defined in the OMM. The assessment evaluates whether the DQOs were achieved in various QC elements - precision, accuracy, representativeness, comparability, and completeness, as presented below.

### **1. Precision**

Precision is defined as the degree of mutual agreement among independent measurements as the result of repeated application of the same process under similar conditions. Analytical precision is evaluated via the relative percent difference (RPD) values of LCS/LCSD, MS/MSD, and duplicate sample (inorganic only) analyses. The RPD values of field duplicate analyses are used to evaluate the analytical and field precision in conjunction with sample homogeneity.

The precision of VOCs, SVOCs, methane, ethane, ethane, metals, and inorganic constituent (anions, alkalinity, bicarbonate, COD, TDS, hexavalent chromium, ammonia, and TOC) analyses met the project DQOs.

#### **1.1 Manganese – Field Duplicate**

The concentration difference value for manganese in field duplicate pair, samples PLF-#4R-1012 and PLF-#94R-1012 was outside the advisory criteria (2xRL); manganese results for both samples were qualified as estimated values.

#### **1.2 1,2-Dichloroethane – Field Duplicate**

The concentration difference value for 1,2-dichloroethane in field duplicate pair, samples PLF-MW54I-1012 and PLF-MW954I-1012 was outside the advisory criteria (2xRL); 1,2-dichloroethane results for both samples were qualified as estimated values.

### **2. Accuracy**

Accuracy is a statistical measurement of correctness and includes components of random and system errors. Accuracy is defined as the degree of agreement between a measurement and the known reference. Analytical accuracy is evaluated via the percent recovery (%R) values of initial and continuing calibration (percent difference or percent drift for organic analyses), surrogate spikes (organic analyses only), MS, MSD, LCS, LCSD, and internal standards (as applicable for the analytical methods) in conjunction with method blank and field blank results. Method and field blanks identify the type and magnitude of effects contributed to the system error through field and/or laboratory procedures.

The accuracy of VOCs, SVOCs, methane, ethane, ethane, metals, and inorganic constituents (anions, alkalinity, COD, TDS, hexavalent chromium, ammonia, and TOC) analyses met the DQOs of the OMM, except for the following:

### **2.1 SVOCs – Instrument Calibration Verification**

The %D values for 4-chloroaniline, benzoic acid, and 2,4-dinitrophenol in the calibration verification analysis were less than the lower control limit (-25%), indicating a potential low bias of the associated sample results for these compounds. 4-Chloroaniline, benzoic acid, and 2,4-dinitrophenol were not detected in associated samples (all samples analyzed for SVOCs); the results were qualified (UJ) as estimated.

## **3. Representativeness**

Representativeness is the level of confidence that the analytical data reflect the actual field condition. Representativeness is evaluated via the integrity of the samples during the course from collection through preparation/analysis at the laboratory. The evaluation of associated method and field blanks also assists in identifying artifacts that may skew the representativeness of the samples.

No anomalies were identified in the procedures of sample preservation, handling, preparation, and analyses. Sample preparation and analyses were all performed within the required holding times. The laboratory and field blanks were either free of contaminants or at levels that had no significant effects on sample results. The VOCs, SVOCs, methane, ethane, ethane, metals, and inorganic constituent data are assumed representative.

## **4. Comparability**

Comparability is the confidence with which one data set can be compared to another data set. Using standard methods throughout the data generation processes ensures the comparability of data generated in separated sampling events.

Data collected in this sampling event are assumed comparable because standard methods were used for sample preparation and analyses, and the methods were consistent with those specified in the OMM.

Selective ion monitoring (SIM) technique was applied to the analyses of full list VOCs, as opposed to only compounds requiring lower detection limits in all previous sampling events. The reporting limits remained the same as those specified in the OMM. No significant deviations of results from the previous sampling events were observed.

## 5. Completeness

Completeness is a ratio of the number of valid data to the expected number of data that can be obtained under normal conditions for a given sampling event. Valid data are sample results determined acceptable for use. Rejected results are considered un-useable and thus invalid. In cases where data were rejected in favor of those obtained from a separate valid analysis, the rejection does not affect the completeness.

The completeness of this sampling event is 100 percent for all analyses except hexavalent chromium. The overall completeness for this sampling event met the 95 percent completeness goal of the OMM.

## 6. Sensitivity

Sensitivity depicts the level of ability an analytical system (i.e., sample preparation and instrumental analysis) of detecting a target component in a given sample matrix with a defined level of confidence. Factors affecting the sensitivity of an analytical system include: analytical system background (e.g., laboratory artifact or method blank contamination), sample matrix (e.g., mass spectrometry ion ratio change, co-elution of peaks, or baseline elevation) and instrument instability.

To evaluate if the analytical sensitivity achieved the project expectation, sample-specific PQLs were compared against the RL goals set forth in the OMM and the revisions. In addition, sample results were compared to detections of target analytes in method blanks, trip blanks, and calibration blanks to identify potential effects of laboratory and field background on sensitivity.

The sensitivity associated with the analyses of all samples was attained to the project goals in this sampling event.

## VI. REFERENCES

*USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2008, EPA-540-R-08-01.

*USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*, Office of Superfund Remediation and Technical Innovation, U.S. Environmental Protection Agency, January 2010, USEPA 540/R-10/011.

*USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Third Edition, December 1996.

*USEPA Methods for Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983 and updates.

*Standard Methods for the Examination of Water and Wastewater*, American Public Health Association, 20<sup>th</sup> Edition, 1995.

*Operations and Maintenance Manual - SVE, NoVOCs<sup>TM</sup> and Groundwater Monitoring, Pasco Landfill Site, Pasco, Washington*. Environmental Partners, Inc. January 31, 2007 and Revisions.

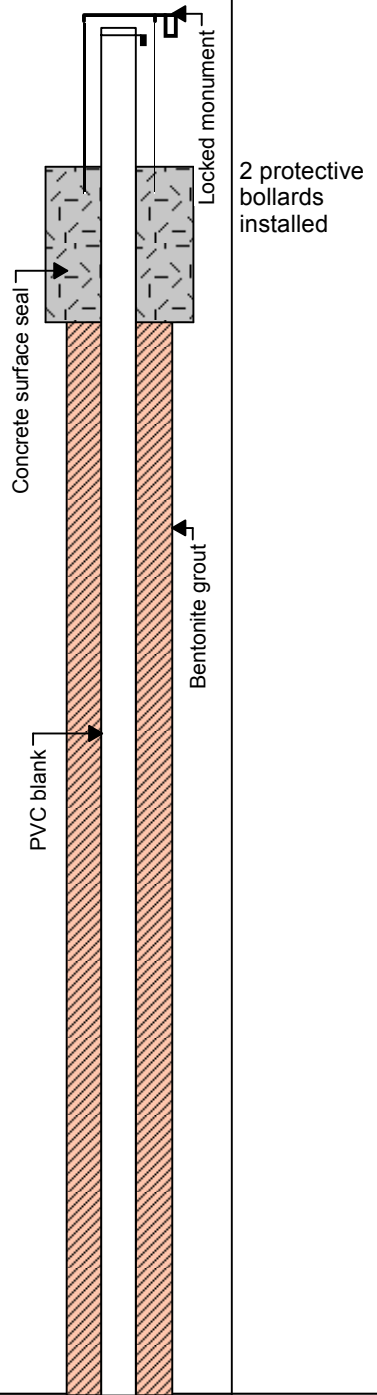
*Operations and Maintenance Manual - SVE, NoVOCs<sup>TM</sup> and Groundwater Monitoring, Pasco Landfill Site, Pasco, Washington, Addendum No. 1*. Environmental Partners, Inc. May 22, 2008.

**Attachment B**  
*MW-55S Borelog*

# Boring: MW-55S

<b>Client:</b> IWAG Group III	<b>Contractor:</b> Environmental West	<b>Elevations (ft amsl)</b>
<b>Site Address:</b> 1901 Dietrich Road, Pasco WA	<b>Equipment:</b> Truck-mounted rotasonic	<b>Ground Surface:</b> 426.04
<b>Date of Drilling:</b> April 9th & 10th, 2012	<b>Borehole Diameter:</b> 6-5/8" casing; 4" sonic; 2.5" SS	<b>Top of Casing:</b> 428.82
<b>Logged by:</b> K. Addis, L.G.	<b>Casing Mat &amp; Size:</b> 2" Sch 40 PVC	<b>Bottom of Casing:</b> 349.0
<b>Total Depth (ft bgs):</b> 77.5	<b>Screen Size:</b> 0.010" machine cut	<b>Top of Screen:</b> 364.0
<b>Datum:</b> NAD83-91; NAVD88	<b>Filter Pack:</b> 10/20 Colorado Silica Sand	<b>Bottom of screen:</b> 349.0

Depth (ft)	Elevation	Lithology	USCS	Description	Interval	Recovery	Blow Counts	Sample	PID	Well Completion Details	Comments
-3											
	426.0			Ground Surface							
0.0			SM	<b>Silty sand</b> Olive gray; moist; very dense; mostly very fine to fine sand with some silt and trace gravel				MW55S@2			
1							21		5.5		
3				Decreasing silt			26	MW55S@3.5	1.7		
5							27				
7				Increasing silt			20	MW55S@7			
9							29	MW55S@8.5	0.9		
11							34				
12	414.0							MW55S@12			
13	12.0		ML	<b>Sandy silt</b> Olive gray; moist; hard; mostly silt with some fine sand			46	MW55S@13.5	1.5		
15							43				
17	409.5		ML	<b>Silt with sand</b> Olive gray; damp; hard; mostly silt with little fine sand			50-6"	MW55S@17			
18	16.5										
19	408.0		SM	<b>Silty sand</b> Olive gray; damp; very dense; mostly very fine to fine sand with little silt			28	MW55S@18.5	1.4		
21	18.0		SP-SM	<b>Poorly-graded sand with silt</b> Olive gray; damp; very dense; mostly fine sand with few silt			40	MW55S@22			
23	404.0						50-6"				
25	22.0		ML				19	MW55S@23.5	0.9		
27							33				
29							49				



# Boring: MW-55S

<b>Client:</b> IWAG Group III	<b>Contractor:</b> Environmental West	<b>Elevations (ft amsl)</b>
<b>Site Address:</b> 1901 Dietrich Road, Pasco WA	<b>Equipment:</b> Truck-mounted rotasonic	<b>Ground Surface:</b> 426.04
<b>Date of Drilling:</b> April 9th & 10th, 2012	<b>Borehole Diameter:</b> 6-5/8" casing; 4" sonic; 2.5" SS	<b>Top of Casing:</b> 428.82
<b>Logged by:</b> K. Addis, L.G.	<b>Casing Mat &amp; Size:</b> 2" Sch 40 PVC	<b>Bottom of Casing:</b> 349.0
<b>Total Depth (ft bgs):</b> 77.5	<b>Screen Size:</b> 0.010" machine cut	<b>Top of Screen:</b> 364.0
<b>Datum:</b> NAD83-91; NAVD88	<b>Filter Pack:</b> 10/20 Colorado Silica Sand	<b>Bottom of screen:</b> 349.0

Depth (ft)	Elevation	Lithology	USCS	Description	Interval	Recovery	Blow Counts	Sample	PID	Well Completion Details	Comments
25	402.0 24.0 401.0 25.0		ML	<b>Sandy silt</b> Olive gray; damp; hard; mostly silt with some fine sand							
			ML	<b>Silt</b>				MW55S@27			
				<b>Silt</b>							
27	399.0 27.0		ML	Olive gray; damp; hard; mostly silt with few very fine sand							
	398.0 28.0		SM	<b>Silt with sand</b> Olive gray; damp; hard; mostly silt with little fine sand			32 40 50-6"	MW55S@28.5	0.2		
				<b>Silty sand</b>							
	396.0 30.0		ML	Olive gray; damp; very dense							
				<b>Silt with sand</b>				MW55S@32			
	394.0 32.0		SP-SM	<b>Poorly-graded sand with silt</b>							
				Olive gray; damp; very dense; mostly fine sand with few silt			30 38 50-5"	MW55S@33.5	1.3		
35								MW55S@37			
37	388.5 37.5		MH	<b>Sandy elastic silt</b>							
	387.5 38.5		SM	Light grayish brown; damp; hard; medium to high plasticity; mostly silt with some little fine sand and trace clay			30 46 50-5"	MW55S@38	0.1		
				<b>Silty sand</b>				MW55S@42			
41	385.0 41.0		MH	Olive gray; damp; very dense; mostly fine sand with little silt and trace clay							
	384.0 42.0		SM	<b>Sandy elastic silt</b>							
				Light grayish brown; damp; hard; medium to high plasticity; mostly silt with little fine sand and trace clay			29 50-5"	MW55S@43	0.1		
43			SP								
				<b>Silty sand</b>				MW55S@47			
45											
				<b>Poorly-graded sand</b>							
	379.0 47.0		SM	Black (Salt and pepper); damp; very dense; mostly fine to medium sand with trace gravel; silty sand seams 2' thick at 44' and 45.5'			44 50-5"	MW55S@48.5	0.2		
49	377.0 49.0		SP-SM	<b>Silty sand</b>							
				Dark gray-brown; damp; very dense; mostly sand with fine silt				MW55S@52			



# Boring: MW-55S

**Client:** IWAG Group III      **Contractor:** Environmental West      **Elevations (ft amsl)**  
**Site Address:** 1901 Dietrich Road, Pasco WA      **Equipment:** Truck-mounted rotasonic      **Ground Surface:** 426.04  
**Date of Drilling:** April 9th & 10th, 2012      **Borehole Diameter:** 6-5/8" casing; 4" sonic; 2.5" SS      **Top of Casing:** 428.82  
**Logged by:** K. Addis, L.G.      **Casing Mat & Size:** 2" Sch 40 PVC      **Bottom of Casing:** 349.0  
**Total Depth (ft bgs):** 77.5      **Screen Size:** 0.010" machine cut      **Top of Screen:** 364.0  
**Datum:** NAD83-91; NAVD88      **Filter Pack:** 10/20 Colorado Silica Sand      **Bottom of screen:** 349.0

Depth (ft)	Elevation	Lithology	USCS	Description	Interval	Recovery	Blow Counts	Sample	PID	Well Completion Details	Comments
52	374.0 52.0	[Dotted pattern]	SP	<b>Poorly-graded sand with silt</b> Black (Salt and pepper); damp; very dense; mostly fine to medium sand with little silt with trace gravel			17 50-5"	MW55S@53	0.2	Bentonite grout	
54				<b>Poorly-graded sand</b> Black (salt and pepper); damp; very dense; mostly fine to medium sand with trace coarse sand					MW55S@57		
56	369.0 57.0	[Dotted pattern]	SP-SM	<b>Poorly-graded sand with silt</b> Black; damp; mostly fine to medium sand with little silt			42 50-5"	MW55S@57.9	0.1	Bentonite pellets	
58				Becomes dry and gray					MW55S@62		
60		[Dotted pattern]	SP-SM	<b>Poorly-graded sand with silt</b> Black; damp; mostly fine to medium sand with little silt			50-4"	MW55S@62.3	0.2	Filter Pack	
62	364.0 62.0			<b>Poorly-graded sand</b>					MW55S@67		
64	362.0 64.0	[Vertical lines]	SM	<b>Silty sand</b> Brown-gray; moist; mostly fine to medium sand with little silt			50-6"	MW55S@67.5	0.1	Well screen	Water level 67.05 ATD
66	361.0 65.0										
68	358.0 68.0	[Dotted pattern]	SP	<b>Poorly-graded sand</b> Black; saturated; mostly fine to medium sand with trace silt							
70											
72		[Dotted pattern]	SP	<b>Poorly-graded sand</b> Black; saturated; mostly fine to medium sand							
74											
76	351.0 75.0										
	348.5 77.5										

**Attachment C**  
*Annual Reports on Institutional Controls*

## M E M O R A N D U M

**DATE:** November 30, 2012  
**TO:** Gary Crutchfield, City Manager  
**CC:** Rick White, Director, Community & Economic Development  
Mary Holder, Environmental Scientist, Environmental Partners, Inc.  
Doyle Heath, Senior Engineer – Utility  
James Coleman, Biologist, B-F Health District  
**FROM:** Mitch Nickolds, Inspection Services Manager  
**RE:** 2012- East Pasco Plume Area-Well Location Survey  
**Attachments:** 1) Chart - 2) Monitoring Well Map

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Please find attached a chart which provides the address, parcel number, property owner information, current water use status of operational wells located within a section of East Pasco, inclusive of the area south of East “A” Street, determined by the State Department of Ecology to be affected by a subterranean plume of ground water contamination. The well names shown in the first column in the chart coincide with the names of the wells shown on the attached monitoring wells map, as prepared by Environmental Partners, Inc.

On Wednesday, November 14, 2012, Doyle Heath, Senior Engineer-Utilities, Mary Holder, Environmental Scientist, Environmental Partners, Inc., James Coleman, Biologist, Benton-Franklin Health District, and I surveyed the target area to verify the exact locations of known wells and to locate any wells not previously known to the City.

No additional wells were discovered during the 2012 survey and the status of the existing wells, number of City water connections and the properties upon which they are located have been updated in the attached chart. As directed, we will perform an East Pasco well survey annually and provide you the updated well status chart and monitoring well map.

Please advise if you have any questions.

MN/

**OPERATIONAL WELLS/NOVEMBER-2012  
EAST PASCO PLUME IMPACT AREA**

<b>Number and Name of Wells</b>	<b>Address</b>	<b>Property Owner(s)</b>	<b>Potable Water Use/Parcel Status?</b>	<b>City Water Account Status</b>
				<b><i>Water users in italics</i></b>
1 BONNIE 1	2508 E. Lewis St. Tax Parcel #: 113900057	Amerawest Corporation 2839 West Kennewick Ave. Kennewick, WA 99336	No City water available to the entire site. All mobile homes removed. Property in foreclosure.	2 accts. w/water 1 acct. no water (Bonnie Brae) Note: Well is disabled. <i>9 apartments and 3 single-family residences connected to City water.</i>
1 WEST	2400 East Lewis Pl. Tax Parcel #: 113900011	Lester & Marjorie West 2400 E Lewis St. Pasco, WA 99301	No. City Water is available on site.	4 accts. w/water Well for irrigation only. <i>3 rentals and 1 owner occupied home connected to City water.</i>
1 RINDT	2500 E Lewis Pl. Tax Parcel #: 113870135	Enrique & Elodia Montoya 2500 East Lewis St. Pasco, WA 99301	No	1 acct. w/water <i>1 single-family home connected to City water</i>
2 HOMME'S	2506 E. Lewis Pl. Tax Parcel #: 113870198	Doug Brown (ETAL) Michelle Raye Younger 2506 E Lewis Pl. Pasco, WA 99301	No City Water on site. New concrete pad and awning added to shed	1 acct. w/water <i>7 apartments and 1 single family dwelling connected to City water</i>
1 NORVELL (Anjeles)	2700 E. Lewis Place Tax Parcel #: 113870170	Alejandro Anjeles 2700 East Lewis St. Pasco, WA 99301	Yes Certified by the WA Dept. of Ecology and B-F Heath District.	No water acct. Note: Well is only water source on this property. <i>3 businesses using well water on premises</i>

**OPERATIONAL WELLS/NOVEMBER-2012  
EAST PASCO PLUME IMPACT AREA**

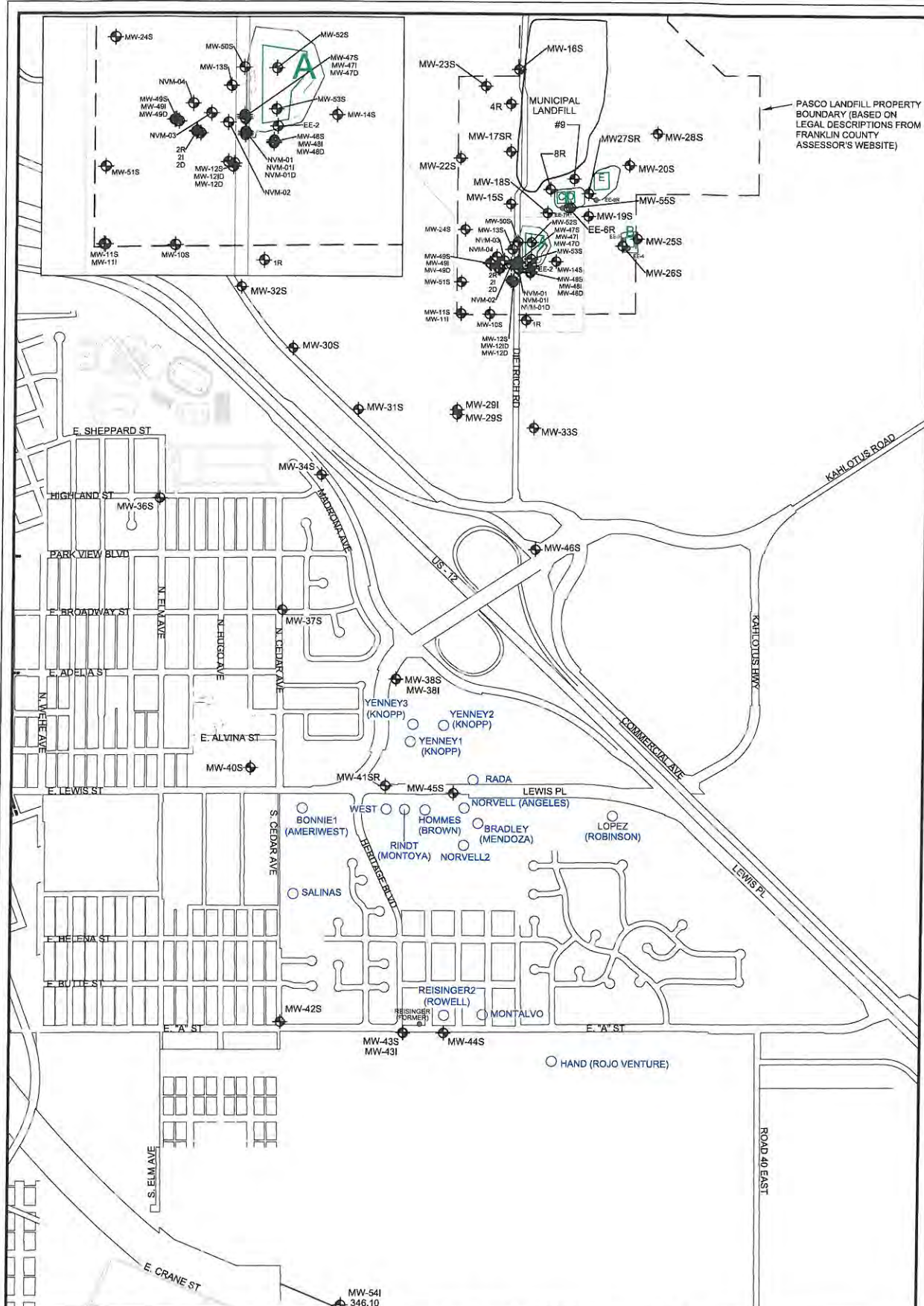
<b>Number and Name of Wells</b>	<b>Address</b>	<b>Property Owner(s)</b>	<b>Potable Water Use/Parcel Status?</b>	<b>City Water Account Status</b>
				<b><i>Water users in italics</i></b>
1 NORVELL 2	2750 E Lewis Street Tax Parcel #: 113870161	Don & Barbara Norvell PO Box 62 Pasco, WA 99301	No Well drilled in 2005 with DOE approval.	No water acct. Note: Well is only water source on this property. <i>1 single-family dwelling connected to well</i>
1 BRADLEY	2904 E Lewis Pl. Tax Parcel #: 113870018	Ramiro & Irma Mendoza 4114 Finnhorse Lane Pasco, WA 99301-8317	No City water available but not connected.	No water acct. Note: Well is only water source on this property <i>1 office bathroom and outdoor hose bibs connected to well.</i>
1 LOPEZ	No Address Tax Parcel #: 113730044	Bill & Sheree (Jr) Robinson 10120 W Argent Road Pasco, WA 99301	No power to well. Old shed removed. City water available but not connected.	No water acct. Note: Well is only water source on this property <i>No connections to well</i>
1 RADA	2707 E Lewis Pl. Tax Parcel #: 113780053  3008 E George Tax Parcel # 113780104  3012 E George Tax Parcel	Douglas Rada (ETAL) 2707 E Lewis Place Pasco, WA 99302  Douglas Rada 2707 E Lewis Place Pasco, WA 99302  Joseph E & Deanne Rada 440 Merry Lane	No City water available but not connected.  City Water not available  City Water not available	No water accts. Note: Well is only water source on these properties <i>1 business office 2 single-family dwellings connected to well located on Parcel 113780053 (2707 E Lewis Place).</i>

**OPERATIONAL WELLS/NOVEMBER-2012  
EAST PASCO PLUME IMPACT AREA**

<b>Number &amp; Name of Wells</b>	<b>Address &amp; Tax Parcel</b>	<b>Property Owner(s)</b>	<b>Potable Water Use/Parcel Status?</b>	<b>City Water Account Status</b>
	#113780113	Burbank, WA 99301		<i><b>Water users in italics</b></i>
1 YENNEY 1	900 N Avery Ave. Tax Parcel #: 113780035	Glenn & Carol Knopp 4172 N. Frontage Road E. Moses Lake, WA 98837	City water available	1 acct. w/water Note: <i>Well is used for irrigation only.</i>
1 YENNEY 3	900 ½ N Avery Ave. Tax Parcel #: 113780062	Glenn & Carol Knopp 4172 N. Frontage Road E. Moses Lake, WA 98837	City water available	1 acct. w/water Note: <i>Well is used for irrigation only.</i>
1 YENNEY 2	3021 E George St. Tax Parcel #: 113780017	Glenn & Carol Knopp 4172 N. Frontage Road E. Moses Lake, WA 98837	Yes House is vacant and decayed. Bldg. permit required to occupy.	No water acct. Note: Well is only water source on this property. <b>Electric service to well is active</b> <i>1 Single-family home connected to well.</i>
1 SALINAS	407 S Cedar Ave. Tax Parcel #: 113900085	Julian Salinas 407 South Cedar Avenue Pasco, WA 99301	City water available. Dwelling is connected to City water service.	1 acct. w/water <i>1 Single-family dwelling is connected to City water Well is used for irrigation only.</i>
1 REISINGER 1	2505 E "A" St. Tax Parcel #: 113884147	Howard A & Linda S Rowell 4709 Hilltop Drive Pasco, WA 99301	House demolished. Well is decommissioned	1 acct. w/water <i>City water for irrigation water meter for dust control.</i>

**OPERATIONAL WELLS/NOVEMBER-2012  
EAST PASCO PLUME IMPACT AREA**

<b>Number &amp; Name of Wells</b>	<b>Address &amp; Tax Parcel</b>	<b>Property Owner(s)</b>	<b>Potable Water Use/Parcel Status?</b>	<b>City Water Account Status</b>
				<b><i>Water users in italics</i></b>
1 REISINGER 2	No Address Tax Parcel #: 113883031	Howard A & Linda S Rowell 4709 Hilltop Drive Pasco, WA 99301	No Note: The well house is the only structure built on this property.	No water acct. No dwellings. <i>Well is used for irrigation only.</i>
1 MONTALVO	2700 E "A" St. Tax Parcel #: 113882078	Juan Montalvo 2700 East "A" St. Pasco, WA 99301	Yes Well is used for drinking water.	No water acct. Note: Well is only water source on this property. <i>3 apartments and 1 dwelling</i>
1 HAND	3300 E "A" St. Tax Parcel #: 112530057	Ronald & Alice Hjaltalin DBA Rojo Venture LLC 4520 West Wernett Pasco, WA 99301	No	1 acct. w/water Noted as fire line Hose bib for filling hydro-mulch tanks <i>1 business office connected to City water</i>



PASCO LANDFILL PROPERTY BOUNDARY (BASED ON LEGAL DESCRIPTIONS FROM FRANKLIN COUNTY ASSESSOR'S WEBSITE)

MW-42S MONITORING WELL  
 YENNEY1 (KNOPP) RESIDENTIAL WELL (WITH PROPERTY OWNER)  
 REISINGER DECOMMISSIONED WELL

0 250 500 1000  
 APPROXIMATE SCALE: 1" = 1,000'

**ENVIRONMENTAL PARTNERS INC**  
 295 NE Gilman Boulevard, Suite 201  
 Issaquah, Washington 98027

**PASCO LANDFILL WELL LOCATIONS**

PROJECT	03911.2
PREPARED FOR	IWAG GROUP III PASCO LANDFILL
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DRAWN BY	ALW
REVIEWED BY	MMH
DATE	11/30/12



**PROSECUTING ATTORNEY  
FRANKLIN COUNTY, WASHINGTON**

**SHAWN P. SANT  
PROSECUTING ATTORNEY**

**DAVID W. CORKRUM  
CHIEF CRIMINAL DEPUTY**

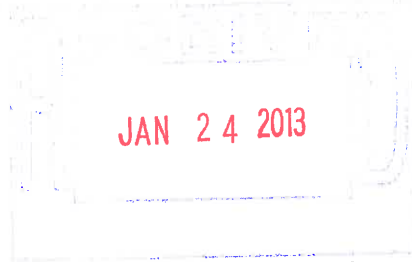
**RYAN E. VERHULP  
CHIEF CIVIL DEPUTY**

**KELLY J. SCHADLER  
OFFICE ADMINISTRATOR**

1016 North 4<sup>th</sup> Avenue  
Pasco, WA 99301  
Criminal Division (509) 545-3543  
Fax (509) 545-2135

**DEPUTIES:**

**FRANK W. JENNY  
BRIAN V. HULTGRENN  
TIMOTHY E. DICKERSON  
MAUREEN R. LORINCZ  
KIM M. KREMER  
TEDDY E. CHOW  
TERESA CHEN  
JANET E. TAYLOR**



January 22, 2013


Ms. Mary Holder  
Environmental Partners, Inc.  
295 NE Gilman Boulevard  
Suite 201  
Issaquah, WA 98027

Re: Pasco Sanitary Landfill  
Annual Institutional Controls Reports for 2012

Dear Ms. Holder,

Enclosed please find the Annual Institutional Controls Report for 2012.

Very truly yours,

  
Ryan E. Verhulp, Chief Civil  
Deputy Prosecuting Attorney 

REV:df

Enclosure



# FRANKLIN COUNTY

## PLANNING AND BUILDING DEPARTMENT

*JERROD B. MACPHERSON – DIRECTOR*

January 17, 2013

Ryan E. Verhulp  
Chief Civil Deputy  
Prosecuting Attorney's Office  
1016 North 4<sup>th</sup> Avenue  
Pasco, WA 99301

RE: Pasco Sanitary Landfill - "Annual Institutional Controls Report" for 2012.

Dear Mr. Verhulp:

Please consider this letter as the "Annual Institutional Controls Report" to inform you of the activity that has taken place in the year 2012 for the Pasco Sanitary Landfill.

Throughout the calendar year of 2012 our department continued to carefully monitor all building and development permits for the affected area. No land use approvals or building permits were issued within the affected zone for the 2012 calendar year.

These control measures include building and development permit tracking for the affected area through our land use and building permit programs, as well as quarterly site investigations to ensure that no illegal activities are taking place within the affected zone.

To date, all of these controls measures are in place and working very well. Our main goal in instituting these control measures is to prevent any drinking water wells from going into the affected area.

If you have any further comments, questions, and/or concerns don't hesitate to contact me at anytime.

Sincerely,

A handwritten signature in black ink that reads "Jerrod MacPherson".

Jerrod MacPherson,  
Director

JM/jm

**Attachment D**  
*Waste Handling*

718266

1548636

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number WAD991281874	2. Page 1 of 1	3. Emergency Response Phone (877) 577-2669	4. Manifest Tracking Number 00 0059663 DAT				
5. Generator's Name and Mailing Address CALIBRE SYSTEMS ATTN: JEFF DAWSON 64299 AIRWAY ROAD				Generator's Site Address (if different than mailing address) PASCO LANDFILL 1901 DIETRICH ROAD PASCO WA 99301 (509)654-1247					
Generator's Phone: JOSEPH OR 97846 (703)859-3370									
6. Transporter 1 Company Name BURLINGTON ENVIRONMENTAL, LLC					U.S. EPA ID Number WAR000001743				
7. Transporter 2 Company Name					U.S. EPA ID Number				
8. Designated Facility Name and Site Address BURLINGTON ENVIRONMENTAL, LLC. KENT FACILITY 70245 77TH AVENUE SOUTH					U.S. EPA ID Number WAD991281767				
Facility's Phone: KENT, WA 98032 (253) 872-8838									
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
				No.	Type				
	X	1. WA3082 HAZARDOUS WASTE, LIQUID, H.O.S. (METHYL ETHYL KETONE, TRICHLOROETHYLENE) 9 PGIII		1	TT	5175	6	0035	0040
		2.							
		3.							
	4.								
14. Special Handling Instructions and Additional Information (1) 48743-01 - ERG(171) ZONE A VAPOR CONDENS									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offeror's Printed/Typed Name Jeff J. Dawson					Signature Jeff J. Dawson			Month Day Year Oct 17 12	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Blaine Legg					Signature Blaine Legg			Month Day Year 10 17 12	
Transporter 2 Printed/Typed Name					Signature			Month Day Year	
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number: _____									
18b. Alternate Facility (or Generator) U.S. EPA ID Number _____									
Facility's Phone: _____									
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____									
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1. H082		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name Christine Crisostomo					Signature Crisostomo			Month Day Year 10 17 12	

5916X

GENERATOR

INT'L TRANSPORTER

DESIGNATED FACILITY



**CERTIFICATE OF ANALYSIS**

CLIENT: Environmental Partners, Inc.  
 295 NE Gilman Blvd., Suite 201  
 Issaquah, WA 98027

CLIENT CONTACT: Thom Morin  
 CLIENT PROJECT: 03911.1  
 CLIENT SAMPLE ID: SVECONDFLARE-101712

DATE: 10/26/2012  
 ALS JOB#: EV12100108  
 ALS SAMPLE#: -01  
 DATE RECEIVED: 10/18/2012  
 COLLECTION DATE: 10/17/2012 9:45:00 AM  
 WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Chloromethane	EPA-8260	6.6	2.0	1	UG/L	10/25/2012	GAP
Vinyl Chloride	EPA-8260	1.5	0.20	1	UG/L	10/25/2012	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Chloroethane	EPA-8260	5.1	2.0	1	UG/L	10/25/2012	GAP
Trichlorofluoromethane	EPA-8260	7.6	2.0	1	UG/L	10/25/2012	GAP
Acetone	EPA-8260	1500000	68000	100000	UG/L	10/25/2012	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Ethanol	EPA-8260	5300000	7.10E+05	1000	UG/L	10/25/2012	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Methylene Chloride	EPA-8260	8800	680	1000	UG/L	10/25/2012	GAP
tert-Butanol	EPA-8260	43000	13000	1000	UG/L	10/25/2012	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/25/2012	GAP
Diisopropyl Ether	EPA-8260	U	3.5	1	UG/L	10/25/2012	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,1-Dichloroethane	EPA-8260	190	2.0	10	UG/L	10/25/2012	GAP
2-Butanone	EPA-8260	950000	1.40E+05	100000	UG/L	10/25/2012	GAP
Ethyl T-Butyl Ether	EPA-8260	U	4.1	1	UG/L	10/25/2012	GAP
Cis-1,2-Dichloroethene	EPA-8260	3.9	2.0	1	UG/L	10/25/2012	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Chloroform	EPA-8260	15	2.0	1	UG/L	10/25/2012	GAP
1,1,1-Trichloroethane	EPA-8260	56	2.0	10	UG/L	10/25/2012	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Carbon Tetrachloride	EPA-8260	U	0.34	1	UG/L	10/25/2012	GAP
tert-Amyl Methyl Ether	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,2-Dichloroethane	EPA-8260	1000	2.0	100	UG/L	10/25/2012	GAP
Benzene	EPA-8260	23	2.0	1	UG/L	10/25/2012	GAP
Trichloroethene	EPA-8260	940	5.4	100	UG/L	10/25/2012	GAP
1,2-Dichloropropane	EPA-8260	U	0.64	1	UG/L	10/25/2012	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Bromodichloromethane	EPA-8260	U	0.71	1	UG/L	10/25/2012	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
4-Methyl-2-Pentanone	EPA-8260	100000	3400	10000	UG/L	10/25/2012	GAP
Toluene	EPA-8260	19000	15	1000	UG/L	10/25/2012	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,1,2-Trichloroethane	EPA-8260	7.3	0.77	1	UG/L	10/25/2012	GAP



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	10/26/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12100108
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	SVECONDFLARE-101712	DATE RECEIVED:	10/18/2012
		COLLECTION DATE:	10/17/2012 9:45:00 AM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Hexanone	EPA-8260	3900	94	100	UG/L	10/25/2012	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Tetrachloroethylene	EPA-8260	75	2.0	10	UG/L	10/25/2012	GAP
Dibromochloromethane	EPA-8260	U	0.52	1	UG/L	10/25/2012	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/25/2012	GAP
Chlorobenzene	EPA-8260	4.5	2.0	1	UG/L	10/25/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	1.7	1	UG/L	10/25/2012	GAP
Ethylbenzene	EPA-8260	1600	2.9	100	UG/L	10/25/2012	GAP
m,p-Xylene	EPA-8260	5400	11	100	UG/L	10/25/2012	GAP
Styrene	EPA-8260	U	1.5	1	UG/L	10/25/2012	GAP
o-Xylene	EPA-8260	2200	6.9	100	UG/L	10/25/2012	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Isopropylbenzene	EPA-8260	63	2.0	10	UG/L	10/25/2012	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
N-Propyl Benzene	EPA-8260	140	2.0	10	UG/L	10/25/2012	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,3,5-Trimethylbenzene	EPA-8260	330	2.0	10	UG/L	10/25/2012	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,2,4-Trimethylbenzene	EPA-8260	760	5.4	100	UG/L	10/25/2012	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
P-Isopropyltoluene	EPA-8260	8.1	2.0	1	UG/L	10/25/2012	GAP
1,3 Dichlorobenzene	EPA-8260	2.7	2.0	1	UG/L	10/25/2012	GAP
1,4-Dichlorobenzene	EPA-8260	11	1.8	1	UG/L	10/25/2012	GAP
N-Butylbenzene	EPA-8260	24	2.0	1	UG/L	10/25/2012	GAP
1,2-Dichlorobenzene	EPA-8260	120	2.0	10	UG/L	10/25/2012	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/25/2012	GAP
1,2,4-Trichlorobenzene	EPA-8260	5.0	2.0	1	UG/L	10/25/2012	GAP
Hexachlorobutadiene	EPA-8260	U	0.56	1	UG/L	10/25/2012	GAP
Naphthalene	EPA-8260	470	5.5	100	UG/L	10/25/2012	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	96.3	10/25/2012	GAP
1,2-Dichloroethane-d4 10X Dilution	EPA-8260	107	10/25/2012	GAP



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	<b>DATE:</b>	10/26/2012
<b>CLIENT CONTACT:</b>	Thom Morin	<b>ALS JOB#:</b>	EV12100108
<b>CLIENT PROJECT:</b>	03911.1	<b>ALS SAMPLE#:</b>	-01
<b>CLIENT SAMPLE ID</b>	SVECONDFLARE-101712	<b>DATE RECEIVED:</b>	10/18/2012
		<b>COLLECTION DATE:</b>	10/17/2012 9:45:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4 100X Dilution	EPA-8260	<b>109</b>	10/25/2012	GAP
1,2-Dichloroethane-d4 1000X Dilution	EPA-8260	<b>119</b>	10/25/2012	GAP
1,2-Dichloroethane-d4 10000X Dilution	EPA-8260	<b>114</b>	10/25/2012	GAP
1,2-Dichloroethane-d4 100000X Dilution	EPA-8260	<b>115</b>	10/25/2012	GAP
Toluene-d8	EPA-8260	<b>73.0</b>	10/25/2012	GAP
Toluene-d8 10X Dilution	EPA-8260	<b>83.5</b>	10/25/2012	GAP
Toluene-d8 100X Dilution	EPA-8260	<b>87.1</b>	10/25/2012	GAP
Toluene-d8 1000X Dilution	EPA-8260	<b>89.4</b>	10/25/2012	GAP
Toluene-d8 10000X Dilution	EPA-8260	<b>86.5</b>	10/25/2012	GAP
Toluene-d8 100000X Dilution	EPA-8260	<b>80.0</b>	10/25/2012	GAP
4-Bromofluorobenzene	EPA-8260	<b>115</b>	10/25/2012	GAP
4-Bromofluorobenzene 10X Dilution	EPA-8260	<b>103</b>	10/25/2012	GAP
4-Bromofluorobenzene 100X Dilution	EPA-8260	<b>101</b>	10/25/2012	GAP
4-Bromofluorobenzene 1000X Dilution	EPA-8260	<b>93.8</b>	10/25/2012	GAP
4-Bromofluorobenzene 10000X Dilution	EPA-8260	<b>88.0</b>	10/25/2012	GAP
4-Bromofluorobenzene 100000X Dilution	EPA-8260	<b>85.0</b>	10/25/2012	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	10/26/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12100108
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-02
CLIENT SAMPLE ID	SVECONDOWS-101712	DATE RECEIVED:	10/18/2012
		COLLECTION DATE:	10/17/2012 10:00:00 AM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Chloromethane	EPA-8260	4.8	2.0	1	UG/L	10/25/2012	GAP
Vinyl Chloride	EPA-8260	1.5	0.20	1	UG/L	10/25/2012	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Chloroethane	EPA-8260	3.8	2.0	1	UG/L	10/25/2012	GAP
Trichlorofluoromethane	EPA-8260	2.7	2.0	1	UG/L	10/25/2012	GAP
Acetone	EPA-8260	760000	68000	100000	UG/L	10/25/2012	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Ethanol	EPA-8260	1700000	71000	100	UG/L	10/25/2012	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Methylene Chloride	EPA-8260	3900	68	100	UG/L	10/25/2012	GAP
tert-Butanol	EPA-8260	11000	1300	100	UG/L	10/25/2012	GAP
Acrylonitrile	EPA-8260	15	10	1	UG/L	10/25/2012	GAP
Diisopropyl Ether	EPA-8260	U	3.5	1	UG/L	10/25/2012	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,1-Dichloroethane	EPA-8260	100	2.0	10	UG/L	10/25/2012	GAP
2-Butanone	EPA-8260	440000	1.40E+05	100000	UG/L	10/25/2012	GAP
Ethyl T-Butyl Ether	EPA-8260	U	4.1	1	UG/L	10/25/2012	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Chloroform	EPA-8260	11	2.0	1	UG/L	10/25/2012	GAP
1,1,1-Trichloroethane	EPA-8260	20	2.0	1	UG/L	10/25/2012	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Carbon Tetrachloride	EPA-8260	U	0.34	1	UG/L	10/25/2012	GAP
tert-Amyl Methyl Ether	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,2-Dichloroethane	EPA-8260	640	2.0	100	UG/L	10/25/2012	GAP
Benzene	EPA-8260	12	2.0	1	UG/L	10/25/2012	GAP
Trichloroethene	EPA-8260	460	5.4	100	UG/L	10/25/2012	GAP
1,2-Dichloropropane	EPA-8260	U	0.64	1	UG/L	10/25/2012	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Bromodichloromethane	EPA-8260	U	0.71	1	UG/L	10/25/2012	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
4-Methyl-2-Pentanone	EPA-8260	42000	3400	10000	UG/L	10/25/2012	GAP
Toluene	EPA-8260	8500	15	1000	UG/L	10/25/2012	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,1,2-Trichloroethane	EPA-8260	4.4	0.77	1	UG/L	10/25/2012	GAP





**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	10/26/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12100108
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-02
CLIENT SAMPLE ID	SVECONDOWS-101712	DATE RECEIVED:	10/18/2012
		COLLECTION DATE:	10/17/2012 10:00:00 AM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
2-Hexanone	EPA-8260	1900	94	100	UG/L	10/25/2012	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Tetrachloroethylene	EPA-8260	32	2.0	1	UG/L	10/25/2012	GAP
Dibromochloromethane	EPA-8260	U	0.52	1	UG/L	10/25/2012	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/25/2012	GAP
Chlorobenzene	EPA-8260	2.6	2.0	1	UG/L	10/25/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	1.7	1	UG/L	10/25/2012	GAP
Ethylbenzene	EPA-8260	640	2.9	100	UG/L	10/25/2012	GAP
m,p-Xylene	EPA-8260	2200	11	100	UG/L	10/25/2012	GAP
Styrene	EPA-8260	U	1.5	1	UG/L	10/25/2012	GAP
o-Xylene	EPA-8260	910	6.9	100	UG/L	10/25/2012	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Isopropylbenzene	EPA-8260	22	2.0	1	UG/L	10/25/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
N-Propyl Benzene	EPA-8260	45	2.0	10	UG/L	10/25/2012	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,3,5-Trimethylbenzene	EPA-8260	120	2.0	10	UG/L	10/25/2012	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,2,4-Trimethylbenzene	EPA-8260	300	2.0	10	UG/L	10/25/2012	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
P-Isopropyltoluene	EPA-8260	2.9	2.0	1	UG/L	10/25/2012	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP
1,4-Dichlorobenzene	EPA-8260	4.3	1.8	1	UG/L	10/25/2012	GAP
N-Butylbenzene	EPA-8260	8.2	2.0	1	UG/L	10/25/2012	GAP
1,2-Dichlorobenzene	EPA-8260	41	2.0	10	UG/L	10/25/2012	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/25/2012	GAP
1,2,4-Trichlorobenzene	EPA-8260	2.6	2.0	1	UG/L	10/25/2012	GAP
Hexachlorobutadiene	EPA-8260	U	0.56	1	UG/L	10/25/2012	GAP
Naphthalene	EPA-8260	190	2.0	10	UG/L	10/25/2012	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/25/2012	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	91.3	10/25/2012	GAP
1,2-Dichloroethane-d4 10X Dilution	EPA-8260	101	10/25/2012	GAP



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	<b>DATE:</b>	10/26/2012
<b>CLIENT CONTACT:</b>	Thom Morin	<b>ALS JOB#:</b>	EV12100108
<b>CLIENT PROJECT:</b>	03911.1	<b>ALS SAMPLE#:</b>	-02
<b>CLIENT SAMPLE ID</b>	SVECONDOWS-101712	<b>DATE RECEIVED:</b>	10/18/2012
		<b>COLLECTION DATE:</b>	10/17/2012 10:00:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4 100X Dilution	EPA-8260	<b>105</b>	10/25/2012	GAP
1,2-Dichloroethane-d4 1000X Dilution	EPA-8260	<b>113</b>	10/25/2012	GAP
1,2-Dichloroethane-d4 10000X Dilution	EPA-8260	<b>112</b>	10/25/2012	GAP
1,2-Dichloroethane-d4 100000X Dilution	EPA-8260	<b>110</b>	10/25/2012	GAP
Toluene-d8	EPA-8260	<b>85.5</b>	10/25/2012	GAP
Toluene-d8 10X Dilution	EPA-8260	<b>86.3</b>	10/25/2012	GAP
Toluene-d8 100X Dilution	EPA-8260	<b>88.4</b>	10/25/2012	GAP
Toluene-d8 1000X Dilution	EPA-8260	<b>91.0</b>	10/25/2012	GAP
Toluene-d8 10000X Dilution	EPA-8260	<b>85.5</b>	10/25/2012	GAP
Toluene-d8 100000X Dilution	EPA-8260	<b>80.0</b>	10/25/2012	GAP
4-Bromofluorobenzene	EPA-8260	<b>109</b>	10/25/2012	GAP
4-Bromofluorobenzene 10X Dilution	EPA-8260	<b>106</b>	10/25/2012	GAP
4-Bromofluorobenzene 100X Dilution	EPA-8260	<b>99.7</b>	10/25/2012	GAP
4-Bromofluorobenzene 1000X Dilution	EPA-8260	<b>90.1</b>	10/25/2012	GAP
4-Bromofluorobenzene 10000X Dilution	EPA-8260	<b>86.0</b>	10/25/2012	GAP
4-Bromofluorobenzene 100000X Dilution	EPA-8260	<b>85.0</b>	10/25/2012	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number WAD991281874	2. Page 1 of 1	3. Emergency Response Phone (877) 577-2669	4. Manifest Tracking Number 000059876 DAT				
5. Generator's Name and Mailing Address CALIBRE SYSTEMS ATTN: JEFF DAWSON 64290 AIRWAY ROAD Generator's Phone: JOSEPH OR 97846 (703)859-3370				Generator's Site Address (if different than mailing address) PASCO LANDFILL 1901 DIETRICH ROAD PASCO WA 99301 (509)554-1247					
6. Transporter 1 Company Name BURLINGTON ENVIRONMENTAL, LLC					U.S. EPA ID Number WAR000001743				
7. Transporter 2 Company Name					U.S. EPA ID Number				
8. Designated Facility Name and Site Address BURLINGTON ENVIRONMENTAL, LLC, KENT FACILITY 20245 77TH AVENUE SOUTH Facility's Phone: KENT, WA 98032 (253) 872-0030					U.S. EPA ID Number WAD991281767				
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes			
		No.	Type						
		X	1. MAR002 HAZARDOUS WASTE, LIQUID, N.O.S. (METHYL ETHYL KETONE, TRICHLOROETHYLENE) 9 PGIII	1	TT	5149	G	0035	0040
			2.						
			3.						
	4.								
14. Special Handling Instructions and Additional Information (1) 402743-01 - ERG(171) ZONE B VAPOR CONDENS									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offeror's Printed/Typed Name Jeff J. Dawson				Signature <i>Jeff J. Dawson</i>		Month Day Year Nov 8 12			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name <i>James Leap</i>				Signature <i>[Signature]</i>		Month Day Year 11 8 12			
Transporter 2 Printed/Typed Name				Signature		Month Day Year			
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
18b. Alternate Facility (or Generator) _____ Manifest Reference Number: _____ U.S. EPA ID Number _____									
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____									
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1. H082		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name Furnace Smith				Signature <i>[Signature]</i>		Month Day Year 11 8 12			

6280X

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR



**CERTIFICATE OF ANALYSIS**

CLIENT: Environmental Partners, Inc.  
 295 NE Gilman Blvd., Suite 201  
 Issaquah, WA 98027

CLIENT CONTACT: Thom Morin  
 CLIENT PROJECT: 03911.1  
 CLIENT SAMPLE ID: SVECONDSKID-1112

DATE: 11/20/2012  
 ALS JOB#: EV12110078  
 ALS SAMPLE#: -01  
 DATE RECEIVED: 11/15/2012  
 COLLECTION DATE: 11/14/2012 1:00:00 PM  
 WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Chloromethane	EPA-8260	U	2.3	10	UG/L	11/20/2012	GAP
Vinyl Chloride	EPA-8260	U	0.31	10	UG/L	11/20/2012	GAP
Bromomethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Chloroethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Acetone	EPA-8260	<b>440000</b>	54000	80000	UG/L	11/19/2012	GAP
Carbon Disulfide	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Ethanol	EPA-8260	<b>1700000</b>	71000	100	UG/L	11/20/2012	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Methylene Chloride	EPA-8260	<b>1700</b>	68	100	UG/L	11/20/2012	GAP
tert-Butanol	EPA-8260	<b>11000</b>	1300	100	UG/L	11/20/2012	GAP
Acrylonitrile	EPA-8260	U	10	10	UG/L	11/20/2012	GAP
Diisopropyl Ether	EPA-8260	<b>90</b>	35	10	UG/L	11/20/2012	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,1-Dichloroethane	EPA-8260	<b>52</b>	2.0	10	UG/L	11/20/2012	GAP
2-Butanone	EPA-8260	<b>240000</b>	14000	10000	UG/L	11/19/2012	GAP
Ethyl T-Butyl Ether	EPA-8260	U	41	10	UG/L	11/20/2012	GAP
Cis-1,2-Dichloroethene	EPA-8260	<b>22</b>	2.0	10	UG/L	11/20/2012	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Bromochloromethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Chloroform	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,1,1-Trichloroethane	EPA-8260	<b>18</b>	2.0	10	UG/L	11/20/2012	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Carbon Tetrachloride	EPA-8260	U	0.34	10	UG/L	11/20/2012	GAP
tert-Amyl Methyl Ether	EPA-8260	U	3.9	10	UG/L	11/20/2012	GAP
1,2-Dichloroethane	EPA-8260	<b>220</b>	2.0	10	UG/L	11/20/2012	GAP
Benzene	EPA-8260	<b>6.5</b>	2.0	10	UG/L	11/20/2012	GAP
Trichloroethene	EPA-8260	<b>270</b>	2.0	10	UG/L	11/20/2012	GAP
1,2-Dichloropropane	EPA-8260	U	0.64	10	UG/L	11/20/2012	GAP
Dibromomethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Bromodichloromethane	EPA-8260	U	0.71	10	UG/L	11/20/2012	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
4-Methyl-2-Pentanone	EPA-8260	<b>240000</b>	3400	10000	UG/L	11/19/2012	GAP
Toluene	EPA-8260	<b>8100</b>	15	1000	UG/L	11/20/2012	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,1,2-Trichloroethane	EPA-8260	U	0.77	10	UG/L	11/20/2012	GAP



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	11/20/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12110078
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	SVECONDSKID-1112	DATE RECEIVED:	11/15/2012
		COLLECTION DATE:	11/14/2012 1:00:00 PM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Hexanone	EPA-8260	2000	94	100	UG/L	11/20/2012	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Tetrachloroethylene	EPA-8260	21	2.0	10	UG/L	11/20/2012	GAP
Dibromochloromethane	EPA-8260	U	0.74	10	UG/L	11/20/2012	GAP
1,2-Dibromoethane	EPA-8260	U	0.10	10	UG/L	11/20/2012	GAP
Chlorobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	1.7	10	UG/L	11/20/2012	GAP
Ethylbenzene	EPA-8260	680	2.9	100	UG/L	11/20/2012	GAP
m,p-Xylene	EPA-8260	2600	11	100	UG/L	11/20/2012	GAP
Styrene	EPA-8260	3.2	1.5	10	UG/L	11/20/2012	GAP
o-Xylene	EPA-8260	920	6.9	100	UG/L	11/20/2012	GAP
Bromoform	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Isopropylbenzene	EPA-8260	30	2.0	10	UG/L	11/20/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Bromobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
N-Propyl Benzene	EPA-8260	63	2.0	10	UG/L	11/20/2012	GAP
2-Chlorotoluene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,3,5-Trimethylbenzene	EPA-8260	160	2.0	10	UG/L	11/20/2012	GAP
4-Chlorotoluene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
T-Butyl Benzene	EPA-8260	6.0	2.0	10	UG/L	11/20/2012	GAP
1,2,4-Trimethylbenzene	EPA-8260	270	5.4	100	UG/L	11/20/2012	GAP
S-Butyl Benzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
P-Isopropyltoluene	EPA-8260	3.0	2.0	10	UG/L	11/20/2012	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,4-Dichlorobenzene	EPA-8260	U	1.8	10	UG/L	11/20/2012	GAP
N-Butylbenzene	EPA-8260	2.7	2.0	10	UG/L	11/20/2012	GAP
1,2-Dichlorobenzene	EPA-8260	51	2.0	10	UG/L	11/20/2012	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	10	UG/L	11/20/2012	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Hexachlorobutadiene	EPA-8260	U	0.69	10	UG/L	11/20/2012	GAP
Naphthalene	EPA-8260	300	2.0	10	UG/L	11/20/2012	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4 10X Dilution	EPA-8260	61.5 GS1	11/20/2012	GAP
1,2-Dichloroethane-d4 100X	EPA-8260	73.9	11/20/2012	GAP



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	11/20/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12110078
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	SVECONDSKID-1112	DATE RECEIVED:	11/15/2012
		COLLECTION DATE:	11/14/2012 1:00:00 PM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Dilution				
1,2-Dichloroethane-d4 1000X Dilution	EPA-8260	<b>120</b>	11/20/2012	GAP
1,2-Dichloroethane-d4 10000X Dilution	EPA-8260	<b>144 GS1</b>	11/19/2012	GAP
1,2-Dichloroethane-d4 80000X Dilution	EPA-8260	<b>140 GS1</b>	11/19/2012	GAP
Toluene-d8 10X Dilution	EPA-8260	<b>94.9</b>	11/20/2012	GAP
Toluene-d8 100X Dilution	EPA-8260	<b>105</b>	11/20/2012	GAP
Toluene-d8 1000X Dilution	EPA-8260	<b>106</b>	11/20/2012	GAP
Toluene-d8 10000X Dilution	EPA-8260	<b>86.5</b>	11/19/2012	GAP
Toluene-d8 80000X Dilution	EPA-8260	<b>84.0</b>	11/19/2012	GAP
4-Bromofluorobenzene 10X Dilution	EPA-8260	<b>125 GS1</b>	11/20/2012	GAP
4-Bromofluorobenzene 100X Dilution	EPA-8260	<b>122 GS1</b>	11/20/2012	GAP
4-Bromofluorobenzene 1000X Dilution	EPA-8260	<b>100</b>	11/20/2012	GAP
4-Bromofluorobenzene 10000X Dilution	EPA-8260	<b>93.5</b>	11/19/2012	GAP
4-Bromofluorobenzene 80000X Dilution	EPA-8260	<b>92.0</b>	11/19/2012	GAP

U - Analyte analyzed for but not detected at level above reporting limit.  
 GS1 - Surrogate outside of control limits due to matrix effect.



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	11/20/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12110078
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-02
CLIENT SAMPLE ID	SVECONDFLARE-1112	DATE RECEIVED:	11/15/2012
		COLLECTION DATE:	11/14/2012 1:10:00 PM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Chloromethane	EPA-8260	<b>2.9</b>	2.3	10	UG/L	11/20/2012	GAP
Vinyl Chloride	EPA-8260	U	0.31	10	UG/L	11/20/2012	GAP
Bromomethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Chloroethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Trichlorofluoromethane	EPA-8260	<b>6.8</b>	2.0	10	UG/L	11/20/2012	GAP
Acetone	EPA-8260	<b>1200000</b>	54000	80000	UG/L	11/19/2012	GAP
Carbon Disulfide	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Ethanol	EPA-8260	<b>4900000</b>	7.10E+05	1000	UG/L	11/20/2012	GAP
1,1-Dichloroethene	EPA-8260	<b>18</b>	2.0	10	UG/L	11/20/2012	GAP
Methylene Chloride	EPA-8260	<b>4000</b>	68	100	UG/L	11/20/2012	GAP
tert-Butanol	EPA-8260	<b>54000</b>	13000	1000	UG/L	11/20/2012	GAP
Acrylonitrile	EPA-8260	U	10	10	UG/L	11/20/2012	GAP
Diisopropyl Ether	EPA-8260	U	35	10	UG/L	11/20/2012	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,1-Dichloroethane	EPA-8260	<b>140</b>	2.0	10	UG/L	11/20/2012	GAP
2-Butanone	EPA-8260	<b>1100000</b>	1.10E+05	80000	UG/L	11/19/2012	GAP
Ethyl T-Butyl Ether	EPA-8260	U	41	10	UG/L	11/20/2012	GAP
Cis-1,2-Dichloroethene	EPA-8260	<b>58</b>	2.0	10	UG/L	11/20/2012	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Bromochloromethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Chloroform	EPA-8260	<b>8.0</b>	2.0	10	UG/L	11/20/2012	GAP
1,1,1-Trichloroethane	EPA-8260	<b>55</b>	2.0	10	UG/L	11/20/2012	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Carbon Tetrachloride	EPA-8260	U	0.34	10	UG/L	11/20/2012	GAP
tert-Amyl Methyl Ether	EPA-8260	U	3.9	10	UG/L	11/20/2012	GAP
1,2-Dichloroethane	EPA-8260	<b>560</b>	2.0	100	UG/L	11/20/2012	GAP
Benzene	EPA-8260	<b>14</b>	2.0	10	UG/L	11/20/2012	GAP
Trichloroethene	EPA-8260	<b>760</b>	5.4	100	UG/L	11/20/2012	GAP
1,2-Dichloropropane	EPA-8260	U	0.64	10	UG/L	11/20/2012	GAP
Dibromomethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Bromodichloromethane	EPA-8260	U	0.71	10	UG/L	11/20/2012	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
4-Methyl-2-Pentanone	EPA-8260	<b>120000</b>	3400	10000	UG/L	11/19/2012	GAP
Toluene	EPA-8260	<b>19000</b>	15	1000	UG/L	11/20/2012	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,1,2-Trichloroethane	EPA-8260	<b>9.7</b>	0.77	10	UG/L	11/20/2012	GAP



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	<b>DATE:</b>	11/20/2012
<b>CLIENT CONTACT:</b>	Thom Morin	<b>ALS JOB#:</b>	EV12110078
<b>CLIENT PROJECT:</b>	03911.1	<b>ALS SAMPLE#:</b>	-02
<b>CLIENT SAMPLE ID</b>	SVECONDFLARE-1112	<b>DATE RECEIVED:</b>	11/15/2012
		<b>COLLECTION DATE:</b>	11/14/2012 1:10:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
2-Hexanone	EPA-8260	4000	940	1000	UG/L	11/20/2012	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Tetrachloroethylene	EPA-8260	56	2.0	10	UG/L	11/20/2012	GAP
Dibromochloromethane	EPA-8260	U	0.74	10	UG/L	11/20/2012	GAP
1,2-Dibromoethane	EPA-8260	U	0.10	10	UG/L	11/20/2012	GAP
Chlorobenzene	EPA-8260	5.4	2.0	10	UG/L	11/20/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	1.7	10	UG/L	11/20/2012	GAP
Ethylbenzene	EPA-8260	2400	2.9	100	UG/L	11/20/2012	GAP
m,p-Xylene	EPA-8260	4700	110	1000	UG/L	11/20/2012	GAP
Styrene	EPA-8260	3.2	1.5	10	UG/L	11/20/2012	GAP
o-Xylene	EPA-8260	3300	6.9	100	UG/L	11/20/2012	GAP
Bromoform	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Isopropylbenzene	EPA-8260	86	2.0	10	UG/L	11/20/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
Bromobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
N-Propyl Benzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
2-Chlorotoluene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,3,5-Trimethylbenzene	EPA-8260	460	4.1	100	UG/L	11/20/2012	GAP
4-Chlorotoluene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
T-Butyl Benzene	EPA-8260	6.0	2.0	10	UG/L	11/20/2012	GAP
1,2,4-Trimethylbenzene	EPA-8260	1300	5.4	100	UG/L	11/20/2012	GAP
S-Butyl Benzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
P-Isopropyltoluene	EPA-8260	23	2.0	10	UG/L	11/20/2012	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP
1,4-Dichlorobenzene	EPA-8260	6.3	1.8	10	UG/L	11/20/2012	GAP
N-Butylbenzene	EPA-8260	33	2.0	10	UG/L	11/20/2012	GAP
1,2-Dichlorobenzene	EPA-8260	150	2.0	10	UG/L	11/20/2012	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	10	UG/L	11/20/2012	GAP
1,2,4-Trichlorobenzene	EPA-8260	20	2.0	10	UG/L	11/20/2012	GAP
Hexachlorobutadiene	EPA-8260	U	0.69	10	UG/L	11/20/2012	GAP
Naphthalene	EPA-8260	660	5.5	100	UG/L	11/20/2012	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	10	UG/L	11/20/2012	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
1,2-Dichloroethane-d4 10X Dilution	EPA-8260	59.5 GS1	11/20/2012	GAP
1,2-Dichloroethane-d4 100X	EPA-8260	66.2 GS1	11/20/2012	GAP





**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	11/20/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12110078
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-02
CLIENT SAMPLE ID	SVECONDFLARE-1112	DATE RECEIVED:	11/15/2012
		COLLECTION DATE:	11/14/2012 1:10:00 PM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Dilution				
1,2-Dichloroethane-d4 1000X Dilution	EPA-8260	<b>94.6</b>	11/20/2012	GAP
1,2-Dichloroethane-d4 10000X Dilution	EPA-8260	<b>138 GS1</b>	11/19/2012	GAP
1,2-Dichloroethane-d4 80000X Dilution	EPA-8260	<b>144 GS1</b>	11/19/2012	GAP
Toluene-d8 10X Dilution	EPA-8260	<b>91.5</b>	11/20/2012	GAP
Toluene-d8 100X Dilution	EPA-8260	<b>99.7</b>	11/20/2012	GAP
Toluene-d8 1000X Dilution	EPA-8260	<b>109</b>	11/20/2012	GAP
Toluene-d8 10000X Dilution	EPA-8260	<b>94.5</b>	11/19/2012	GAP
Toluene-d8 80000X Dilution	EPA-8260	<b>84.0</b>	11/19/2012	GAP
4-Bromofluorobenzene 10X Dilution	EPA-8260	<b>128 GS1</b>	11/20/2012	GAP
4-Bromofluorobenzene 100X Dilution	EPA-8260	<b>127 GS1</b>	11/20/2012	GAP
4-Bromofluorobenzene 1000X Dilution	EPA-8260	<b>105</b>	11/20/2012	GAP
4-Bromofluorobenzene 10000X Dilution	EPA-8260	<b>93.5</b>	11/19/2012	GAP
4-Bromofluorobenzene 80000X Dilution	EPA-8260	<b>92.0</b>	11/19/2012	GAP

U - Analyte analyzed for but not detected at level above reporting limit.  
 GS1 - Surrogate outside of control limits due to matrix effect.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number WAD991281874	2. Page 1 of 1	3. Emergency Response Phone (877) 577-2669	4. Manifest Tracking Number 000060092 DAT		
5. Generator's Name and Mailing Address CALIBRE SYSTEMS ATTN: JEFF DAWSON 64290 AIRWAY ROAD				Generator's Site Address (if different than mailing address) PASCO LANDFILL 1901 DIETRICH ROAD PASCO WA 99381 (509)554-1247			
Generator's Phone: JOSEPH OR 97846 (703)959-3370							
6. Transporter 1 Company Name BURLINGTON ENVIRONMENTAL, LLC					U.S. EPA ID Number WAD00001743		
7. Transporter 2 Company Name					U.S. EPA ID Number		
8. Designated Facility Name and Site Address BURLINGTON ENVIRONMENTAL, LLC. KENT FACILITY 20245 77TH AVENUE SOUTH Facility's Phone: KENT, WA 98032 (253) 872-8838					U.S. EPA ID Number WAD991281767		
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
X	HA3002 HAZARDOUS WASTE, LIQUID, N.O.S. (METHYL ETHYL KETONE, TRICHLOROETHYLENE) 9 PGIII	1	TT	4708	6	D035	D040
14. Special Handling Instructions and Additional Information (1) 482743-01 - ER6(171) ZONE A VAPOR CONDENS							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offor's Printed/Typed Name Jeff J. Dawson				Signature <i>Jeff J. Dawson</i>		Month Day Year Nov 19 12	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Brian Leap				Signature <i>Brian Leap</i>		Month Day Year 11 19 12	
Transporter 2 Printed/Typed Name				Signature		Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number: _____							
18b. Alternate Facility (or Generator)					U.S. EPA ID Number		
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H082		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name Olay Cruz				Signature <i>Olay Cruz</i>		Month Day Year 11 19 12	

6633X

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number WAD991281874	2. Page 1 of 1	3. Emergency Response Phone (877) 577-2669	4. Manifest Tracking Number 00 0060227 DAT				
5. Generator's Name and Mailing Address CALIBRE SYSTEMS ATTN: JEFF DAWSON 64290 AIRWAY ROAD Generator's Phone: JOSEPH OR 87846 (703)859-3370				Generator's Site Address (if different than mailing address) PASCO LANDFILL 1981 DIETRICH ROAD PASCO WA 99301 (509)554-1247					
6. Transporter 1 Company Name BURLINGTON ENVIRONMENTAL, LLC				U.S. EPA ID Number WAD000001743					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address BURLINGTON ENVIRONMENTAL, LLC. KENT FACILITY 28245 77TH AVENUE SOUTH Facility's Phone: KENT, WA 98032 (253) 872-8838				U.S. EPA ID Number WAD991281767					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes			
		No.	Type						
		X	HA3002 HAZARDOUS WASTE, LIQUID, N.O.S. (METHYL ETHYL KETONE, TRICHLOROETHYLENE) 9 PGIII	1	TT	5023	G	0035	0040
14. Special Handling Instructions and Additional Information (1) 482743-01 - ERG(171) ZONE A VAPOR CONDENS									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offor's Printed/Typed Name Jeff J. Dawson				Signature Jeff J. Dawson		Month Day Year 12 11 12			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Brian Leap				Signature 		Month Day Year 12 11 12			
Transporter 2 Printed/Typed Name				Signature		Month Day Year			
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number: _____									
18b. Alternate Facility (or Generator)				U.S. EPA ID Number					
Facility's Phone: _____									
18c. Signature of Alternate Facility (or Generator)						Month Day Year			
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1. H082		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name Christine Crisostano				Signature 		Month Day Year 10 11 12			

7424Y

GENERATOR

TRANSPORTER INTL

DESIGNATED FACILITY



**CERTIFICATE OF ANALYSIS**

CLIENT: Environmental Partners, Inc.  
 295 NE Gilman Blvd., Suite 201  
 Issaquah, WA 98027

CLIENT CONTACT: Thom Morin  
 CLIENT PROJECT: 03911.1  
 CLIENT SAMPLE ID: SVECONDOWS-1212

DATE: 12/18/2012  
 ALS JOB#: EV12120070  
 ALS SAMPLE#: -01  
 DATE RECEIVED: 12/13/2012  
 COLLECTION DATE: 12/12/2012 10:15:00 AM  
 WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Vinyl Chloride	EPA-8260	0.37	0.20	1	UG/L	12/15/2012	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Chloroethane	EPA-8260	2.6	2.0	1	UG/L	12/15/2012	GAP
Trichlorofluoromethane	EPA-8260	3.2	2.0	1	UG/L	12/15/2012	GAP
Acetone	EPA-8260	1400000	1.00E+06	40000	UG/L	12/17/2012	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Ethanol	EPA-8260	3100000	71000	100	UG/L	12/15/2012	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Methylene Chloride	EPA-8260	5100	680	1000	UG/L	12/15/2012	GAP
tert-Butanol	EPA-8260	U	13	1	UG/L	12/15/2012	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/15/2012	GAP
Diisopropyl Ether	EPA-8260	U	3.5	1	UG/L	12/15/2012	GAP
Methyl T-Butyl Ether	EPA-8260	16	2.0	1	UG/L	12/15/2012	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,1-Dichloroethane	EPA-8260	100	2.0	10	UG/L	12/15/2012	GAP
2-Butanone	EPA-8260	1100000	4.00E+05	40000	UG/L	12/17/2012	GAP
Ethyl T-Butyl Ether	EPA-8260	U	4.1	1	UG/L	12/15/2012	GAP
Cis-1,2-Dichloroethene	EPA-8260	3.4	2.0	1	UG/L	12/15/2012	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Chloroform	EPA-8260	7.0	2.0	1	UG/L	12/15/2012	GAP
1,1,1-Trichloroethane	EPA-8260	45	2.0	10	UG/L	12/15/2012	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Carbon Tetrachloride	EPA-8260	U	0.34	1	UG/L	12/15/2012	GAP
tert-Amyl Methyl Ether	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,2-Dichloroethane	EPA-8260	500	2.0	100	UG/L	12/15/2012	GAP
Benzene	EPA-8260	11	2.0	1	UG/L	12/15/2012	GAP
Trichloroethene	EPA-8260	750	5.4	100	UG/L	12/15/2012	GAP
1,2-Dichloropropane	EPA-8260	U	0.64	1	UG/L	12/15/2012	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Bromodichloromethane	EPA-8260	U	0.71	1	UG/L	12/15/2012	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
4-Methyl-2-Pentanone	EPA-8260	59000	3400	10000	UG/L	12/14/2012	GAP
Toluene	EPA-8260	12000	15	1000	UG/L	12/15/2012	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,1,2-Trichloroethane	EPA-8260	6.1	0.77	1	UG/L	12/15/2012	GAP



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	12/18/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12120070
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	SVECONDOWNS-1212	DATE RECEIVED:	12/13/2012
		COLLECTION DATE:	12/12/2012 10:15:00 AM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
2-Hexanone	EPA-8260	3600	940	1000	UG/L	12/15/2012	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Tetrachloroethylene	EPA-8260	93	2.0	10	UG/L	12/15/2012	GAP
Dibromochloromethane	EPA-8260	U	0.52	1	UG/L	12/15/2012	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/15/2012	GAP
Chlorobenzene	EPA-8260	3.3	2.0	1	UG/L	12/15/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	1.7	1	UG/L	12/15/2012	GAP
Ethylbenzene	EPA-8260	1300	2.9	100	UG/L	12/15/2012	GAP
m,p-Xylene	EPA-8260	4900	11	100	UG/L	12/15/2012	GAP
Styrene	EPA-8260	U	1.5	1	UG/L	12/15/2012	GAP
o-Xylene	EPA-8260	1900	6.9	100	UG/L	12/15/2012	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Isopropylbenzene	EPA-8260	70	2.0	10	UG/L	12/15/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
N-Propyl Benzene	EPA-8260	140	2.0	10	UG/L	12/15/2012	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,3,5-Trimethylbenzene	EPA-8260	380	2.0	10	UG/L	12/15/2012	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,2,4-Trimethylbenzene	EPA-8260	870	5.4	100	UG/L	12/15/2012	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
P-Isopropyltoluene	EPA-8260	13	2.0	1	UG/L	12/15/2012	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,4-Dichlorobenzene	EPA-8260	11	1.8	1	UG/L	12/15/2012	GAP
N-Butylbenzene	EPA-8260	24	2.0	1	UG/L	12/15/2012	GAP
1,2-Dichlorobenzene	EPA-8260	89	2.0	10	UG/L	12/15/2012	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/15/2012	GAP
1,2,4-Trichlorobenzene	EPA-8260	6.4	2.0	1	UG/L	12/15/2012	GAP
Hexachlorobutadiene	EPA-8260	U	0.56	1	UG/L	12/15/2012	GAP
Naphthalene	EPA-8260	420	5.5	100	UG/L	12/15/2012	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	73.5	12/15/2012	GAP
1,2-Dichloroethane-d4 10X Dilution	EPA-8260	91.9	12/15/2012	GAP



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	<b>DATE:</b>	12/18/2012
<b>CLIENT CONTACT:</b>	Thom Morin	<b>ALS JOB#:</b>	EV12120070
<b>CLIENT PROJECT:</b>	03911.1	<b>ALS SAMPLE#:</b>	-01
<b>CLIENT SAMPLE ID</b>	SVECONDOWS-1212	<b>DATE RECEIVED:</b>	12/13/2012
		<b>COLLECTION DATE:</b>	12/12/2012 10:15:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4 100X Dilution	EPA-8260	<b>98.5</b>	12/15/2012	GAP
1,2-Dichloroethane-d4 1000X Dilution	EPA-8260	<b>104</b>	12/15/2012	GAP
1,2-Dichloroethane-d4 10000X Dilution	EPA-8260	<b>104</b>	12/14/2012	GAP
1,2-Dichloroethane-d4 40000X Dilution	EPA-8260	<b>92.0</b>	12/17/2012	GAP
Toluene-d8	EPA-8260	<b>89.1</b>	12/15/2012	GAP
Toluene-d8 10X Dilution	EPA-8260	<b>86.6</b>	12/15/2012	GAP
Toluene-d8 100X Dilution	EPA-8260	<b>93.2</b>	12/15/2012	GAP
Toluene-d8 1000X Dilution	EPA-8260	<b>89.8</b>	12/15/2012	GAP
Toluene-d8 10000X Dilution	EPA-8260	<b>86.5</b>	12/14/2012	GAP
Toluene-d8 40000X Dilution	EPA-8260	<b>86.0</b>	12/17/2012	GAP
4-Bromofluorobenzene	EPA-8260	<b>111</b>	12/15/2012	GAP
4-Bromofluorobenzene 10X Dilution	EPA-8260	<b>104</b>	12/15/2012	GAP
4-Bromofluorobenzene 100X Dilution	EPA-8260	<b>110</b>	12/15/2012	GAP
4-Bromofluorobenzene 1000X Dilution	EPA-8260	<b>99.6</b>	12/15/2012	GAP
4-Bromofluorobenzene 10000X Dilution	EPA-8260	<b>92.5</b>	12/14/2012	GAP
4-Bromofluorobenzene 40000X Dilution	EPA-8260	<b>98.0</b>	12/17/2012	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	12/18/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12120070
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-02
CLIENT SAMPLE ID	SVECONDFLARE-1212	DATE RECEIVED:	12/13/2012
		COLLECTION DATE:	12/12/2012 10:00:00 AM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Chloromethane	EPA-8260	2.5	2.0	1	UG/L	12/15/2012	GAP
Vinyl Chloride	EPA-8260	0.37	0.20	1	UG/L	12/15/2012	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Chloroethane	EPA-8260	4.7	2.0	1	UG/L	12/15/2012	GAP
Trichlorofluoromethane	EPA-8260	4.3	2.0	1	UG/L	12/15/2012	GAP
Acetone	EPA-8260	2800000	2.50E+06	100000	UG/L	12/17/2012	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Ethanol	EPA-8260	6700000	7.10E+05	1000	UG/L	12/15/2012	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Methylene Chloride	EPA-8260	6300	680	1000	UG/L	12/15/2012	GAP
tert-Butanol	EPA-8260	72000	13000	1000	UG/L	12/15/2012	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/15/2012	GAP
Diisopropyl Ether	EPA-8260	U	3.5	1	UG/L	12/15/2012	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,1-Dichloroethane	EPA-8260	240	2.0	10	UG/L	12/15/2012	GAP
2-Butanone	EPA-8260	2200000	1.00E+06	100000	UG/L	12/17/2012	GAP
Ethyl T-Butyl Ether	EPA-8260	U	4.1	1	UG/L	12/15/2012	GAP
Cis-1,2-Dichloroethene	EPA-8260	3.2	2.0	1	UG/L	12/15/2012	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Chloroform	EPA-8260	11	2.0	1	UG/L	12/15/2012	GAP
1,1,1-Trichloroethane	EPA-8260	170	2.0	10	UG/L	12/15/2012	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Carbon Tetrachloride	EPA-8260	U	0.34	1	UG/L	12/15/2012	GAP
tert-Amyl Methyl Ether	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,2-Dichloroethane	EPA-8260	930	2.0	100	UG/L	12/15/2012	GAP
Benzene	EPA-8260	24	2.0	1	UG/L	12/15/2012	GAP
Trichloroethene	EPA-8260	1600	5.4	100	UG/L	12/15/2012	GAP
1,2-Dichloropropane	EPA-8260	U	0.64	1	UG/L	12/15/2012	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Bromodichloromethane	EPA-8260	U	0.71	1	UG/L	12/15/2012	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
4-Methyl-2-Pentanone	EPA-8260	170000	3400	10000	UG/L	12/14/2012	GAP
Toluene	EPA-8260	27000	15	1000	UG/L	12/15/2012	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,1,2-Trichloroethane	EPA-8260	11	0.77	1	UG/L	12/15/2012	GAP



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	<b>DATE:</b>	12/18/2012
<b>CLIENT CONTACT:</b>	Thom Morin	<b>ALS JOB#:</b>	EV12120070
<b>CLIENT PROJECT:</b>	03911.1	<b>ALS SAMPLE#:</b>	-02
<b>CLIENT SAMPLE ID</b>	SVECONDFLARE-1212	<b>DATE RECEIVED:</b>	12/13/2012
		<b>COLLECTION DATE:</b>	12/12/2012 10:00:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
2-Hexanone	EPA-8260	6400	940	1000	UG/L	12/15/2012	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Tetrachloroethylene	EPA-8260	130	2.0	10	UG/L	12/15/2012	GAP
Dibromochloromethane	EPA-8260	U	0.52	1	UG/L	12/15/2012	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/15/2012	GAP
Chlorobenzene	EPA-8260	5.5	2.0	1	UG/L	12/15/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	1.7	1	UG/L	12/15/2012	GAP
Ethylbenzene	EPA-8260	2400	2.9	100	UG/L	12/15/2012	GAP
m,p-Xylene	EPA-8260	7500	110	1000	UG/L	12/15/2012	GAP
Styrene	EPA-8260	U	1.5	1	UG/L	12/15/2012	GAP
o-Xylene	EPA-8260	3600	6.9	100	UG/L	12/15/2012	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Isopropylbenzene	EPA-8260	100	2.0	10	UG/L	12/15/2012	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
N-Propyl Benzene	EPA-8260	190	2.0	10	UG/L	12/15/2012	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,3,5-Trimethylbenzene	EPA-8260	540	4.1	100	UG/L	12/15/2012	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
1,2,4-Trimethylbenzene	EPA-8260	1400	5.4	100	UG/L	12/15/2012	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/15/2012	GAP
P-Isopropyltoluene	EPA-8260	18	2.0	1	UG/L	12/15/2012	GAP
1,3 Dichlorobenzene	EPA-8260	4.4	2.0	1	UG/L	12/15/2012	GAP
1,4-Dichlorobenzene	EPA-8260	16	1.8	1	UG/L	12/15/2012	GAP
N-Butylbenzene	EPA-8260	45	2.0	10	UG/L	12/15/2012	GAP
1,2-Dichlorobenzene	EPA-8260	190	2.0	10	UG/L	12/15/2012	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/15/2012	GAP
1,2,4-Trichlorobenzene	EPA-8260	9.1	2.0	1	UG/L	12/15/2012	GAP
Hexachlorobutadiene	EPA-8260	U	0.56	1	UG/L	12/15/2012	GAP
Naphthalene	EPA-8260	820	5.5	100	UG/L	12/15/2012	GAP
1,2,3-Trichlorobenzene	EPA-8260	2.8	2.0	1	UG/L	12/15/2012	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	78.4	12/15/2012	GAP
1,2-Dichloroethane-d4 10X Dilution	EPA-8260	84.1	12/15/2012	GAP





**CERTIFICATE OF ANALYSIS**

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	12/18/2012
CLIENT CONTACT:	Thom Morin	ALS JOB#:	EV12120070
CLIENT PROJECT:	03911.1	ALS SAMPLE#:	-02
CLIENT SAMPLE ID	SVECONDFLARE-1212	DATE RECEIVED:	12/13/2012
		COLLECTION DATE:	12/12/2012 10:00:00 AM
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4 100X Dilution	EPA-8260	<b>90.6</b>	12/15/2012	GAP
1,2-Dichloroethane-d4 1000X Dilution	EPA-8260	<b>103</b>	12/15/2012	GAP
1,2-Dichloroethane-d4 10000X Dilution	EPA-8260	<b>102</b>	12/14/2012	GAP
1,2-Dichloroethane-d4 100000X Dilution	EPA-8260	<b>85.0</b>	12/17/2012	GAP
Toluene-d8	EPA-8260	<b>78.6 GS1</b>	12/15/2012	GAP
Toluene-d8 10X Dilution	EPA-8260	<b>83.6</b>	12/15/2012	GAP
Toluene-d8 100X Dilution	EPA-8260	<b>88.7</b>	12/15/2012	GAP
Toluene-d8 1000X Dilution	EPA-8260	<b>90.3</b>	12/15/2012	GAP
Toluene-d8 10000X Dilution	EPA-8260	<b>86.5</b>	12/14/2012	GAP
Toluene-d8 100000X Dilution	EPA-8260	<b>85.0</b>	12/17/2012	GAP
4-Bromofluorobenzene	EPA-8260	<b>132 GS1</b>	12/15/2012	GAP
4-Bromofluorobenzene 10X Dilution	EPA-8260	<b>102</b>	12/15/2012	GAP
4-Bromofluorobenzene 100X Dilution	EPA-8260	<b>105</b>	12/15/2012	GAP
4-Bromofluorobenzene 1000X Dilution	EPA-8260	<b>104</b>	12/15/2012	GAP
4-Bromofluorobenzene 10000X Dilution	EPA-8260	<b>92.0</b>	12/14/2012	GAP
4-Bromofluorobenzene 100000X Dilution	EPA-8260	<b>95.0</b>	12/17/2012	GAP

U - Analyte analyzed for but not detected at level above reporting limit.  
 GS1 - Surrogate outside of control limits due to matrix effect.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number 100001281757	2. Page 1 of	3. Emergency Response Phone 703 571 21	4. Manifest Tracking Number <b>000060455 DAT</b>	
5. Generator's Name and Mailing Address BURLINGTON ENVIRONMENTAL, LLC. WENT FACILITY 28245 77TH AVENUE SOUTH WENT, WA 98072 (253) 872-8030			Generator's Site Address (if different than mailing address) BURLINGTON ENVIRONMENTAL, LLC. WENT FACILITY 1301 DIETRICH ROAD BURLINGTON, WA 98009			
6. Transporter 1 Company Name BURLINGTON ENVIRONMENTAL, LLC			U.S. EPA ID Number W00001281757			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address BURLINGTON ENVIRONMENTAL, LLC. WENT FACILITY 28245 77TH AVENUE SOUTH WENT, WA 98072 (253) 872-8030			U.S. EPA ID Number W00001281757			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. H93082 HAZARDOUS WASTE, LIQUID, H.O.S. (METHYL ETHYL KETONE, TRICHLOROETHYLENE) 9 PGIII	1	TT	4055	G	D035 D045
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information (1) 482743-01 - ERG(171) ZONE A VAPOR CONDENS						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offor's Printed/Typed Name Jeff J. Dawson			Signature <i>Jeff J. Dawson</i>		Month Day Year 12/27/12	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Drew Leary			Signature <i>Drew Leary</i>		Month Day Year 12/27/12	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
18. Discrepancy						
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection line 1 - Total gallons should be 3468 per measurement. ref 12/28/12 Manifest Reference Number.						
18b. Alternate Facility (or Generator) U.S. EPA ID Number						
18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H082		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name Christine Crisostomo			Signature <i>Christine Crisostomo</i>		Month Day Year 12/28/12	

795X

**Attachment E**  
*2012 SVE System Shutdown and Restart History*



# 2012 SVE System Shutdown and Restart History

In the first quarter of 2012, prior to operation of the upgraded SVE system, the SVE system was shutdown for the following periods and reasons:

- 11:00 to 12:00 on January 3 (1 hour); Flow fault alarm
- 17:00 on January 19 to 13:00 on January 20 (20 hours); High liquid sensor in the oil-water sensor for SVE system condensate
- 00:00 to 10:00 January 23 (10 hours); Over-amperage shutdown on the regenerative blower.
- 10:00 on January 30 to 10:00 on January 31 (24 hours); Vacuum sensor replacement and follow-up testing.
- 14:00 to 17:00 on February 24 (3 hours); Sensor failure on explosimeter pump, subsequently replaced.

In the second quarter of 2012 the SVE system shutdown and restart history was as follows:

Date	Time	Details
April 1	01:30-10:20	Regenerative blower off for High LEL (VEW-06S/D and 07S/D). VEW-06I and VEW-07I and the flare remained on.
April 13	07:20	Each of the three SVE blowers was shut down one after the other for about 1 minute and turned back on. Only one SVE blower was off at any one time and the other two SVE blowers remained on. This was done by manually turning the SVE blowers on and off at the PLC to test the text message function. The flare remained on.
April 19	08:39-09:17	All systems off (VEW-06S/D and VEW-07S/D) including the flare. The power was turned off to reset the LEL meter, which shut everything down.
May 4	05:45	VEW-07I blower turned off to pump water from its pump tank. All other blowers and the flare remained on.
	06:00	VEW-07I blower turned back on.
May 6	09:24	Regenerative blower (VEW-06D and 07D) shutdown for high LEL in VEW-06D. The Flare and VEW-06S/I and 07S/I remained on.
	14:14	Regenerative blower (VEW-06D and 07D) back on.
May 7	08:28	SVE blowers off to recalibrate LEL. Flare remained on.
	08:42	SVE blowers on then off and on again.
May 29	09:00	VEW-07I/S blower off to check float switches in the pump tank. All other SVE blowers and the flare remained on.
	09:10	VEW-07I/S blower back on.

Date	Time	Details
June 11	08:52	Flare off after switching flare blowers at the flare. All three SVE blowers shut down.
June 11 June 12	11:00	Flare back on manually.
	11:10	All SVE blowers back on.
	07:21	VEW-07I blower off. All other SVE blowers and the flare remained on.
June 12 June 19	07:33	VEW -07I blower on.
	08:15	All SVE blowers and the flare off to work on the flare variable frequency drives (VFDs).
	09:50	Flare on.
	10:00	All SVE blowers back on.
	18:34	All systems shut down. It appeared that the regenerative blower VFD fault shut all systems down including the flare. Then the flare flame out indicator failed and had to be reset. Attempted to restart all systems until 23:00 hrs.
June 20	05:00	Resumed attempts to restart the flare.
June 20 June 21	07:50	Flare on.
	08:00	All three SVE blowers back on.
	16:12	VEW-07I/S automatic shutdown for High LEL. All other SVE blowers and the flare remained on.
June 22	08:18	VEW-07S/I back on.

In the third quarter of 2012 the SVE system shutdown and restart history was as follows:

Date	Time	Details
July 7	01:25	VEW-07IS blower shutdown for High level in condensate pump. Flare and other SVE blowers remained on.
	10:16	VEW-07IS blower on. Flare and other SVE blowers remained on.
July 10	08:28	Shutdown Regen blower (VEW-06D and VEW-07D) for temperature logging on 7/11/12 and 7/12/12. Flare and other SVE blowers remained on.
	08:37	Shutdown VEW-07I/S blower to work on condensate pump tank float switches. Flare and 06IS blower remained on.
	09:32	Blower on. Flare and VEW-06S/I remained on.
July 12	13:00	Regenerative blower on. Flare and VEW-06S/I and VEW-07S/I blowers remained on.
August 6	13:10	All 3 SVE blowers shutdown to move the SVE flow meter at the flare to the 45-degree position.

		Flare remained on.
	13:30	Regen blower on.
	13:43	VEW-06SI and VEW-07SI blowers on. Flare remained on.
August 21	02:22	All three SVE blowers and the flare shutdown for an electrical storm.
	08:21	Flare on.
	08:42	Flare temperature above 1,600 degrees.
	08:49	All three SVE blowers on.
August 29	11:30	Shutdown flare to replace a part on the flare air compressor. This shutdown all three SVE blowers.
	12:34	Flare on.
	12:45	Flare temperature above 1,600 degrees.
	12:50	All three SVE blowers on.
September 7	22:40	System-wide shut down due to area wide power outage
September 8	01:50	Power back on.
September 8	01:51	PLC sends "VFD overload" message. System remains off.
September 9	07:41	Flare on.
	07:50	Flare temperature above 1,600 degrees.
	08:05	All three SVE blowers on.

In the fourth quarter of 2012 the SVE system shutdown and restart history was as follows:

Date	Time	Details
November 11	12:31	6I blower shut down and would not restart. The other two blowers and flare remained on.
November 12	12:30	7I blower was shut down. VEW-6I and VEW-7I blowers were operated intermittently.
	13:20	Both blowers remained on. The flare and regenerative blower remained on during the entire process.
November 22	06:55	The 6SI blower shut down for a VFD fault (amp load too high). The other two blowers and the flare remained on.
November 25	09:06	VEW-7SI blower was turned off.
	09:29	VEW-6SI blower turned on.
	09:34	VEW-7SI blowers turned on. Flare and regenerative blower remained on without interruption.
	11:01	The VEW-6SI blower shut down for a VFD fault (amp load too high). The other two blowers and the flare remained on.
	15:40	VEW-6SI blower turned on.
	15:45	To keep the VEW-6SI blower from drawing too many amps, the VEW-7SI blower was reduced to 65% capacity or approximately 120 cfm. This reduced the amps both blowers are drawing. The

Date	Time	Details
		flare and regen blower remained on without interruption. The 7SI blower remained on as its power was reduced.
November 26	15:34	All three SVE blowers shut down for PLC software upgrade. The flare remained on.
	16:17	All three blowers back on.
November 27	06:15	All three SVE blowers shut down for high LEL in the oil/water separator. The previous days shutdowns put all moisture separator pump outs in manual off. The flare remained on.
	11:02	All pump outs were returned to auto, the OWS pumped out, and all three blowers were restarted.
November 29	10:00	The VEW-6I blower shut down for high LEL.
	10:04	The regenerative blower shut down (VEW-6SD and VEW-7SD) for high LEL in VEW-6SD. Flare and VEW-7I blower remained on.
	13:45	The regenerative and VEW-6I blowers back on.
November 30	06:20	VEW-6I blower shut down for high LEL. Flare and the other two blowers remained on.
	08:21	VEW-6I blower back on.
	14:02	VEW-6I and regenerative blower shut down for high LEL. Flare and the 7I blower remained on.
	16:23	Both blowers back on.
December 5		Flow adjusted in VEW-7I and VEW-6I
December 17	05:34	All three SVE blowers shut down for power failure. (Area wide power outage.) Flare remained on.
	08:09	All three blowers on.
December 18	13:57	SVE blowers for wells VEW-6I, VEW-6S/D, and VEW-7S/D shutdown for High LEL in wells VEW-6I and VEW-6S/D. Flare and VEW-7I blower remained on.
	15:28	SVE blowers for wells VEW-6I, VEW-6S/D, and VEW-7S/D back on.
	21:19	All three SVE blowers shut down for high LEL. Flare remained on.
December 19	17:14	All three SVE blowers on.
December 20	11:33	All three SVE blowers shut down for high LEL. Flare remained on.
	14:44	All three SVE blowers on.
December 21	11:27	Shut down all three blowers to replace LEL sensor. Flare remained on.
	12:48	All three SVE blowers on.

**Attachment F**  
*Performance Monitoring Checklists*



### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0740/0800

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0800/0820

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is sparse on crown and soil is holding.*

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0820/0840

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Minor wind erosion on the North side slope and crown.*

*Sparse vegetation on the crown in eroded area.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39°f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0740/0800

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 8".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0740/0800

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 8". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39°f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0800/0820

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 6". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39°f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0820/0840

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 4". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39°f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0740/0800

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*



### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39°f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0800/0820

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 01-2012 Date: 31-Jan-12

Project Inspector Name: Eric Jensen Weather: Clear, 39°f, Wind calm, Pressure 30.08 rising

Work Start/Finish: 0820/0840

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is sparse on crown and soil is holding.*

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1220/1240

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>Yes</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Minor wind erosion on the North side slope and crown.*

*Sparse vegetation on the crown in eroded area.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 8".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	No	No	No
Sediment/Water Level Staff Gauge Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Foot Traffic Damage to Liner	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	No	No	No
Water Level Greater than 4.0 feet	No	No	No
Anchor Trench Disturbed/Exposed/Pull Out	No	No	No
Ballooning Liner	Yes	No	No
Vegetation Growing in Sediment	Yes	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 10". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 7". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*



### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1220/1240

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 5". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 02-2012 Date: 21-Feb-12

Project Inspector Name: Eric Jensen Weather: Overcast, 57° f, Wind SW 22 G30, Pressure 29.98 falling

Work Start/Finish: 1220/1240

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1120/1140

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Minor wind erosion on the North side slope and crown.*

*Sparse vegetation on the crown in eroded area.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 8".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*



### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 10". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1120/1140

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 6". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 3". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1120/1140

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 03-2012 Date: 22-Mar-12

Project Inspector Name: Eric Jensen Weather: Clear, 46° f, Wind SW 7, Pressure 30.06 falling

Work Start/Finish: 1140/1200

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63° f, Wind SW  
21 G26, Pressure  
30.17

Work Start/Finish: 1650/1710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

*Vegetation is coming back in disturbed areas*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1710/1730

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.



### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1730/1750

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>Yes</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Minor wind erosion on the North side slope and crown.*

*Sparse vegetation on the crown in eroded area.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1650/1710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 7".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1650/1710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 8". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1710/1730

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	No	No	No
Sediment/Water Level Staff Gauge Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Foot Traffic Damage to Liner	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	No	No	No
Water Level Greater than 4.0 feet	No	No	No
Anchor Trench Disturbed/Exposed/Pull Out	No	No	No
Ballooning Liner	Yes	No	No
Vegetation Growing in Sediment	Yes	No	No
Other (Define in Inspection Report)	No		No

Comments, Remarks, and Action Items:

Water depth is 6". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1730/1750

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 2". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1650/1710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1710/1730

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 04-2012 Date: 27-Apr-12

Project Inspector Name: Eric Jensen Weather: Clear, 63°f, Wind SW 21 G26, Pressure 30.17

Work Start/Finish: 1730/1750

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*



### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0815/0835

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

*Vegetation is coming back in disturbed areas*

*Small burrows just below the crown of the slope well North of the East Basin.*

*Linear features below the burrows well past the North End of the East Basin. They did not look like water erosion because there does not seem to be any soil deposits at the bottom of the linear features. The linear features are on the East Slope 65 ft East of VPM-01 and a tiny bit North*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0835/0855

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0855/0915

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>Yes</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0815/0835

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 0".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0815/0835

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	No	No	No
Sediment/Water Level Staff Gauge Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Foot Traffic Damage to Liner	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	No	No	No
Water Level Greater than 4.0 feet	No	No	No
Anchor Trench Disturbed/Exposed/Pull Out	No	No	No
Ballooning Liner	Yes	No	No
Vegetation Growing in Sediment	Yes	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 0". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0835/0855

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 0". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0855/0915

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 0". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0815/0835

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>Yes</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*



### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0835/0855

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 05-2012 Date: 1-Jun-12

Project Inspector Name: Eric Jensen Weather: Cloudy, 71° f, Wind SW 3, Pressure 29.94

Work Start/Finish: 0855/0915

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71° f, Wind calm, Pressure 30.03

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

*Vegetation is coming back in disturbed areas*

*NW edge of Umbrella liner is beginning to be exposed*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71° f, Wind calm, Pressure 30.03

Work Start/Finish: 1150/1210

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71° f, Wind calm, Pressure 30.03

Work Start/Finish: 1210/1230

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71°f, Wind calm, Pressure 30.03

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 1".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71°f, Wind calm, Pressure 30.03

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 2". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71°f, Wind calm, Pressure 30.03

Work Start/Finish: 1150/1210

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 0". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*



### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71°f, Wind calm, Pressure 30.03

Work Start/Finish: 1210/1230

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 0". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71° f, Wind calm, Pressure 30.03

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71° f, Wind calm, Pressure 30.03

Work Start/Finish: 1150/1210

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 06-2012 Date: 27-Jun-12

Project Inspector Name: Eric Jensen Weather: Clear, 71° f, Wind calm, Pressure 30.03

Work Start/Finish: 1210/1230

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0650/0710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

*Vegetation is coming back in disturbed areas*

*NW edge of Umbrella liner is beginning to be exposed*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0630/0650

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0710/0730

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73°f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0650/0710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 0".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*



### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0650/0710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 0". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0630/0650

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 0". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0710/0730

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 0". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0650/0710

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0630/0650

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 07-2012 Date: 27-Jul-12

Project Inspector Name: Eric Jensen Weather: Clear, 73° f, Wind SW 9, Pressure 29.86

Work Start/Finish: 0710/0730

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement*

*Vegetation is coming back in disturbed areas*

*NW edge of Umbrella liner is beginning to be exposed*

*Cracks forming in the sediment around the depressions*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1110/1130

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.



### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1150/1210

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>Yes</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 0".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 0". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1110/1130

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 0". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1150/1210

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 0". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1130/1150

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>Yes</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1110/1130

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 08-2012 Date: 27-Aug-12

Project Inspector Name: Eric Jensen Weather: Clear, 77° f, Wind SW 9, Pressure 30.00

Work Start/Finish: 1150/1210

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*



### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement (see SCS Engineers report for more details)*

*NW edge of Umbrella liner is beginning to be exposed*

*Cracks forming in the sediment around the depressions (see SCS Engineers report for more details)*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1120/1140

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>Yes</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 0".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 0". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 0". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1120/1140

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 0". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*



### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1100/1120

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 09-2012 Date: 26-Sep-12

Project Inspector Name: Eric Jensen Weather: Clear, 65° f, Wind calm, Pressure 30.08

Work Start/Finish: 1120/1140

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement (see SCS Engineers report for more details)*

*NW edge of Umbrella liner is beginning to be exposed*

*Cracks forming in the sediment around the depressions (see SCS Engineers report for more details)*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1220/1240

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>Yes</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is sparse on crown and soil is holding.*

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1240/1300

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

**Zone A West Detention/Evaporation Basin Inspection Checklist**

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1200/1220

<b>Man-Made Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Liner Puncture	No	No	No
Sediment/Water Level Staff Gauge Disturbance	No	No	No
Other (Define in Inspection Report)			
<b>Animal-Made Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Burrowing	No	No	No
Foot Traffic Damage to Liner	No	No	No
Other (Define in Inspection Report)			
<b>Natural Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Sediment Level Greater than 0.9 feet average	No	No	No
Water Level Greater than 4.0 feet	No	No	No
Anchor Trench Disturbed/Exposed/Pull Out	No	No	No
Ballooning Liner	Yes	No	No
Vegetation Growing in Sediment	No	No	No
Other (Define in Inspection Report)	No		No

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 2".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*The water depth is 3". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.*

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1220/1240

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 0". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*



### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1240/1300

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 0". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1200/1220

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>Yes</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1220/1240

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 10-2012 Date: 26-Oct-12

Project Inspector Name: Eric Jensen Weather: Overcast, 44° f, Wind NW 7, Pressure 30.22

Work Start/Finish: 1240/1300

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0840/0900

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>No</i>	<i>No</i>	<i>No</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement (see SCS Engineers report for more details)*

*NW edge of Umbrella liner is beginning to be exposed*

*Cracks forming in the sediment around the depressions (see SCS Engineers report for more details)*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0900/0920

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.

### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0920/0940

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

### Zone A West Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0840/0900

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 8".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*



### Zone A East Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0840/0900

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 11". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0900/0920

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 6". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0920/0940

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 5". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0840/0900

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

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### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0900/0920

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 11-2012 Date: 30-Nov-12

Project Inspector Name: Eric Jensen Weather: Clear, 39° f, Wind NE 6, Pressure 29.61

Work Start/Finish: 0920/0940

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone A Landfill Cover Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW  
32 G45, Pressure  
29.66

Work Start/Finish: 1510/1530

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Consumption of Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	<i>Yes</i>	<i>No</i>	<i>No</i>
Stormwater Erosion	<i>No</i>	<i>No</i>	<i>No</i>
Settlement	<i>Yes</i>	<i>under evaluation</i>	<i>under evaluation</i>
Sparse Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Distressed Vegetation	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Elevation surveys will be used for evaluation of further settlement (see SCS Engineers report for more details)*

*NW edge of Umbrella liner is beginning to be exposed*

*Cracks forming in the sediment around the depressions (see SCS Engineers report for more details) and in other places*

### Zone C/D Landfill Cover Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1430/1450

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	No	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

Vegetation is sparse on crown and soil is holding.



### Zone E Landfill Cover Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1410/1430

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Vehicle Rutting	No	No	No
Foot Traffic Disturbance	No	No	No
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	No	No	No
Consumption of Vegetation	No	No	No
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Wind Erosion	Yes	No	No
Stormwater Erosion	No	No	No
Settlement	No	No	No
Sparse Vegetation	Yes	No	No
Distressed Vegetation	No	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Vegetation is growing well on the cover and holding the soil.*

**Zone A West Detention/Evaporation Basin Inspection Checklist**

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1510/1530

<b>Man-Made Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Liner Puncture	No	No	No
Sediment/Water Level Staff Gauge Disturbance	No	No	No
Other (Define in Inspection Report)			
<b>Animal-Made Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Burrowing	No	No	No
Foot Traffic Damage to Liner	No	No	No
Other (Define in Inspection Report)			
<b>Natural Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Sediment Level Greater than 0.9 feet average	No	No	No
Water Level Greater than 4.0 feet	No	No	No
Anchor Trench Disturbed/Exposed/Pull Out	No	No	No
Ballooning Liner	Yes	No	No
Vegetation Growing in Sediment	No	No	No
Other (Define in Inspection Report)	No		No

Comments, Remarks, and Action Items:

*The Sediment depth is 0" to 3", Ave. is 1". The water depth is 8".*

*The basin liner is beginning to be exposed on the west side of the west berm between the fence and the top of the berm.*

**Zone A East Detention/Evaporation Basin Inspection Checklist**

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1510/1530

<b>Man-Made Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Liner Puncture	No	No	No
Sediment/Water Level Staff Gauge Disturbance	No	No	No
Other (Define in Inspection Report)			
<b>Animal-Made Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Burrowing	No	No	No
Foot Traffic Damage to Liner	No	No	No
Other (Define in Inspection Report)			
<b>Natural Disturbance</b>	<b>Disturbance Noted (Yes/No)</b>	<b>Maintenance Required (Yes/No)</b>	<b>Repair Required (Yes/No)</b>
Sediment Level Greater than 0.9 feet average	No	No	No
Water Level Greater than 4.0 feet	No	No	No
Anchor Trench Disturbed/Exposed/Pull Out	No	No	No
Ballooning Liner	Yes	No	No
Vegetation Growing in Sediment	Yes	No	No
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

The water depth is 12". The average sediment depth is approx. 1/2". Vegetation only growing in the sediment at North end near the inlet pipe. Minor sediment below keystone blocks.

### Area C/D Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1430/1450

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)	<i>No</i>		<i>No</i>

Comments, Remarks, and Action Items:

*Water depth is 9". The Sediment depth is 0" to 6", ave. is 3" on the bottom, 0" on the side walls. Some sediment in North drainage pipe. Some vegetation growth in sediment.*

### Zone E Detention/Evaporation Basin Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45° f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1410/1430

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Liner Puncture	<i>No</i>	<i>No</i>	<i>No</i>
Sediment/Water Level Staff Gauge Disturbance	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing	<i>No</i>	<i>No</i>	<i>No</i>
Foot Traffic Damage to Liner	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Sediment Level Greater than 0.9 feet average	<i>No</i>	<i>No</i>	<i>No</i>
Water Level Greater than 4.0 feet	<i>No</i>	<i>No</i>	<i>No</i>
Anchor Trench Disturbed/Exposed/Pull Out	<i>No</i>	<i>No</i>	<i>No</i>
Ballooning Liner	<i>Yes</i>	<i>No</i>	<i>No</i>
Vegetation Growing in Sediment	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Water depth is 6". Sediment is 0" to 5", Ave is 2" on the bottom, 0" on the side walls.*

*Vegetation is growing along the edge.*

### Zone A Fence Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45°f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1510/1530

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence.*

*One of the fence poles is bent on the south side.*

### Zone C/D Fence Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45°f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1430/1450

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>Yes</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*

### Zone E Fence Inspection Checklist

Project Inspection Report No.: 12-2012 Date: 17-Dec-12

Project Inspector Name: Eric Jensen Weather: Clear, 45°f, Wind SW 32 G45, Pressure 29.66

Work Start/Finish: 1410/1430

Man-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Fence Hit by Vehicle	<i>No</i>	<i>No</i>	<i>No</i>
Fence Cut	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Animal-Made Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Burrowing under Fence	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			
Natural Disturbance	Disturbance Noted (Yes/No)	Maintenance Required (Yes/No)	Repair Required (Yes/No)
Build Up of Blown Vegetation (Tumbleweed)	<i>No</i>	<i>No</i>	<i>No</i>
Vegetation Growing on Fence	<i>No</i>	<i>No</i>	<i>No</i>
Fence Leaning or Falling	<i>No</i>	<i>No</i>	<i>No</i>
Other (Define in Inspection Report)			

Comments, Remarks, and Action Items:

*Tumbleweeds along the fence inside and out.*



**Attachment G**  
*Electronic Data Deliverable*  
*(available on compact disc)*